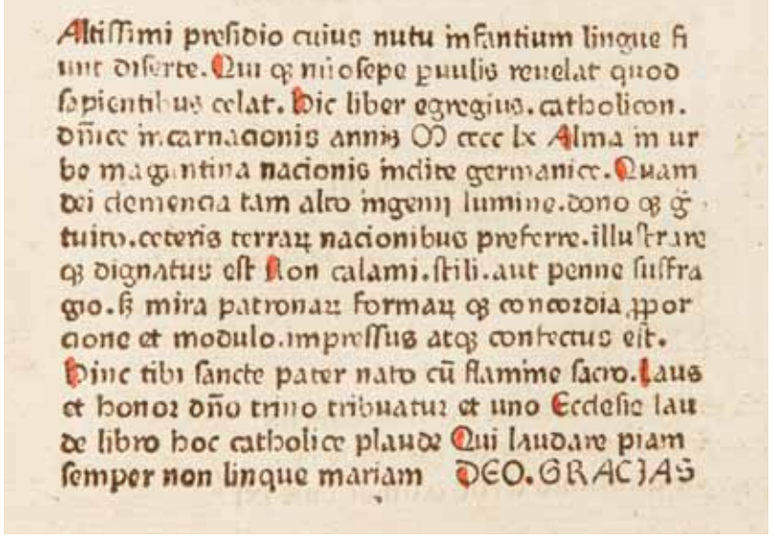
JONATHAN A. HILL, BOOKSELLER

CATALOGUE 236


Altissimi presidio cuius nutu infantium lingue fi
unt diserte. Qui q; nonnisepe paruulis reuelat quod
sapientibus celat. Hic liber egregius. catholicon.
dñice incarnacionis anno Ø cccc lx Alma in ur
be maguntina nacionis inclite germanice. Quam
dei clemencia tam alto ingenij lumine. dono q; g
tuito. ceteris terrarū nacionibus preferre. illustrare
q; dignatus est Non calami. stili. aut penne suffra
gio. sed mira patronarū formarū q; concordia. pro
porcione et modulo. impressus atq; confectus est.
Hinc tibi sancte pater nato cū flamine sancto. Laus
et honor dño trino tribuatur et uno Ecclesie lau
de libro hoc catholice plaude Qui laudare piam
semper non linque mariam DEO. GRACIAS

ITEM 8. Balbus, Catholicon, ca. 1469

JONATHAN A. HILL, BOOKSELLER

SCIENCE, MEDICINE, NATURAL HISTORY, EARLY WESTERN PRINTING, & BIBLIOGRAPHY

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NEW YORK CITY · 2021

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Residents of New York State should include appropriate sales tax.

Cover illustration from Item 58 Pacioli, 1509

Further illustrations can be seen on our webpage.
Selective Subject Index at end

A Magnificent Book

1. (ABBEY, John Roland). *English Bindings 1490–1940 in the Library of J.R. Abbey.* Edited by G.D. Hobson. 130 fine reproductions (12 in gold & color) & 46 facsimiles in the text. Title printed in red, black, & gold. Large 4to, orig. cloth by Sangorski & Sutcliffe, red morocco lettering piece on spine, t.e.g. London: Privately Printed at the Chiswick Press, 1940. $3750.00

Limited to 180 numbered copies, signed by Major Abbey and G.D. Hobson. This sumptuously produced private library catalogue, the only authoritative survey of the history of bookbinding in the British Isles, is especially valuable for the wealth of information given in the detailed descriptions of a magnificent series of specimens, representative of the various styles and periods. With twelve appendices and four indices.

Very nice copy. From the library of the design binder and teacher Faith Shannon, to whom it was given by Roger Powell. With the stamp of the Royal College of Art Design School on front and rear endpapers. Correspondence laid-in states that this copy was never accessioned into the library of the Royal College of Art but was simply kept by Faith Shannon within the teaching area.

❡ Breslauer, The Uses of Bookbinding Literature, p. 28–"Hobson's method was to make lists of binding which had the same tools in common; if the binder of one or several was known, he could attribute the others to him; if the workshop was not known, he baptized it with a sobriquet, such as 'Queens' Binder'; all this required an immense amount of historical and archival research, the examination of the holdings of permanent libraries and private collections, and of the illustrations in books on bindings and auction and booksellers' catalogues."

"Of Great Importance" Printed on "Schreibpappir"

2. ALBINUS, Peter. *Meisznische Land und Berg-Chronica, In welcher . . . Bergwercken, sampt zugehoerigen Metall und Metallar beschreibungen . . .* Each title within an elaborate woodcut pictorial border, two full-page engravings, & numerous woodcuts & maps in the text, woodcut initials and head- & tailpieces. First title printed in red & black. 6 p.l., 449, [15] pp.; 4 p.l., 205, [6] pp. Two vols. in

one. Folio, cont. vellum over boards (binding a little soiled, light browning throughout as is always the case). Dresden: "durchaus auff Schreibpappir gedruckt," 1589-90. $7500.00


Meißnische
Land vnd Berg-
Chronica/ In welcher ein
vollnstendige description des Lan-
des / so zwischen der Elbe / Sala vnd
Behmischen gelegen
Mit einverleibten fürnehmen
Sächsischen / Düringischen vnd
Antiquiteten, derer etliche in
Cum Gratia & Priuilegio Cæsareo,
& Electorali Saxonico.
Dresden/ Im 1589. Jar.

NO. 2

First edition, and a fine copy, of this early mining book, splendidly printed on special paper ("Schreibpappir"). "This work is of great importance in connexion with the early history of mining in Saxony."–Zeitlinger, 2nd Supp., 13976. Albinus's book also contains valuable information on the output of gold and silver along with details on the magnet-stone, wolfram, and many other metals.

The present book contains much original information on the life and works of Agricola and is also of great significance for the early history of European porcelain manufacturing. For more on this see W. Prandtl, "Zur Vorgeschichte des Meissner Porzellans" in *Chymia,* Vol. IV (1953).

Albinus (1534-98), was professor of poetry and mathematics at the University of Wittenberg and historiographer to the Electorate of Saxony.

Very nice copy. Foot of spine a little defective. Bookplate of Hans Joachim Höupler. Attractive copies of this book are scarce.

◖ Ferchl, p. 6–"die sehr viel hütten-chemische Nachrichten enthält. Quelle über das Leben Georg Agricolas." Hoover 43.

3. [AMELUNG VON TANNENBAUM, Heinrich Christian]. *Auffrichtig eröffnete Gedancken über den Reformirten Apothecker, oder: Unpartheyischer Ausspruch, ob das von Herrn Abraham â Gehema . . . so genante, ohnmaaszgeblich-für gestellte Project, wie und welcher Gestalt die heutigen Apothecken zu reformiren; billig, thuelich, rathsam und nöthig sey? Entworffen von Ninorigo Schadgehemio.* 104 pp. Small 8vo, attractive antique calf-backed marbled boards. Freystadt [Dresden]: 1690. $2500.00

First edition, and very rare (no copy in North America according to WorldCat), of this pseudonymous second attack by the alchemist/chemist Amelung on the *Reformierter Apothecker* (1688) of Janusz Abraham Gehema (1617-1715). Gehema was one of the leading proponents in Germany of the "new medicine" of the Dutch and French, which he had learned while a medical student at Leiden, Groningen, and Utrecht.

In the *Reformierter Apothecker,* Gehema presented his plan to reform the apothecary trade in Germany by reducing and simplifying the range of remedies to only useful herbs and drugs. Amelung, the author of the *Chymische Untersuchung* (1690) and about whom nothing else is known, attacks both

Gehema's pharmacological knowledge and medical knowledge while defending the German apothecary trade.

Fine copy. Minor browning.

◖ For Amelung, see Ferguson, I, pp. 30-31, & Ferchl, pp. 8 & 471. For Gehema, see Anette Henriette Munt, *The Impact of Dutch Cartesian Medical Reformers in Early Enlightenment German Culture (1680-1720),* PhD thesis, University of London, 2004 (online resource).

Contains "His Most Important Contributions to Mathematics"

4. ARCHIMEDES. *Monumenta Omnia Mathematica, quae extant . . . ex traditione . . . Francici Maurolici.* Woodcut printer's device on title, numerous woodcut illus. in the text, & a woodcut vignette on verso of final leaf. Title printed in red & black. 4 p.l., 296 pp. Folio, cont. vellum over boards (first four leaves with some light browning & staining). Palermo: C. Hesperi, 1685. $13,500.00

First edition of Maurolico's important edition of Archimedes' works, based upon an earlier partial edition by Borelli (Messina: 1670-72), which was almost completely lost. Maurolico's edition was largely prepared in 1534 and 1547-50 and remained in manuscript for many years after his death.

Maurolico's "method of redaction is suggested in the preface. After enumerating and summarising Archimedes' works, Maurolico states that he has tried to make the works more easily intelligible by adding many lemmas, by demonstrating many things omitted by Archimedes, and by treating of the centres of gravity of solids . . . Maurolico does not hesitate to re-arrange Archimedes' master work, the *De Sphaera et Cylindro*, often substituting what he claims to be a better proof or enunciation for that of the original . . . It is, however, in the *De Aequeponderantibus* that Maurolico makes his most drastic re-arrangement of the Archimedean material and also his most important contributions to mathematics . . .

"Maurolico organises the treatise (which he calls *De Momentis Aequalibus*) and his own additions into four books. The first deals with general principles relating to centres of gravity and equilibrium. The following three books concern the determination of centres of gravity in plane figures; paraboloids; and spheres, pyramids, prisms, conoids and other solids. Although Archimedes had apparently known how to find the centres of gravity in various solids, none of his proofs was extant in the sixteenth century. Maurolico sought to

remedy this deficiency by applying the Archimedean method of moments to the problem. This he did with considerable success . . .

"Although the long delay in publishing the Maurolico Archimedes precluded its entry to the mainstream of mathematical development, the importance of its author's studies was acknowledged by Federico Commandino."–Rose, *The Italian Renaissance of Mathematics,* p. 167.

A very good and crisp copy. Preserved in a box.

◖ Riccardi, I, 43-44–(with a list of the contents).

An Anatomist Collects

5. (AUCTION CATALOGUES: MORAND, Sauveur François). *Catalogue des Bronzes et autres Curiosités Egyptiennes, Etrusques, Indiennes & Chinoises; Médailles & Monnoies d'or & d'argent; Bagues & Boutons de diamants; Pierres gravées, Agates, Jaspes & Coquilles, dont la Scalata; Polypiers, Animaux, Oiseaux & Insectes: Pieces anatomiques & nombres d'autres morceaux curieux. Du Cabinet de feu M. Morand . . . Cette Vente se fera le Mercredi premier Décembre* [1 December 1773] [Expert: P. Remy]. 2 p.l., 66, [1] pp. Small 8vo (180 x 105 mm.), late 19th-century cloth-backed marbled boards, spine gilt. Paris: P. Remy & Musier, 1773.

[BOUND AFTER]:

([BENARD, —]). *Catalogue des Bronzes, Marbres, Porcelaines, Meubles, & autres objets de curiosité. Provenant du Cabinet de M.*** Dont la Vente se fera . . . le Jeudi 26 Mai 1774, & jour suivans . . .* 9 pp. Small 8vo. Paris: Chariot, 1774. $3500.00

I. The very rare auction catalogue of Morand's important cabinet of anatomical curiosities, natural history specimens, art, and antiquities (see below). Morand (1697-1773), the esteemed surgeon and contributor to the *Encylopédie*, possessed an eclectic collection, but focused principally on anatomical specimens for his research, and antiquities.

"Morand sought to be a scholar-surgeon rather than a mere surgeon at a time when many still thought that occupation closer to barbering than to medicine. He taught anatomy and surgery at the Paris College of Surgery, the Charité, the Invalides, and his home. Also, for some fifty years he published articles and books on such varied scientific subjects as cataracts, the anatomy of the brain, the medical uses of electricity, the differing size of humans in the morning and evening, and extra-fingered humans."–Kafker & Kafker, *The Encyclopedists as Individuals: a Biographical Dictionary of the Authors of the* Encyclopédie (1988), p. 270.

This catalogue describes 539 lots of sculpture, ceramics, furniture, medals and coins, weapons, tools, clothes, minerals, shells, petrified wood, fossils, bird and insect specimens, human specimens (many with deformities), Morand's anatomical teaching collection, jewelry, etc. His anatomical collection constitutes just over 100 lots, which are meticulously inventoried and described. For example, we find two fetal skeletons connected at the head, a hand with six fingers, two boxes filled with human and animal teeth, the wax model of a female skeleton assembled by Morand, artificial eyes, etc., etc. A number of the other curiosities come from India, China, Egypt, Greece, and Africa.

46 *Cabinet Anatomique.*

388 Un tronc avec le bassin.
389 Un tronc sans bassin.
390 Deux extrémités inférieures d'adulte, dont une sans rotule, & deux extrémités inférieures avec leurs ligamens, dont le fémur est scié vers la moitié.

Ostéologie monstrueuse.

391 Deux squelettes de fœtus séparés dans toutes leurs parties, excepté par leurs têtes qui ne forment qu'une face pour les deux.
392 Deux fœtus desséchés réunis par le tronc, portant deux têtes, & les extrémités inférieures de chaque fœtus séparées.
393 Un squelette de fœtus qui n'a qu'une seule extrémité inférieure.
394 Deux pieds à six doigts avec le modele en cire.
395 Une main à six doigts.
396 Une autre main à six doigts, dont le doigt surnuméraire est articulé avec le cinquieme os du métacarpe, avec le modele en cire.
397 Une autre main à six doigts, dont le sixieme composé de deux pha-

Cabinet anatomique. 47

langes, est articulé par la seconde, avec une apophyse qui tient lieu de troisieme phalange, & qui naît obliquement d'avant en arriere du cinquieme os du métacarpe.
398 Une tête humaine, &c.
399 Têtes humaines de différens âges.
400 Différentes coupes verticales de la tête.
401 Cranes, & bases de crane d'adulte.
402 Différentes portions de têtes, relatives au trépan, à la carie & à l'exostose.
403 Deux têtes d'hydrocephales, dont une entiere.
404 Une tête en ivoire.
405 Une tête en albâtre.
406 Squelettes de quadrupedes.
407 Squelettes d'oiseaux.
408 Squelettes de poissons.
409 Un squelette de tortue.
410 Tête de bélier de Gesley à doubles cornes.
411 Deux cornes de bouquetin.
412 Bois de daim.
413 Plusieurs vertebres de jeunes & vieilles baleines.
414 Deux côtes de baleine.

II. A choice collection of 47 lots of ancient sculpture, weapons, and ceramics. Lugt was able to confirm only the consigner's last name as "Benard."

Two rare and interesting sale catalogues, the first thoroughly detailing a fascinating anatomical cabinet. Engraved bookplate of G[eorges] P[annier] (1853-1944) on the front paste-down. Natural paper flaw touching text on Biii of the Morand catalogue. Title-page of the Benard catalogue a little browned. We locate no copy of this second catalogue in North America.

◖ I. Lugt 2208. *N.B.G.*, Vol. 36, cols. 446-47 (Morand). R. Taton, *Enseignement et Diffusion des Sciences en France* (1986), pp. 185 & 691. II. Lugt 2294.

"One of the Greatest of All Medical Classics"

6. AUENBRUGGER, Leopold. *Inventum Novum ex Percussione Thoracis Humani ut signo abstrusos interni pectoris morbos detegendi.* 95, [1] pp. 8vo, cont. vellum over boards (lower portion of spine neatly repaired at an early date, some occasional light browning and foxing as usual with this book). Vienna: J.T. Trattner, 1761. $13,500.00

First edition of the first book to suggest percussion of the chest as a diagnostic measure, "one of the greatest of all medical classics."–*Heirs of Hippocrates* 954.

"With the introduction of percussion of the chest, which offered a new and dependable method of diagnosing diseases of the heart and lungs in living persons, Leopold Auenbrugger made the first advance in physical diagnosis since the age of Hippocrates. The son of an innkeeper, Auenbrugger had learned as a boy how to establish the level of wine in a cask by thumping the barrel . . . Applying the same technique to the human chest, he noticed that different sounds — tympanic, dull, or obscure, were produced when there was underlying disease of the heart or lungs in the interior of the chest. He verified his diagnoses by experiments on cadavers and by postmortems." –Grolier Club, *One Hundred Books Famous in Medicine,* 45.

At first Auenbrugger's discovery attracted little attention, but he lived to see Corvisart's classic translation of the book in 1808, after which the value of percussion was universally recognized.

Very good copy. This copy is of the second issue, with the errata on the final page. Bookplates of Piergiorgio Borio.

Garrison-Morton 2672. Lilly, *Notable Medical Books,* p. 127.

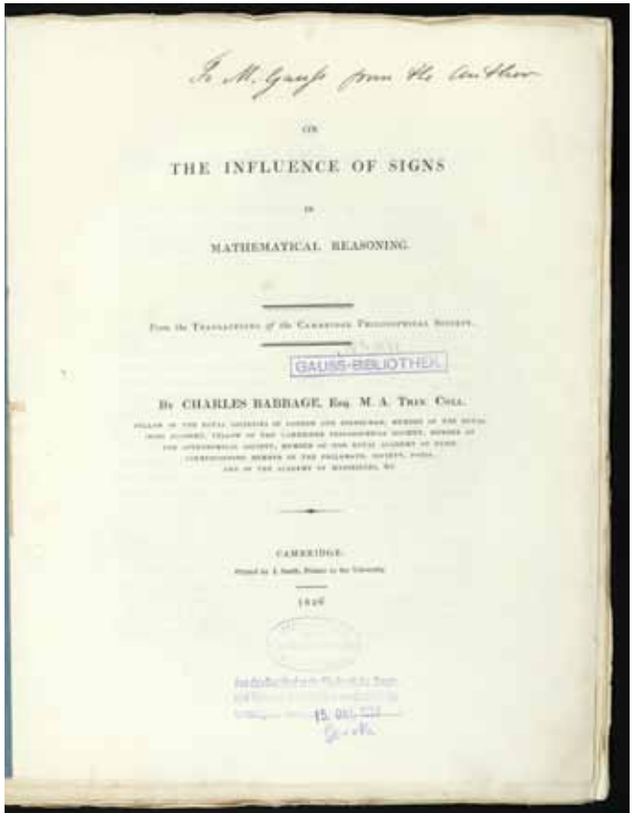
Presentation Copy from Babbage to Gauss

7. BABBAGE, Charles. *On the Influence of Signs in Mathematical Reasoning.* 1 p.l., 53 pp. Large 4to, orig. blue wrappers, uncut. London: J. Smith, 1826. $85,000.00

A remarkable association copy of this extremely rare offprint, linking two of the greatest scientists of the 19th century, and pre-figuring Babbage's later work on his difference and analytical engines. This copy bears the following inscription on the title-page in Babbage's hand: "To M. Gauss from the Author." Additionally, Babbage has written on the upper wrapper: "M. Gauss. Influence of Signs. 3. Ch. Babbage. On the influence of signs in mathematical reasoning."

Babbage here presents his views on the importance of symbolic notation in mathematical reasoning. He argues that algebraic symbolism enables one to express ideas more briefly and precisely than in ordinary language; it enables one to consider problems in great generality, rather than only in special cases; and it often enables one to consider simultaneously different cases of a problem that would otherwise be treated separately. The use of mathematical symbols is more efficient, and less prone to error, than other forms of reasoning, as he emphasized particularly when discussing the superiority of algebraic analysis over geometrical reasoning: "[T]he power which we possess by the aid of symbols in compressing into a small compass the several steps of a chain of reasoning, whilst it contributes greatly to abridge the time which our enquiries would otherwise occupy, in difficult cases influences the accuracy of our conclusions: for from the distance which is sometimes interposed [in geometrical reasoning] between the beginning and the end of a chain of reasoning, although the separate parts are sufficiently clear, the whole is often obscure" (p. 8). Babbage also emphasizes the importance of choosing the correct notation: it should remind the user of the nature of the quantity itself (so use 'v' for velocity, 't' for time, and so on); and related quantities should be denoted by similar symbols (so v, v', v'' etc. for the velocities of different bodies in the same problem, for example). Babbage singles out Lagrange's *Mecanique Analitique* as a model to be emulated in the correct choice of mathematical symbols.

The present paper may be seen as part of a chain of ideas that links not only his mathematical and scientific work, but also his views on politics and industry. While a student at Cambridge, Babbage formed, together with


To M. Gauss from the Author

ON

THE INFLUENCE OF SIGNS

IN

MATHEMATICAL REASONING.

GAUSS-BIBLIOTHEK

By CHARLES BABBAGE, Esq. M. A. Trin. Coll.

CAMBRIDGE:

1826

Herschel and Peacock, the "Analytical Society." This society was principally concerned with a matter of mathematical symbolism: its aim was famously to support "the principles of pure D'ism in opposition to the Dot-age of the University." Theological overtones apart, this was a plea to replace what Babbage and the other members of the Society viewed as the outdated and inefficient Newtonian fluxional "dot" notation still used in England with the Leibnizian dy/dx notation which was universally employed on the Continent. "For Herschel and Babbage, however, there was more to analysis than a debate about the appropriate mathematical symbols . . . The key to the success of analytical algebra as they saw it was its efficiency. It was a problem-solving technology that could produce answers quickly and without wasting resources . . . It was a way of economizing mental labor. As such

it could be used to recognize what the most efficient way of proceeding in other enterprises might be too. It could provide the key, for example, to the most profitable way of deploying resources in order to maximize factory production."–Morus, *When Physics became King,* p. 36.

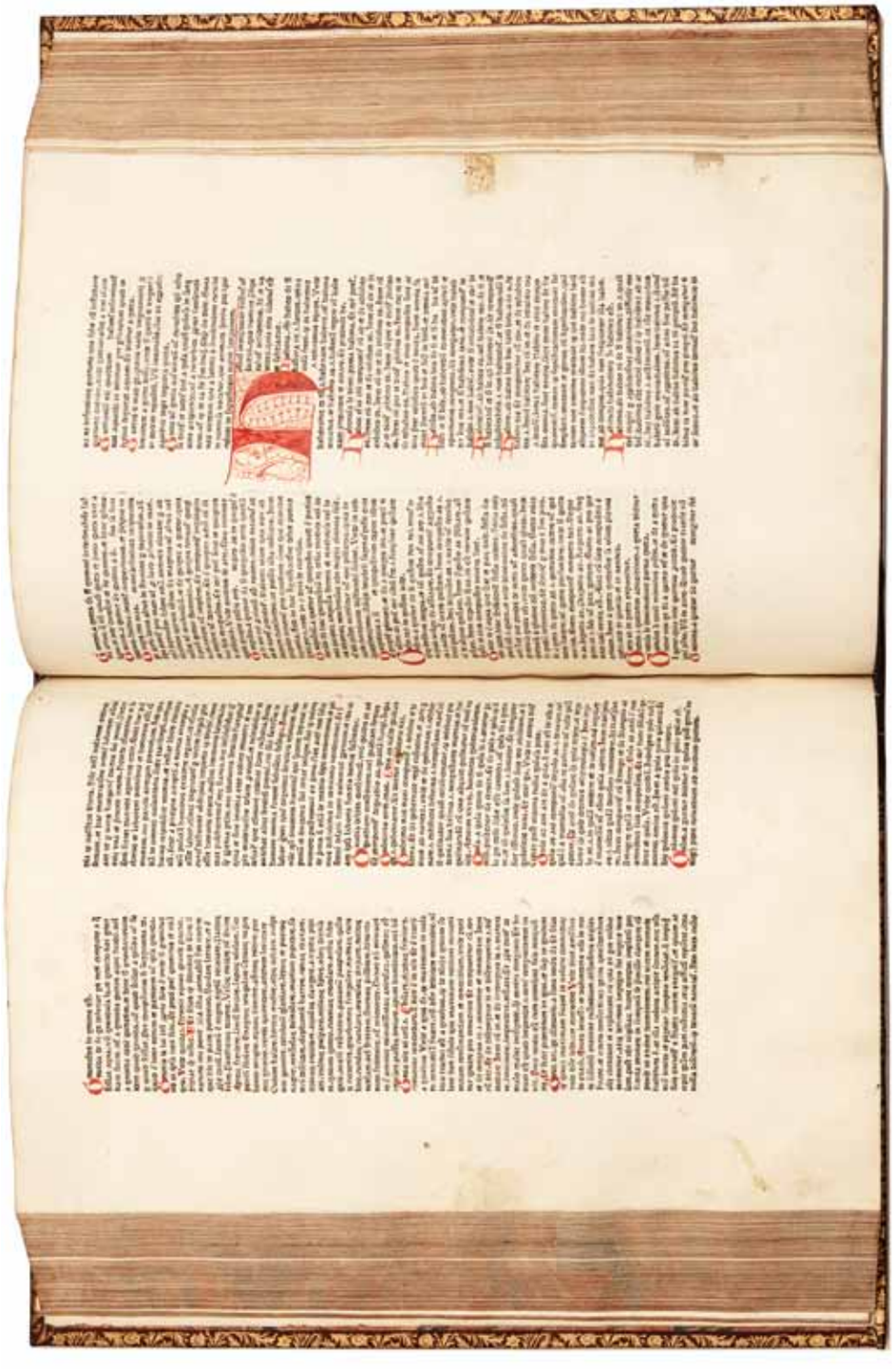
"Babbage's ultimate solution to the problem of how to guarantee efficiency, transparency, and accuracy in reasoning was the same as his solution to the same problem in political economy: replace humans with machinery. Babbage was a firm exponent of the division of labor in factory management and equally enthusiastic for mechanization as the ultimate realization of the principle. His primary concern throughout the 1820s and beyond was to work on his projected calculating and analytical engines . . . The calculating engine would replace the human drudge work for calculating mathematical tables to be used (for example) in actuarial work and in astronomy. The analytical engine would go further — it would replace the human capacity to reason as well."–*ibid.*, pp. 37-38. When developing his difference engine Babbage again realized the importance of symbolism: in "A Method of Expressing by Signs the Action of Machinery" (*Philosophical Transactions*: 1826) he developed a special notation, related to Boolean algebra (which was developed later), to accurately describe the working of the engine.

Babbage first met Gauss in the course of a European tour he undertook starting at the end of 1827. After travelling through Holland, Belgium, Germany and Italy, Babbage arrived in Berlin in September 1828 to meet Alexander von Humboldt, then regarded as the greatest scientist of the century. At the time, Humboldt was organizing the seventh annual Congress of German scientists. Babbage was present when the Congress opened on 18 September 1828, with Gauss among the several hundred scientists and luminaries present. It was there that Babbage met Gauss.

Babbage's paper was read at a meeting of the Cambridge Philosophical Society on 16 December 1821, but it was not published in its *Transactions* until more than five years later (Vol. 2, 1827, pp. 325-377). The item offered here is a very rare pre-publication offprint, dated 1826 on the title page.

In very fine and fresh condition, entirely uncut. Preserved in a handsome blue morocco-backed box. With the stamps of the "Gauss-Bibliothek" (also on upper wrapper) and the Royal Observatory at Göttingen on title with release stamp date 15 October 1951.

◖ *D.S.B.,* I, pp. 354-56. Dunnington, G.W., Gauss: *Titan of Science,* 2004. Poggendorff, I, 81.



Gutenberg's Other Great Innovation: "Texts Frozen in Metal"; The Hibbert – Botfield Copy of the Catholicon

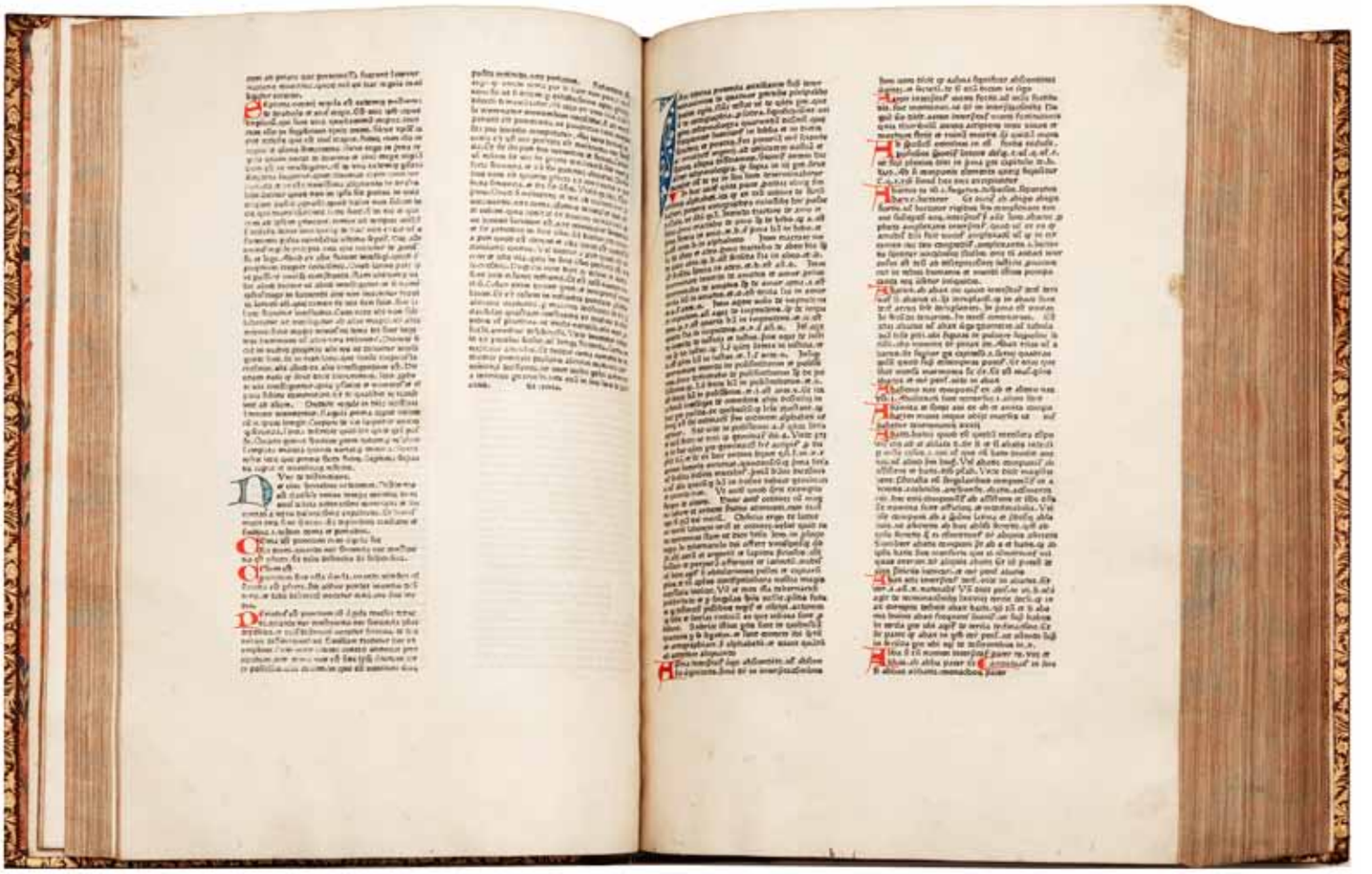
8. BALBUS, Johannes. *Catholicon.* Gothic type, double column, 66 lines (33 line-pairs). [373] leaves. Decoration by a contemporary Dutch or Westphalian artist (see below). Eight pinholes to the sheet preserved. Royal folio (385 x 270 mm.), mid-18th cent. French red morocco over heavy boards, by Louis Douceur, triple gilt fillets round sides, spine nicely gilt, a.e.g. Mainz: [Peter Schoeffer], 1460 [but ca. 1469]. $600,000.00

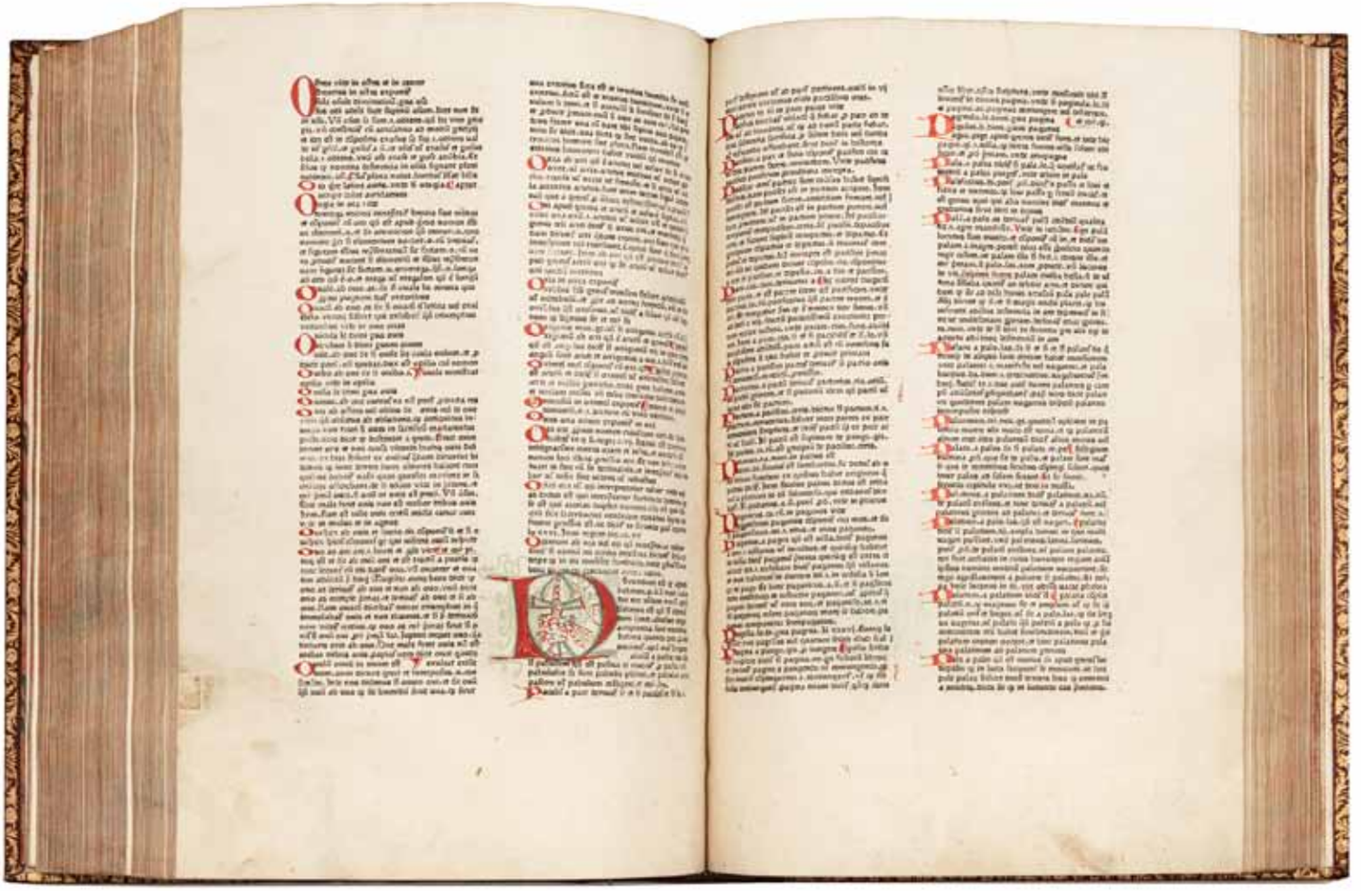
Second impression (of three) of the original edition, first printed in 1460, in which Gutenberg first used the revolutionary method of two-line printing slugs, thereby finding "a solution to the challenge of permanently fixing typographical compositions" (Needham, p. 432). The *Catholicon* was not printed with movable type, Gutenberg's first great invention, but with units of paired lines or "slugs." It is an early form of stereotyping or linotype setting and marks the beginning of modern publishing of texts. The method was as follows: as composition in type of the *Catholicon* progressed, a secondary casting was made in units of paired lines or "slugs" in order to allow future reprinting without the expense of resetting the text.

As mentioned above, there are three distinct impressions of the *Catholicon,* all printed from the same setting of type — "down to the most minute details" (Needham, p. 423) — but on distinct presses and using different paper stocks: 1. the 1460 impression, by Gutenberg, is printed on vellum or Bull's Head paper; 2. our second impression, using the slugs created by Gutenberg, was printed by Peter Schoeffer on Galliziani paper from Basel; and 3. a third impression, probably printed by Schoeffer ca. 1472, on Tower- and Crown-watermarked papers.

This is the first book to name its place of printing, and is also the first book to refer in print to the invention of movable metal type (from the colophon):

"With the help of Omnipotent God, at Whose very nod the tongues of infants are made eloquent, and Who often reveals to the humble what He withholds from the wise — this excellent book, *Catholicon,* has been printed in the goodly city of Mainz, in the glorious German nation . . . , and it has been brought to completion in the year of our Lord's incarnation, 1460 —





not by means of reed, stylus, or quill, but with the miraculous concurrence of punches and types cast in moulds . . . "

In 1905, Zedler first defined the three impressions but offered no explanation. Paul Needham was the first since Zedler to re-examine all bibliographical aspects of the Catholicon Press productions. When he first published his findings in *The Papers of the Bibliographical Society of America* (1982), the article, which is really a wonderful example of bibliographical detective work, changed the methods of other incunabulists and added to the perception of Gutenberg's genius.

Dr. Needham concluded the following: "The Catholicon printer's three books were not printed with movable types. The type pages of these books were composed of indissoluble two-line slugs, arranged into columns or pages as the case may be. After printing, the slugs were retained, and at later times additional impressions were pulled from them . . . The *Catholicon* slugs were printed at three separate times, as the three different paper supplies of the copies indicate. The Bull's Head and vellum impression was completed in 1460, as its colophon states. The Galliziani impression [our edition] was printed in the late 1460s; this impression omitted the first slug of the text, the two-line incipit. The Tower-Crown impression was printed about 1472 or after, and also omitted the first slug" (p. 425).

TEXT: The Catholicon is a Latin dictionary with grammar compiled by a Genoese Dominican, Johannes Balbus (d. 1298), who dated the completion of his work 7 March 1286. It remained the standard Latin dictionary until the 16th century and was apparently the first lexicographical work to achieve complete alphabetization from the first to last letter of each word.

DECORATION: by a contemporary Dutch or Westphalian artist: 12-line penwork initial P (fol. 1r) in blue and white, with green and red infill and red surround extending down the entire inner margin, 9-line penwork initial P on the same page in red, with violet and green infill and surround; 4-13-line initials in blue and white, or in red with penwork surround, 1-3-line red lombards, paragraph-marks and capital-strokes, initial L on 24/1v omitted and later supplied in black ink, rubrication entirely omitted from 13/10r and 18/7r.

BINDING: mid-18th-century French gold-tooled red morocco over pasteboard, by Louis Douceur, triple fillets on sides, spine decorated in compartments with floral ornament and lettered, marbled endpapers, probably

bound for the Duke of La Vallière. We thank Mr. Eric Aguirre for identifying several of the tools employed by Douceur on other of his signed bindings.

PROVENANCE: quire signatures and occasional marginalia in a 16th-century hand; ?Polling, Augustinian Canons Regular, 1765 exchange; ?to the Duc de la Vallière, by exchange for five early manuscripts approved by Polling's Prior, Franz Töpsl; Louis-César de la Baume-le-Blanc, Duc de La Vallière, the greatest book collector of the 18th-century (1767 auction of duplicates, lot 2289, fr. 474); George Hibbert (1829 Evans sale, lot 812, 36-4-6 to Payne & Foss); Beriah Botfield, purchased for 45 (pencil inscription, P.& F. Acquisitions p.15); sold Christie's London (Longleat, 13 June 2002, lot 9, 215,650 or $317,000). La Vallière also owned two other paper copies: De R 90.53 (third impression, now Austrian National Library) and De R 90.72 (imperfect, "disparu"), as well as a vellum printing (De R 90.1, now British Library IC.301).

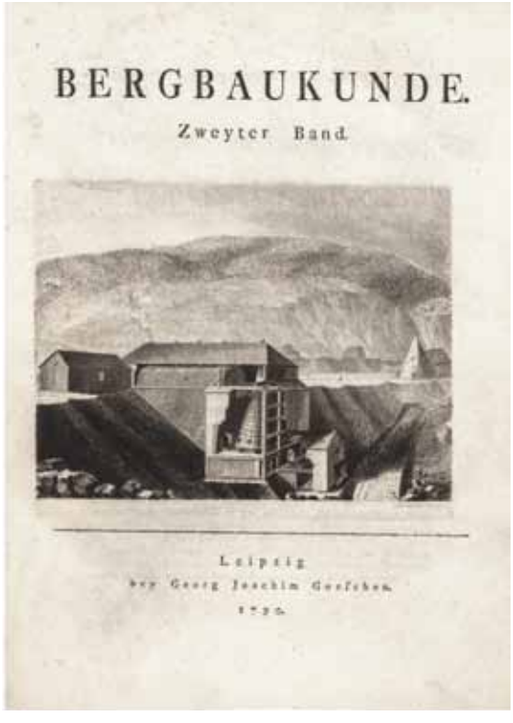
A fine, fresh, and handsome copy. Extreme inner margin of first leaf strengthened, small tear in its lower blank margin mended, recto lightly soiled; minor repair to extreme margins or corners of ten other leaves not affecting text, tiny hole in 16/4 affecting three letters; rubricator's stain on 11/6v, small stains on 8/3-9, 22/8v and 33/10v.

◖ Paul Needham, "Johann Gutenberg and the Catholicon Press" in *Papers of the Bibliographical Society of America,* Vol. 76, Fourth Quarter (1982), pp. 395-456. Goff B-20.

An Important Work on Mining & Metallurgy

9. BERGBAUKUNDE. [Edited by Ignaz von Born & Friedrich Wilhelm Heinrich von Trebra]. Two fine & large mezzotint vignettes on titles, 13 folding engraved plates & maps, three folding printed tables, & one engraving in the text. 4 p.l., 408, [12] pp.; 2 p.l., 468, [4] pp. Two vols. Large 4to, cont. half-calf & dark red boards (corners a bit worn, minor rubbing), flat spines gilt, green morocco lettering pieces on spines. Leipzig: G.J. Goeschen, 1789-90. $6750.00

First edition and very scarce; this is a complete copy with all 13 plates. Born and Trebra were the founders, in 1786 at Szkleno in Hungary, of the Societät der Bergbaukunde, which had the purpose of increasing knowledge in the areas of geology, mining, mineralogy, and metallurgy. It was a very international



scientific society, and other early members included von Heynitz, Lavoisier, Gmelin, Charpentier, Ferber, Poda, Hawkins, and Goethe.

This is the first (and only?) publication of the society; "hierin findet sich alles Wissenswerthe des Bergfachs nach dem damaligen Stande der Wissenschaft und Erfahrung vortrefflich und eingehend erörtert."– *A.D.B.,* Vol. 38, p. 551. The first 34 pages of Vol. I print the society's plans and by-laws. The remainder of the two volumes contains numerous contributions concerning various mining activities in Germany, Hungary, France, England, Mexico, etc.

Each title-page vignette is an extremely attractive mezzotint, and the plates depict geological cross-sections, maps of mining areas, machinery, etc.

Fine set of this attractive book.

◖ *D.S.B.,* II, pp. 315-16 & XIII, pp. 455-56. Mikulas Teich, "Born's Amalgamation Process and the International Metallurgic Gathering at Skleno in 1786" in *Annals of Science, 32* (1975), pp. 305-40.

An Important Geological & Mineralogical Journal

10. BERGMÄNNISCHES JOURNAL. Edited by Alexander Wilhelm Köhler & [from Vol. 5] Christian (or Carl) August Siegfried Hoffmann. Numerous plates & tables (many folding). Six vols. in 12. 8vo, cont. pinkish-purple boards (spines faded, occasional

dampstaining & foxing), printed paper labels on spines. Freiberg: Craz, 1788-94.

[WITH]:

NEUES BERGMÄNNISCHES JOURNAL. Edited by Alexander Wilhelm Köhler & Christian (or Carl) August Siegfried Hoffmann. Numerous plates & tables (many folding). Three vols. (of 4). 8vo, cont. blue boards, printed paper labels on spines. Freiberg: Craz, 1795-99. $7500.00

A nearly complete run — lacking only the fourth and final volume of the second series (which was published 18 years after Vol. III) — of this important and rare geological and mineralogical journal, edited by two of Werner's chief disciples, Köhler and Hoffmann. This journal was the chief mouthpiece for spreading the revolutionary ideas of Werner concerning geology and mineralogy. The contributors constitute an honor roll of German scientists and include Werner (numerous contributions), Alexander von Humboldt (several of his earliest appearances in print), C.R.W. Wiedemann, Hoffmann, Köhler, Göttling, Karsten, J.F. Widenmann, Gellert, Klaproth, Lempe, etc., etc.

The journal includes book reviews, lists of relevant books recently published, obituaries, reports from American mines, etc.

Fine set. From the library of His Serene Highness Prince Fürstenberg at Donaueschingen, with his stamp on the verso of the title of each volume. Lacking the general title in Vol. III of the second series.

◖ Hoover 116–(Vols. 1-5 only of the *Bergmännisches Journal*). Kronick 348. Poggendorff, I, 1123 & 1291.

"Established the Fundamental Principles of the Calculus of Probabilities"–Evans

11. BERNOULLI, Jacob. *Ars Conjectandi, Opus Posthumum. Accedit Tractatus De Seriebus Infinitis, et Epistola Gallicè scripta de Ludo Pilae Reticularis.* Woodcut device on title, two folding printed tables, & one folding woodcut plate. 2 p.l., 306, 35, [1] pp. 4to, fine cont. vellum over boards (slightly warped). Basel: impensis Thurnisiorum, Fratrum, 1713. $25,000.00

First edition of "the first systematic attempt to place the theory of probability on a firm basis and is still the foundation of much modern practice in all fields where probability is concerned — insurance, statistics and mathematical heredity tables."–*Printing & the Mind of Man* 179.

A very fine and large copy preserved in a box.

◖ Dibner, *Heralds of Science,* 110. *D.S.B.,* II, pp. 46-51. Evans, *Epochal Achievements*, 8. Horblit 12.

12. BOSSUT, Charles. *Traité Théorique et Expérimental d'Hydrodynamique.* 23 folding engraved plates. 3 p.l., xviii, 545, [3] pp.; 4 p.l., 515, [1] pp. Two vols. Thick 8vo, orig. mottled calf (a few minor defects), triple gilt fillet round sides, flat spines richly gilt, green morocco lettering pieces on spines. Paris: Imprimerie Royale, 1786-87. $2750.00

First edition of one of the classic works in hydrodynamics and hydraulics. The second volume is particularly interesting as it describes numerous hydraulic experiments. The handsome plates illustrate many hydraulic machines including two devices which produce steam.

Bossut (1730-1814), assumed the chair of hydrodynamics established by Turgot at the Louvre. He was a major contributor to European scientific education and his texts represent the emergence of a standardized, rigorous system of engineering physics textbooks.

A very fine and attractive set in remarkable original state.

◖ *D.S.B.,* II, pp. 334-35. Rouse & Ince, *History of Hydraulics*, pp. 126-27.

"The First Recognition of Electrical Repulsion"

13. CABEO, Niccolo. *Philosophia Magnetica, in qua Magnetis Natura penitus explicatur, et Omnium quae hoc Lapide cernuntur, causae propriae afferuntur . . .* Engraved title & several engravings & numerous woodcuts in the text. 8 p.l., 412, [12] pp. Folio, cont. half-sheep & marbled boards (minor worming towards end), spine gilt, black leather lettering piece on spine. Ferrara: F. Succius, 1629.

$15,000.00

First edition, Jesuit issue, and a very fine copy. "Perhaps the most significant discovery of the century following Gilbert was that of electrical repulsion. This effect seems first to have been noticed incidentally by Cabeus, who, in his *Philosophia Magnetica* (1629), describes how filings attracted by excited amber sometimes recoiled to a distance of several inches after making contact."–Wolf, *A History of Science, Technology, and Philosophy,* I, p. 303.

Cabeo also relates his many experiments on the possibility of telegraphic communication by means of magnetized needles and gives the first picture of the sympathetic telegraph, an imaginary magnetic telegraph which sometimes appeared in early electrical literature, fancifully prefiguring the actual telegraph. It was supposed to operate by synchronous activation of two instruments with alphabetic dials whose needles had been magnetized by the same magnet.

Cabeo (1586-1650), taught theology and mathematics in Parma for many years until he settled in Genoa where he taught mathematics.

Handsome and large copy. There are three issues (no priority) of this book: the first issue has a royal coat-of-arms at the head of the title; the second issue has the coat-of-arms replaced by the Jesuit emblem; and the third was produced for export to Germany and has an added printed title with a Cologne imprint.

◖ Ferguson, I, p. 136. Neville, I, p. 232. Riccardi, I, 205-06. Wheeler Gift Cat. 97–"the first recognition of electrical repulsion."

A Monumental Work on Mining & Metallurgy

14. CANCRIN, Franz Ludwig von. *Erste Gründe der Berg und Salzwerkskunde.* Engraved vignettes on general titles, 540 (of 548, see Part IX below) folding engraved plates, & 18 folding printed tables on 16 leaves. 12 parts bound in 16 vols. 8vo, cont. vellum over boards (Vols. I-IX) and other good cont. bindings for the rest. Frankfurt am Main: Andrea, 1773-91. $8500.00

First edition of this great work. Cancrin (1738-1812), was an engineer and high government official, both in Germany and in Russia, where he was recruited by Catherine II to manage the Staraya Russa saltworks. "Despite the press of his civil offices, Cancrin found time (1773-1791) to write an encyclopedic work in twenty-one volumes [actually it is 12 titles in 19 parts] that covered all aspects of the mining of metals and salt — including mineralogy, assaying, mathematics, and mechanics. This work brought him a European reputation."–*D.S.B.,* III, pp. 41-42.

In this set, the binder has removed many of the title-pages for the individual parts, as the general titles supply summary titles. In the following description, we have supplied the exact or summary titles:

Part I. *Kurzer Entwurf der Mineralogie.* 10 p.l., 272, [24] pp. 1773. Cancrin's introduction to mineralogy.

Part II. *Probierkunst.* Ten folding engraved plates. 4 p.l., 296, [14] pp. 1773. On assaying.

Part III. *Erste Begriffe der oberirdischen Erdbeschreibung.* Three folding engraved plates. 4 p.l., 72, [7] pp. 1773. Concerned with subterranean geological formations and ore deposits.

Part IV. *Erste Begriffe der unterirdischen Erdbeschreibung.* Eight folding engraved plates. 4 p.l., 72, [7] pp. 1773. Concerned with surface geological formations.

Part V. *Kurzer Entwurf der Grubenbaukunst.* 57 folding engraved plates. 6 p.l., 244, [16] pp. 1774. This is a richly illustrated work on methods of digging and constructing mines. The plates depict the different kinds of shafts that could be established, the tools used to dig the shafts and remove metals and their ores, methods of securing the shafts, etc.

Part VI, in two vols. *Anleitung zur Markscheidekunst. Erster* [–*Anderer*] *Teil. Welcher die Arithmetik, Geometrie und ebene Trigonometrie in sich begreift.* 65 folding engraved plates and two tables on one folding sheet. 4 p.l., 808, [60] pp.; 4 p.l., 304, xxxi,

[24] pp. Two parts in two vols. 1775-76. A very well-illustrated treatise on underground surveying. Many instruments and machines are depicted.

Part VII, in three vols. *Mechanik, Hydrostatik, Aerometrie und Hydraulik.* 110 folding engraved plates. 4 p.l., 276, [36] pp.; 6 p.l., 222, [13] pp.; 4 p.l., 32 pp. Three vols. 1777-78-81. Describes the machinery used in mines. The plates are very detailed.

Part VIII. *Anleitung zur Scheide oder Aufbereitungskunst der Mineralien.* 21 folding engraved plates. 5 p.l., 158, [8] pp. 1782. A complete work on the extraction of metals from ore.

Part IX, in three vols. *Schmelzung und Ausscheidung der Metalle aus ihren Erzen.* 214 (of 222) folding engraved plates. 5 p.l., 432, [18] pp.; 4 p.l., 168, [5] pp.; 6 p.l., 216, [14] pp. 1784-86-88. On smelting and metallurgy. This part lacks the 12-leaf *Anhang* to the first volume and its eight plates.

Part X, in three vols. *Entwurf der Salzwerkskunde.* 52 folding engraved plates & five folding printed tables on three leaves. 7 p.l., 270, [26] pp.; 4 p.l., 284, [18] pp.; 4 p.l., 210, [20] pp. 1788-89-89. A complete work on salt mining and refining.

Part XI. *Grundsäzze des teutschen Berg- und Salzrechts zum Gebrauch der vorlesungen entworfen.* 1 p.l., x, 210 pp.; 162 pp.; 146 pp.; 110 pp.; [iii]-x, 67, [35] pp. Five parts in one vol. 1790. On the laws concerning mining.

Part XII. *Die Bergkameral- und Bergpolizeiwissenschaft.* Twelve folding printed tables. 4 p.l., 276, [10] pp. 1791.

A fine and attractive set. The first nine parts, bound in eleven volumes, are in fine contemporary vellum, with the stamp of "Bibliothek Schloss Miltenberg." The castle is in the town of Miltenberg on the River Main, north of the Odenwald. Most sets are incomplete, lacking parts and/or plates, due to the long span of time it took to publish the complete work.

Fundamental Work on Color

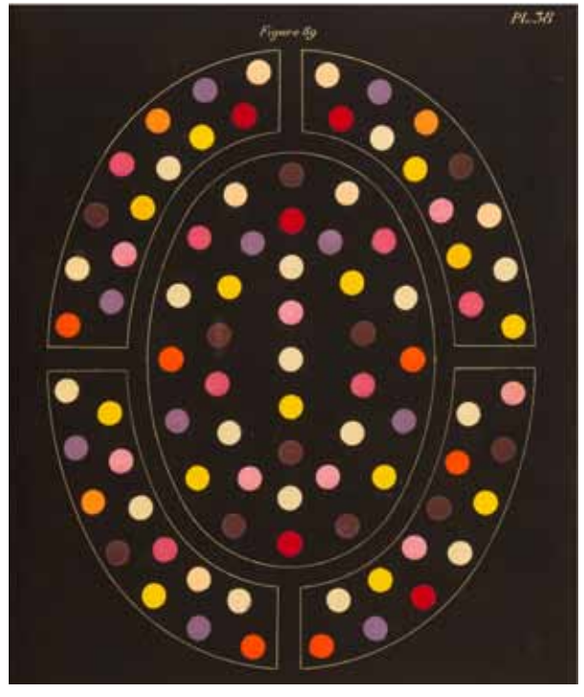
15. CHEVREUL, Michel Eugène. *De la Loi du Contraste simultané des Couleurs, et de l'Assortiment des Objets colorés, considéré d'après cette Loi dans ses Rapports avec la Peinture, les Tapisseries des Gobelins, les Tapisseries de Beauvais pour Meubles, les Tapis, la Mosaïque, les Vitraux colorés, l'Impression des Étoffes, l'Imprimerie, l'Enluminure, la Décoration des Édifices, l'Habillement et l'Horticulture.* Two vols. Text vol.: two folding printed tables. xv, 735 pp., one leaf of errata. 8vo, attractive antique calf-backed marbled boards (several signatures foxed), flat spine gilt. [with]: Atlas vol.: 40 plates, most of them colored & folded, many of them signed by the author, and nine printed sheets, each of a different color, and two printed leaves of text (including title). Large 4to, binding as above. Paris: Pitois-Levrault, 1839. $25,000.00

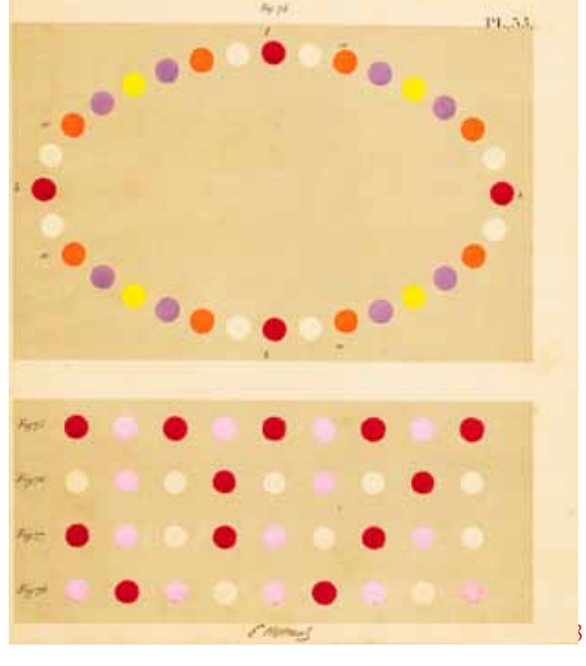
First edition of this classic work — one of the most influential treatises on color of the 19th century — by the great French chemist Chevreul (1786-1889).

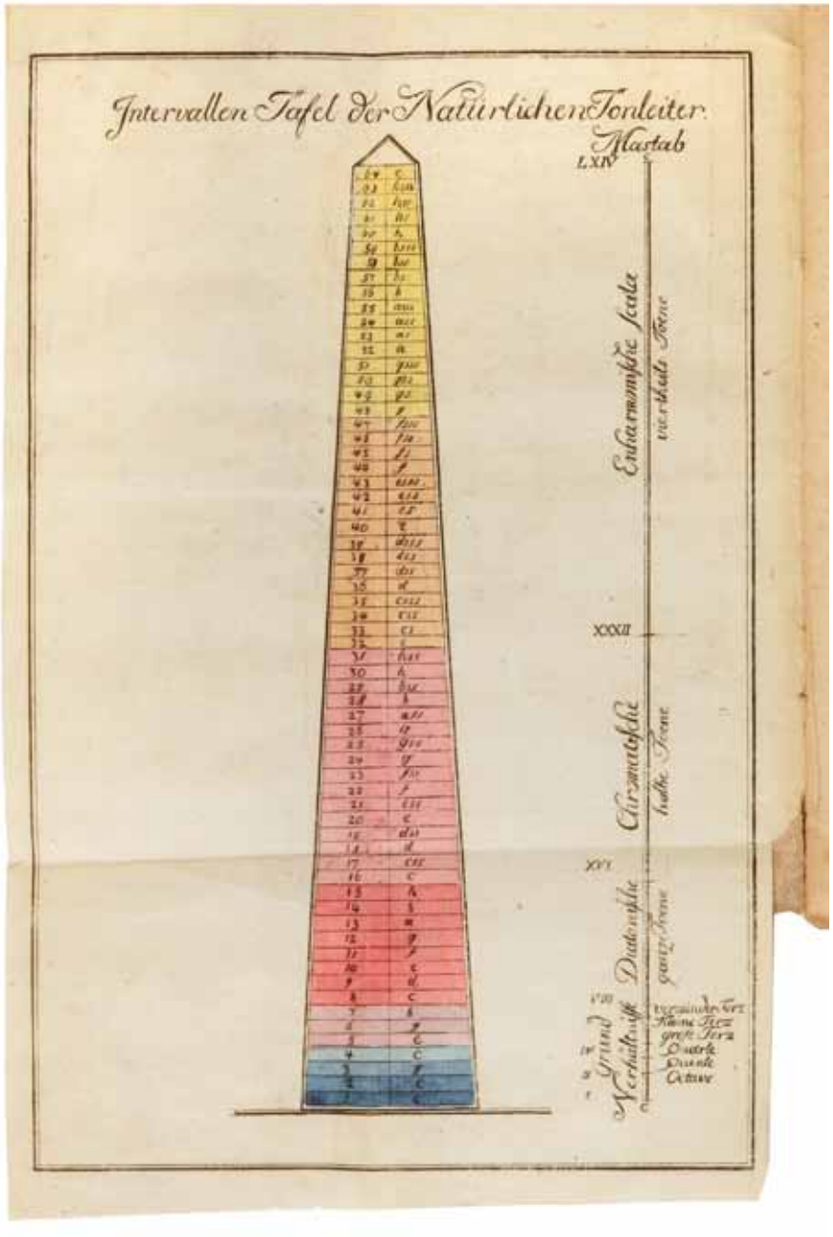
"Chevreul made an intensive study of the principles governing the contrast of colors, which resulted in his monumental *De la loi du contraste simultané des couleurs* (1839), the most influential of his many books. This book was the outcome of his discovery that the apparent intensity and vigor of colors depended less on the pigmentation of the material used than on the hue of the neighboring fabric. After many experiments on color contrast Chevreul formulated for the first time the general principles and effects of simultaneous contrast, the modification in hue and tone that occurs when juxtaposed colors are seen simultaneously . . . Chevreul designed his *De la loi du contraste simultané* less for scientists than for painters, designers, and decorators. He devoted much of the book to the applications of the principles of contrast to the various problems that the artist and designer encounter in the use of color and to the harmonizing of colors and their use as agents of pictorial harmony . . . The neo-impressionist painters derived their methods of painting from Chevreul's principles, applying separate touches of pure colors to the canvas and allowing the eye of the observer to combine them."– *D.S.B.,* III, p. 241.

Nice set.

◖ *En Français dans le Texte* 237. Kemp, *The Science of Art,* pp. 306-07.







The Colorful History of Harmony; "One of the First Musical Romantics"–Grove

16. DALBERG, Johann Friedrich Hugo, Freiherr von. *Untersuchungen über den Ursprung der Harmonie und ihre allmählige Ausbildung.* Folding handcolored engraved frontispiece, two engraved plates (one folding & heightened in red), one folding plate of printed music, & music printing in the text. xii, 52 pp., one leaf of errata. 8vo, cont. marbled semi-stiff boards (spine a little defective), uncut. Erfurt: Beyer & Maring, 1800. $2950.00

First edition of this attractive and fascinating book which relates harmony to colors; it is very much a product of early German Romanticism. Dalberg (1760-1812), was an author, composer, and aesthetician. He was "born into a noble family . . . though physically deformed, he was a virtuoso pianist . . . He studied composition with Ignaz Holzbauer and travelled extensively in Italy and England. His works about music and his compositions were published regularly in his lifetime and were regarded seriously by professionals . . .

"Dalberg's writings cover such diverse subjects as meteorology, penal law and translations of works on oriental subjects. This wide range of interest that hints at the dilettante is also reflected in his writings on music. Their topics included the music of India, ancient Greek music, newly invented instruments and the history of harmony."–New Grove, Vol. 5, pp. 151-52.

Dalberg was very interested in the nature of musical inspiration and in the present work he provides a history of harmony and relates various harmonic structures to certain colors. The wonderful handcolored frontispiece depicts a color scale ranging from deep blue to pale yellow. Dalberg associates diatonic and chromatic scales with darker colors and enharmonic scales with orange and yellow.

Very good copy with some minor browning and foxing.

Darwin's First Separately Printed Work

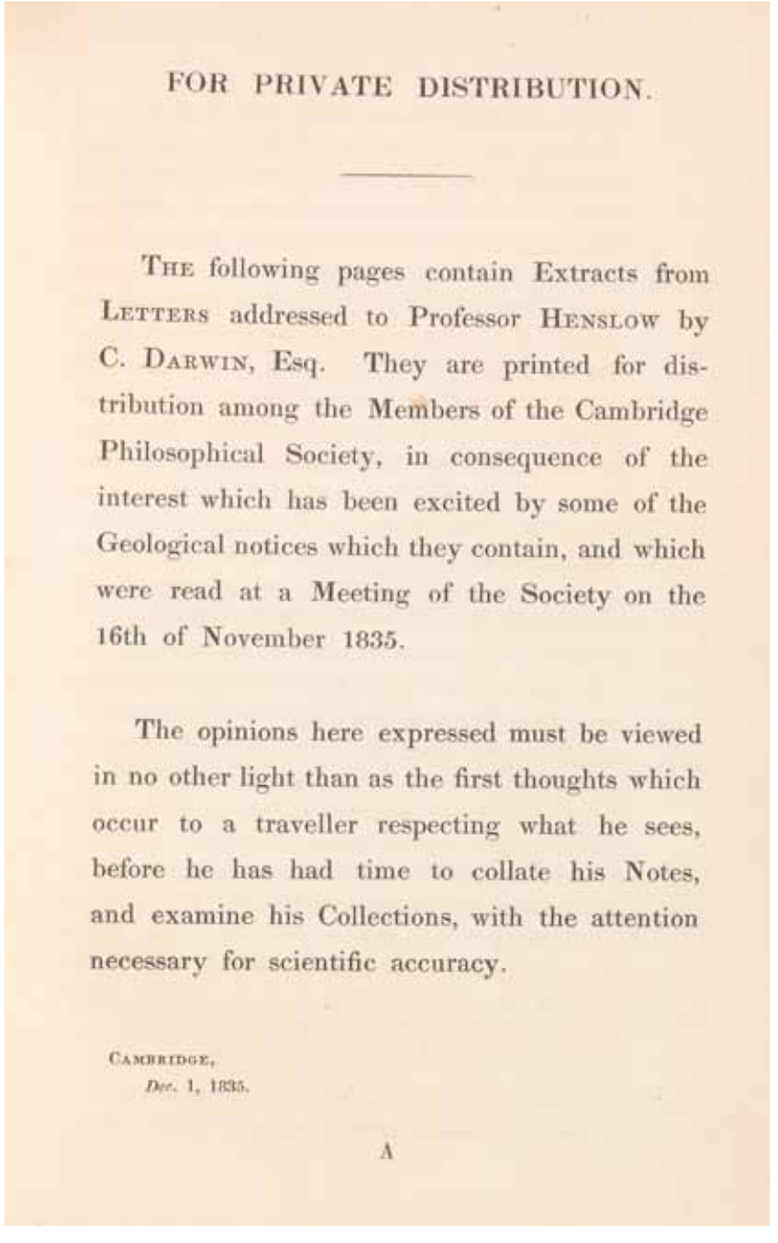
17. DARWIN, Charles Robert. [Drop-title]: *For Private Distribution . . . Extracts from Letters addressed to Professor Henslow by C. Darwin.* 31 pp. 8vo, bound in attractive green morocco-backed cloth over boards. [Cambridge: "Printed for Distribution among the Members of the Cambridge Philosophical Society," 1 December 1835]. $300,000.00

First edition of Darwin's first separately printed work, and of the greatest rarity. This unauthorized pamphlet contains extracts from ten letters written to John Stevens Henslow (1796-1861), by Darwin during his five-year voyage on the *Beagle*. Henslow had been Darwin's botany professor at Cambridge and their friendship "was one of the most influential circumstances in his [Darwin's] early life."–ODNB. It was Henslow who obtained for him the post of naturalist on the *Beagle*.

Darwin's letters were published without his knowledge; Henslow had read some of them before the Cambridge Philosophical Society and was responsible for printing this small pamphlet of extracts. The present work did introduce Darwin's name and some important observations to a small but influential group of scientists, and when he arrived back in England in the autumn of 1836 he carried with him something of a reputation as a geologist.

Fine copy, preserved in a green morocco-backed box. From the library of Robert Crewe-Milnes, 1st Marquess of Crewe (1858-1945), British statesman and author (note on pastedown stating that the book was purchased by Maggs Bros. from the Crewe library). Accompanied by the 1960 privately printed facsimile.

◖ Freeman 1.



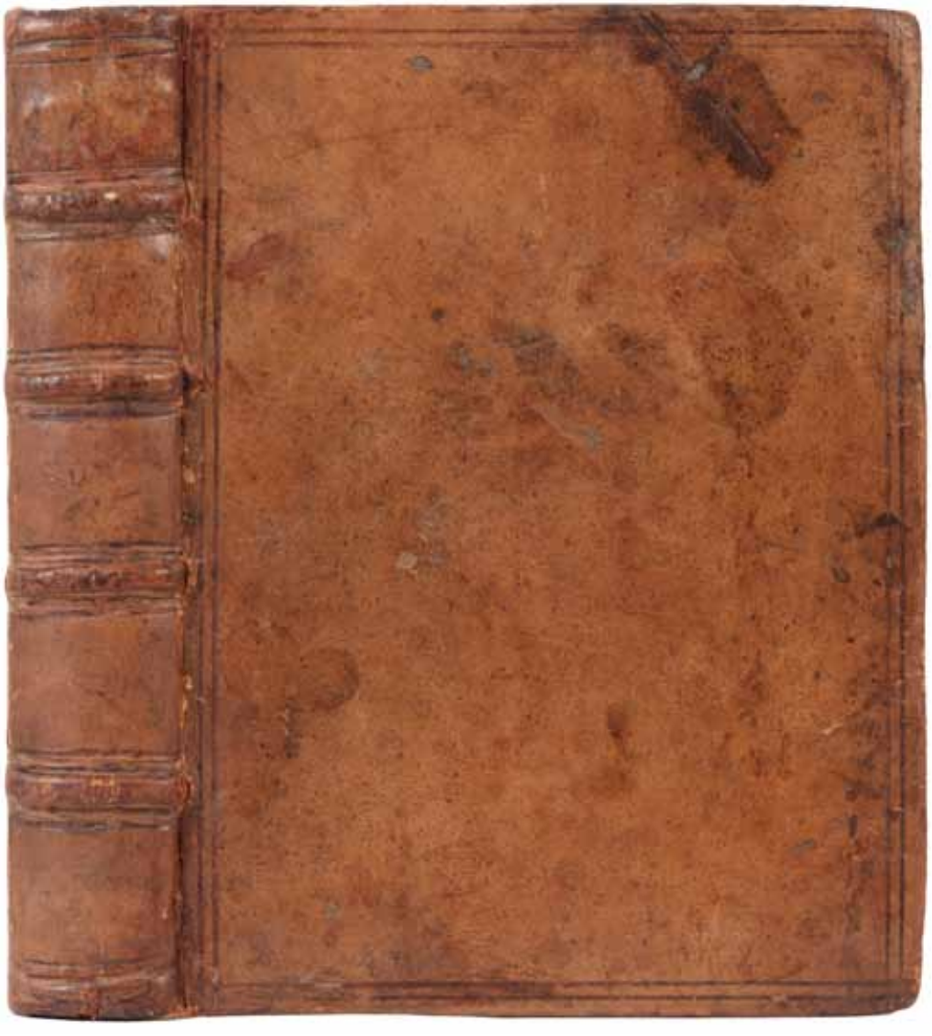
FOR PRIVATE DISTRIBUTION.

THE following pages contain Extracts from LETTERS addressed to Professor HENSLOW by C. DARWIN, Esq. They are printed for distribution among the Members of the Cambridge Philosophical Society, in consequence of the interest which has been excited by some of the Geological notices which they contain, and which were read at a Meeting of the Society on the 16th of November 1835.

The opinions here expressed must be viewed in no other light than as the first thoughts which occur to a traveller respecting what he sees, before he has had time to collate his Notes, and examine his Collections, with the attention necessary for scientific accuracy.

CAMBRIDGE,
Dec. 1, 1835.

A



The Foundation of Modern Scientific Method

18. [DESCARTES, René]. *Discours de la Methode pour bien conduire sa Raison & chercher la verité dans les Sciences. Plus La Dioptrique. Les Meteores. Et la Geometrie. Qui sont des essais de cete Methode.* Woodcut printer's device on title & woodcut illus. & diagrams in the text (several full-page). 78 pp., 1 leaf, 413, [34] pp. Small 4to, cont. English panelled calf (small & careful repairs to head & tail of spine), cont. English fore-edge paper label lettered "Cartes." Leyden: J. Maire, 1637. $200,000.00

First edition, and a fine copy in a contemporary English calf binding with a delightful fore-edge label reading "Cartes." This great classic of science is Descartes's first published book and his most important. In it, he determined his method for obtaining real knowledge by the natural light of reason. Descartes stated that everything must be questioned so that we may discover something that is beyond doubt. At last, Descartes was left with one certainty: *Cogito, ergo sum* — "I think, therefore, I am." From this central proposition stems all modern scientific and philosophic thought.

Descartes appended here the "Meteores," "La Dioptrique," and "La Geometrie" as examples of his method. "La Geometrie" is his most important mathematical work (according to *D.S.B.,* IV, p. 55, his "magnum opus"), in which he laid the foundation of the new analytical geometry. The other two treatises are concerned with his optical researches and contain the earliest statement of Snell's law of refraction.

Descartes also applied his physiological ideas in the *Discours.* His discussion of Harvey's discovery of the circulation of the blood is the first mention of it by a prominent foreign scholar.

A fine, unpressed, and charming copy, preserved in a red morocco-backed box.

◖ Dibner 81. *En Français dans le Texte* 90. Horblit 24. *Printing & the Mind of Man* 129. Sparrow, *Milestones of Science,* 54.

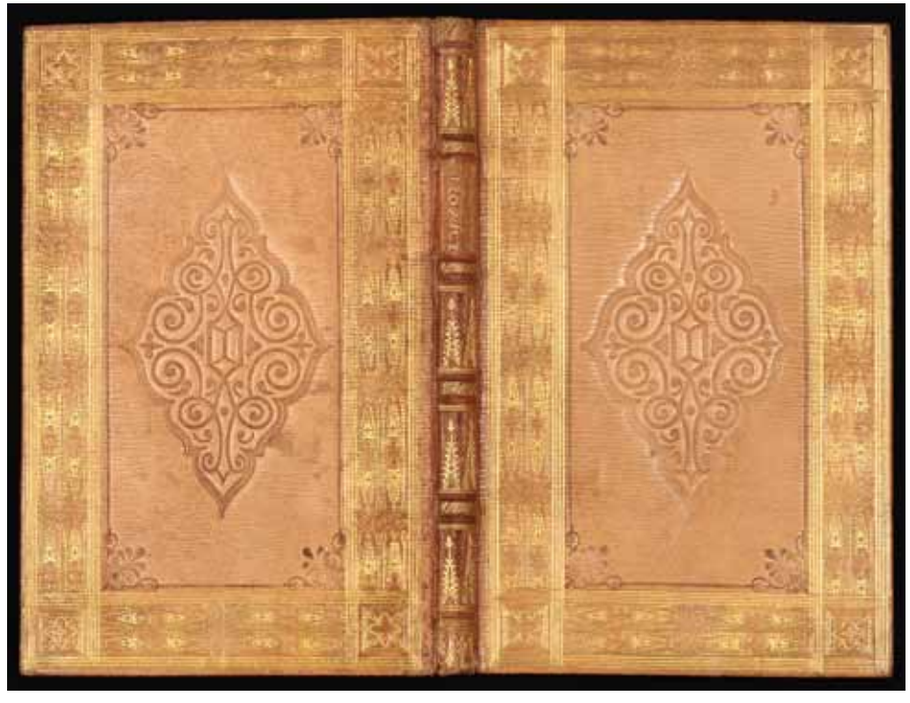
"The Most Exclusive Bookseller's Catalogue Ever Issued . . . A Joy to Possess" In a Dazzling Contemporary Binding by George Mullen of Dublin

19. DIBDIN, Thomas Frognall. *Here Begyneth a Littel Tome and Hathe to Name The Lincolne Nosegay: beynge a Brefe Table of Certaine Bokes in the Posession of Maister Thomas Frognall Dibdin Clerk. Which Bookes be to be sold to Him who shal gyve the moste for ye Same.* 16 pp. 8vo, a wonderful cont. binding by George Mullen of Dublin (with his ticket) of cream-colored straight-grained morocco (spine very slightly darkened), richly gilt & blind-tooled, around sides gilt roll borders in a "Gothic" design, flanked by quadruple gilt fillets, central panels decorated in blind, in center of each cover a large lozenge-shaped arabesque blind stamp, inner arabesque cornerpieces; inside borders gilt, doublures & endleaves of blue watered silk, framed by blind ornamental borders, spine with four raised bands & richly gilt, second compartment with title lettered in gilt, a.e.g. [London: printed by W. Bulmer, [1814].]. $75,000.00

First edition, limited to 36 copies only; one of the great Dibdin rarities, here bound, ca. 1816, in one of the masterpieces by George Mullen of Dublin, Ireland's finest binder of the period, with his ticket.

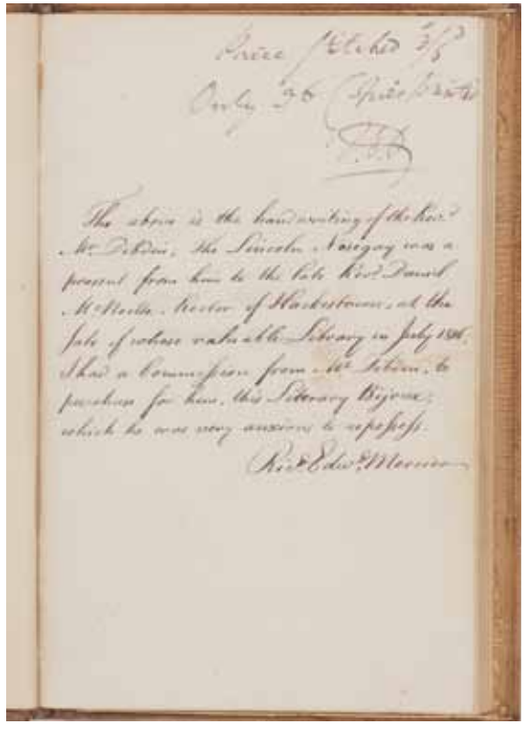
In this work we find Dibdin in the guise of bookseller. In October 1814 Dibdin managed to purchase for 500 guineas from the Dean and Chapter of Lincoln Cathedral six volumes containing 19 titles, mostly black-letter rarities, including four Caxtons. Within a month, Dibdin produced the present catalogue.

"The well-turned archness of the title and the enthusiasm of the descriptions, the use of the best printer in England and the small limitation, the quality and the rarity of the books . . . and the standing in the book world of the celebrated author of *Bibliomania*, were carefully chosen ingredients which made *The Lincolne Nosegay* the most exclusive bookseller's catalogue ever issued. It may perhaps be more aptly termed a private auction catalogue, for it is unpriced, but the distinction is not important. More important is the limitation of edition as the measure of Dibdin's influenceable circle of friends and maximum targeted sales audience: thirty-one in the Roxburghe



Club, including himself, and five spare copies . . . It is therefore not surprising that the *Nosegay* became a highly-prized collector's bijou — a joy to possess and a frustration not to possess . . . The *Nosegay* has remained a rare and attractive relic of its age."–Rabaiotti, "Beckford's *A Dialogue in the Shades* and Dibdin's *The Lincolne Nosegay*" in *The Book Collector,* Summer 1989, pp. 212-13.

PROVENANCE: This copy was given or sold by Dibdin to the Rev. Daniel McNeille, rector of Hackestowne in Ireland; on the upper portion of a front flyleaf Dibdin has written: "Price stitched 3s/6d. Only 36 Copies printed. T.F.D." This copy was bought at the sale of McNeille's "valuable" library in Dublin in July 1816 (clipping regarding the sale from the Dublin Journal of 20 July 1816 mounted on an endpaper) by William Shaw Mason (1774-1853), author of A Statistical Account or Parochial Survey of Ireland. On the flyleaf, underneath Dibdin's note, the auctioneer, Richard Edward Mercier, has recorded that Dibdin himself had given him an unsuccessful commission for this book: " . . . I had a Commission from



Mr. Dibdin to purchase for him this Literary Bijoux, which he was very anxious to repossess." Mason, who probably asked Mercier to write this note, had it bound by Mullen, the outstanding Irish binder of the period, and presented it to Earl Whitworth of Abaston (1795-1825), Lord Lieutenant of Ireland from 1813 to 1817. On another flyleaf, there is a dedication in Mason's hand: "His Excellency Charles Earl Whitworth, Lord Lieutenant of Ireland &c., whose kind Condecension has so especially promoted the progress of the Statistical Survey." With the bookplate of George John, Eighth Earl of De La Warr (1791-1869) on the front doublure. From the library of Bernard H. Breslauer (his sale, Christie's NY, 21 March 2005, lot 83). The binding was exhibited, and reproduced in the exhibition's catalogue, at the Houghton Library in 1991.

Fine copy preserved in a box.

Jackson 34. Windle & Pippin A 24a.

The First Printing of Fermat's Last Theorem; With the Very Rare Errata Leaf

20. DIOPHANTUS, of Alexandria. *Arithmeticorum Libri Sex, et De Numeris multangulis Liber Unus. Cum Commentariis C.G. Bacheti . . . & observationibus D.P. de Fermat . . . Accessit Doctrinae Analyticae inventum novum, collectum ex variis eiusdem D. de Fermat Epistolis.* Large engraved vignette on title, several finely engraved headpieces & initials, & a few woodcut diagrams in the text. 6 p.l., 64, 341, 48 pp., one leaf of errata. Folio, cont. speckled calf (carefully rebacked with the orig. spine laid-down, light browning as usual, two corners discretely repaired), spine richly gilt. Toulouse: B. Bosc, 1670. $65,000.00

First edition, and a very fine and fresh copy. This edition is the first to contain Fermat's observations on the *Arithmetica* of Diophantus, the first systematic treatise on algebra; it also contains (on H3r) the first statement of the celebrated "Last Theorem" which Fermat originally wrote by hand in the margins of his copy of Bachet's edition of Diophantus (1620). This theorem is the most famous problem in mathematics and remained unsolved for over 325 years until its recent solution by Andrew Wiles. But it should be remembered that Wiles was able to resort to sophisticated 20th-century techniques not available to Fermat. The exact form of Fermat's proof, if indeed he had a genuine one, thus remains one of the great unsolved puzzles of mathematics.

The 1670 edition was published posthumously by Fermat's son Clement Samuel. It is based on his father's annotated copy of the Bachet edition of 1621 and contains a major part of Fermat's work on number theory, a branch of mathematics that he virtually created.

A nice copy with the extremely rare errata leaf.

◖ Smith, *Rara Arithmetica,* p. 348.

The Natural History Collections at Dresden
Large Paper Copy

21. [EILENBURG, Christian Heinrich]. *Description du Cabinet Roial de Dresde touchant l'Histoire Naturelle.* Engraved arms on title, an engraved headpiece depicting the Zwinger, & two engraved folding plates. 1 p.l., 101, [1] pp. Large 4to, cont. mottled & polished sheep (minor browning), spine gilt, leather lettering piece on spine. Dresden & Leipzig: G.C. Walther, 1755. $5000.00

First edition, and a fine large paper copy, of the "first separate catalogue of the Dresden natural history collections housed in the magnificent baroque Zwinger (built by Poeppelmann in 1711), which also accommodated the Dresden print cabinet. This catalogue is one of the fruits of Augustus the Strong's reorganisation of the old Dresden *Wunderkammer* into a number of specialised collections. The collection of ancient marbles was similarly catalogued in 1733, and the prehistoric and mineralogical collections in 1749; other departments of the museum followed in the nineteenth century . . .

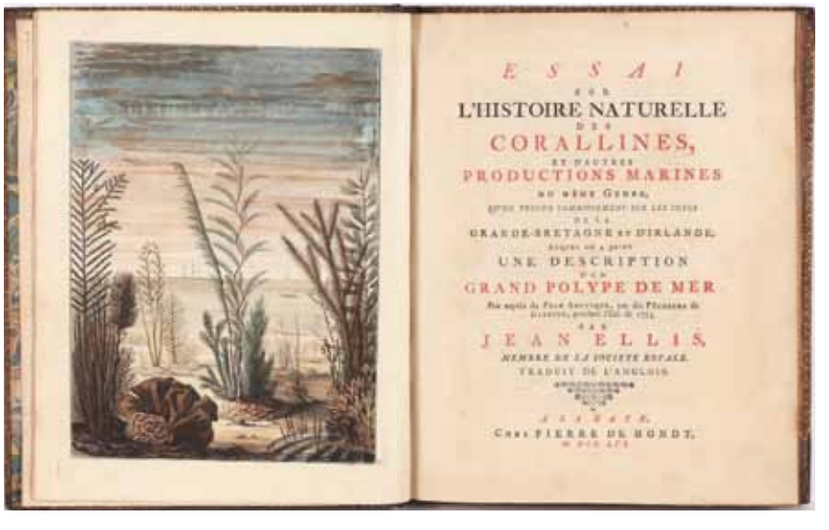
"Fossils and petrifactions, animal skeletons and specimens, corals and shells were all represented in profusion, but oddities and natural curiosities still abound in the form of 'Missgeburten', peculiarly shaped plants, and two pieces of gold and silver supposedly transmuted from copper and lead by Johann Friedrich Boettger, better known for his rediscovery of the art of making porcelain. The final chapter is devoted to a model of Solomon's temple, constructed over a period of twenty years from Biblical references by a Hamburg gentleman named Schott. The model had been admired by Peter the Great and exhibited in London where a pamphlet about it was issued in 1725. The folding plates give ground-plans of the Zwinger."–Grinke, *From Wunderkammer to Museum,* 50.

Very nice copy, printed on large paper. A German language edition was also published in the same year.

◖ Murray, I, pp. 207-8. Schuh, *Mineralogy & Crystallography: A Biobibliography,* 1469 to 1920, 1506.

With Fine Contemporary Coloring
A "Seminal" Work

22. ELLIS, John. *Essai sur l'Histoire naturelle des Corallines, et d'autres Productions marines de même Genre, qu'on trouve communement sur les Côtes de la Grande-Bretagne et d'Irlande; auquel on a joint une Description d'un Grande Polype de Mer, pris auprès*



du Pole Arctique, par des Pêcheurs de Baleine, pendant l'Été de 1753. Engraved frontis. & 39 engraved plates (5 are folding), all of which are finely handcolored. xvi, 125 pp., [3] pp. of publisher's ads. Large 4to, cont. mottled calf (a few careful repairs to upper joint & corners), triple gilt fillet round sides, spine gilt, red morocco lettering piece on spine, a.e.g. The Hague: P. de Hondt, 1756. $13,500.00

First edition in French (1st ed., in English: 1755); this is one of the few copies which has fine and delicate contemporary coloring. Ellis (ca. 1710-76), whom Linnaeus termed a "bright star of natural history" and "the main support of natural history in England," was one of the earliest marine zoologists. With the Swede Daniel Solander (1733–1782), he discovered that sponges are animals.

"Ellis's zoophyte descriptions and professionally drawn engravings, and his scientific approach, were outstanding. His two longest books, *Natural History of the Corallines* . . . and the posthumous *Natural History of Zoophytes* (1786, partly written by Solander), were seminal. In the 1750s he was one of the British Museum's first noteworthy scientific visitors. He became a fellow of the Royal Society in 1754 and was its Copley medallist in 1767."–ODNB.

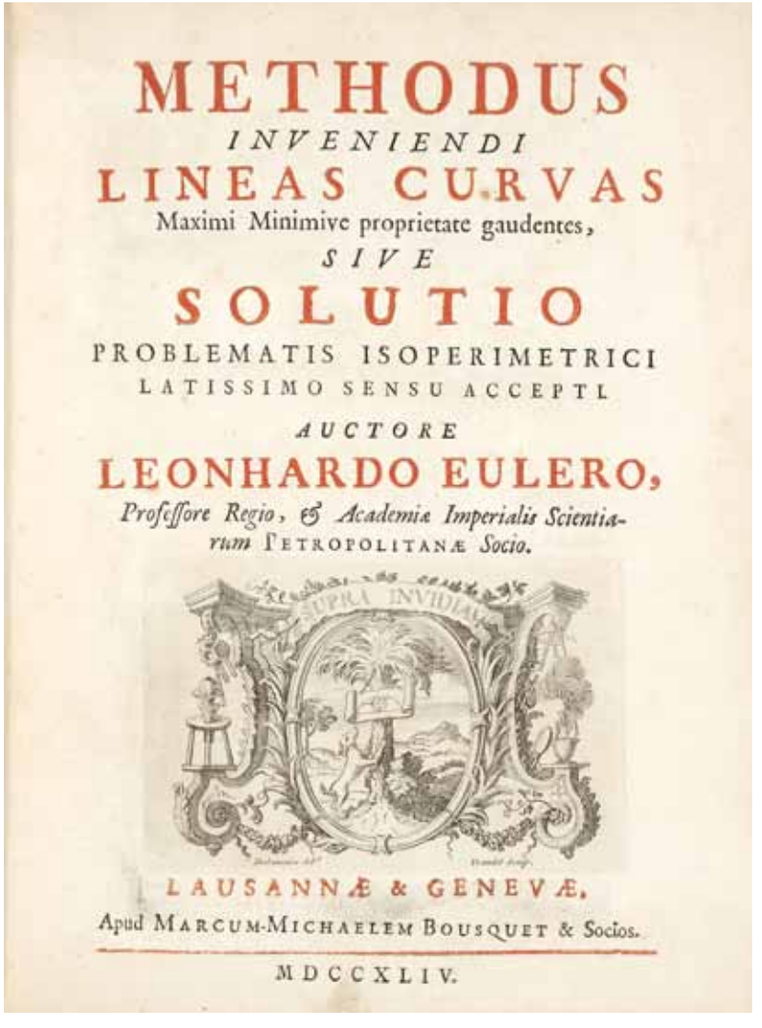
The final plate depicts Cuff's aquatic microscope. See Clay & Court, *History of the Microscope,* pp. 66-68.

A very attractive copy.

A New Branch of Mathematics

23. EULER, Leonhard. *Methodus Inveniendi Lineas Curvas Maximi Minimive proprietate gaudentes, sive Solutio Problematis Isoperimetrici Latissimo sensu accepti.* Engraved vignette on title & five folding engraved plates. Title in red & black. 1 p.l., 322 pp., 1 leaf of instructions to binder. Large 4to, cont. mottled calf (foot of upper joint carefully repaired), spine richly gilt, red morocco lettering piece on spine. Lausanne & Geneva: M.M. Bousquet, 1744. $12,500.00

First edition of the work which created the calculus of variations. This book, which displayed "an amount of mathematical genius seldom rivalled, contained his researches on the calculus of variation to the invention of which Euler was led by the study of the researches of Johann and Jakob Bernoulli . . . The study of isoperimetrical curves, the brachistochrone in


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

a resisting medium and the theory of geodesics, previously treated by the elder Bernoullis and others, led to the creation of this new branch of mathematics, the Calculus of Variations. His method was essentially geometrical, which makes the solution of the simpler problems very clear."–Cajori, *A History of Mathematics,* p. 234.

Fine large copy from the library of Haskell F. Norman with bookplate.

◖ Dibner 111. *D.S.B.,* IV, p. 479. Evans, *First Editions of Epochal Achievements in the History of Science* (1934), 9. Horblit 28. Roberts & Trent, *Bibliotheca Mechanica,* p. 104–"For the purposes of mechanics, the significance of this work lies in the appendix, which deals with geometrical forms of elastic curves . . . The present work illustrates the first solution to the problem of the buckling of a column." Sparrow 60.

One of Euler's Rarer Works; The Dukes of Anhalt Set

24. EULER, Leonhard. *Opuscula Analytica.* Two folding engraved plates. 2 p.l., 363 pp.; 2 p.l., 346 pp. Two vols. Large 4to, early 19th-cent. half-sheep & green marbled boards, flat spine gilt, red leather lettering piece on spine. St. Petersburg: Typis Academiae Imperialis Scientiarum, 1783-85. $9500.00

First edition of this collection of 29 mathematical treatises by Euler; the first volume was published in the year of his death. This is a very uncommon book.

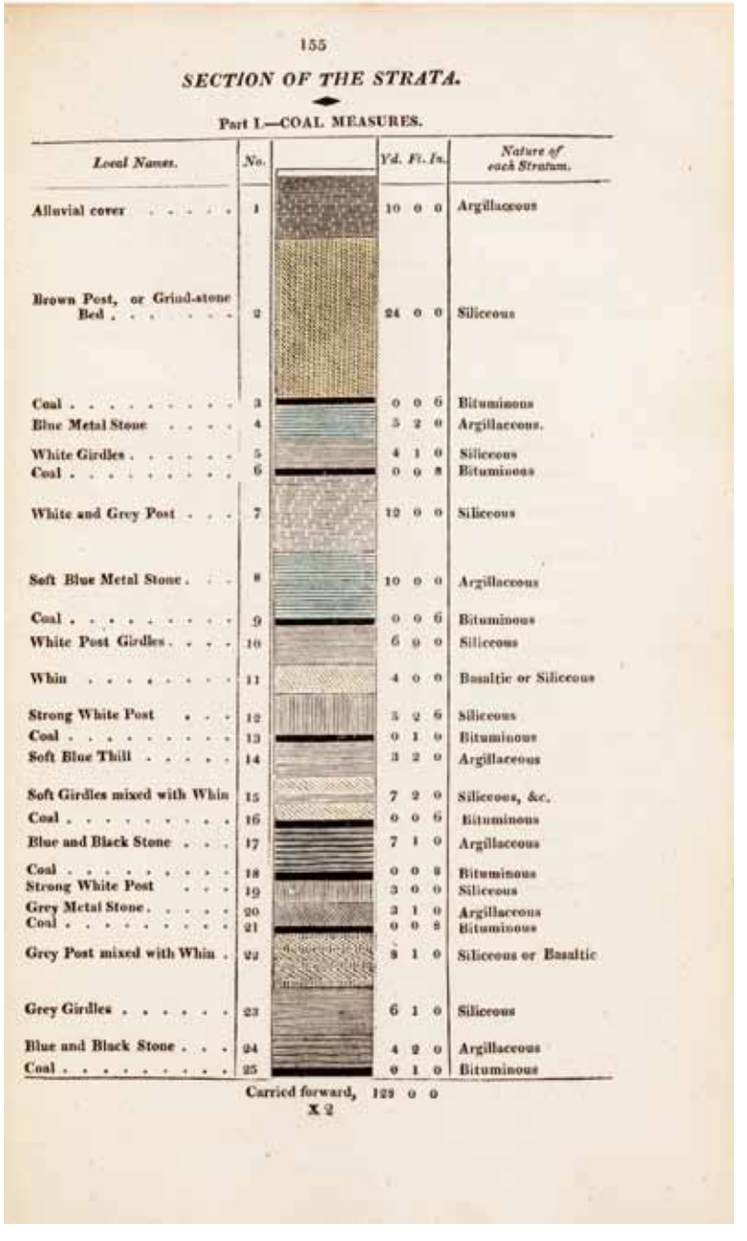
"Containing important papers on the theory of numbers, including his famous 'Observationes circa Divisionem Quadratorum per Numeros primos', also 'de Criteriis Aequationis $fxx + gyy = hzz$, utrum ea Resolutionem admittat necne? Considerationes super Theoremate Fermatiano,' etc. etc."–Sotheran, 2nd Supp., 1464.

Fine and fresh set from the library of the Dukes of Anhalt with their stamp on verso of each title.

◖ Keynes, *A Treatise on Probability. Bibliography,* p. 443.

Large-Paper Copy

25. FORSTER, Westgarth. *A Treatise on a Section of the Strata, from Newcastle-upon-Tyne, to the Mountain of Cross Fell, in Cumberland; with Remarks on Mineral Veins in General. Also, Tables of the Strata, in Yorkshire, Derbyshire, &c. To which is added, A Treatise on the Discovery, the Opening, and the Working of Lead Mines; with the Dressing and Smelting of Lead Ores.* One large folding printed table, 11 engraved plates (of which 10 are folding & 4 are hand-colored), & numerous hand-tinted diagrams in the text. 8, ix-xii, x, [11]-422, xvi, [18] pp. Thickish 8vo, cont. russia (quite well rebacked), sides decorated in gilt. Alston, Cumberland: Printed,



155

SECTION OF THE STRATA.

Part I.—COAL MEASURES.

Local Names.	No.	Yd.	Ft.	In.	Nature of each Stratum.
Alluvial cover	1	10	0	0	Argillaceous
Brown Post, or Grind-stone Bed	2	24	0	0	Siliceous
Coal	3	0	0	6	Bituminous
Blue Metal Stone	4	5	2	0	Argillaceous.
White Girdles	5	4	1	0	Siliceous
Coal	6	0	0	8	Bituminous
White and Grey Post	7	12	0	0	Siliceous
Soft Blue Metal Stone	8	10	0	0	Argillaceous
Coal	9	0	0	6	Bituminous
White Post Girdles	10	6	0	0	Siliceous
Whin	11	4	0	0	Basaltic or Siliceous
Strong White Post	12	5	2	6	Siliceous
Coal	13	0	1	0	Bituminous
Soft Blue Thill	14	3	2	0	Argillaceous
Soft Girdles mixed with Whin	15	7	2	0	Siliceous, &c.
Coal	16	0	0	6	Bituminous
Blue and Black Stone	17	7	1	0	Argillaceous
Coal	18	0	0	8	Bituminous
Strong White Post	19	3	0	0	Siliceous
Grey Metal Stone	20	3	1	0	Argillaceous
Coal	21	0	0	8	Bituminous
Grey Post mixed with Whin	22	8	1	0	Siliceous or Basaltic
Grey Girdles	23	6	1	0	Siliceous
Blue and Black Stone	24	4	2	0	Argillaceous
Coal	25	0	1	0	Bituminous
Carried forward,		129	0	0	

X 2

for the Author, at the Geological Press, and Sold by John Pattinson, 1821. $2500.00

"Second edition, greatly enlarged" (1st ed.: 1809). This is a handsome large-paper copy; the numerous text diagrams have been hand-tinted (in regular paper copies they are left plain). Forster (1772-1835), was a mining surveyor who had extensive experience in the lead mines of the region.

"Forster's book...is notable for a very long column, some 5 1/2 feet long altogether, which is shown in portions...It is a typical column of 'vertical section', in the Geological Survey's meaning of the term, showing by lines and dots the various kinds of rock, and drawn to scale. On one side are written the 'local names' (which include such curiosities as 'girdles', 'post', 'thill', 'hazle', 'plate', 'tuft') and on the other the 'nature of each stratum' (more ordinary adjectives, such as 'argillaceous', 'siliceous', 'bituminous')."–Challinor, *History of British Geology,* p. 93.

Nice copy.

Hoover 318–(calling for 12 plates in error). Porter, *The Making of Geology*, p. 179–"Westgarth Forster attempted to depict the geological structure of the same area pictorially, by constructing a gigantic notional vertical column of the strata from Cross Fell to the North Sea, encompassing the lead mining area and the north-eastern coalfield. The section was to scale, used consistent shading, and was accompanied by a physical map and an elaborate verbal key."

A Very Pretty Set

26. FOURCROY, Antoine François de, Comte. *Elementary Lectures on Chemistry and Natural History . . . Translated . . . by Thomas Elliot. With Many Additions, Notes, and Illustrations, by the Translator.* xxviii, 520 pp.; viii, [9]-496 pp. Two vols. 8vo, cont. polished calf, flat spines gilt, red & green morocco lettering pieces on spines. Edinburgh: C. Elliot, 1785. $1650.00

First edition in English (1st ed.: 1782) of the author's first important publication. It derives from a course of seventy lectures which Fourcroy gave each winter in his laboratory and it discusses all aspects of chemistry, including the recent work on gases. In all his lectures, Fourcroy emphasized the relations between chemistry and natural history and their applications to medicine.

Very fine set. Early armorial bookplate of "Story" in each volume.

Cole 463. *D.S.B.,* V, pp. 89-93. Partington, III, pp. 535-51. Smeaton 9.

✲ ✲ ✲

The Distribution of Books by Catalogue: The Frankfurt Book Fair Catalogues Georg Willer and His Competitors

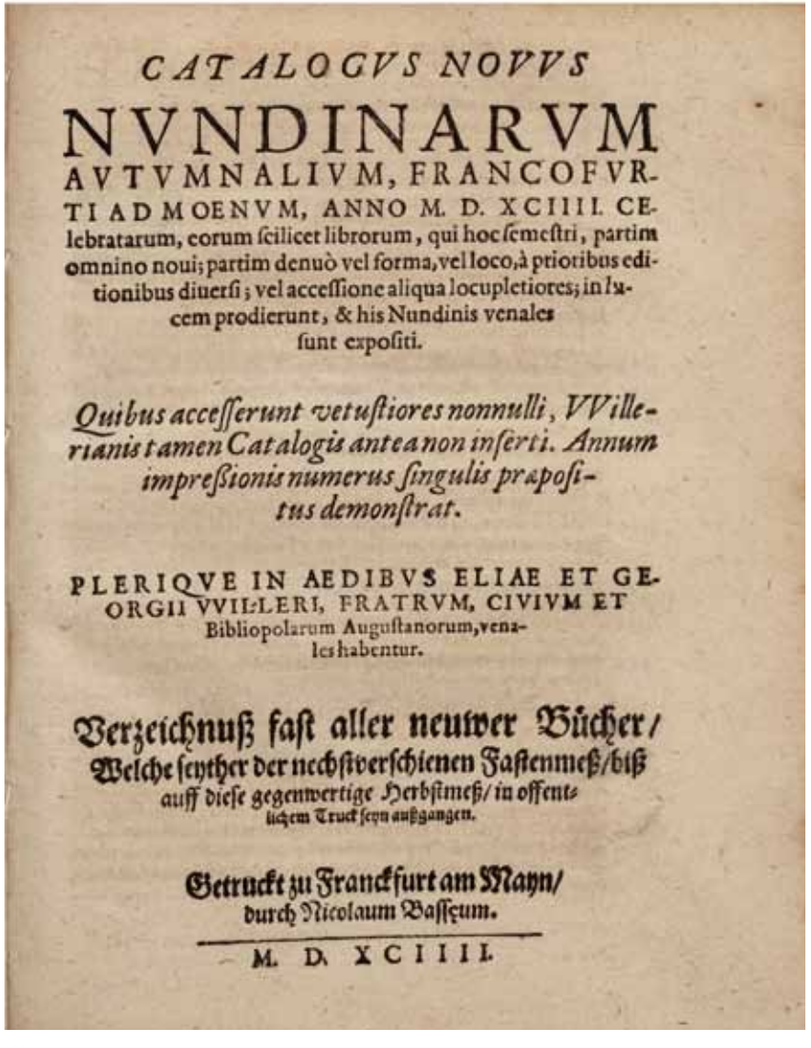
By the 15th century, the twice-yearly fairs of the free Imperial City of Frankfurt am Main had become international marketplaces. In the 16th century, the fairs increasingly became centers for publishers, book wholesalers, and those involved in printing (paper makers, type founders, bookbinders, etc.) to meet, trade, and settle accounts.

"But the real importance of the fairs was for the exchange of *new* books, books printed since the last fair . . . It was for the use of the reading public and of the booksellers, who did not attend the fair but bought their stock from the printers who did, that Georg Willer of Augsburg began the long series of Frankfurt Fair book catalogues in 1564. Before that date printers visiting the fair must have had to write out by hand countless lists of new books to send to their customers: thereafter they could send copies of the fair catalogue to the local booksellers all over Europe, who in turn passed them on to their customers . . .

"The fair catalogue was a co-operative effort: the printers coming to the fair sent in advance title-pages of the books they were bringing, so that Willer could arrange them in subject order before printing his catalogue."–Graham Pollard in *The Distribution of Books by Catalogue* (1965), pp. 74-77.

These catalogues created a revolution for the book trade. They were the best and, indeed, only source from which scholars and booksellers could discover when and by whom any particular book had been published. These "catalogues represent the first international bibliographies of a periodic character, attempting to list every six months all new publications issued in Europe, and they can be considered the prototype of today's *Books in Print*. The books are arranged by subject; for the first time, place, publisher, and date are always mentioned."–Grolier Club, *Bibliography,* 24.

The success of Willer's catalogues enjoyed soon attracted competition from others in the book trade including Johann Georg Portenbach, Tobias Lutz, and Henning Grosse.



CATALOGVS NOVVS
NVNDINARVM
AVTVMNALIVM, FRANCOFVR-
TI AD MOENVM, ANNO M. D. XCIIII. CE-
lebratarum, eorum ſcilicet librorum, qui hoc ſemeſtri, partim
omnino noui; partim denuò vel forma, vel loco, à prioribus edi-
tionibus diuerſi; vel acceſſione aliqua locupletiores; in lu-
cem prodierunt, & his Nundinis venales
ſunt expoſiti.

Quibus acceſſerunt vetuſtiores nonnulli, VVille-
rianis tamen Catalogis antea non inſerti. Annum
impreſſionis numerus ſingulis præpoſi-
tus demonſtrat.

PLERIQVE IN AEDIBVS ELIAE ET GE-
ORGII VVILLERI, FRATRVM, CIVIVM ET
Bibliopolarum Auguſtanorum, vena-
les habentur.

Verzeichnuß faſt aller neuwer Bücher/
Welche ſeyther der nechſtverſchienen Faſtenmeß/biß
auff dieſe gegenwertige Herbſtmeß/ in offent-
lichem Truck ſeyn außgangen.

Getruckt zu Franckfurt am Mayn/
durch Nicolaum Baſſeum.

M. D. XCIIII.

NO. 27

27. WILLER, Elias & Georg. *Catalogus Novus nundinarum Autumnalium Francofurti ad Moenum, Anno M. D. XCIIII. celebratarum, eorum scilicet librorum, qui hoc semestri, partim omnino novi, partim denuo vel forma, vel loco, à prioribus editionibus diversi, vel accessione aliqua locupletiores, in lucem prodierunt, & his Nundinis venales sunt expositi.* [20] leaves. Small 4to, attractive antique calf-backed marbled boards. Frankfurt am Main: N. Bassée, 1594. $3250.00

The autumn 1594 catalogue of the Frankfurt Book Fair; WorldCat locates one copy in North America. All Willer catalogues are extremely rare.

Fine and fresh copy.

28. WILLER, Elias & Georg. *Catalogus Novus nundinarum Autumnalium, Francofurti ad Moenum, Anno M.D. XCV. celebratarum, eorum scilicet librorum, qui hoc semestri, partim omnino novi, partim denuo vel forma, vel loco, à prioribus editionibus diversi, vel accessione aliqua locupletiores, in lucem prodierunt, & his Nundinis venales sunt expositi.* [16] leaves. Small 4to, attractive antique calf-backed marbled boards. Frankfurt am Main: N. Bassée, 1595. $3000.00

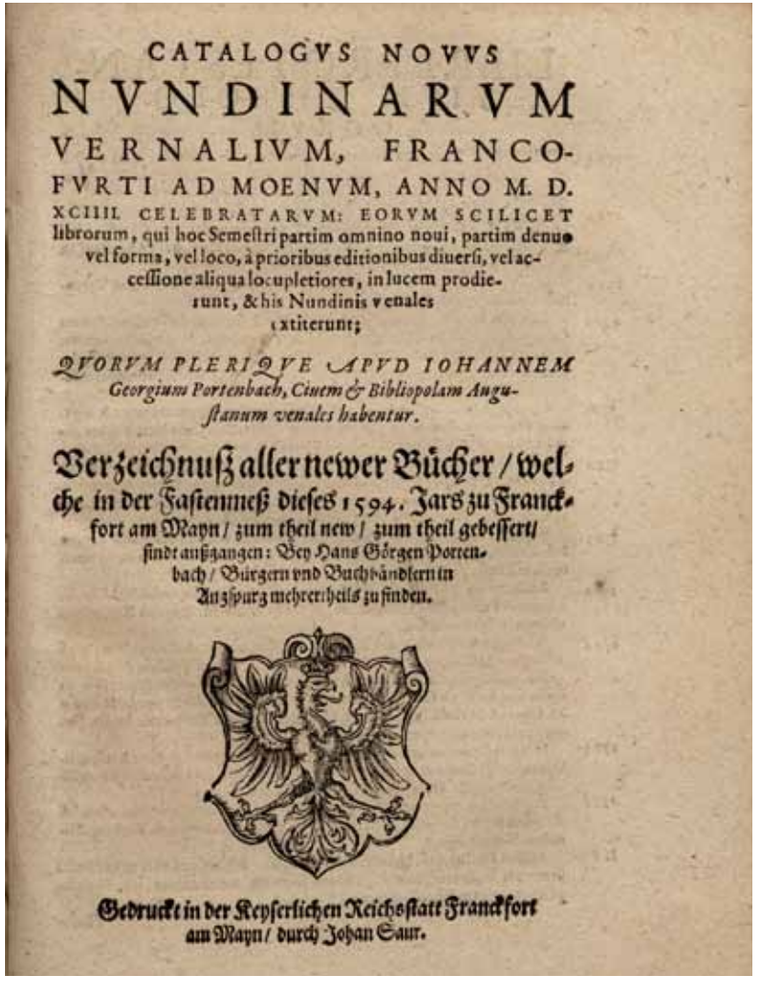
The autumn 1595 catalogue of the Frankfurt Book Fair; WorldCat locates only one copy in North America. Very good copy. Minor worming in lower blank margin.

29. PORTENBACH, Johann Georg. *Catalogus Novus nundinarum Vernalium, Francofurti ad Moenum, anno M. D. XCIIII. celebratarum: eorum scilicet librorum, qui hoc semestri, partim omnino novi, partim denuo vel forma, vel loco, à prioribus editionibus diversi, vel accessione aliqua locupletiores, in lucem prodierunt, & his nundinis venales extiterunt.* Woodcut arms of the city of Frankfurt on title. [16] leaves. Small 4to, attractive antique calf-backed marbled boards. Frankfurt am Main: J. Saur, [1594]. $3000.00

The spring 1594 catalogue of the Frankfurt Book Fair issued by Portenbach; WorldCat locates two copies in North America. Georg Willer issued

the first Frankfurt Book Fair catalogue in 1564. It enjoyed great success and soon attracted competitors. The first to issue rival fair catalogues were the Augsburg booksellers Portenbach and Lutz, who published a series from the spring of 1577 until the spring of 1590, when the two partners fell out. They went their separate ways, each continuing to publish Frankfurt book fair catalogues, still in competition with Willer.

Fine copy.


CATALOGVS NOVVS
NVNDINARVM
VERNALIVM, FRANCO-
FVRTI AD MOENVM, ANNO M. D.
XCIIII. CELEBRATARVM: EORVM SCILICET
librorum, qui hoc Semestri partim omnino noui, partim denuo
vel forma, vel loco, à prioribus editionibus diuersi, vel ac-
cessione aliqua locupletiores, in lucem prodie-
runt, & his Nundinis venales
extiterunt;
QVORVM PLERIQVE APVD IOHANNEM
Georgium Portenbach, Ciuem & Bibliopolam Augu-
stanum venales habentur.
Verzeichnuß aller newer Bücher / wel-
che in der Fastenmeß dieses 1594. Jars zu Franck-
fort am Mayn / zum theil new / zum theil gebessert /
sind außgangen: Bey Hans Görgen Porten-
bach / Bürgern vnd Buchhändlern in
Augspurg mehrertheils zu finden.
Gedruckt in der Keyserlichen Reichsstatt Franckfort
am Mayn / durch Johan Saur.

30. PORTENBACH, Johann Georg. *Catalogus Novus nundinarum Autumnalium Francofurti ad Moenum, anno M. D. XCV. celebratarum: eorum scilicet librorum, qui hoc semestri partim omnino novi, partim denuo vel forma, vel loco, à prioribus editionibus diversi, vel accessione aliqua locupletiores, in lucem prodierunt, & his Nundinis fuerunt expositi.* Typographical device on title. [12] (of 14) leaves, lacking the final two leaves. Small 4to, attractive antique calf-backed marbled boards. Frankfurt am Main: J. Saur, [1595]. $1500.00

An incomplete copy, lacking the final two leaves, of the autumn 1595 catalogue of the Frankfurt Book Fair issued by Portenbach; WorldCat locates no copy in North America.

Fine copy.

31. LUTZ, Tobias. *Catalogus Novus nundinarum Autumalium, Francofurti ad Moenum, anno M. D. XCVI. celebratarum: eorum scilicet librorum, qui hoc semestri partim omnino novi, partim denuo vel forma, vel loco, à prioribus editionibus diversi, vel accessione aliqua locupletiores, in lucem prodierunt, & his Nundinis venales fuerunt expositi.* Frankfurt city arms on title. [18] leaves. Small 4to, attractive antique calf-backed marbled boards. Frankfurt am Main: J. Saur, [1596]. $3250.00

The autumn 1596 catalogue of the Frankfurt Book Fair issued by Lutz; WorldCat locates one copy in North America. Fine copy.

The Leipzig Book Fair

32. GROSSE, Henning. *Catalogus novus Omnium Librorum, qui nundinis Vernalibus Francofurti ad Moenum et Lipsiae anno XCVIII. celebratis, noviter impressi venales expositi fuerunt, Ex tribus Catalogis diversis Francofurti editu, concinnatus.* Large publisher's device on title. [30] leaves. Small 4to, attractive antique calf-backed marbled boards. Eisleben: H. Grosse, 1598. $3500.00

The spring 1598 catalogue of the Leipzig and Frankfurt book fairs issued by Grosse; WorldCat locates no copy in North America. Imitating the

Frankfurt Book Fair lists, the Leipzig bookseller Henning Grosse began to issue fair catalogues for his hometown in the autumn of 1594, continuing until the autumn of 1599. The Leipzig Fair served the northern German market. Our copy has the rare "Appendix" of four leaves.

Fine copy. Paper lightly browned.

* * *

The Atomic Theory

33. GASSENDI, Pierre. *De Vita et Moribus Epicuri Libri Octo.* Woodcut printer's device on title & one engraved plate with a port. of Epicurus. 4 leaves, 5-236, [18] pp. 4to, cont. French sheep (head & foot of spine neatly repaired, several signatures lightly browned), single gilt fillet round sides, spine richly gilt, red morocco lettering piece on spine. Lyons: G. Barbier, 1647. $8500.00

First edition of an important book; this life of Epicurus, which emphasized his philosophy of physics, was the foundation of Gassendi's Epicurean atomism. His atomic theory was applied to chemistry by Boyle and adopted by Newton in his new mechanical philosophy.

"Before Galileo and Descartes had succeeded in combining mathematics with mechanics, the chief refuge of hard-headed opponents of scholastic verbalism and Renaissance Platonism was the tradition of Greek atomism . . . Its chief representative during the period of Cartesian domination was Gassendi, who stands both as the climax of Epicurean atomism of the Renaissance in its accommodation to a mathematical science of nature, and as the first of the explorers of the implications of that science for the traditional empirical philosophy of knowledge. Gassendi is thus with Hobbes one of the fathers of 'scientific' empiricism . . . Gassendi indeed fancied himself the creator of the great rival scientific system to that of Descartes, the system founded on sound experience. History has reserved that distinction for Hobbes; yet it probable that Gassendi contributed far more to the actual advance of scientific ideas than his more consistent and gifted British fellow-worker."–J.H. Randall, *The Career of Philosophy,* Vol. I, pp. 521-23.

Fine unpressed copy. Bookplate of René Escande de Messières.

◖ Partington, II, pp. 458-66.


1480

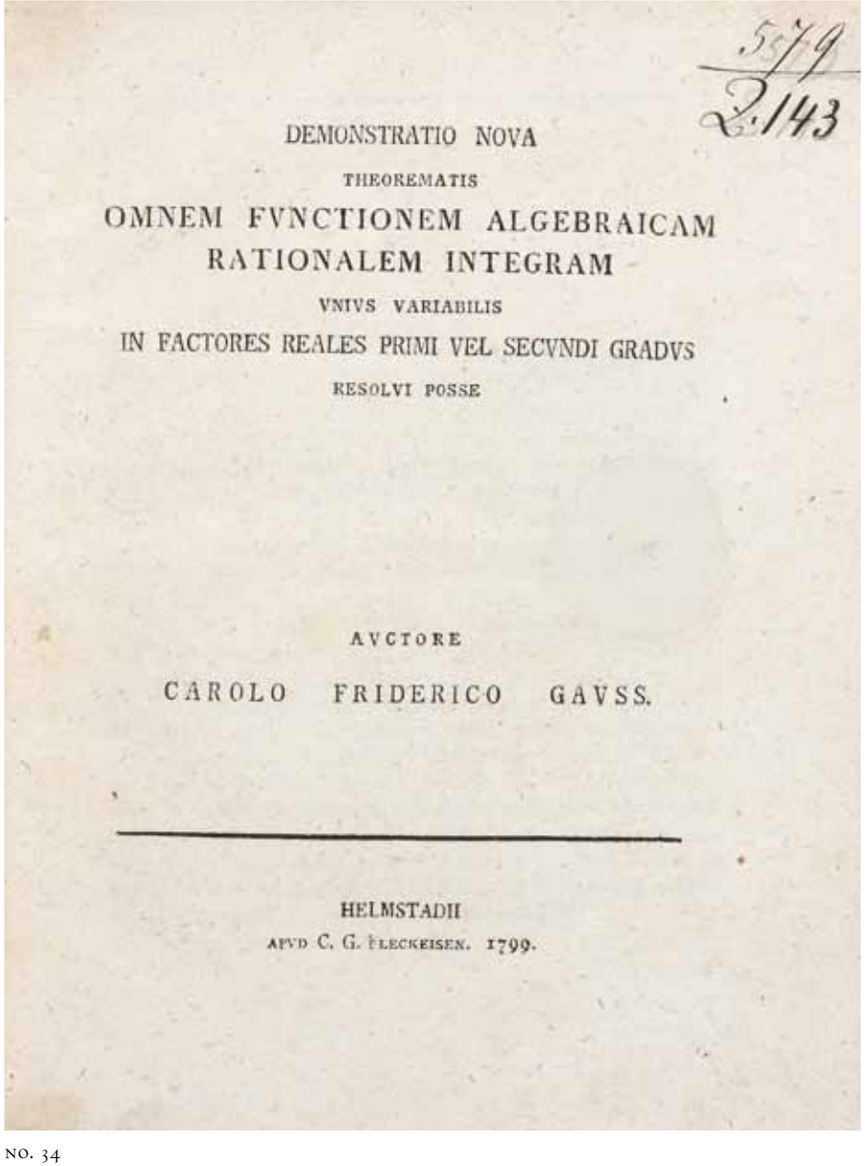
DE VITA
ET
MORIBVS
EPICVRI
LIBRI OCTO.

Authore PETRO GASSENDO Dinienſis
Eccleſiæ Præpoſito.

Mea quidem iſta ſententia eſt (inuitis hoc noſtris popularibus dicam) ſanctа Epicurum, & rectа præcipere, & ſi propiùs acceſſeris, triſtia. Itaque non dico, quod plerique noſtrorum, Sectam Epicuri flagitiorum magiſtram eſſe: ſed illud dico; malè audit, infamis eſt; & immeritò: nec hoc ſcire quiſquam poteſt, niſi interiùs fuerit admiſſus. Seneca lib. de vita beata, cap. 13.

LVGDVNI,
Apud GVILLELMVM BARBIER, Typogr. Reg.

M. DC. XLVII.
CVM PRIVILEGIO REGIS.



NO. 34

"A Landmark in Algebra"–Bell

34. GAUSS, Carl Friedrich. *Demonstratio Nova Theorematis Omnem Functionem Algebraicam Rationalem Integram unius Variabilis in Factores Reales Primi vel Secundi Gradus resolvi posse.* One engraved plate (somewhat browned). 39, [1] pp. 4to, cont. half-calf & marbled boards. Helmstadt: C.G. Fleckeisen, 1799. $35,000.00

First edition of Gauss's first book for which he received his doctorate degree; in this rare work Gauss gave the first rigorous proof of the fundamental theorem of algebra. This theorem, which states that every algebraic equation in one unknown has a root, was expressed by Albert Girard, Descartes, Newton, and Maclaurin. Attempts at a proof were made by d'Alembert, Euler, and Lagrange, but Gauss was the first to furnish a rigorous demonstration.

This is Gauss's first great work and marks the beginning of an extraordinary ten years which saw the publication of his *Disquisitiones Arithmeticae* (1801) and his calculation of the orbit of the newly discovered planet Ceres.

"Gauss ranks, together with Archimedes and Newton, as one of the greatest geniuses in the history of mathematics."–*Printing & the Mind of Man*, p. 155.

A very good copy. Library stamp on blank portion of title removed and another stamp on final text leaf with circular piece of paper pasted over. On page 26 there are two corrections, presumably in the hand of Gauss.

◖ Bell, *Men of Mathematics,* pp. 218-69. *D.S.B.,* V, pp. 298-315. Smith, *History of Mathematics*, II, pp. 473-74.

35. GERHARD, Carl Abraham. *Versuch einer Geschichte des Mineralreichs.* Engraved vignette on first title & 10 folding engraved plates (7 of which are hand-colored). xxxx, 302 pp.; viii, 424 pp. Two vols. 8vo, orig. blue semi-stiff wrappers (ends of spines a bit frayed), uncut. Berlin: C.F. Himburg, 1781-82. $3000.00

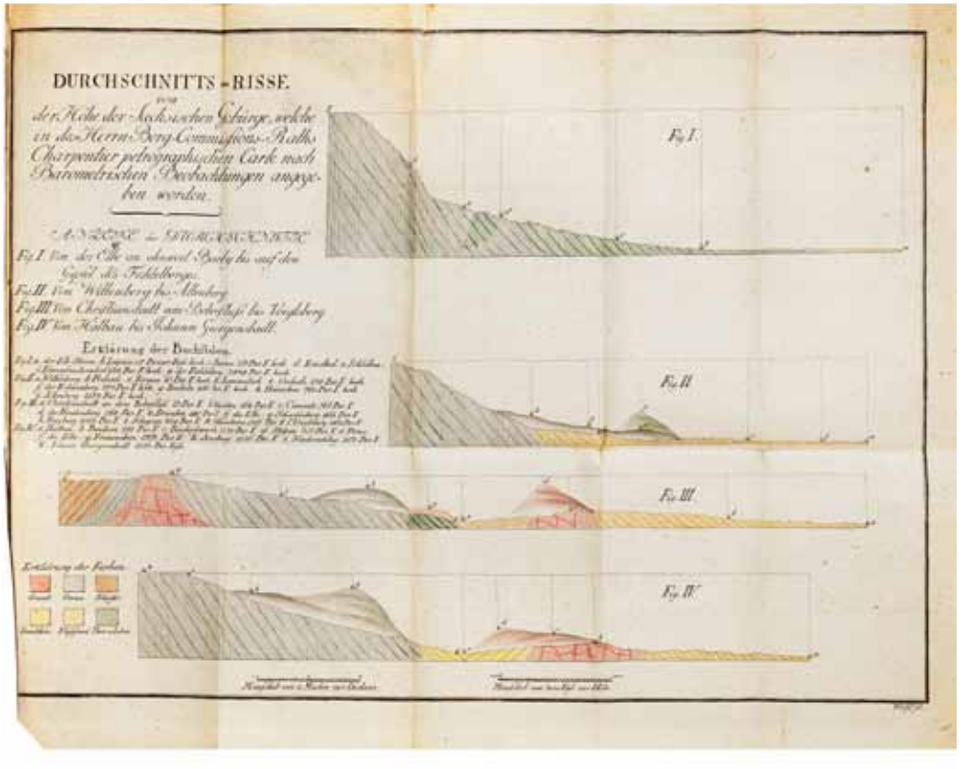
First edition of a scarce work in which Gerhard "held that veins were open fissures which originated through great movements in the earth's crust as well as from other causes, and that they were filled by the action of waters dissolving material out of the surrounding country rock and depositing it in these fissures."–Adams, *The Birth and Development of the Geological Sciences,* p. 315.

Vol. I is concerned with the origins and properties of minerals, the variations in the earth's structure, techniques to locate mineral veins, etc. Vol. II provides a detailed elaboration of the author's mineral system based on the earlier systems of Bergman, Born, Werner, Wallerius, and Cronstedt.

Gerhard (1738-1821), rose to privy councillor for finance, war, and crown lands in Prussia. He later became commissary for the administration of mines and smelting works and, in 1779, was appointed councillor for mining. Gerhard's chief writings are in mineralogy, but he also wrote on geology, medicine, botany, natural history, and chemistry, and was elected to membership in many scientific societies.

Nice set in original state, preserved in a box.

◖ Poggendorff, I, 880-81. Schuh, *Mineralogy & Crystallography: A Biobibliography,* 1469 to 1920, 1861.



The Discovery of Optical Diffraction; William Molyneux's Copy

36. GRIMALDI, Francesco Maria. *Physico-Mathesis de Lumine, Coloribus, et Iride . . .* Added title-page with a large engraved vignette & woodcut diagrams in the text. Both titles printed in red & black. 11 p.l. (including the added title-page), 535 pp., 8 leaves. 4to, fine antique mottled calf (some faint dampstains), sides panelled in gilt, spine richly gilt, red morocco lettering piece on spine. Bologna: Heirs of V. Benati, 1665. $75,000.00

First edition, the copy of William Molyneux (1656-98), astronomer, founder of the Dublin Philosophical Society, and author of the first treatise on optics in English (for more on Molyneux, see *D.S.B.,* IX, pp. 464-66). This is Grimaldi's only book; in it he describes the discovery of optical diffraction. This is perhaps the rarest of all great optical books, especially in such good condition, and marks the first scientific attempt to establish a comprehensive wave theory of light.

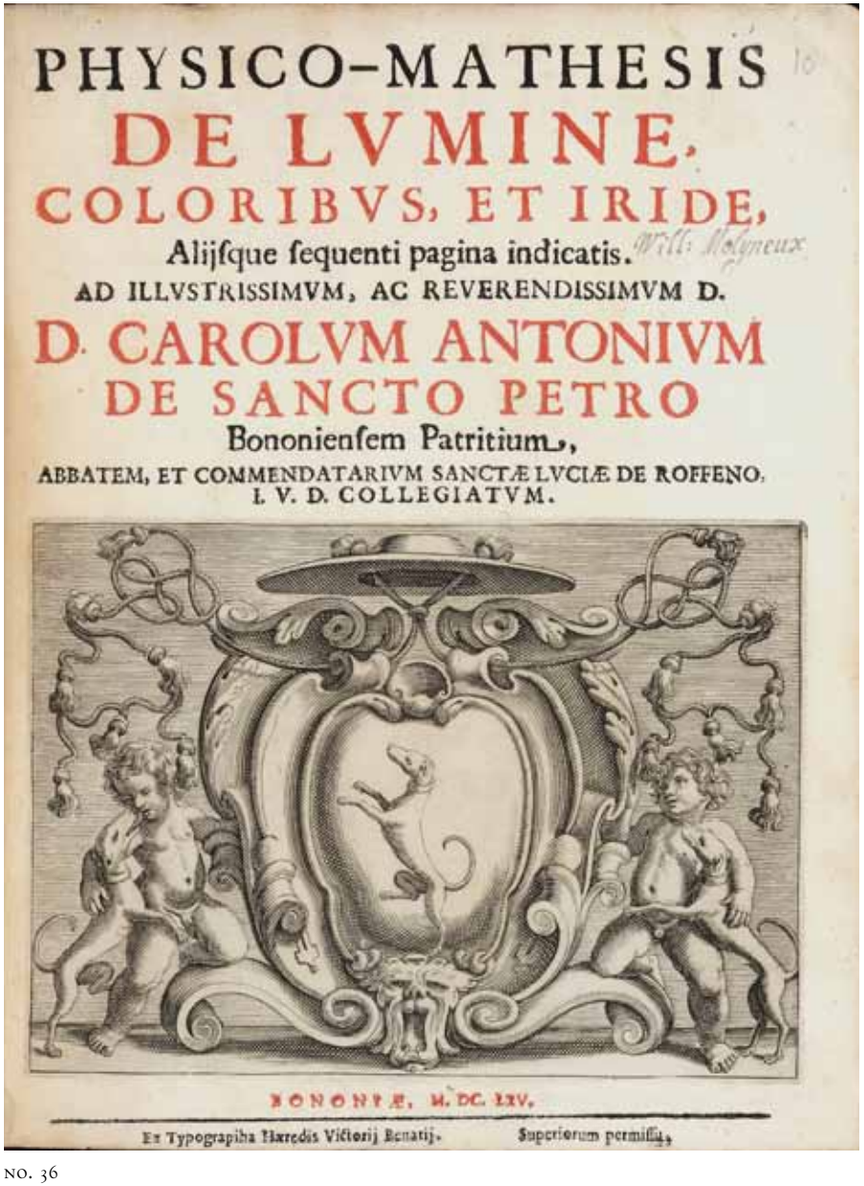
The diffraction experiments which Grimaldi describes here show "that a new mode of transmission of light had been discovered and that this mode contradicts the notion of an exclusively rectilinear passage of light. Diffraction thus gave *prima facie* evidence for a fluid nature of light. The name 'diffraction' comes from the loss of uniformity observed in the flow of a stream of water as it 'splits apart' around a slender obstacle placed in its path."–*D.S.B.,* V, p. 544.

Grimaldi repeatedly states that colors are not something different from light but are modifications of light produced by the fine structure of the bodies which reflect it, and probably consisting of an alteration in the type of motion and in the velocity of the light. The different colors are produced when the eye is stimulated by light oscillations whose velocities differ. All these views were of fundamental importance for the subsequent development of optics.

Newton was aware of Grimaldi's work, though only secondhand. The Englishman's great contribution to the knowledge of diffraction is his set of careful measurements which made clear the periodic nature of the phenomenon.

With the signature of William Molyneux on the second title-page. Bookplate of E.N. da C. Andrade. Very good copy.

◖ Albert, Norton, & Hurtes, *Source Book of Ophthalmology,* 919–contains "Grimaldi's work on the discovery of the diffraction (Newton's inflexion) of light . . . considered a classic in the history of optics, this work makes the first scientific attempt to establish the wave theory." Kemp, The Science of Art, p. 285.


PHYSICO-MATHESIS
DE LVMINE,
COLORIBVS, ET IRIDE,
Alijſque ſequenti pagina indicatis.
AD ILLVSTRISSIMVM, AC REVERENDISSIMVM D.
D. CAROLVM ANTONIVM
DE SANCTO PETRO
Bononienſem Patritium,
ABBATEM, ET COMMENDATARIVM SANCTÆ LVCIÆ DE ROFFENO.
I. V. D. COLLEGIATVM.
BONONIÆ, M. DC. XXV.
Ex Typographia Hæredis Victorij Benatij. Superiorum permiſſu.

NO. 36

The Chronometer & Jealousy

37. [HARRISON, John]. *The Principles of Mr. Harrison's Time-Keeper, with Plates of the Same.* Published by Order of the Commissioners of Longitude. Ten folding engraved plates. 31 pp. Large 4to, cont. half-calf & marbled boards, spine gilt, red morocco lettering piece on spine. London: Printed by W. Richardson & S. Clark; and sold by J. Nourse & Mess. Mount & Page, 1767.

[BOUND WITH]:

MASKELYNE, Nevil. *An Account of the Going of Mr. John Harrison's Watch, at the Royal Observatory, from May 6th, 1766 to March 4th, 1767. Together with the Original Observations and Calculations of the Same . . .* Published by Order of the Commissioners of Longitude. 28, lvi pp. Large 4to. London: W. Richardson & S. Clark, 1767.

[BOUND WITH]:

LE ROY, J[ulien] D[avid]. *A Succinct Account of the Attempts of Mess. Harrison and Le Roy, for finding the Longitude at Sea, and of the Proofs made of their works . . . To which is prefixed, a Summary of the Marquis de Courtanvaut's Voyage, for the Trial of certain Instruments for finding the Longitude at Sea. Done from the French, by a Fellow of the Royal Society.* 14, xii, 54pp. Large 4to. London: F. Newbery, 1768. $125,000.00

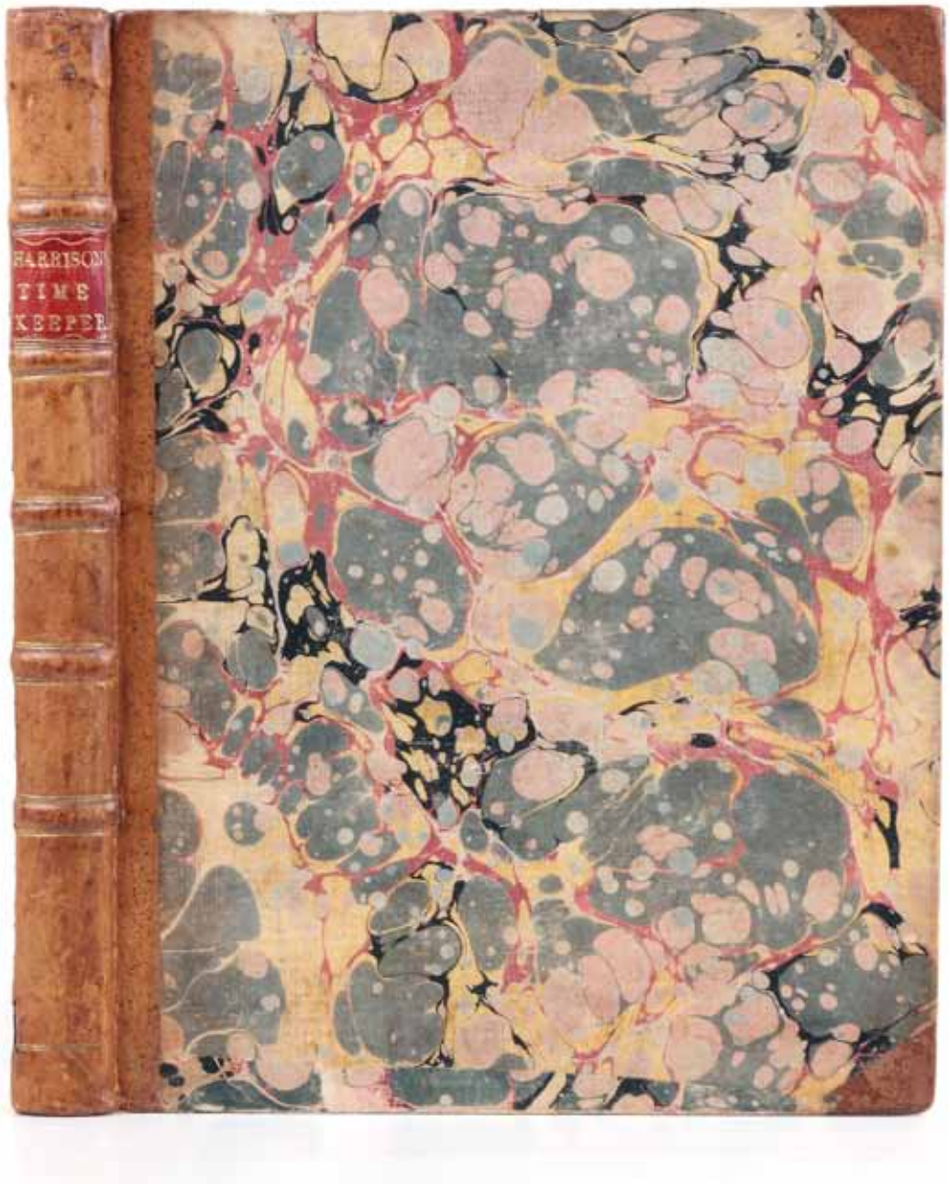
First editions of the first two works and first edition in English of the third; very fine copies from the library of Matthew Boulton, with the modern bookplate. These are important works regarding the invention and perfection of the chronometer, which enabled navigators to determine their correct geographical position at all times.

I. While latitude has been ascertainable by relatively simple means, measuring longitude presented considerable challenges. In 1714, the English government offered the enormous prize of 20,000 pounds to be awarded by the Board of Longitude to anyone who developed a reliable means of calculating longitude at sea. "One way of measuring longitude is to compare local

solar time with the standard time at the prime meridian. Local time is easily ascertained by observing the sun but only a very accurate clock can register a standard time over long periods. The improvements in horology effected by Christian Huygens and others after him about the mid-seventeenth century promised success with this method. But the practical problems associated with temperature-compensation and so forth remained long intractable, although several rewards for an invention were offered. Finally, John Harrison, a clockmaker with several useful inventions to his credit . . . perfected a chronometer of the required degree of accuracy, showing a steady rate of gain or loss. Harrison's chronometer not only supplied navigators with a perfect instrument for observing the true geographical position at any moment during their voyage, but also laid the foundation for the compilation of exact charts of the deep seas and the coastal waters of the world . . . There has possibly been no advance of comparable importance in aids to navigation until the introduction of radar."–*Printing & the Mind of Man* 208–(describing Harrison's earlier *An Account of the Proceedings*: 1763).

II. As part of the dispute between Harrison and the Board of Longitude, Maskelyne was called upon to test the accuracy of Harrison's marine chronometer. Maskelyne was known to favor the rival method of finding longitude by means of lunar tables and he therefore subjected Harrison's chronometer, which had already performed well on two West Indian voyages, to a series of extreme and unrealistic tests. The tests were intended to fully discredit the watch. The predictably disappointing results were published in the present pamphlet, along with Maskelyne's conclusion that "Mr Harrison's watch cannot be depended upon to keep the longitude within a degree in a West India voyage of six weeks . . . nevertheless . . . it is a useful and valuable invention."

III. First edition in English of the *Exposé succint des Travaux de MM. Harrison et Le Roy* (1768). This is a very rare and important contribution to the famous and bitter quarrel involving Pierre Le Roy (1717-85), the most eminent horologist in France of the 18th century, Harrison, and Berthoud. Le Roy made important contributions to the chronometer; he "established the main principles of the modern chronometer, to wit, a detached escapement, temperature compensation in the balance, and an isochronous balance spring."–Catherine Cardinal, "Ferdinand Berthoud and Pierre Le Roy . . . " in *The Quest for Longitude* (Ed. by William J.H. Andrewes), 1996, p. 292. The present work



was written by Le Roy, using his father's name for this edition, in answer to Harrison's *Principles* (see item I). Le Roy illustrates the originality and priority of his own work, dating from before 1754, in comparison with Harrison's. While recognizing the merit of Harrison's chronometer, he considered his own to be superior. The condescension expressed here by Le Roy provoked a series of violently critical responses, both in England and in France.

Le Roy also provides an account of the trial of his Nos. 1 and 2 on the *Aurore* under the Marquis de Courtanvaux in 1767.

This is an extremely rare book.

Fine copies, attractively bound together, and preserved in a box. Loosely inserted is a page of manuscript notes in ink by a contemporary reader about Harrison's time-keeper.

I. Horblit 42b. II. Baillie, *Clocks and Watches. An Historical Bibliography*, p. 271. III. Baillie, ibid., pp. 276-77-(describing the original French edition). See also the note to *Printing & the Mind of Man* 208 for a discussion of the claims of Le Roy to priority in the invention of the chronometer.

The First Six Works of Hevelius

38. HEVELIUS, Johannes. *Selenographia: sive, Lunae Descriptio . . .* Finely engraved title-page, engraved port. of the author, 111 engraved plates on 91 sheets (3 are folding, engraved volvelle at p. 364 with orig. red silk thread), & numerous engravings in the text. Printed title in red & black. 14 p.l., 563 pp. Folio, fine cont. Dutch vellum over boards (upper joint a little cracked but strong), panelled in blind, covers with arabesque in center of panel, remains of ties. Danzig: Autoris sumtibus, 1647.

[BOUND WITH]:

———. Epistolae II. *Prior: De Motu Lunae Libratorio, in certas Tabulas redacto . . . Ad Johannes Bapt. Ricciolum . . . Posterior: De utriusquè Luminaris defectu Anni 1654. Ad . . . Petrum Nucerum.* Finely engraved vignette on title, one engraving in the text & six engraved plates (one double-page). 1 p.l., 72 pp. Folio. Danzig: Sumtibus Autoris, 1654.

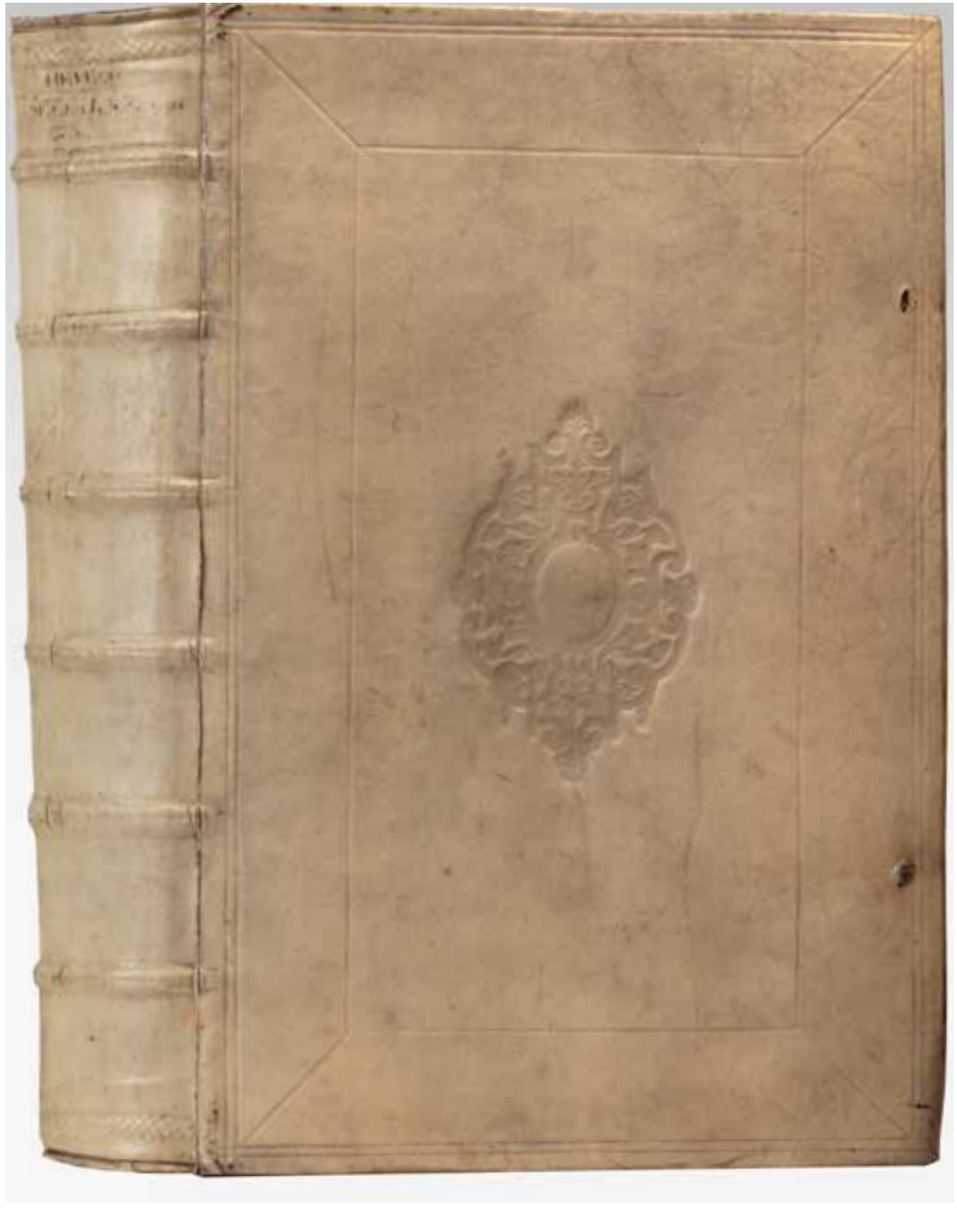
[BOUND WITH]:

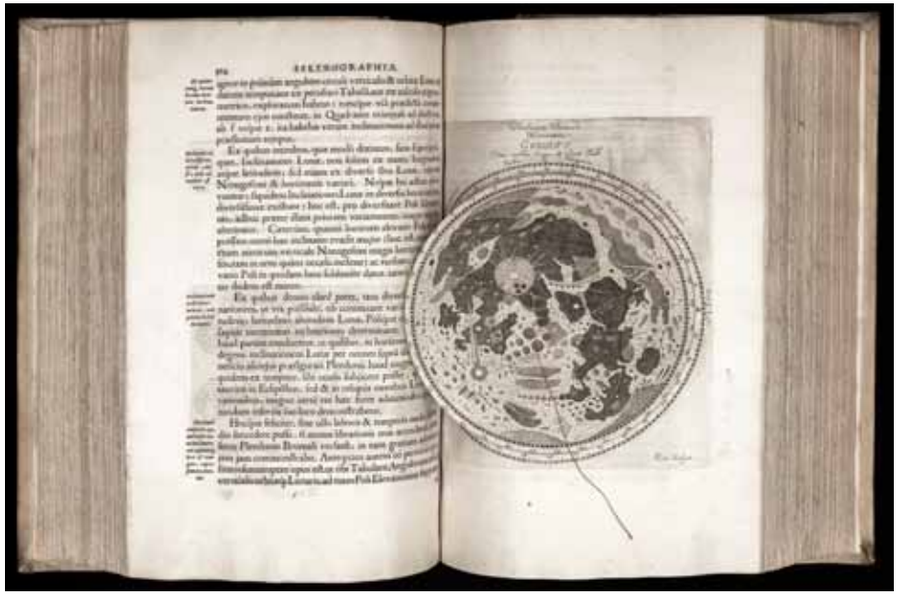

JOHANNIS HEVELII
EPISTOLÆ II.
De Motu Lunæ Libratorio,
F. JOHANNEM BAPT. RICCIOLUM SOC. JES.
De utriusque Luminaris defectu
Anno 1654.
PETRUM NUCERIUM,
GEDANI,


JOHANNIS HEVELII
EPISTOLÆ IV.
LAURENTIUM EICHSTADIUM,
PET. GASSENDUM & ISM. BULLIALDUM,
P. JOH. BAPT. RICCIOLUM SOC. JES.
PETRUM NUCERIUM,
GEDANI.


JOHANNIS HEVELII
DISSERTATIO,
Nativa Saturni Facie,
VARIIS PHASIBUS.
Addita est, tam Eclipseos Solaris anni 1656
SERENISSIMUM,
LUDOVICI A DEODATI,
REGIS CHRISTIANISSIMI
PATRUUM,
GASTONEM BORBONIUM,
AURELIANENSIUM DUCEM, &c.
GEDANI

——. Epistolae IV. *I. De observatione deliquii Solis Anno 1649. habitâ. Ad . . . Laurentium Eichstadium . . . II. De Eclipsi Solis anno 1652 observatâ. Ad . . . Pet. Gassendum & Ism. Bullialdum . . . III. De Motu Lunae Libratorio ad . . . Joh. Bapt. Ricciolum . . . IV. De utriusq; Luminaris defectu anni 1654. Ad . . . Petrum Nucerium.* Finely engraved vignette on title, two engravings in the text (one full-page in Epistola II), & seven engraved plates (one double-page). 1 p.l., [Epistola II]: [8] pp.; one blank leaf; [Epistola I]: one double-page





folding leaf (printed on pages [1-3], the fourth page is blank) & one plate; [Epistola III & IV]: 72 pp. & six plates. Folio (title a bit dampstained). Danzig: Sumtibus Autoris, 1654.

[BOUND WITH]:

———. Dissertatio, *De Nativa Saturni Facie, ejusque Variis Phasibus, certa Periodo redeuntibus cui Addita est, tam Eclipseos Solaris anni 1656 Observatio, quàm Diametri Solis apparentis accurata dimensio.* Finely engraved vignette on title & four engraved plates. 4 p.l. (the fourth leaf contains directions to the binder, otherwise blank), 40 pp. Danzig: Sumptibus Autoris, 1656. $165,000.00

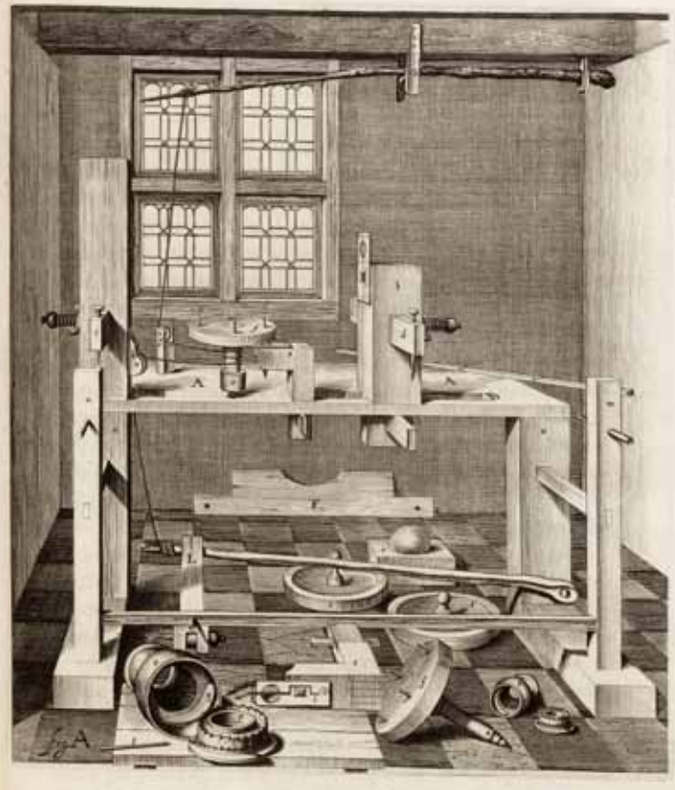
A magnificent sammelband containing first editions of the first six of Hevelius's publications, all privately printed. These are fine and large copies with many outer and a few lower edges uncut. This collection comes from the library formed by Sir Christopher Sykes (1749-1801), at Sledmere House in Yorkshire.

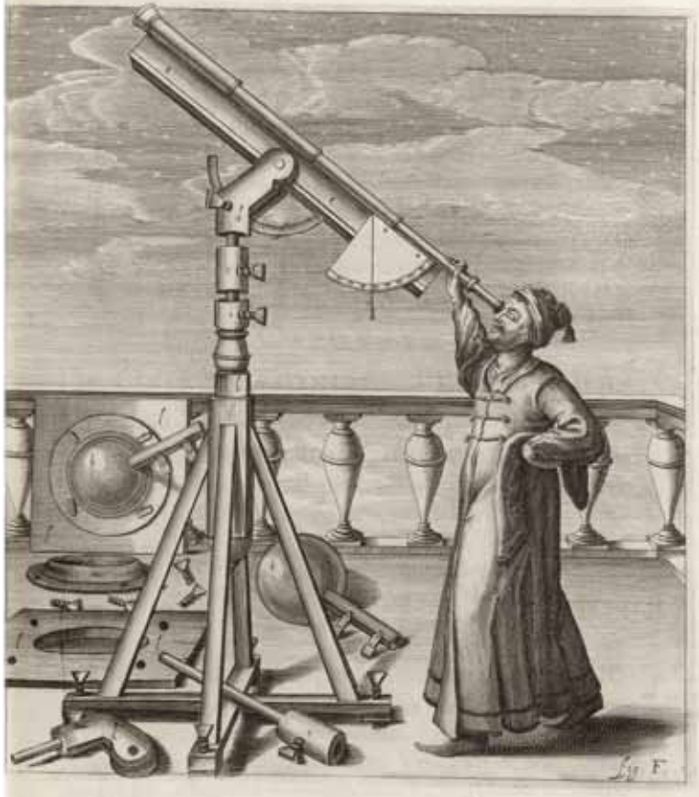
I. The author's first book and one of his greatest; this is the first complete lunar atlas and contains the results of four years' observations made from Hevelius's specially built observatory at his home in Danzig. It is the foundation work of lunar topography and the first astronomical atlas to exploit the powers of the telescope.

"The *Selenographia* proper begins with arguments disproving the ancient idea that the moon is a mirror reflecting the earth; but with the eighth chapter its contents become memorable. There Hevelius delineates and discusses the lunar markings and the movement of libration...Hevelius gave many new names to the lunar mountains, craters, and other formations; most of them are still used. His most profitable task, though, was to draw the moon in different states of libration."–*D.S.B.,* VI, pp. 361-62.

"No finer book on the moon has ever been published. In scores of illustrations, drawn and engraved by the author himself, Hevelius tracked the moon through every phase of an entire lunar cycle, and then incorporated the information gained into three large moon maps."–Ashworth, *The Face of the Moon. Galileo to Apollo* (Linda Hall Library, 1989), 5.

II. This work contains two letters by Hevelius, the first (pp. 1-48) answers Riccioli's doubts set forth in his *Almagestum* concerning Hevelius's theory on the libration of the moon as described in his *Selenographia*. The second let-





ter (pp. 49-72) is addressed to P. Nucerius (Pierre des Noyers), one of Hevelius's patrons. It contains observation methods employed and a description of the solar eclipse of August 12 and of the lunar eclipse of 27 August, 1654.

Bound into this copy are the other two letters (see III) that appeared in the *Epistolae IV*. I have not included them in my collation for sake of simplicity (but see next title).

III. The *Epistolae IV* contains the two letters described in II (now numbered III and IV) as well as two further letters inserted. The first of these, addressed to Laurentius Eichstädt, professor of mathematics at Danzig, provides observations of the solar eclipse on 4 November 1649. This letter consists of one double-page folding printed leaf (printed on three sides) and one engraved plate.

The second letter is addressed to Pierre Gassendi and Ismael Bouilliau and contains observations of the solar eclipse of 8 April 1652. This letter consists of [8] pages.

Both of these letters are inserted following the title-page.

IV. The *Dissertatio* contains Hevelius's theory of the various configurations of Saturn and the sun's diameter.

"Hevelius's works were all printed in Danzig, in folio . . . Each work is a masterpiece of composition and a fine example of expert printing. The books were generally not sold, but distributed at the author's discretion . . . Today all the works of Hevelius are very difficult to obtain."–*Johannes Hevelius* (B.Y.U., 1971), p. 83.

PROVENANCE: Inscription of "Cat. V1 P331 CS Sledmere" on inside front cover.

A very fine set of Hevelius's first works, preserved in a morocco-backed box.

◖ Johannes Hevelius (B.Y.U., 1971) 1, 2, 3, 4, 5, & 6. I. Whitaker, *Mapping and Naming of the Moon,* pp. 50-57.

His Cometary Magnum Opus

39. HEVELIUS, Johannes. *Cometographia, Totam Naturam Cometarum . . . exhibens . . . Cumprimis vero Cometæ Anno 1652, 1661, 1664 & 1665 ab ipso Auctore, summo studio observati, aliquantò prolixius, pensiculatiusque; exponuntur, expenduntur, atque rigidissimo calculo subjiciuntur. Accessit Omnium Cometarum, à Mundo condito hucusque ab Historicis, Philosophis, & Astronomis annotatorum, Historia . . .* Fine engraved frontis., head- & tailpieces, 38 engraved plates (four of which are folding), & 71 engravings in the text. 20 p.l. (incl. frontis. & blank leaf), 913, [45] pp., one leaf of errata. Folio, fine cont. smooth vellum over boards. Danzig: Auctoris Typis, & Sumptibus, 1668. $125,000.00

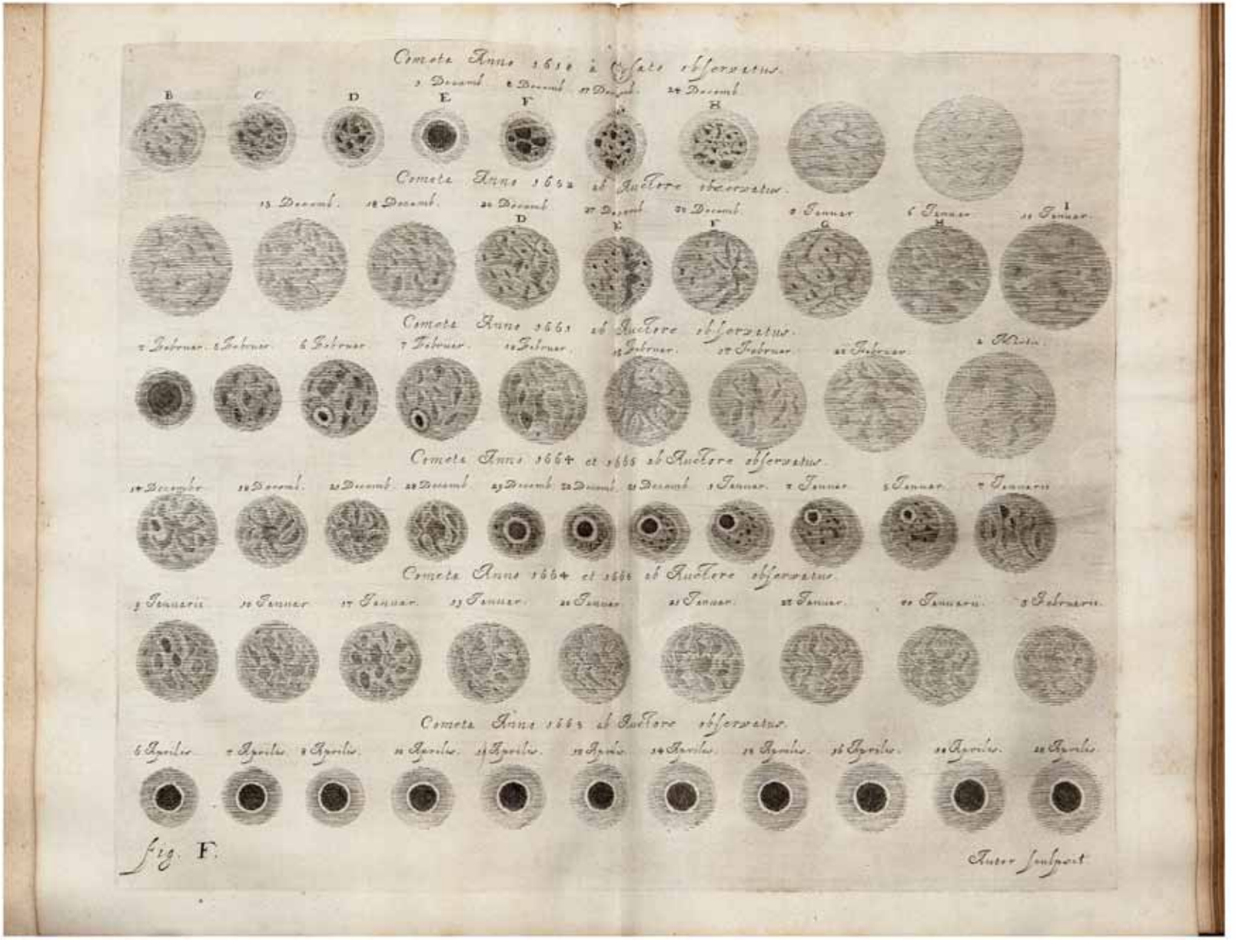
First edition and a fine copy of another of Hevelius's most important books. "After nearly 15 years, the *Cometographia* was published as a series of books or chapters. The first chapter presented observational data on the comet of 1652. One of the more interesting observations was the comet's expansion in size as it receded from perihelion. Later, Isaac Newton would have trouble trying to explain a similar phenomenon observed in the comet of 1680. The second and third chapters were devoted to arguments for comets existing beyond the Earth's atmosphere, and Chapters Four and Five presented a parallax determination for the comet of 1652 and a discussion of its true position and distance from the Earth. The work went on to discuss the comets of 1661, 1664, and 1665. It is interesting to note that in his discussion of the comet of 1664, Hevelius did not use his disputed observation of February 18, 1665. The book ended with a catalog of 251 cometary apparitions from the Biblical deluge to 1665 . . .

"Embedded in *Cometographia* was Hevelius' theory of comets, an interesting collection of ideas based primarily on those of Kepler. Like Kepler, Hevelius began with the premise that comets were transitory objects, and hence their basic motions were rectilinear."–Yeomans, *Comets,* pp. 84-85.

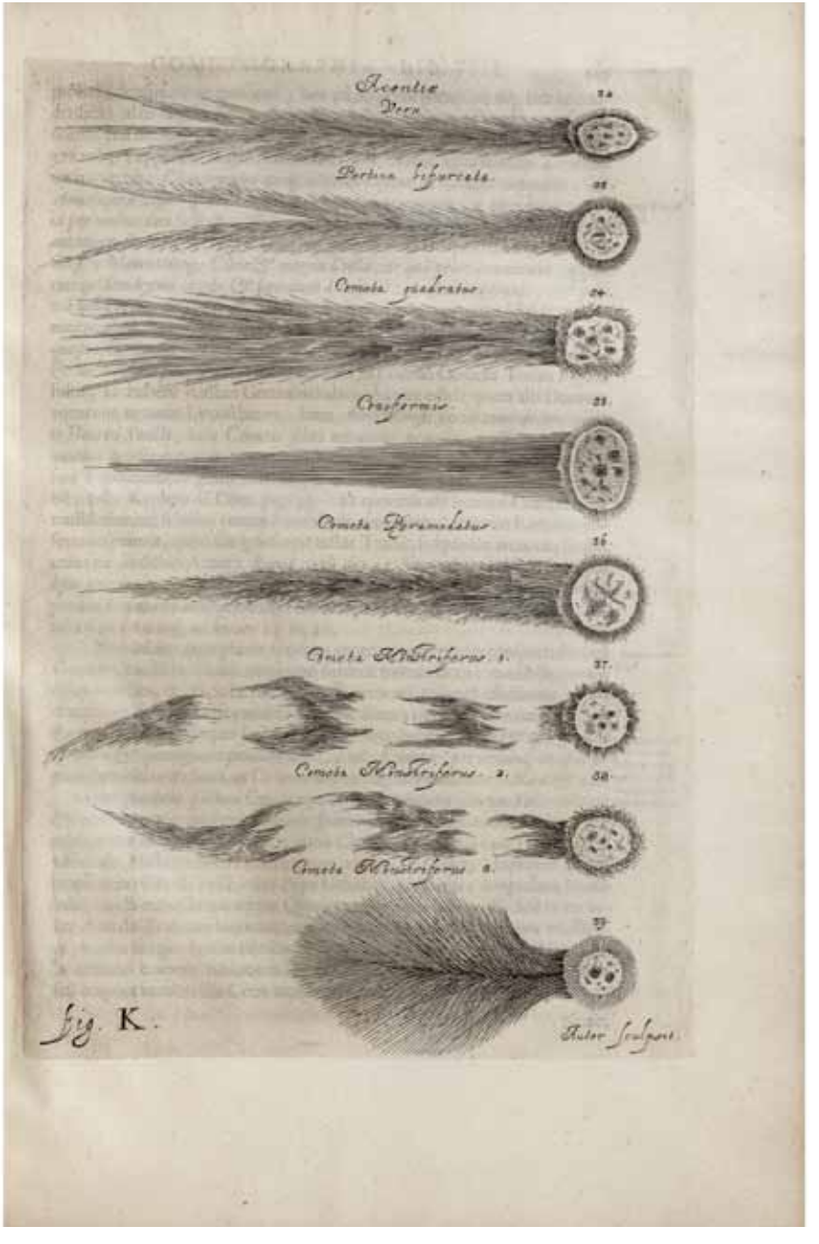
The fine engraved frontispiece is "doubly interesting: it depicts Hevelius sitting at a table with a cometary orbit shown as a conic section combined with a spiral, the sun at the focus of the former. By contrast, a figure of Aristotle holds an illustration of some linear and sublunary cometary paths.


Auriga.
Perseus.
Triangulum.
Taurus.
Aries.
Orion.
Cetus.
Eridanus.
Lepus.
Fig. A.


JOHANNIS HEVELII
COMETOGRAPHIA.


Cometa Anno 1618 à Cassato observatus.
Cometa Anno 1652 ab Auctore observatus.
Cometa Anno 1663 ab Auctore observatus.
Cometa Anno 1664 et 1665 ab Auctore observatus.
Cometa Anno 1664 et 1665 ab Auctore observatus.
Cometa Anno 1665 ab Auctore observatus.
Fig. F.
Autor fulsperit


Ceratia seu Comeæ Cornuti
Cornuti bicuspidatus
Dubiformis
Fiscelliformis Ellipticus
Fiscelliformis retusatus
Fig. H.
Autor sculpsit


Acontia
Vera
Cometa quadratus
Cometa Pyramidatus
Fig. K.
Autor Sculpsit

NO. 39

Below [actually, behind] is a valuable illustration of Hevelius' house and observation platform."–*D.S.B.,* VI, p. 362.

Provenance: Inscription of "Cat. V1 P331 CS Sledmere" on front pastedown endpaper. This copy comes from the library formed by Sir Christopher Sykes (1749-1801), at Sledmere House in Yorkshire.

Fine copy. Preserved in a morocco-backed box.

◖ Johannes Hevelius (B.Y.U., 1971), 10–"One of the major works of Hevelius."

"Aktualismus"

40. HOFF, Karl Ernst Adolf von. *Geschichte der durch Überlieferung nachgewiesenen natürlichen Veränderungen der Erdoberfläche.* One folding engraved map. Five vols. 8vo, cont. black specked boards (a bit of wear), spines gilt, red & blue leather lettering pieces on spines. Gotha: J. Perthes, 1822-24-34-40-41. $2750.00

First edition and very scarce when complete. Hoff (1771-1837), was an important diplomat, representing the duchy of Gotha. He "simultaneously accomplished first-rate work in a totally different field — scientific research, notably in geology and geography. Indeed, he introduced a new epoch of geological study which continues still . . . [In the present work] Hoff insisted that one must in the first instance study the effect of those forces whose work we are able to observe today and apply this knowledge to the earliest history of the earth. Through these premises, later designated *Aktualismus,* he consciously rejected the catastrophist theory. He did not make headway at first. Not until Lyell's *Principles of Geology* attained wide dissemination as a comprehensive textbook, supported by observations throughout the world did actualism gain ascendancy and find lasting application in countless investigations."–*D.S.B.,* VI, p. 457–(& see pp. 456-57 for a full account of Hoff's achievements).

Fine set. The final two volumes, published after Hoff's death, were edited by Heinrich Karl Wilhelm Berghaus.

◖ Zittel, pp. 187-88–"His great work treats of the relation between land and sea in historic time, the extension of the ocean surface owing to the erosion of the coastal territories and invasions of the continents. The volume betokens complete mastery of all the literature on the subject, from the authors of antiquity to the nineteenth century."

41. IMAGINARY LIST. [Drop-title]: *Einheimische Frag – und Anzeige-Nachrichten, wovon ein Theil zu errathen und der andere zu erfragen ist* [*Domestic Tidings in the Shape of Questions and Answers, of which some are to be guessed at, others queried*]. One sheet, folded into two leaves. Small 4to, unbound (small hole in gutter). N.p.: n.d. [but probably Nuremberg: ca. 1780-90]. $2250.00

An apparently unrecorded piece of satirical ephemera, notable for its offerings, such as "Books and engravings . . . available at the cheap rates stated," "Assorted Intelligence," etc. The 26 entries are clearly satirical, and vaguely anti-Semitic on occasion, and make concealed fictitious jabs at notables and events of the time.

Some of the entries in the section "Objects mobile and immobile for sale" (in trans.) are:

—"Hat mesh from a doe taken for a roebuck and mistakenly shot, available at the Saint George public house"

—"A good decoy bird of a brownish color with a splendid tail, tirelessly decoying, for sale near Feucht [a Nuremberg neighborhood]"

—"A very large watering can for sale; it has the unusual property of containing warm water even in the severest of winters; details to be had at SS. Peter & Paul"

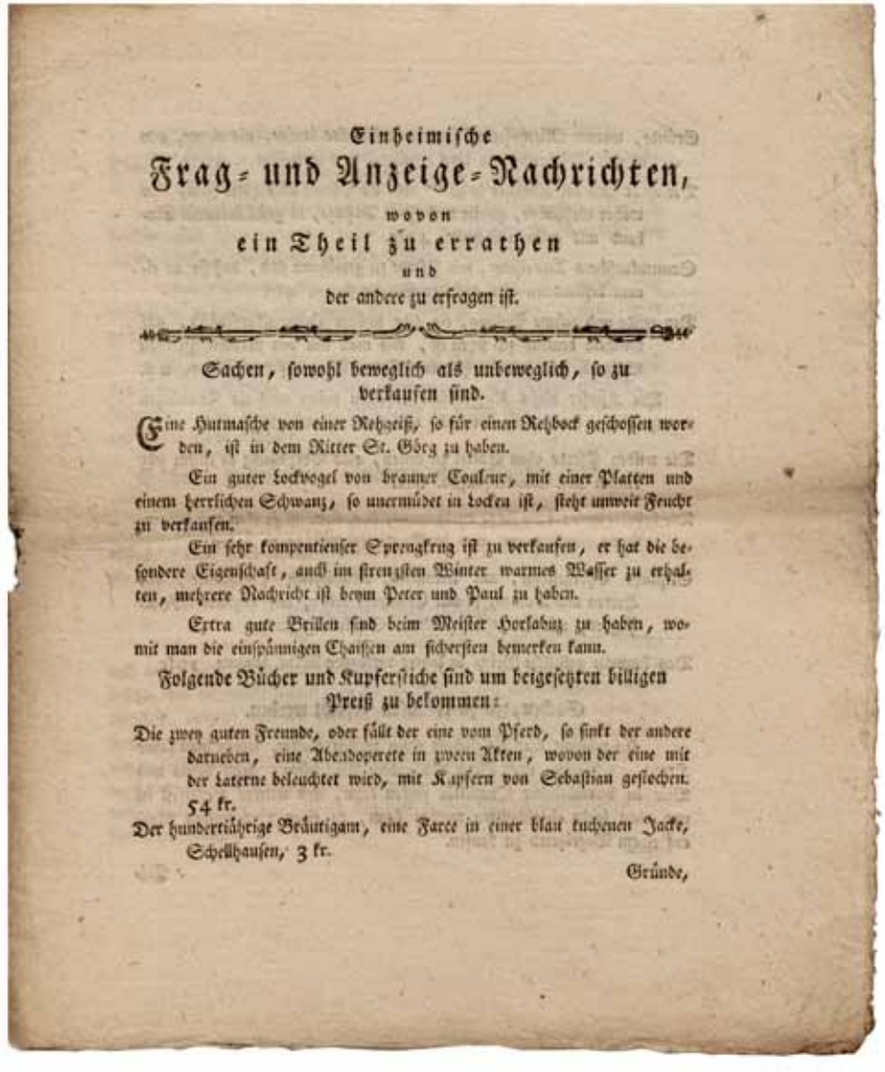
—"Especially fine spectacles are available from Master Horlabuz, perfect for noticing one-horse carriages in time" [apparently the 18th-century road-hog's vehicle of choice]

Another section, with the heading "The following books and engravings are available at the cheap rates stated," includes:

—"The Two Good Friends, or: If one falls from his horse, the other joins him, an evening operetta in two acts, one of them illuminated by a lantern, with copper engravings by Sebastian. 54 kr."

—"The One-Hundred Year-Old Bridegroom, a farce in a blue-cloth jacket, at Schellhausen [in Franconia]. 3 kr."

Fine condition. Not in WorldCat nor VD18.



Einheimische
Frag- und Anzeige-Nachrichten,
wovon
ein Theil zu errathen
und
der andere zu erfragen ist.

Sachen, sowohl beweglich als unbeweglich, so zu verkaufen sind.

Eine Hutmasche von einer Rehgeiß, so für einen Rehbock geschossen worden, ist in dem Ritter St. Görg zu haben.

Ein guter Lockvogel von brauner Couleur, mit einer Platten und einem herrlichen Schwanz, so unermüdet in locken ist, steht unweit Feucht zu verkaufen.

Ein sehr kompentienser Sprengkrug ist zu verkaufen, er hat die besondere Eigenschaft, auch im strengsten Winter warmes Wasser zu erhalten, mehrere Nachricht ist beym Peter und Paul zu haben.

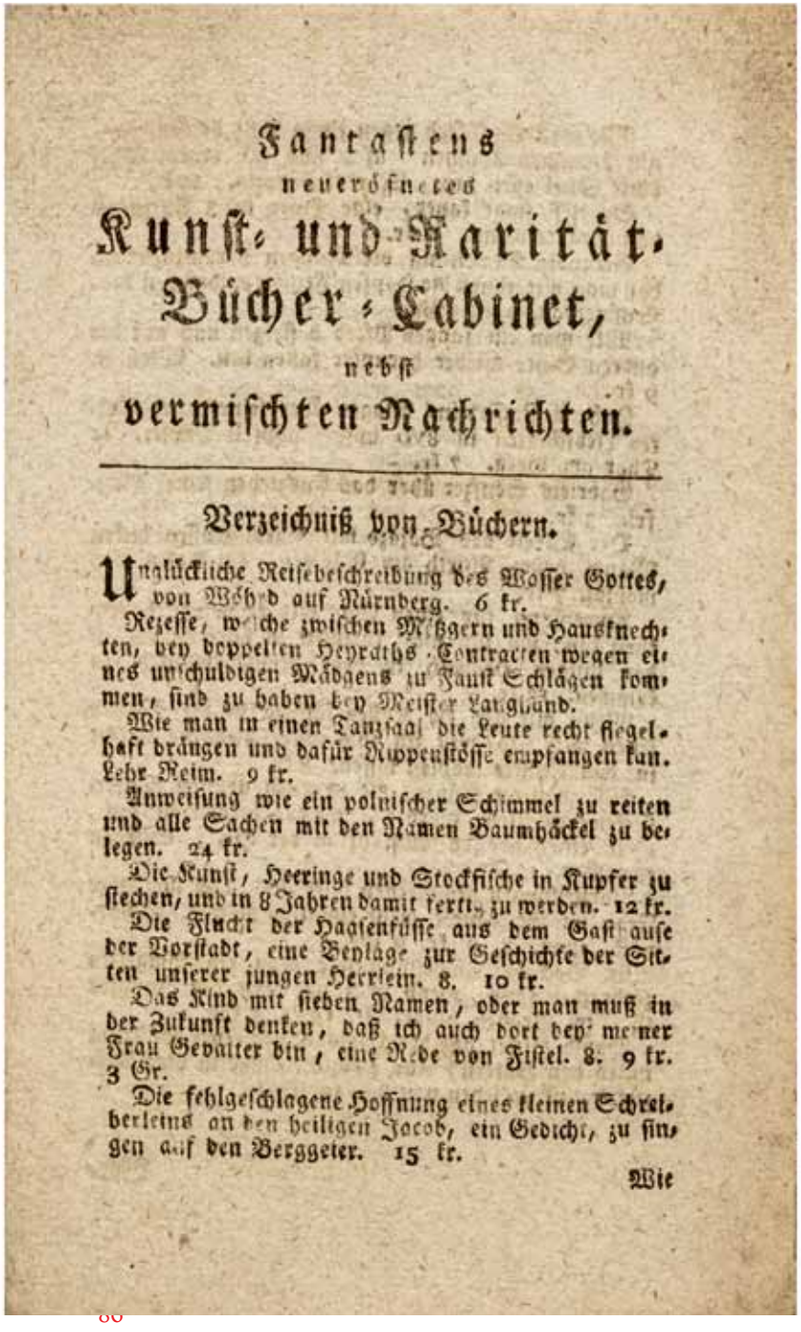
Extra gute Brillen sind beim Meister Horlabuz zu haben, womit man die einspännigen Chaisen am sichersten bemerken kann.

Folgende Bücher und Kupferstiche sind um beigesetzten billigen Preiß zu bekommen:

Die zwey guten Freunde, oder fällt der eine vom Pferd, so sinkt der andere darneben, eine Abendoperete in zween Akten, wovon der eine mit der Laterne beleuchtet wird, mit Kupfern von Sebastian gestochen. 54 kr.

Der hundertjährige Bräutigam, eine Farce in einer blau tuchenen Jacke, Schellhausen, 3 kr.

Gründe,



Fantastens
neueröfnetes
Kunst- und Karität-
Bücher-Cabinet,
nebst
vermischten Nachrichten.

Verzeichniß von Büchern.

Unglückliche Reisebeschreibung des Wasser Gottes, von Wehrd auf Nürnberg. 6 kr.

Rezesse, welche zwischen Metzgern und Hausknechten, bey doppelten Heyraths-Contracten wegen eines unschuldigen Mädgens zu Faust Schlägen kommen, sind zu haben bey Meister Langbein.

Wie man in einen Tanzsaal die Leute recht siegelhaft drängen und dafür Kuppenstösse empfangen kan. Lehr-Reim. 9 kr.

Anweisung wie ein polnischer Schimmel zu reiten und alle Sachen mit den Namen Baumhäckel zu belegen. 24 kr.

Die Kunst, Heeringe und Stockfische in Kupfer zu stechen, und in 8 Jahren damit fertig zu werden. 12 kr.

Die Flucht der Hasenfüsse aus dem Gasthause der Vorstadt, eine Beylage zur Geschichte der Sitten unserer jungen Herrlein. 8. 10 kr.

Das Kind mit sieben Namen, oder man muß in der Zukunft denken, daß ich auch dort bey meiner Frau Gevatter bin, eine Rede von Fistel. 8. 9 kr. 3 Gr.

Die fehlgeschlagene Hoffnung eines kleinen Schreiberleins an den heiligen Jacob, ein Gedicht, zu singen auf den Berggeier. 15 kr.

Wie

42. IMAGINARY LIBRARY CATALOGUE. [Drop-title]: *Fantastens neueröfnetes Kunst– und Karität-Bücher-Cabinet, nebst vermischten Nachrichten* [*Fantasto's newly opened Cabinet of Rare Art and Books, and Assorted Intelligence*]. One sheet folded into two leaves. 8vo, unbound. N.p.: n.d. [but probably Nuremberg: 1780-90]. $2250.00

An apparently unique catalogue of imaginary artworks and books; we find no copy in WorldCat or VD18. The first two pages list 21 fictitious books, all priced.

Fine copy.

43. IMAGINARY LIST: [RECKNAGEL, J.G., attributed to by VD18]. [Drop-title]: *Wöchentliche Frage– und Anzeige-Nachrichten. Ein Extrablatt* [*Weekly Tidings in the Shape of Questions and Answers. A Special Broadside*]. One sheet folded into two leaves. Small 4to, unbound, uncut. N.p.: n.d. [but probably Nuremberg: ca. 1780-90]. $2500.00

Very rare; VD18 13815725 offers J.G. Recknagel as the author but without giving a source and says "place of publication not identifiable." A notary named J.G. (Johann Georg?) Recknagel was active at Nuremberg in 1772, and an eponymous Protestant clergyman (b. 1797), was active in other parts of Franconia in the 1820; neither seems to be our author.

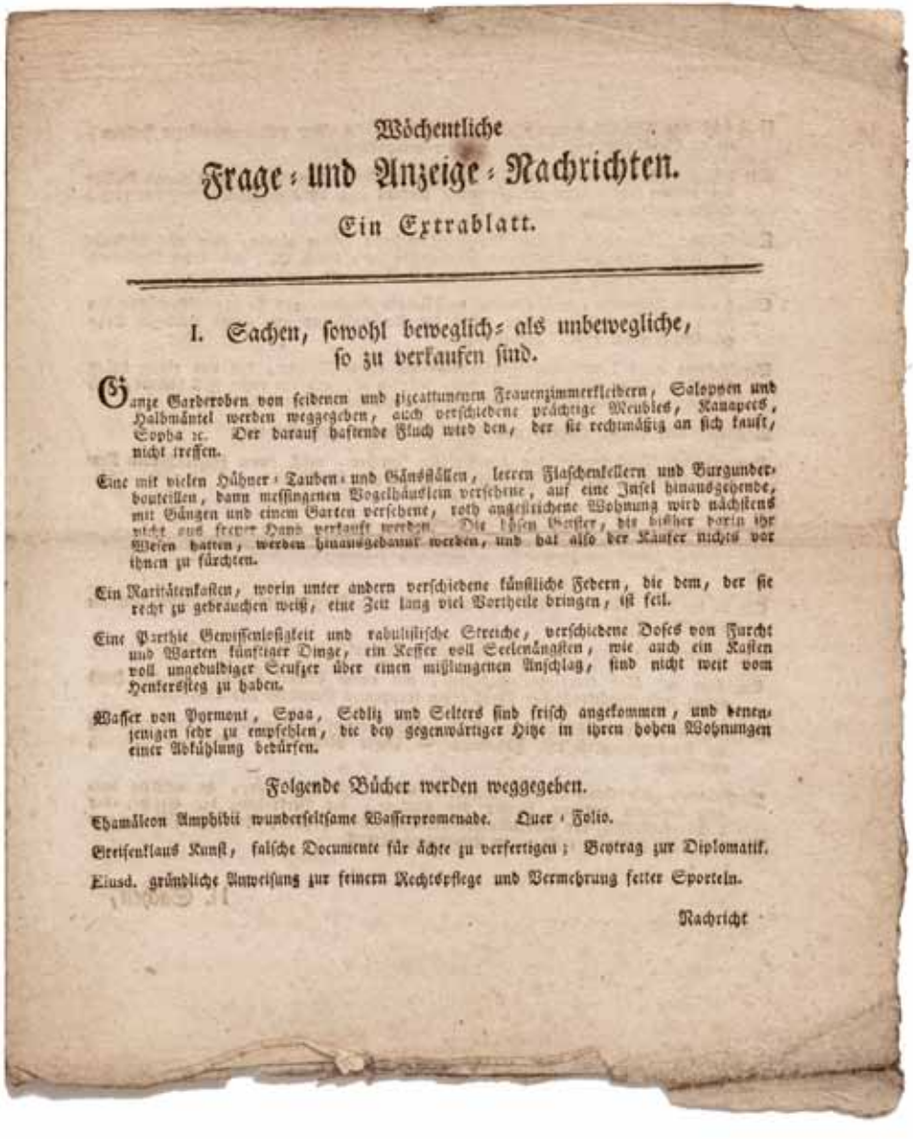
Some of the entries of this satirical fictitious piece of ephemera include the following, in translation.

"Objects mobile and immobile for sale":

—"Entire wardrobes of silk and fine cotton women's dresses, mantillas, and short coats to be given away, also a variety of splendid pieces of furniture, canapés, and sofas, the curse adhering to these objects will not strike whoever will purchase them legally"

—"Soon to be sold (not in the course of self-redress): a habitation painted red, with numerous chicken, duck, and goose stalls, empty wine cellars and burgundy bottles, and brass bird-cages, jutting out onto an island, with walks and a garden. The malicious spirits that have hitherto haunted the property will be banished, so the buyer will have nothing to fear from them"

—"A box of rarities including artificial feathers that will afford him who



Wöchentliche

Frage- und Anzeige-Nachrichten.

Ein Extrablatt.

I. Sachen, sowohl beweglich- als unbewegliche, so zu verkaufen sind.

Ganze Garderoben von seidenen und zizcattunenen Frauenzimmerkleidern, Salopyen und Halbmäntel werden weggegeben, auch verschiedene prächtige Meubles, Kanapees, Sopha ꝛc. Der darauf haftende Fluch wird den, der sie rechtmäßig an sich kauft, nicht treffen.

Eine mit vielen Hühner- Tauben- und Gänsställen, leeren Flaschenkellern und Burgunderbouteillen, dann messingenen Vogelhäuslein versehene, auf eine Insel hinausgehende, mit Gängen und einem Garten versehene, roth angestrichene Wohnung wird nächstens nicht aus freyer Hand verkauft werden. Die bösen Geister, die bisher darin ihr Wesen hatten, werden hinausgebannt werden, und hat also der Käufer nichts vor ihnen zu fürchten.

Ein Raritätenkasten, worin unter andern verschiedene künstliche Federn, die dem, der sie recht zu gebrauchen weiß, eine Zeit lang viel Vortheile bringen, ist feil.

Eine Parthie Gewissenlosigkeit und rabulistische Streiche, verschiedene Doses von Furcht und Warten künftiger Dinge, ein Koffer voll Seelenängsten, wie auch ein Kasten voll ungeduldiger Seufzer über einen mißlungenen Anschlag, sind nicht weit vom Henkersteg zu haben.

Wasser von Pyrmont, Spaa, Sedlitz und Selters sind frisch angekommen, und denenjenigen sehr zu empfehlen, die bey gegenwärtiger Hitze in ihren hohen Wohnungen einer Abkühlung bedürfen.

Folgende Bücher werden weggegeben.

Chamäleon Amphibii wunderseltsame Wasserpromenade. Quer-Folio.

Greifenklaus Kunst, falsche Documente für ächte zu verfertigen; Beytrag zur Diplomatik.

Eiusd. gründliche Anweisung zur feinern Rechtspflege und Vermehrung fetter Sporteln.

Nachricht

knows how to put them to use many advantages; going cheap"

—"A batch of unscrupulousness paired with rabbleist pranks, varying helpings of fear of things to come, a suitcase full of mental agonies, and a box of impatient sighs over a failed attempt — to be had not far from the Henkersteg" [the Executioner's Bridge at Nuremberg]

—"Waters from Pyrmont, Spa, Sedlitz, and Selters have recently arrived and are especially recommended to those who, during the present heat wave, have their apartment under the roof and need refreshment"

"The following books to be given away"

—"Chameleon Amphibian's curious water-promenade. In oblong 2°"

—"Greifenklau's Art of Forging Documents: a Contribution to Diplomacy" [Greifenklau is a famous Bamberg brewery and restaurant]

—"The same author's Thorough Instruction in the fine points of law and the augmentation of luxuriant perquisites."

Fine copy.

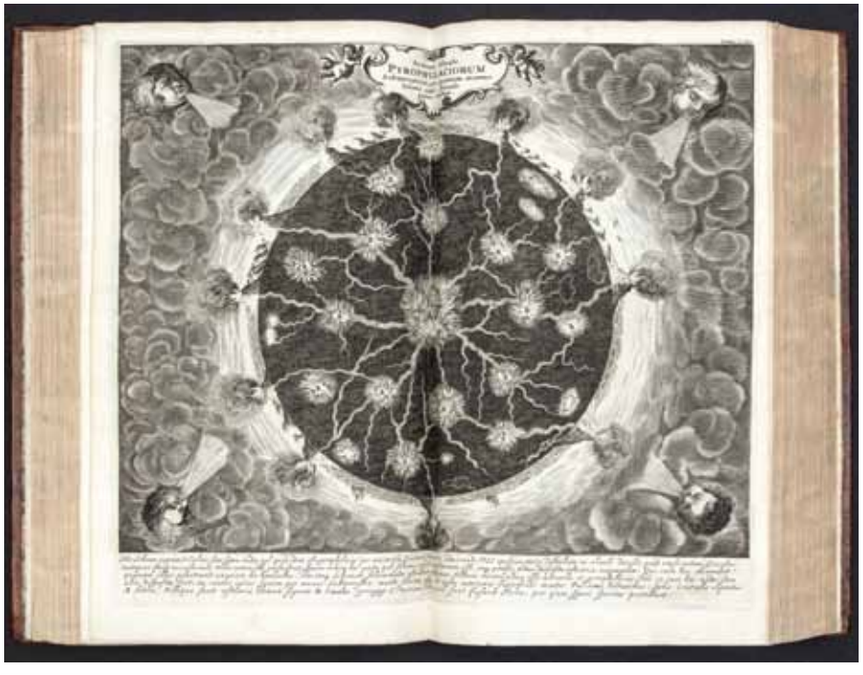
◖ Not in WorldCat.

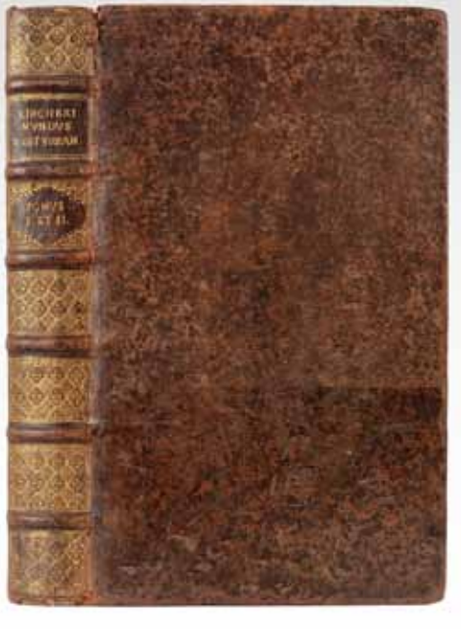
A Fine Copy

44. KIRCHER, Athanasius. *Mundus Subterraneus, in XII Libros digestus . . .* Two engraved titles; a printed title to Vol. I with an engraved vignette; engraved ports. of Kircher & Pope Alexander VII; 19 engraved plates & maps (12 folding or double-page), volvelles in Vol. I at pp. 132, 154, & 156; engraved slip in Vol. II at p. 385; a woodcut slip at p. 30 in Vol. II; numerous engravings & woodcuts in the text; 7 printed tables (6 of which are double-page or folding). 14 p.l., 346, [6] pp.; 5 p.l., 487, [9] pp. Two vols. in one. Folio, cont. mottled sheep (ends of spine a bit worn, minor rubbing, occasional bit of foxing), spine richly gilt. Amsterdam: J. Jansson & E. Weyerstraten, 1665. $27,500.00

First edition of this famous and appealing book; it "must always command a high place in the literature as the first effort to describe the earth from a physical standpoint."–Zittel, p. 25. This work is concerned with geology, mineralogy, mining, astronomy, chemistry, and physics.

The first two books contain a consideration of the center of gravity of the earth and the form and constitution of the sun, moon, and earth. Book





III is devoted to hydrography and Book IV to the earth's interior, volcanoes, and winds. Books VI-VIII treat the earth's composition. Book X is devoted to minerals and mining. It is in this book that Kircher expressed for the first time the theory that the temperature below the earth's surface increases in proportion to depth. There are also sections on distillation (with some fine illustrations of distillation equipment) and glass-making.

A fine and complete copy. Minor worming in gutter at head towards the end of the text.

Ferguson, I, p. 467. Hoover 483. Merrill 17–Kircher's observations of Aetna and Stromboli "led him to conclude that the center of the earth is a massive internal fire for which the volcanoes are mere safety valves." Partington, II, pp. 328-33.

Remained a Major Source of Information for One Hundred Years

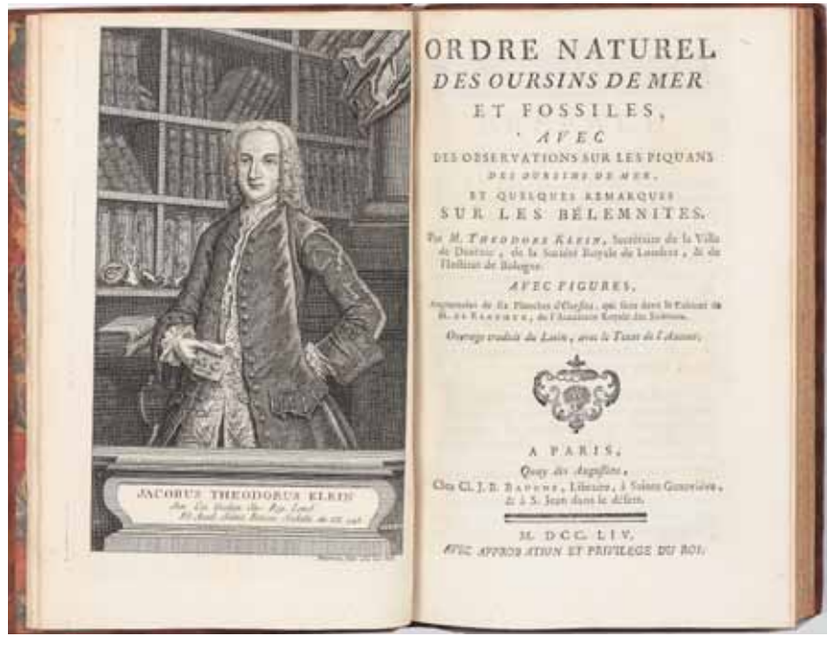
45. KLEIN, Jacob Theodor. *Ordre Naturel des Oursins de Mer et Fossiles, avec des Observations sur les Piquans des Oursins de Mer, et quelques Remarques sur les Bélemnites.* Fine engraved frontis. port. of Klein & 28 engraved plates. 3 p.l. (incl. frontis), 233, [1] pp., one leaf of ads. 8vo, fine cont. polished calf, spine nicely gilt, red morocco lettering piece on spine. Paris: C.J.B. Bauche, 1754.

[BOUND WITH]:

———. *Doutes ou Observations de Mr. Klein . . . sur la Revûe des Animaux, faite par le premier Homme, sur quelques Animaux des Classes des Quadrupedes & Amphibies du systême de la Nature, de M. Linnaeus. Et des Remarques sur les Crustacés, sur les Animaux qui ruminent, & sur la Vie de l'Homme, comparée avec celle des Animaux.* One folding engraved plate. 2 p.l., 108 pp. 8vo. Paris: J.B. Bauche, 1754. $7500.00

I. First edition in French (1st ed., in Latin: Danzig, 1734) and enlarged. This is "one of the earliest monographic treatments of the sea urchins. It includes descriptions, illustrations, and a classification of both recent and fossil sea urchins...Although altered and enlarged, this work was a major source of information on the Echinoidermata for zoologists and paleontologists throughout the eighteenth century and remained a point of departure in discussions by such early nineteenth century authors as James Parkinson."–*D.S.B.,* VII, p. 401.

II. First edition in French (1st ed., in Latin: Leipzig, 1743). This work summarizes Klein's feelings about taxonomic methods. His method was based entirely on external characteristics, such as the number and position of limbs and the mouth. He vigorously opposed any method, including the Linnaean system, based on characters not visible externally.



Klein (1685-1759), a leading marine zoologist, "had many and diverse interests in natural history besides sea urchins. He developed a botanical garden in Danzig, founded and directed a naturalist's society there, made extensive collections, and published about two dozen monographs, including studies of birds, fishes, reptiles, and invertebrates other than the sea urchins, particularly the mollusks."–*D.S.B.*

The attractive frontispiece depicts Klein standing in front of his natural history cabinet.

A very fine and pretty copy.

A Fundamental Work

46. LAPLACE, Pierre Simon, Marquis de. *Traité de Mécanique Céleste.* Folding engraved plate in Vol. IV. Five vols. Large 4to, cont. polished mottled calf (joints & a few corners carefully repaired), spines nicely gilt, red morocco lettering pieces on spines. Paris: J.B.M. Duprat & others, An VII [1798]-1825. $25,000.00

First edition and a complete set with all the supplements. 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 Lagrange 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 very nice set. Our set has the first state, with the earlier dates, of the titles of Vols. I and II, all the half-titles, and all the supplements.

◖ 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.

The Oldest German Periodical Concerned with Mining, Mineralogy, Geology & Metallurgy

47. LEMPE, Johann Friedrich, ed. *Magazin der Bergbaukunde, Erster [-Dreyzehnter] Theil.* [all published]. Engraved vignette on each title (three different vignettes), 37 folding engraved plates, & numerous printed folding tables. 13 vols. 8vo, cont. half-calf & paste-paper boards (light foxing & dampstaining here & there), final six spines decorated in gilt with red & green leather lettering pieces on spines. Dresden: Walther, 1785-99. $7500.00

A complete run of the oldest German periodical concerned with mining, mineralogy, geology, and metallurgy; it was one of the leading journals of its kind and the chief mouthpiece for the teachings of A.G. Werner. The articles contain descriptions of the latest developments in mining machinery, local geologies and mineralogies, accounts of geological expeditions, reviews of

recently published books, and several rather interesting historical pieces.

Lempe (1757-1801), was professor of mathematics and physics at the Mining Academy at Freiberg and wrote many books on mining and technology.

Very good set. Minor wear to a few volumes. From the library of His Serene Highness Prince Fürstenberg at Donaueschingen, with the library's stamp on verso of titles.

◖ Kronick 917. Poggendorff, I, 1421.

48. LEONHARD, Karl Cäsar von, MERZ, Ernst Karl Friedrich, & KOPP, Johann Heinrich. *Systematisch-tabellarische Uebersicht und Charakteristik der Mineralkörper. In oryktognostischer und orologischer Hinsicht.* 3 p.l., xvi pp., 83 leaves, [84]-125 pp. Folio, cont. half-sheep & marbled boards, flat spine gilt. Frankfurt am Main: J.C. Hermann, 1806. $2500.00

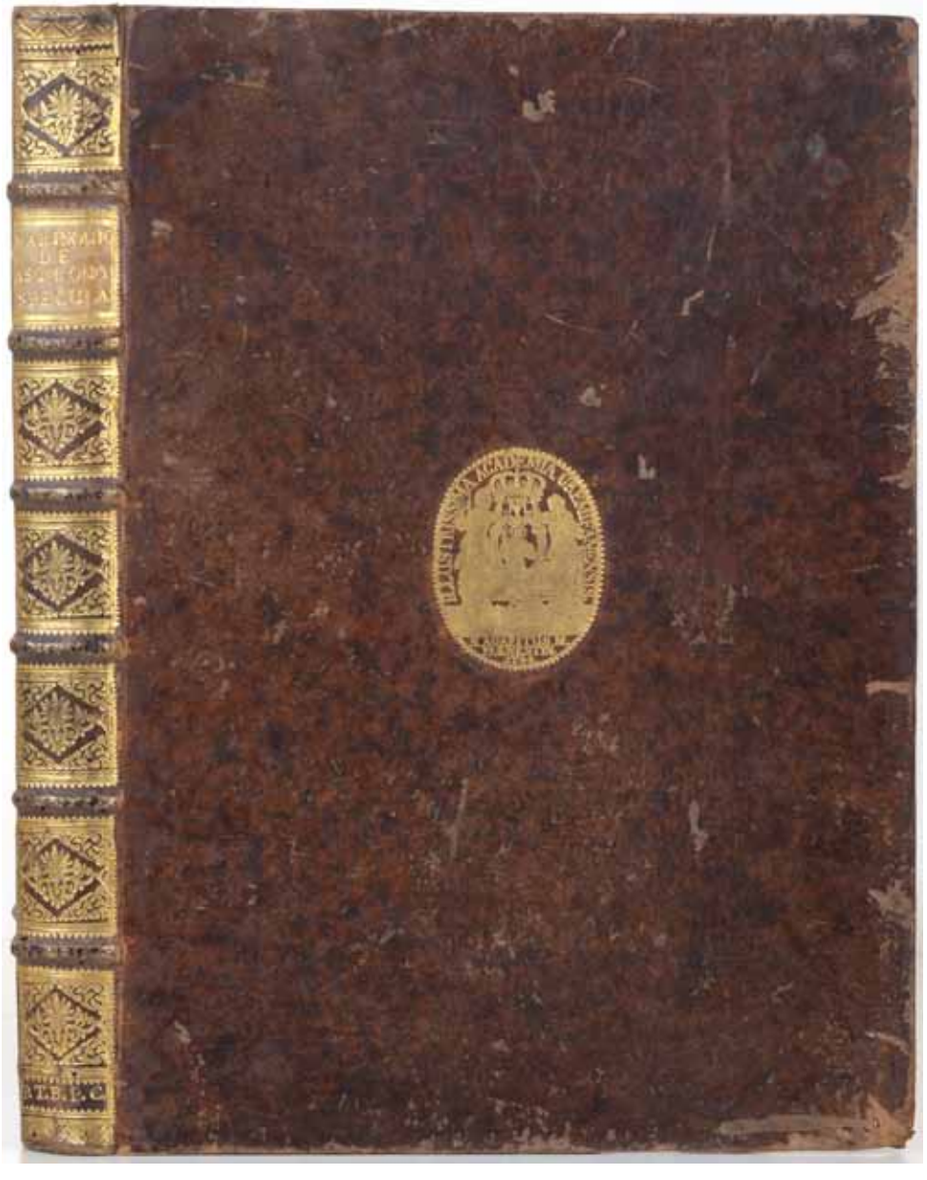
First edition and very rare; this is a systematic survey of minerals, in the form of tables, giving extensive descriptions of their external appearances and chemical qualities. Leonhard (1779-1862), professor of mineralogy at the University of Heidelberg, wrote the oryctognostic section, Merz (1776-1813), the orologic section, and Kopp (1777-1858), the chemical section. "As a founding editor of the *Taschenbuch für die gesammte 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.

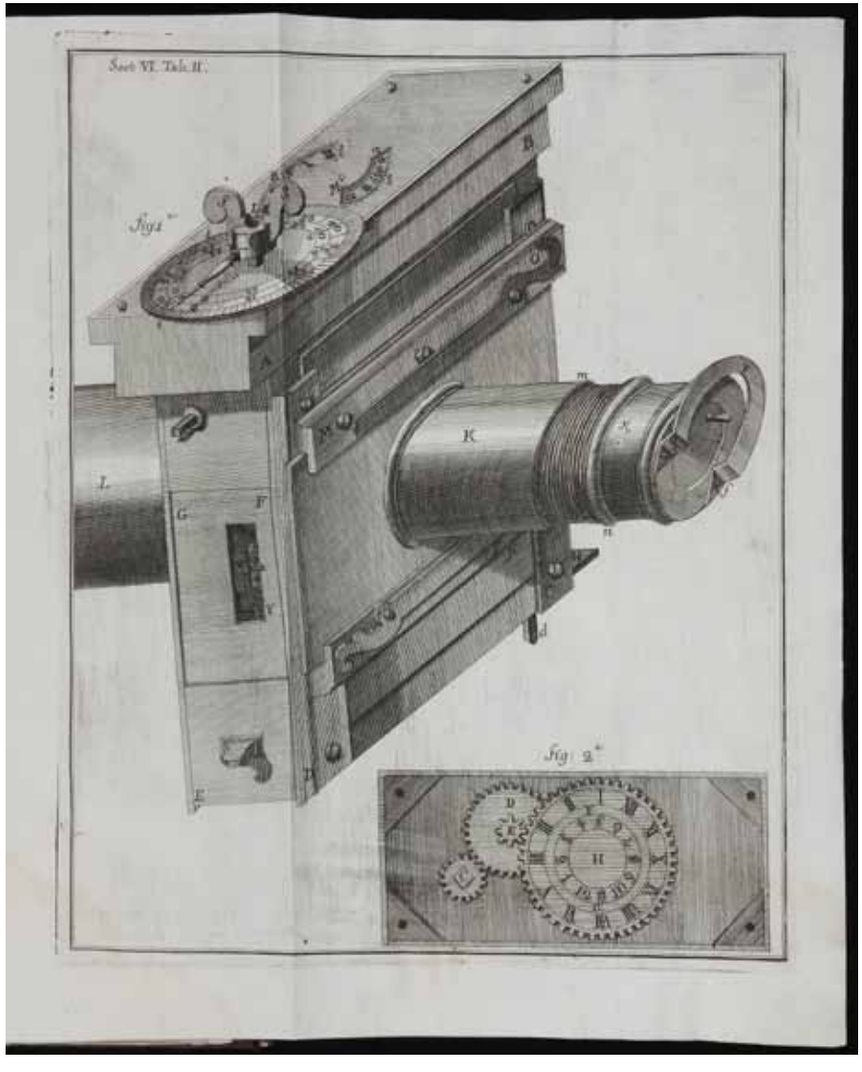
Fine copy. From the library of His Serene Highness Prince Fürstenberg at Donaueschingen with stamp on verso of title.

◖ Schuh, *Mineralogy & Crystallography: A Biobibliography*, 1469 to 1920, 2996–"Rare."

A Magnificently Illustrated Book

49. MARINONI, Giovanni Jacopo de. *De Astronomica Specula Domestica et Organico Apparatu Astronomico Libri Duo.* Finely engraved frontis. of the interior of the Imperial Library in Vienna, 43 folding engraved plates, 17 engravings in the text (including 8 full-page), engraved plan of Vienna on title, engraved headpiece, & one initial. Title printed in red & black. 12 p.l. (incl. the frontis.),





210 pp., one leaf of errata. Folio, cont. mottled sheep (dampstain, for the most part quite faint, in lower portion of final 40 leaves), spine richly gilt, contrasting leather lettering piece on spine. Vienna: L.J. Kaliwoda, 1745. $32,500.00

First edition, first issue, of this luxuriously printed and illustrated volume; this is a particularly fine and handsome copy. This work describes and illustrates the astronomical instruments in the private observatory of G.J. Marinoni (1676-1755), mathematician and astronomer to the Imperial Court of Austria and geodetic surveyor. Like the private observatories of Tycho Brahe in the 16th century and Hevelius in the 17th century, Marinoni's observatory was one of the most beautiful and best equipped in Europe in his time. He built his own instruments and those illustrated here include quadrants, telescopes, micrometers, an improved Graham pendulum, and a camera obscura. Marinoni left all the instruments to the Empress Maria Theresa, to whom this work is dedicated.

"In 1755 . . . in connection with a general reform of the University of Vienna, the Hapsburgs decided to establish a great central astronomical observatory. Its basic equipment was to be the instruments of the late imperial mathematician and geodetic survey, J.J. de Marinoni, who had made his house, on a relatively favorable site at the edge of Vienna, into an astronomical observatory."–*D.S.B.,* VI, p. 233.

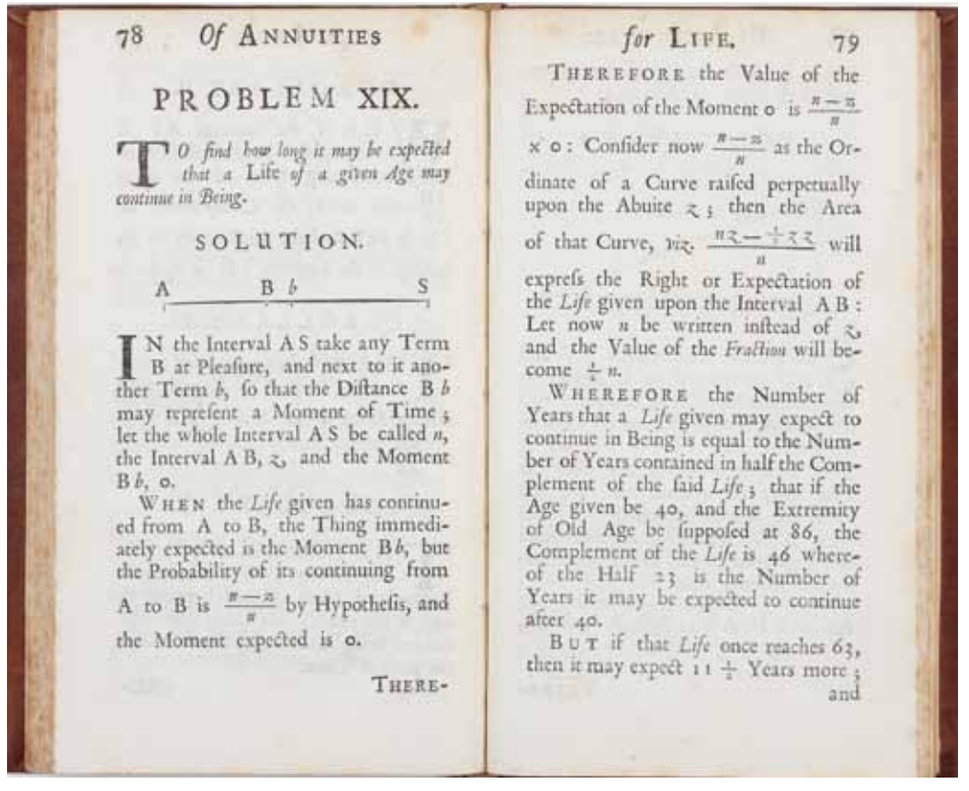
It should be noted that many of the instruments are still preserved at the Vienna Observatory.

A fine, crisp, and large copy. Our copy is a first issue with the title dated 1745 and with only one leaf of errata (the second issue is dated 1746 with an additional leaf of errata). Contemporary signature of "P. Theodorici Byhers Prof Cremisans 1746" and with the arms in gilt of the Kremsmünster Academy on upper cover.

◖ Boffito, p. 129 & plate 81. Poggendorff, II, 53. Riccardi, II, 119–"Bellissima ediz." Turner, Early Scientific Instruments. Europe 1400-1800, p. 223–"a remarkable collection of equipment."

The Theory of Annuities

50. MOIVRE, Abraham de. *Annuities upon Lives: or, The Valuation of Annuities upon any Number of Lives; as also, of Reversions. To which is added, An Appendix concerning the Expectations of Life, and Probabilities of Survivorship.* 1 p.l., 4, viii, 108, [2], slip of errata mounted on final blank leaf. 8vo, attractive antique panelled calf (some light foxing throughout), spine lettered in gilt. London: Printed by W.P. and sold by F. Fayram et al., 1725. $4500.00



78 *Of* ANNUITIES

PROBLEM XIX.

TO find how long it may be expected that a Life of a given Age may continue in Being.

SOLUTION.

A B *b* S

IN the Interval A S take any Term B at Pleasure, and next to it another Term *b*, so that the Distance B *b* may represent a Moment of Time; let the whole Interval A S be called *n*, the Interval A B, *z*, and the Moment B *b*, *o*.

WHEN the *Life* given has continued from A to B, the Thing immediately expected is the Moment B *b*, but the Probability of its continuing from A to B is $\frac{n-z}{n}$ by Hypothesis, and the Moment expected is *o*.

THERE-

for LIFE. 79

THEREFORE the Value of the Expectation of the Moment *o* is $\frac{n-z}{n} \times o$: Consider now $\frac{n-z}{n}$ as the Ordinate of a Curve raised perpetually upon the Abuite *z*; then the Area of that Curve, viz. $\frac{nz-\frac{1}{2}zz}{n}$ will express the Right or Expectation of the *Life* given upon the Interval A B: Let now *n* be written instead of *z*, and the Value of the *Fraction* will become $\frac{1}{2}n$.

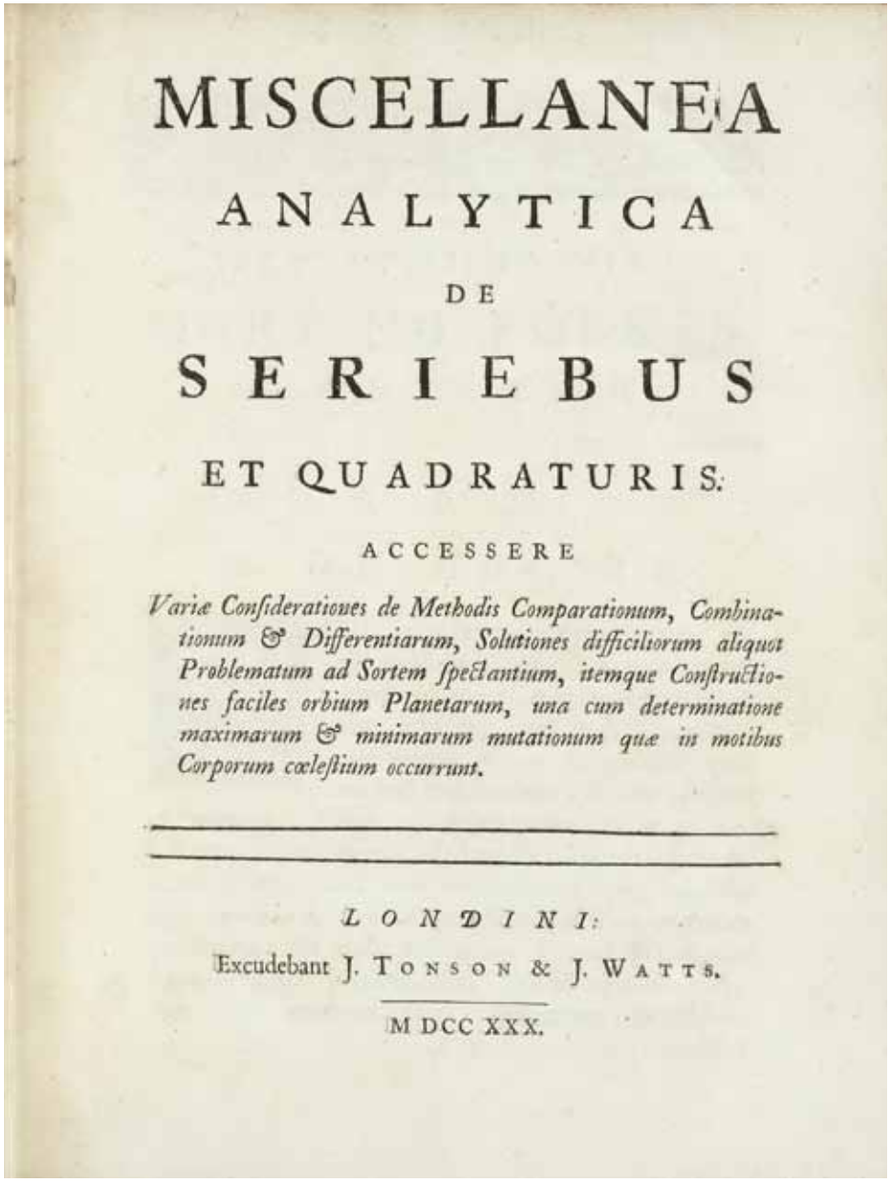
WHEREFORE the Number of Years that a *Life* given may expect to continue in Being is equal to the Number of Years contained in half the Complement of the said *Life*; that if the Age given be 40, and the Extremity of Old Age be supposed at 86, the Complement of the *Life* is 46 whereof the Half 23 is the Number of Years it may be expected to continue after 40.

BUT if that *Life* once reaches 63, then it may expect 11 $\frac{1}{2}$ Years more; and

First edition. Employing the mortality statistics gathered by Edmund Halley in the 1690s, de Moivre formulated the theory of annuities. "De Moivre's contribution to annuities lies not in his evaluation of the demographic facts then known but in his derivation of formulas for annuities based on a postulated law of mortality and constant rates of interest on money. Here one finds the treatment of joint annuities on several lives, the inheritance of annuities, problems about the fair division of the costs of a tontine, and other contracts in which both age and interest on capital are relevant. Ths mathematics became a standard part of all subsequent commercial applications in England."–*D.S.B.,* IX, p. 454.

Very good copy.

◖ Garrison-Morton 1690. Stigler, *The History of Statistics,* pp. 70-85.



MISCELLANEA

ANALYTICA

DE

SERIEBUS

ET QUADRATURIS.

ACCESSERE

Variæ Conſiderationes de Methodis Comparationum, Combinationum & Differentiarum, Solutiones difficiliorum aliquot Problematum ad Sortem ſpectantium, itemque Conſtructiones faciles orbium Planetarum, una cum determinatione maximarum & minimarum mutationum quæ in motibus Corporum cœleſtium occurrunt.

LONDINI:

Excudebant J. TONSON & J. WATTS.

M DCC XXX.

NO. 51

"His Most Important Book"–D.N.B.

51. [MOIVRE, Abraham de]. Miscellanea Analytica de Seriebus et Quadraturis . . . Several woodcut diagrams in the text. 6 p.l., 250 pp., one leaf of errata. Large 4to, cont. calf (two corners carefully repaired), double gilt fillet round sides, spine gilt, morocco lettering piece on spine. London: J. Tonson & J. Watts, 1730.

[BOUND WITH]:

———. [Drop-title]: *Miscellaneis Analyticis Supplementum.* 22 pp., one leaf of errata. N.p.: n.d. $12,500.00

First edition of the de Moivre's "most important book" (*D.N.B.*), here bound with the rare *Supplementum* which is very often missing. The *Miscellanea Analytica* is the successor to *The Doctrine of Chances* and contains the first formulation of "De Moivre's Theorem," the formula for determining a normal approximation to a binomial distribution. This became "the most fruitful single instrument of discovery used in probability theory and statistics for the next two centuries."–*D.S.B.,* IX, pp. 452-53.

The *Supplementum* was published by de Moivre to answer criticisms made by James Stirling after the appearance of the *Miscellanea.*

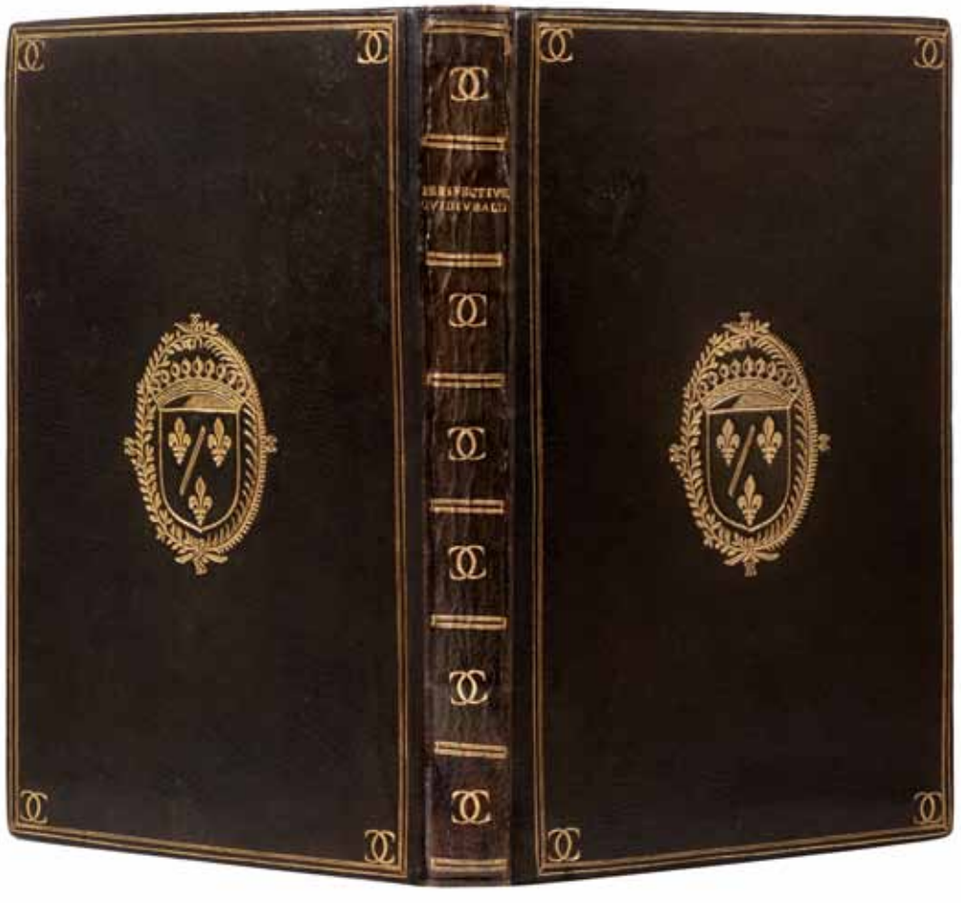
A very nice copy from the library of Haskell F. Norman with his bookplate.

◖ Stigler, *The History of Statistics,* pp. 70-77.

Charles of Valois' Copy in Contemporary Green Morocco with Arms

52. MONTE, Guido Ubaldo, Marchese del. *Perspectivae Libri Sex.* Large woodcut diagram on title & more than 300 woodcut diagrams in the text. 2 p.l., 310, [1] pp. Small folio, cont. dark green morocco, arms of Charles de Valois on sides & his monogram in corners (Olivier 2600, fers 6 & 7), triple gilt fillet round sides, flat spine divided into seven compartments, six with monogram repeated, a.e.g. Pesaro: G. Concordia, 1600. $40,000.00

First edition of this important landmark in the history of the science of perspective and a precious copy from the library of Charles of Valois (1573-



1650), finely bound in contemporary green morocco with his arms. Charles was the natural son of Charles IX and was also Count, then Duke of Angouléme. He served in numerous military campaigns and was imprisoned for a number of years for having taken part in several intrigues. Released in 1616, he was appointed ambassador to Germany in 1620. His considerable collection of books was left by his elder son, Louis de Valois, Comte d'Alais, to the Minims of La Guiche in Charolais. Its library was dispersed at the time of the French Revolution.

Monte (1545-1607), was Galileo's patron and friend for 20 years and was possibly the greatest single influence on the mechanics of Galileo.

This work "is the culminating book in the phase of mathematical perspective with which we have been concerned...His *Perspectivae libri sex* provided a definitive and often original analysis of the mathematics of perspectival projection, in a far more extended way than either Commandino or Benedetti had aimed to do...Guidobaldo's book rightly came to be regarded as the main source of reference for anyone seriously interested in the underlying geometry of perspectival projection. But this is not to say that he made life at all easy for the painter who wishes to approach his text. His only substantial treatment of a representational technique occurred in his final book, in which he analysed the scenographic perspective of stage design."–Kemp, *The Science of Art,* pp. 89-91–(& see his detailed account of the contents of the book).

Galileo apparently read the work in manuscript in 1594, and the illustrations of shadows on the lunar surface in his *Sidereus Nuncius* (1610) may be based on Book 5 (see S.Y. Edgerton in *Art Journal* 44, Fall 1984, p. 226).

A magnificent copy preserved in a morocco-backed box; 17th-century ownership inscription on title, "Ex Bibliotheca Minimorum Guichiensium."

◖ Besterman, *Old Art Books,* p. 74. *D.S.B.,* IX, p. 487-89. Riccardi, II, 179.

The Great Morgan Catalogues; Robert von Hirsch's Set

53. (MORGAN, J. Pierpont). *Catalogue of Manuscripts and Early Printed Books from the Libraries of William Morris, Richard Bennett, Bertram, Fourth Earl of Ashburnham, and other Sources. Now Forming a Portion of the Library of J. Pierpont Morgan.* [Compiled by M.R. James, A.W. Pollard, & E. Gordon Duff]. Plates & reproductions in the text, including many in red, blue, & black. Titles printed in red & black. Four vols. Folio, orig. green half-morocco & cloth (one or two unimportant scratches to bindings), spines gilt, t.e.g., others uncut, by Riviere & Son. London: [Privately] Printed at the Chiswick Press, 1906-07. $30,000.00

Limited to 125 copies (the MSS. volume) and 175 copies (the printed books volumes), and printed on handmade paper. One of the most sumptuously produced catalogues of a private library, this monumental work,

compiled by Pollard and M.R. James with the assistance of E. Gordon Duff, Robert Proctor, and Stephen Aldrich, is of the greatest possible value to all those concerned with the history of manuscript decoration and calligraphy, early printing, and the graphic arts. These volumes contain detailed descriptions and a very large number of facsimiles. No efforts were spared to make them worthy of their remarkable contents.

A fine set and now scarce on the market. With the bookplate of Robert von Hirsch (1883-1977), the great art collector whose collections were sold a year following his death. From the library of Detlef Mauss.

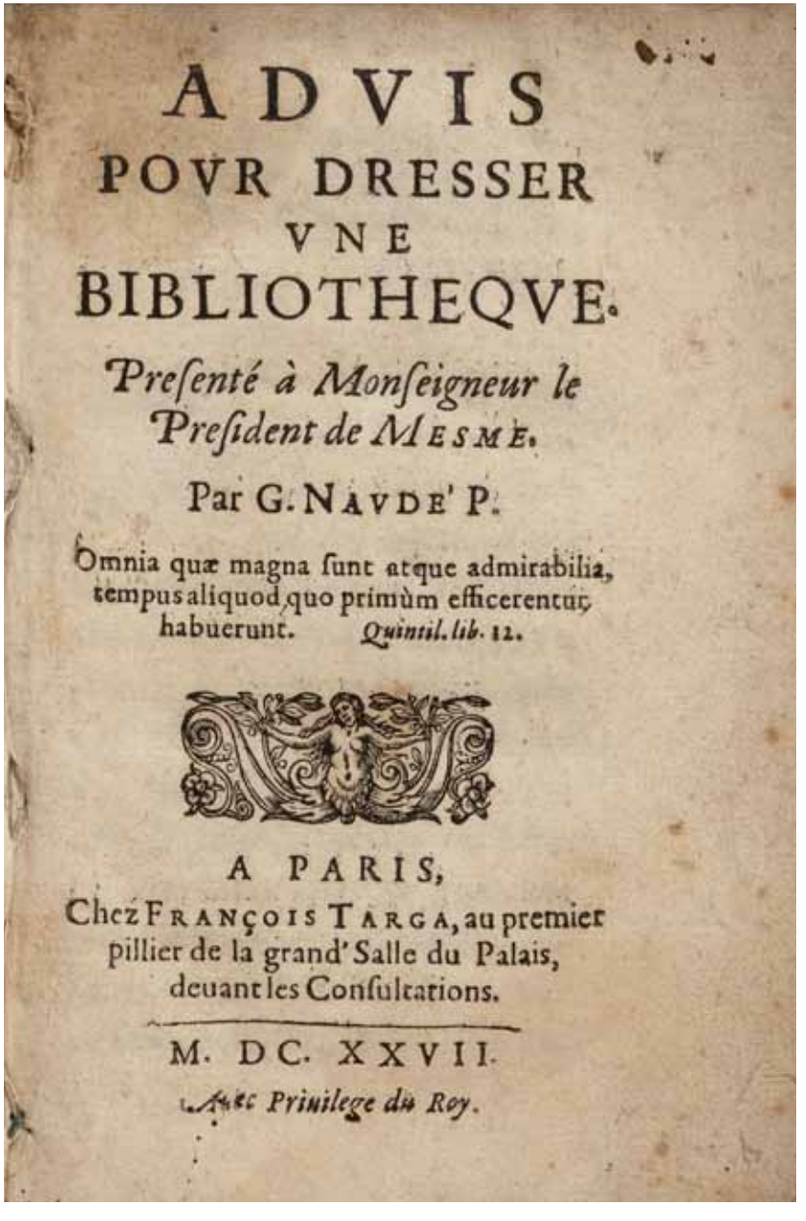
◖ De Ricci, p. 173–"four handsome catalogues."

A Classic on Book Collecting

55. NAUDÉ, Gabriel. *Advis pour dresser une Bibliotheque. Presenté à Monseigneur le President de Mesme.* Woodcut device on title. 166, [1] pp. Small 8vo, cont. vellum over limp boards (lower cover a little defective, minor worming in lower margin but touching one letter of imprint).
Paris: F. Targa, 1627. $35,000.00

First edition of a work of the greatest importance in the history of book collecting and libraries; Naudé's bibliographic canon still influences us today. The first edition is a very rare book; its continuing importance is attested to by the many reprints in French and translations into other languages well into the 20th century.

In this first comprehensive guide devoted to how to form a library, Naudé (1600-53), Cardinal Mazarin's librarian, also stresses the importance of making the library available to the public. Naudé wrote that it was necessary to gather all types of books, regardless of the author's religion or political beliefs. He "advised collectors to buy books on all subjects, taking pains to seek out the



ADVIS
POVR DRESSER
VNE
BIBLIOTHEQVE.

Preſenté à Monſeigneur le Preſident de MESME.

Par G. NAVDE' P.

Omnia quæ magna ſunt atque admirabilia, tempus aliquod quo primùm efficerentur, habuerunt. *Quintil. lib. 12.*

A PARIS,
Chez FRANÇOIS TARGA, au premier pillier de la grand' Salle du Palais, deuant les Conſultations.

M. DC. XXVII.

Auec Priuilege du Roy.

best commentaries and critical editions; the contents were all-important, and nothing was to be bought on account of its antiquity, appearance or associations."–Hobson, *Great Libraries,* p. 14.

Very nice copy, preserved in a box. Bookplate of Edmond Tondut.

◖ Viardot, Jean, "Naissance de la bibliophilie: les cabinets de livres rares," in Histoire des bibliothèques françaises. Les bibliothèques sous l'Ancien Régime 1530-1789, p. 270–"L'Advis a exercé une influence profonde et durable sur le monde du livre. Il faut admettre avec Dacier qu'il a été pour son temps 'un guide, le premier du genre où cette question était traitée d'ensemble et sous tous ses aspects et qu'il a occupé une place et joué un rôle éminents dans l'histoire des idées'." See Archer Taylor's edition of the Evelyn translation of Naudé's book (Berkeley & Los Angeles: 1950).

A Very Fine Copy

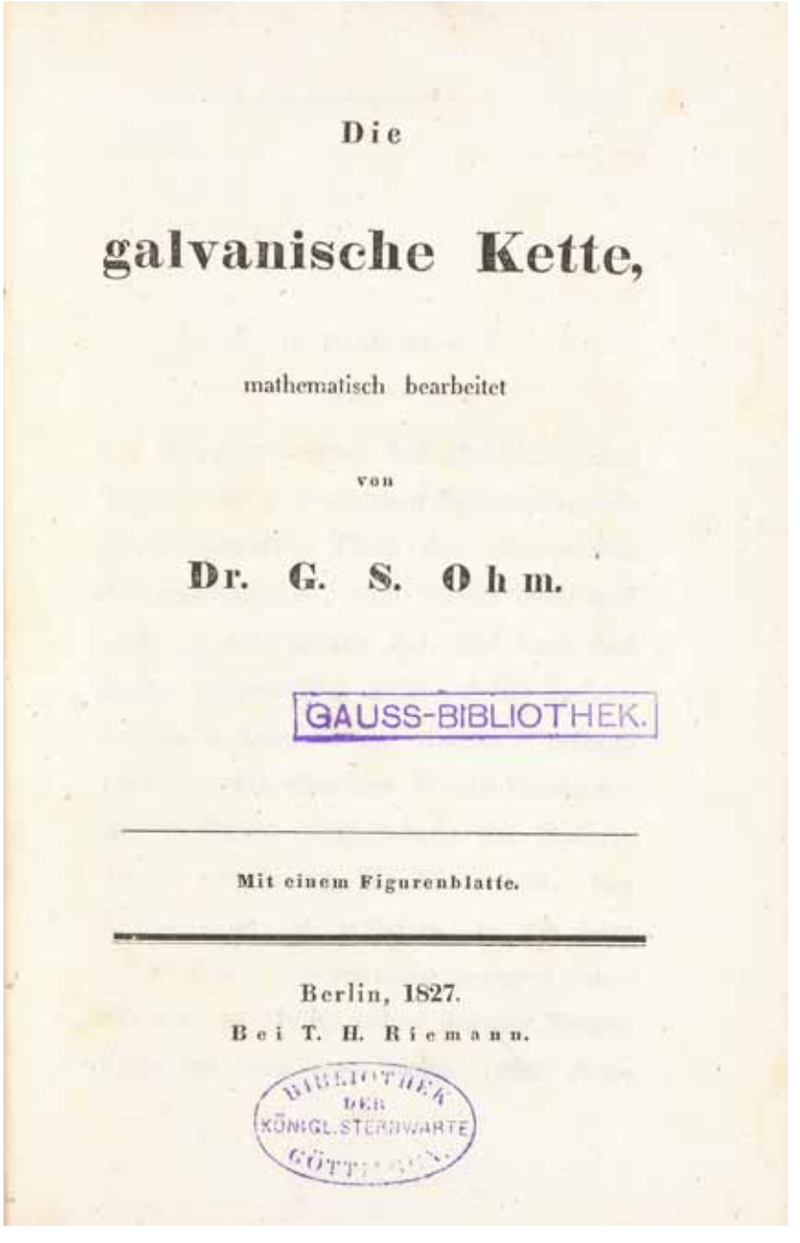
56. NICHOLSON, William. *The First Principles of Chemistry.* Engraved plate serving as the frontis. xxxi, 546, [4] pp. 8vo, fine cont. calf, spine gilt, red morocco lettering piece on spine. London: G.G.J. & J. Robinson, 1792. $1750.00

"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. 18th century engraved armorial bookplate of "Sr Rd Bempde Johnstone, Bart."

◖ Cole 977–"In the second edition the author has revised the work to some extent and inserted new discoveries." Partington, IV, p. 19-20.



Die

galvanische Kette,

mathematisch bearbeitet

von

Dr. G. S. Ohm.

Mit einem Figurenblatte.

Berlin, 1827.

Bei T. H. Riemann.

The Fundamental Law of Electric Circuits; Gauss's Copy

57. OHM, Georg Simon. *Die galvanische Kette, mathematisch bearbeitet.* One folding engraved plate. iv, 245 pp. (lacking the errata leaf & leaf of ads). 8vo, cont. grey paste-paper boards (lower joint with short split at head & foot). Berlin: T.H. Riemann, 1827. $27,500.00

First edition, and a splendid association copy, of this pioneering work which contains one of the most important discoveries in electrical science — "Ohm's law" — the basis of the present system of electrical measurement. Ohm discovered the unit of resistance in an electrical current. This copy belonged to the "Prince of Mathematicians" — Carl Friedrich Gauss — and has the "Gauss-Bibliothek" stamp on the title. It is quite exciting to be able to link two of the greatest 19th-century scientists through an important book like this.

"In the field of electrical measurement Ohm was the great pioneer . . . Ohm's great contribution — 'The Galvanic Chain Mathematically Calculated' — was to measure the rate of current flow and the effects of resistance on the current. 'Ohm's law' — that the resistance of a given conductor is a constant independent of the voltage applied or the current flowing — was arrived at theoretically by analogy with Fourier's heat measurements (1800-14)."–*Printing & the Mind of Man* 289.

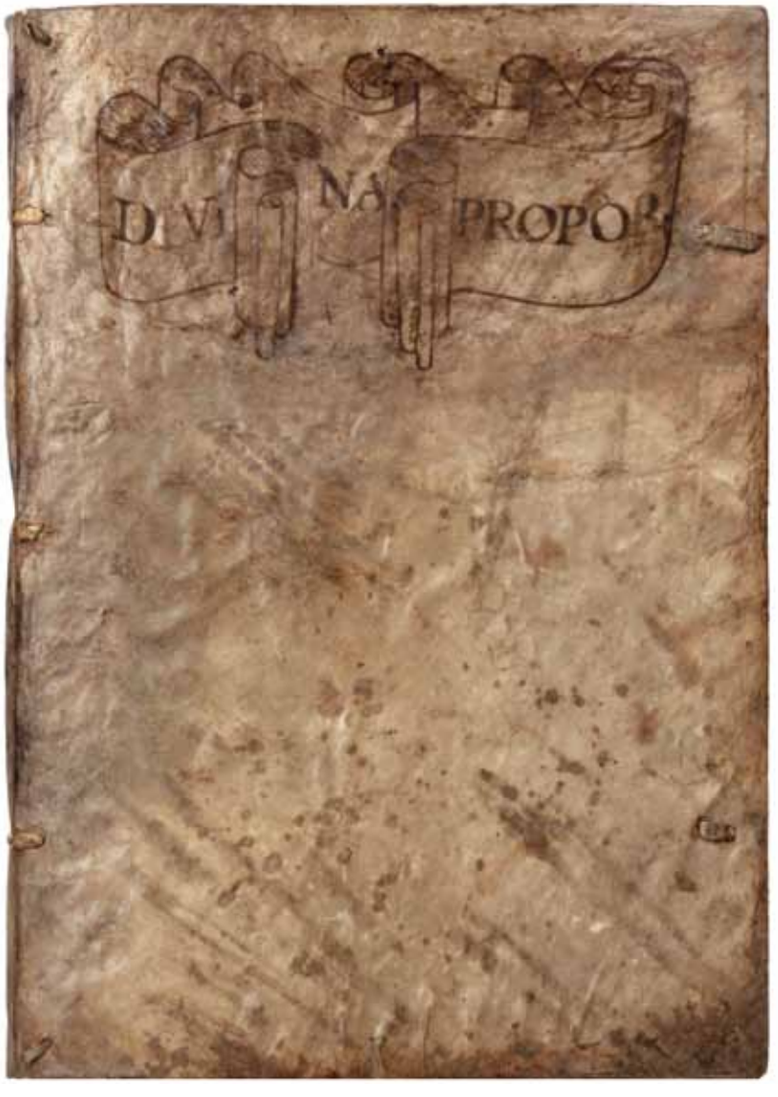
It is known that the publisher was forced to pulp most of the copies of this book due to lack of sales.

A very fine and fresh copy. Lacking the errata leaf (it clearly was never bound-in) and, as usual, the leaf of ads. 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. Preserved in a box.

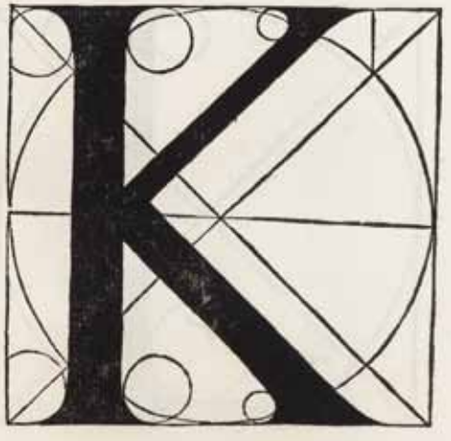
◖ Dibner, *Heralds of Science,* 63. Horblit 81. Sparrow, *Milestones of Science,* 154. Wheeler Gift Cat. 835.

With Illustrations from Designs by Leonardo da Vinci

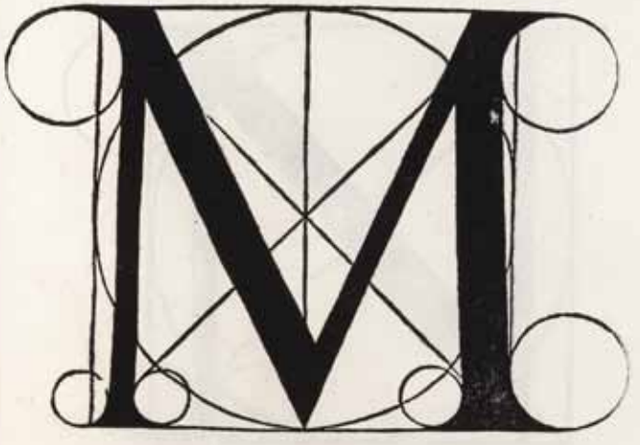
58. [PACIOLI, Luca]. *Divina Proportione.* Edited by A. Capella. 87 fine woodcut plates & 183 woodcut diagrams in the margins. Title printed in red & black. 6 p.l., 33, [1 blank leaf], 26 leaves. Small folio (288 x 201 mm.), cont. vellum over boards (binding a little soiled &



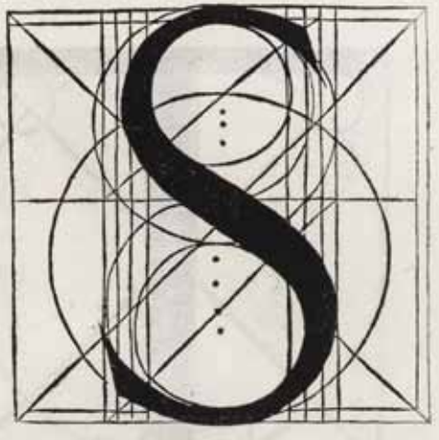
with minor repairs, first & last leaf very slightly soiled), upper cover with the legend "Divina Propor" on a scroll in an early hand, remains of ties. [Venice]: P. de Paganini, [June 1509]. $475,000.00



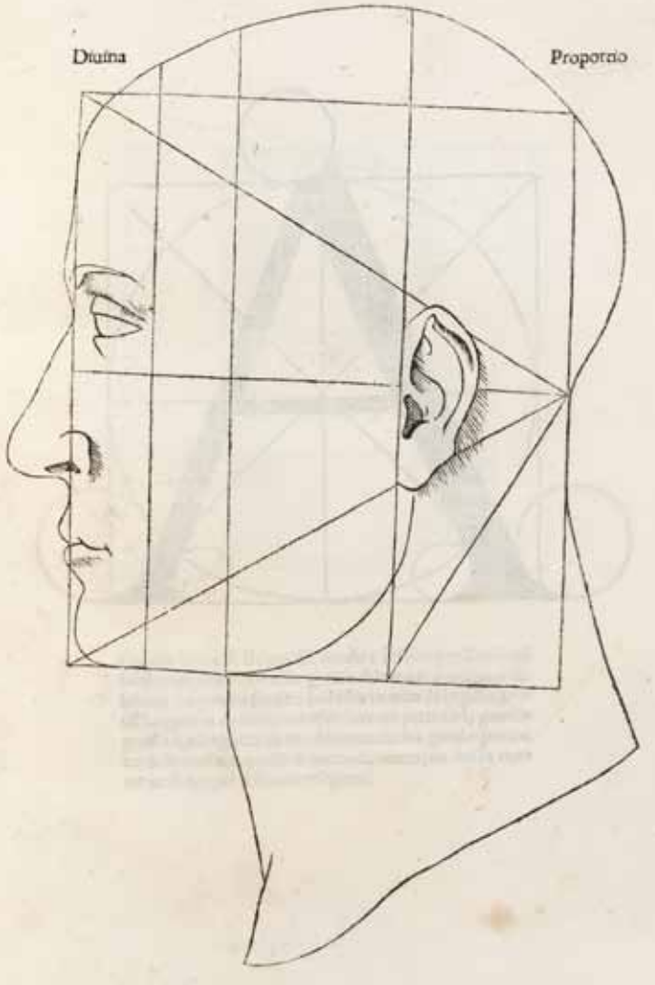
Questa lettera .K. se caua del tondo e del suo quadro trouando una linea per diametro del quadro i questa linea se ferma e termina le due gambe per mezo la gamba grossa. La gamba de sotto uol esser grossa comme laltre gambe una parte de le noue. Quella de sopra la mita de la grossa comme la sinistra del .A. Quella de sotto uol esser longa fin ala crociera ouer di fora. Quella de sopra dentro la crociera

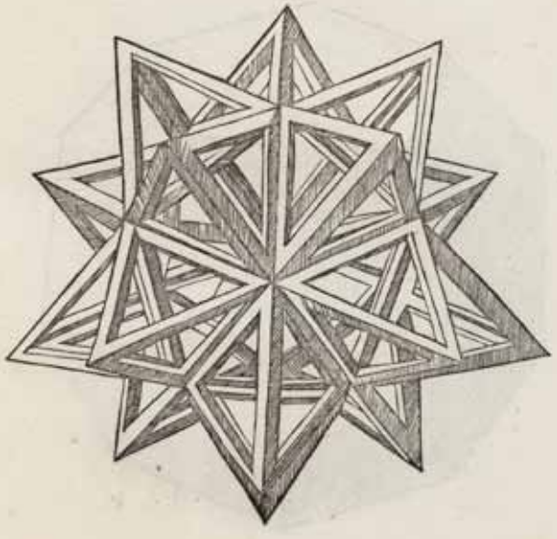


Questa lettera .M. se caua del tondo e del suo quadro le gambe sutili uogliano esser per mezo de le grosse comme la sinistra del .A. le extreme gambe uogliano esser al quanto dentro al quadro le medie fra quelle e le intersecationi de li diametri lor grosseze . grosse e sutili se refereiscano a quelle del .A. cõme di sopra in figura aperto poi comprendere.



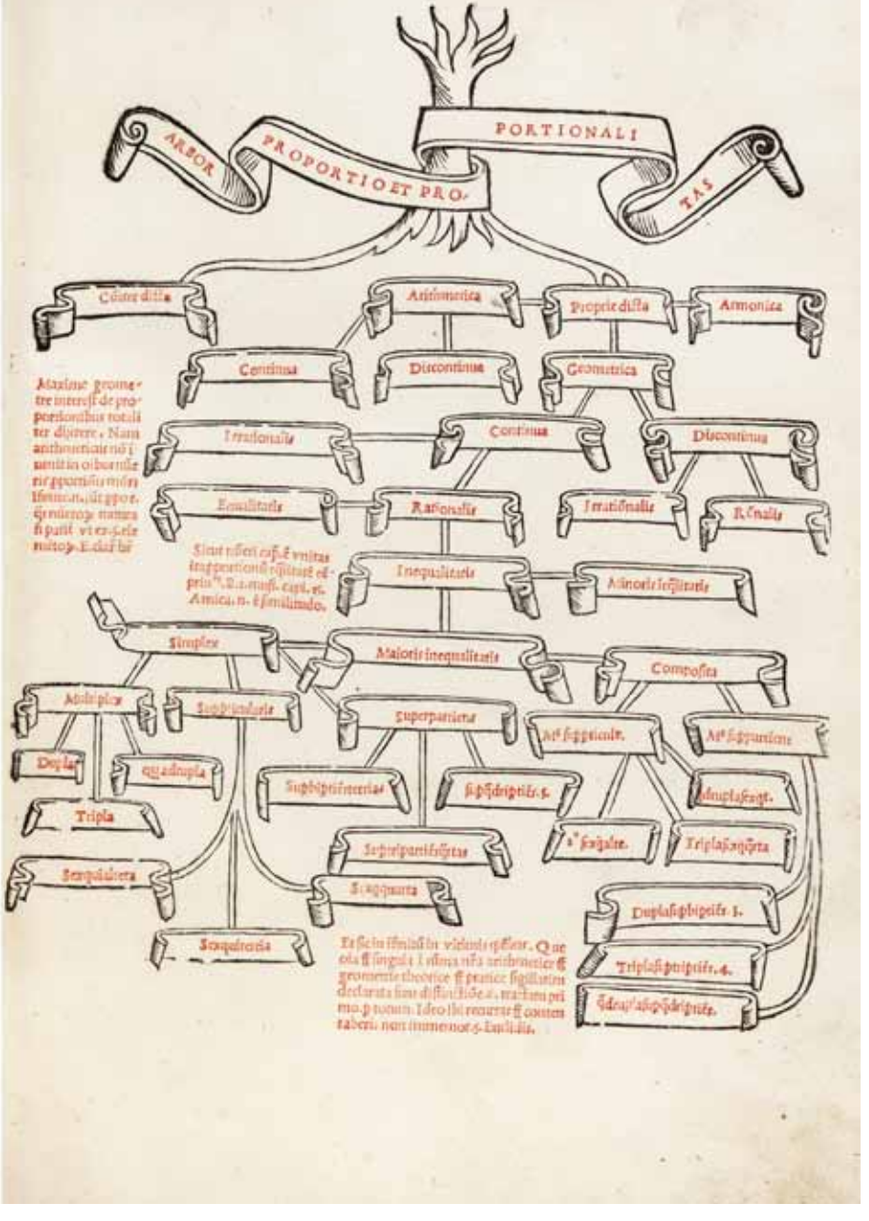
Questa lettera.S. se caua de octo tondi & questa sie la sua Ragione ut hic in exemplo apparet li quali per le sue para lelle trouādo lor centri troueraī quelli de sotto esser ma- giori de li de sopra un terzo del nono del suo quadro La pancia de mezzo uol esser grossa el nono aponto de laltre za. Le sutili un terzo de la grosseza terminando le teste cō sua gratia.





Icosaedron quintum Cenon

Icosaedron Eleuatum Vacuum



First edition and a fine, unpressed, and large copy of this great book of the Italian Renaissance, which contains the handsome woodcut illustrations from designs by Leonardo da Vinci; the importance of this book for the study of type design and Renaissance mathematics and architectural theory cannot be overestimated. The discussion of letter forms, is "the first serious treatise of this kind to be printed and became the inspiration of the successive similar works by Albrecht Dürer and by Geofroy Tory."–Stanley Morison, "Preface" to his Grolier Club edition (1933).

Leonardo provided some 59 drawings of geometrical solids for Pacioli's treatise, and these designs were reproduced in the two surviving manuscripts and our printed edition.

"The *Divina proportione* . . . comprised three books: 'Compendio de divina proportione,' 'Tractato de l'architectura,' and 'Libellus in tres partiales tractatus divisus quinque corporum regularium.' The first book, completed at Milan in 1497, is dedicated to Ludovico Sforza. Its subject is the golden section or divine proportion, as Pacioli called it, the ratio obtained by dividing a line in extreme and mean ratio. It contains a summary of Euclid's propositions (including those in Campanus' version) relating to the golden section, a study of the properties of regular polyhedrons, and a description of semi-regular polyhedrons obtained by truncation or stellation of regular polyhedrons. Book 2 is a treatise on architecture, based on Vitruvius, dedicated to Pacioli's pupils at Sansepolcro. To this he added a treatise on the right proportions of roman lettering. The third book is an Italian translation, dedicated to Soderini, of Piero della Francesca's *De corporibus regularibus* . . .

"The writings of Pacioli have provided historians of the Renaissance with important source material for the study of Leonardo da Vinci."–*D.S.B.,* X, pp. 270-71.

Fine and fresh copy, preserved in an elegant green morocco box. Small stamp on title removed and well filled-in at an early date. This is the *third* time I have had the pleasure of owning this copy. I first sold it many years ago to a very discerning private collector in Paris and following his death, the book came back to me in 2011. I soon sold this copy again from my *Catalogue 200* to a well-known art collector in New York City, who has now moved into other areas of book collecting.

◖ Kemp, *The Science of Art, pp. 27, 55, 62, 63, 104, & 171. Mortimer, II, 346. Smith,* Rara Arithmetica, pp. 87-89.

"The Most Important Work on Occupational Disease before Ramazzini"

59. PANSA, Martin. *Consilium Peripneumoniacum: Das ist Ein getrewer Rath in der beschwerlichen Berg- und Lungensucht, darinnen verfasset, was die fürnemsten Ursachen seyn beyderley Beschwerungen, beydes der gifftigen, die vom Bergwerck entstehet: so wol der gemeinen, die von Flüssen herrühret: Zuvor aber, wie der Mensch mit der kleinen Welt, und mit dem Bergwerck artlich zu vergleichen, und wie beyde Suchten zu vertreiben seyn.* Title printed in red & black. 7 p.l., 104 pp. Small 4to, cont. vellum over boards. Leipzig: T. Schürer, 1614.

[BOUND AFTER]:

———. *Güldenes Kleinod menschlicher Gesundheit: Darinnen die Lehr von des menschen Gesundheit, als welche unter andern Gütern und Kleinodien dieser Welt das allerfürtrefflichste ist, weitleufftig erkläret* . . . Title printed in red & black. 20 p.l. (of 21?), 879, [7] pp. Small 4to. Leipzig: Z. Schürer, 1626.

[BOUND WITH]:

———. *Consilium Antipestiferum Das ist, ein getrewer Rath in gefehrlichen und gifftigen Sterbensleufften, oder Pestilentzseuche* . . . First title in red & black. 5 p.l., 28 pp., one blank leaf; 13, 57 pp., one blank leaf; 8 p.l., 84 pp. Three parts in one vol. Small 4to. Leipzig: T. Schürer, 1614. $9500.00

A fine sammelband of three first editions by Martin Pansa (1580/81-1626), physician, public health doctor, and former student of Georg Agricola.

I. Pansa's *Consilium Peripneumoniacum* (1614) was "the most important work on occupational disease before Ramazzini. He described the symptoms of the lung diseases of miners and smelters."–Garrison-Morton 2119. Pansa was the city doctor of Annaberg, one of the chief mining towns of Saxony. In his *Consilium Peripneumoniacum*, Pansa "asserts that many young miners must cease work in the prime of life and die helplessly of the miner's sickness . . . In the

Güldenes Kleinod
Menschlicher Gesundheit:

Darinnen die Lehr von des Menschen Gesundheit/ als welche unter andern Gütern vnd Kleinodien dieser Welt das allerfürtrefflichste ist/ weitleufftig erkläret/ vnd erstlich der Mensch als eine kleine Welt/ mit der grossen Welt verglichen wird/ vnd sonderlich mit dem Bergwerck:

Deßgleichen was dem Menschen an seiner Gesundheit vnd langem Leben hinderlich sey/ wie vnd warumb er allmehlich ins abnehmen gerathe:

Item, wie er in Erwehlung vnd Correction der mancherley Speisen vnd des Getränckes gute Discretion halten/ vnd durch alle vier Zeiten des Jahrs in der Diæt, Purgation, Schweiß/ Aderlässe/ Schrepffen/ vnd Stärckungen gute Vorsichtigkeit gebrauchen/ vnnd wie er sich in den Affecten regieren/ vnd auff der Reise verhalten sol/ er sey gleich starcker/ oder schwacher/ vnd bawfelliger Natur:

Endlich/ wie er sich in den schönen Gleichnissen/ aus der Natur genommen/ fleissig ersehen/ vnd an anderer verlebter Leute Exempel bespiegeln sol/ was jhme selbsten nützlich vnd dienstlich sey: Auch wie sich sonderlich die alten Leute mit guten Speisen/ Labsal vnd außerlesenen Artzneyen wol versehen/ oder sonsten in acht nehmen sollen:

Zum fleissigsten verfertigt vnd elaborirt

Durch

MARTINUM PANSAM, D.
in Breßlaw Medicum.

CUM PRIVILEGIO.

Leipzig/ In Verlegung Zachariæ Schürers/ vnd Matthiæ Götzen/
1626.

CONSILIVM PERIPNEV-

MONIACVM:

Das ist/

Ein getrewer Rath

in der beschwerlichen Berg- vnd Lungensucht/ darinnen verfasset/ was die fürnemsten Vrsachen seyn beyderley Beschwerungen/ beydes der gifftigen/ die vom Bergwerck entstehet: so wol der gemeinen/ die von Flüssen herrühret: Zuvor aber/ wie der Mensch mit der kleinen Welt/ vnd mit dem Bergwerck artlich zu vergleichen/ vnd wie beyde Suchten zu vertreiben seyn:

Allen Lung- vnd Bergsüchtigen zum besten:

Benebens XXX. disputirlichen Fragen/von dieser Materia gestellet/

Durch

MARTINVM PANSAM,

Schleüsingensem, Franc. Philosophum, Medicum, verordneten Stadt-Doctorem auff S. Annenbergk.

Zuvor niemals in Druck auszgangen.

Horatius lib. 1. Epistolarum, in fine Epist. 6.

—— —— *Si quid novisti rectius istis*
Candidus imperti: si non, his utere mecum

Gedruckt zu Leipzig bey Lorentz Kober/ In verlegung Thomæ Schürers/ Buchhändlers.
Im Jahr 1614.

Consilium Antipestiferum

Das ist/

Ein getrewer Rath

in gefehrlichen vnd gifftigen Sterbensleufften/ oder Pestilentzseuche.

Darinnen gründlich/ kürtzlich vnd klärlich dargethan vnd angezeiget wird/ was die rechten natürlichen Vrsachen seyn/ daß so wenig Leut von der Pestilentz befallen/ auffkommen/ ob sie gleich nützliche Antidota wieder den Gifft zu rechter zeit gebraucht vnd eingenommen haben.

Deßgleichen was die vrsachen der Pest ingemein/ vnd jetziger zeit insonderheit seyn: Wie man sich darvor hüten sol/ auch wie die allbereit inficirten davon zu entledigen.

Nicht allein mit gemeinen/ sondern auch mit besondern bewehrten Mitteln beydes vor Arme vnd Reiche gestellet/ vnd in gewisse Capitel abgetheilet/

Durch

Martinum Pansam D. Poliatrum Annæbergensem.

Gedruckt zu Leipzig/ bey Valentin Am Ende/ In verlegung Thomæ Schürers Buchführers.

Anno M. DC. XIIII.

preface to his book he indicates his purpose in writing. Weak and incapacitated workers are useless in the mines. Nor can the miner acquire a satisfactory knowledge of his craft if he dies at an early age. Therefore he wishes to teach the miners how to protect themselves from the miners' sickness, so that they will be saved from an early death, will remain healthy, and will be able to carry on their trade diligently . . . Pansa wrote in a popular manner. The various chapters contain descriptions and explanations, in which the organs of the body are compared to the parts of a mine . . .

"He speaks of the miners' sickness (die Bergsucht) and of the poisonous lung sickness (giftige Lungensucht) . . . All those who dig gold or silver ores, salt, alum, sulphur, lead, copper, tin, iron, or mercury are subject to it. The ore miners are particularly prone to be attacked by the lung disease, but they also suffer with stomach ulcers, headache, diseases of the limbs, consumption, and tumors . . .

"The sick miners exhibit various symptoms, but the most important ones are cough, expectoration of sputum, shortness of breath, and cachexia. Their lungs become obstructed with phlegm, and paralyses and brain diseases are to be observed among them . . .

"The therapy employed by Pansa consists of the administration of emetics, laxatives and remedies to produce sweating. In addition to these therapeutic measures, bleeding should be employed."–Rosen, *The History of Miners' Diseases*, pp. 94-100.

This is a most uncommon book; WorldCat locates only two copies in North America.

II. Pansa's rare work on diet and health. Pansa makes a number of recommendations on which foods should be consumed or avoided. The work is primarily written as a series of recommendations for miners to promote their good health. An added engraved title-page is occasionally found.

III. Pansa's chief writings on the plague and how to avoid it.

Fine copies. Minor dampstaining to the second work.

Hirsch, IV, p. 491.

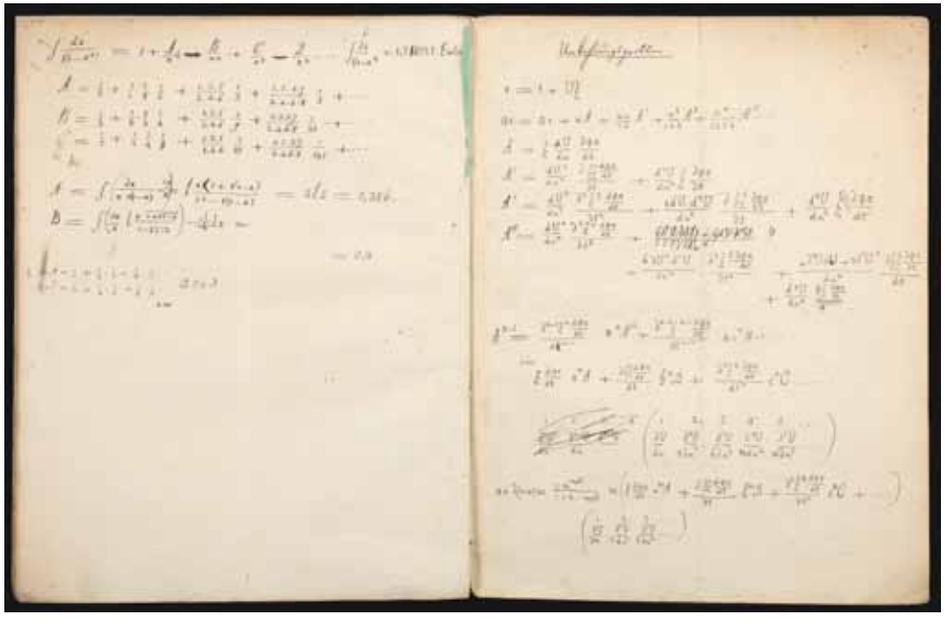
With Extensive Autograph Exercises & Corrections by Gauss

60. PRASSE, Moritz von. *Usus Logarithmorum Infinitomii in Theoria aequationum.* One folding printed table. 1 p.l., 46 pp., one leaf of errata. Large 4to, orig. semi-stiff drab boards (extremities a bit rubbed). Leipzig: C.T. Rabenhorst, 1796. $65,000.00

A remarkable discovery: this is essentially a workbook of the young and precocious Carl Friedrich Gauss, signed and dated by him "C. F. Gauss Sept. 7, 1796" on the inner front cover, at which time he was a 19-year old student in Göttingen. Gauss has not only studied the text carefully, making several corrections to the text, but has also made use of two blank pages at the end to carry out exercises (described in detail below). Mathematical manuscripts of Gauss are of the greatest rarity on the market, especially from his early formative years.

Moritz von Prasse (1769-1814), was the son of Johann Moritz Prasse, who worked as a mediator in the Seven Years' War at the Court of Catherine the Great in St. Petersburg (and according to some sources may have been her lover). His service led to his family's elevation to the nobility on 31 July 1790. Prasse studied mathematics at the University of Leipzig, graduating in 1795, and rising to become professor there in 1799. He became a member of the Jablonowski Society in 1807 and maintained a correspondence on mathematical topics with Goethe. The great geometer August Ferdinand Möbius was among his students. Apart from the present work, his first, he also published *De Reticules Cryptographicis* (1799), a method of encrypting messages using rotating dials, and a set of *Logarithmischen Tafeln* in 1810. His extensive library of works on mathematics was bequeathed to his university on his death in 1814.

The present work by Prasse is concerned with the "polynomial theorem," a generalization of the binomial theorem: whereas the binomial theorem gives a series expansion for powers of the sum of two terms, the polynomial theorem treats the sum of any finite (or even an infinite) number of terms. The formula was first proved by Carl Hindenburg (1741-1808), the founder of the modern theory of combinatorics. It has been known at least since the work of Pascal that the coefficients in the binomial expansion can be interpreted as numbers of combinations, and Hindenburg showed that the



coefficients occurring in the polynomial theorem also had a combinatorial interpretation. He believed that this result could be used to provide a combinatorial basis for the whole of the theory of functions, and gathered around him a group of disciples, which became known as the "Combinatorial School," to develop and propagate this idea. This School included Prasse, as well as Johann Friedrich Pfaff, who became Gauss's teacher after he moved to Helmstedt in 1798. Although the Combinatorial School did not produce the significant advances Hindenburg had hoped for, it "was influential in Germany at the turn of the 19th century and became the basis of the mathematical syllabus of the Prussian gymnasium in the Humboldt educational system."–Jahnke, p. 265 (see below for citation). In this atmosphere it would have been natural for the young Gauss to have been required to study Prasse's work, one of the most recently published products of the Combinatorial School.

Both of the exercises worked out by Gauss deal, like Prasse's work, with series expansions. The first exercise develops a series expansion of the indefinite integral of $(1 - x^n)^-$ over the interval from 0 to 1, in increasing powers of 1/n (Gauss does not specify the range of integration but this is evi-

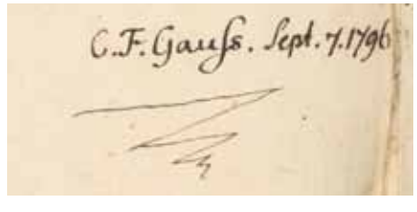
dent from the context). Gauss writes down the answer without explanation, presumably because the intermediate steps were so straightforward for him that he was able to carry them out mentally. His answer can be obtained by first expanding $(1 - x^n)^-$ in increasing powers of x^n and then integrating term by term. This yields terms involving 1/n + 1, 1/2n + 1, etc, which are then expanded in increasing powers of 1/n using the binomial theorem. Collecting powers of 1/n gives Gauss's series expansion of the integral. The coefficients of the powers of 1/n in this expansion are themselves infinite series, which Gauss sums by cleverly expressing them as definite integrals, which he then evaluates directly (again Gauss gives no explanation or working, but the integrals can be evaluated by standard methods with which Gauss was obviously very familiar).

In the second exercise Gauss obtains a series expansion of–(t + U), where U is a function of another variable u, in increasing powers of u. This can be done using Taylor's theorem, although this is not quite straightforward as the derivatives of–(t + U) with respect to u have to be evaluated using the chain rule. Again it is evident that the exercise was nevertheless a simple matter for Gauss as the (correct) answer is written down without explanation or any intermediate steps (although there is one correction!). In fact, Gauss is actually treating a multi-variable case: the presence of multiple–s indicates that he is treating a case in which– is a function of several variables $x_1, x_2,...,x_n$, but this does not cause him any difficulty.

Gauss has also made, as mentioned above, corrections on the following pages: 1, 3, 4, 8, 9, 11, 13, 14, 16, 20, and 21.

Fine and fresh condition. Preserved in a handsome black morocco-backed box. With the stamps of the "Gauss-Bibliothek" and the Royal Observatory at Göttingen on title with release stamp date 15 October 1951 on facing endpaper.

◖ Poggendorff II, 518. *Tomash Library* P108. See H. N. Jahnke, "Algebraic Analysis in Germany 1780-1840" in *Historia Mathematica* 20, pp. 265-284 for a detailed account of the work of the Combinatorial School.



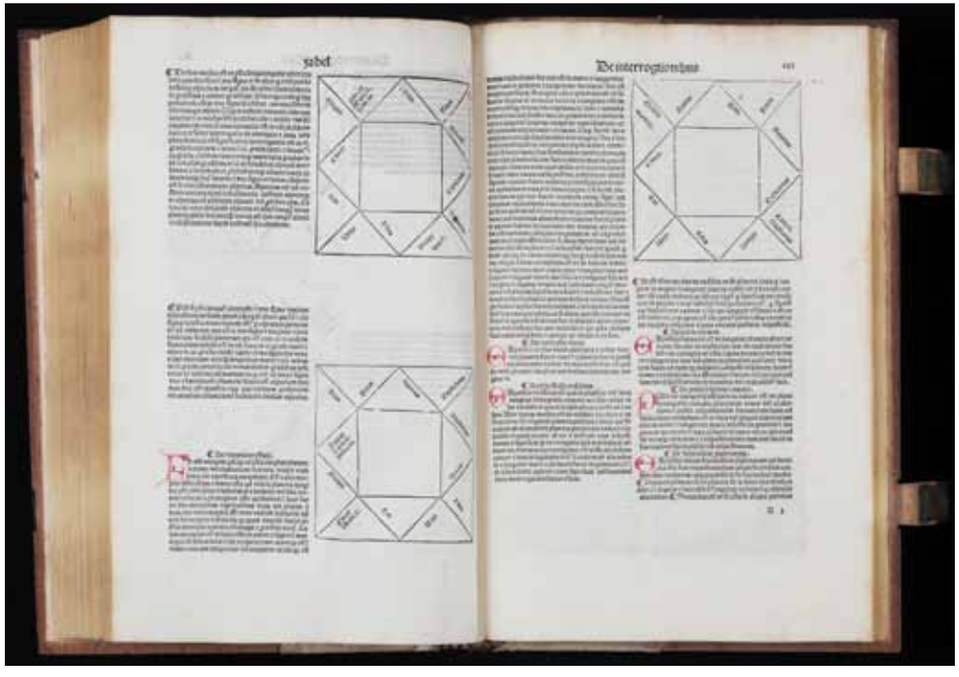
"A Little Astrological Library"–Westman; An Edition Studied by Copernicus?

61. PTOLEMAEUS, Claudius. *Quadripartitium. Centiloquium cum commento Hali* [& other works]. [Edited by Girolamo Salio]. Eighteen woodcut diagrams in the text, numerous woodcut initials, & a woodcut printer's device on recto of final leaf. Rubricated throughout in red. Gothic type, 66 lines & headlines. Two columns. 2 p.l., 152 numbered leaves. Folio (310 x 210 mm.), cont. blindstamped pigskin-backed wooden boards (spine a little rubbed, some unimportant worming at front & back), orig. or early clasps & catches. Venice: Bonetus Locatellus for O. Scotus, 20 Dec. 1493. $75,000.00

Second edition, enlarged with the addition of other important astrological texts, of Ptolemy's *Quadripartitum*, a textbook of astrology more usually known today under its Greek title, the *Tetrabiblos*. "Ptolemy's *Quadripartitium* ranks as the Bible of Astrology, but the attribution of the *Centiloquium* is considered spurious."–Stillwell, *The Awakening Interest in Science during the First Century of Printing 1450-1550,* 96–(describing the first edition of 1484).

"To modern eyes it may seem strange that the same man who wrote a textbook of astronomy on strictly scientific principles should also compose a textbook of astrology . . . Ptolemy, however, regards the *Tetrabiblos* as the natural complement to the *Almagest*: as the latter enables one to predict the positions of the heavenly bodies, so the former expounds the theory of their influences on terrestrial things . . . Ptolemy regards the influence of heavenly bodies as purely physical . . . By careful observation of the terrestrial manifestations accompanying the various recurring combinations of celestial bodies, he believes it possible to erect a system which, although not mathematically certain, will enable one to make useful predictions."–*D.S.B.,* XI, p. 198.

This edition is important; according to Prof. Robert S. Westman, it was the principal resource of theoretical astrology of the late 15th century. "The 1493 edition was, for all practical purposes, a little astrological library. It was produced in a dense, double-columned folio volume . . . the fifteenth-century editor Girolamo Salio of Faventino appended his own introduction, a detailed table of chapter headings, and thirteen auxiliary works by different authors [see below for a listing]."–Westman, *The Copernican Question: Prognostication, Skepticism, and Celestial Order,* p. 44.



Prof. Westman goes on to strongly suggest that this edition was an influential source book for Copernicus who had come to assist Domenico Maria Novara in Bologna in the fall of 1496 (see pp. 96-97). Novara was a major astrological practitioner and his copy of this book — the only surviving book from his library — is at the University of Bologna.

The first edition of 1484 contained only the *Quadripartitum* and the *Centiloquium.* Our edition adds for the first time the following valuable texts:

1. Hermes Trismegistus. *Centiloquium Hermetis* and *De Stellis beibenijs* (the "desert stars").

2. Bethem. *Centiloquium, De Horis planetarum,* and *De Significatione triplicitatum ortus.*

3. Messahalah. *De Receptionibus planetarum, De Interrogationibus, Epistola,* and *De Revolutionibus annorum mundi.*

4. Zahel (or Sahl ibn Bishr). *De Interrogationibus, De Electionibus,* and *De Temporum significat. in Judiciis.*

Salio was a physician and astrologer who specialized in editing medical and astrological texts targeted for a university audience.

A fine and crisp copy in its first binding.

Goff P-1089. Klebs 814.2.

"Un Véritable Manuel de Minéralogie"

62. ROMÉ DE L'ISLE, Jean-Baptiste Louis. *Description Méthodique d'une Collection de Minéraux, du Cabinet de M.D.R.D.L. Ouvrage où l'on donne de nouvelles idées sur la formation & la décomposition des Mines, avec un court exposé des sentimens des Minéralogistes les plus connus, sur la nature de chaque espèce, le Minéralisateur qui s'y rencontre, & la quantité de métal qu'elle produit.* Engraved allegorical frontis. by Augustin Saint-Aubin. xxxii, 299, [5] pp. 8vo, orig. wrappers, uncut. Paris: Didot & Knapen, 1773. $6500.00

First edition, and a lovely copy in original state, of an uncommon book; this is one of Romé's first publications. It is a description "of the metallic ores of his own mineral cabinet, in which he discussed the origin, metamorphosis, and paragenesis of each."–*D.S.B.,* XI, p. 521. Earlier, he had catalogued the mineralogical curiosities in the cabinet of Pedro Francisco Davila and for several years found steady employment by preparing at least fourteen other mineralogical catalogues. In all the descriptions in the pres-

ent work, Romé stresses the importance of crystalline form and that this form is the chief characteristic by which minerals may be classified.

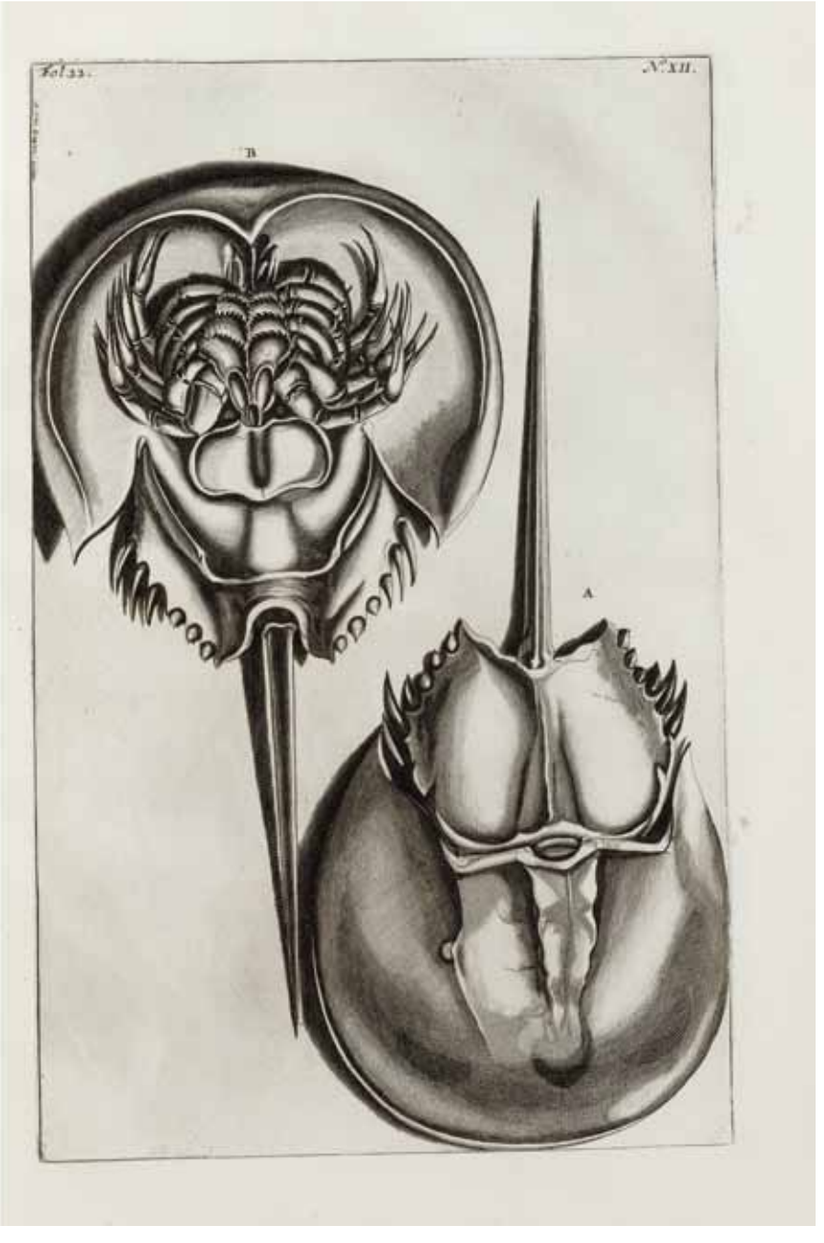
Romé (1736-90), by formulating the law of constancy of interfacial angles, established crystallography as the basis of mineralogy.

The attractive frontispiece, drawn by Saint-Aubin, depicts two putti, one examining ores under a microscope and the other stoking a furnace. Preserved in a box.

◖ Yves Laissus, "Les Cabinets d'Histoire Naturelle" in René Taton, ed., Enseignement et diffusion des sciences en France au dix-huitième siècle, p. 669–"un véritable manuel de minéralogie." Schuh, Mineralogy & Crystallography: A Biobibliography, 1469 to 1920, 4154–"Very scarce. In this collection catalog, the famous French crystallographer fully describes about 750 metallic minerals from his own cabinet. Included are specimens consisting of pure metals as well as natural alloys and combinations with sulfur. Basic division is based upon the principal metals and semimetals contained in the described specimens and include gold, silver, copper, iron, tin, lead, mercury, antimony, zinc, bismuth, cobalt, arsenic and sulfur. Under each of these headings, the specimens are divided based upon their form and chemical composition. For each item described, notes on the origin, associated minerals, locality, size and the estimated weight of contained precious metals is presented. The catalog is well referenced, and if a particular specimen was given to Romé, the supplier's name is included in the description."

A Fine Copy of Rumpf's Cabinet Catalogue; The "Pliny of the Indies"

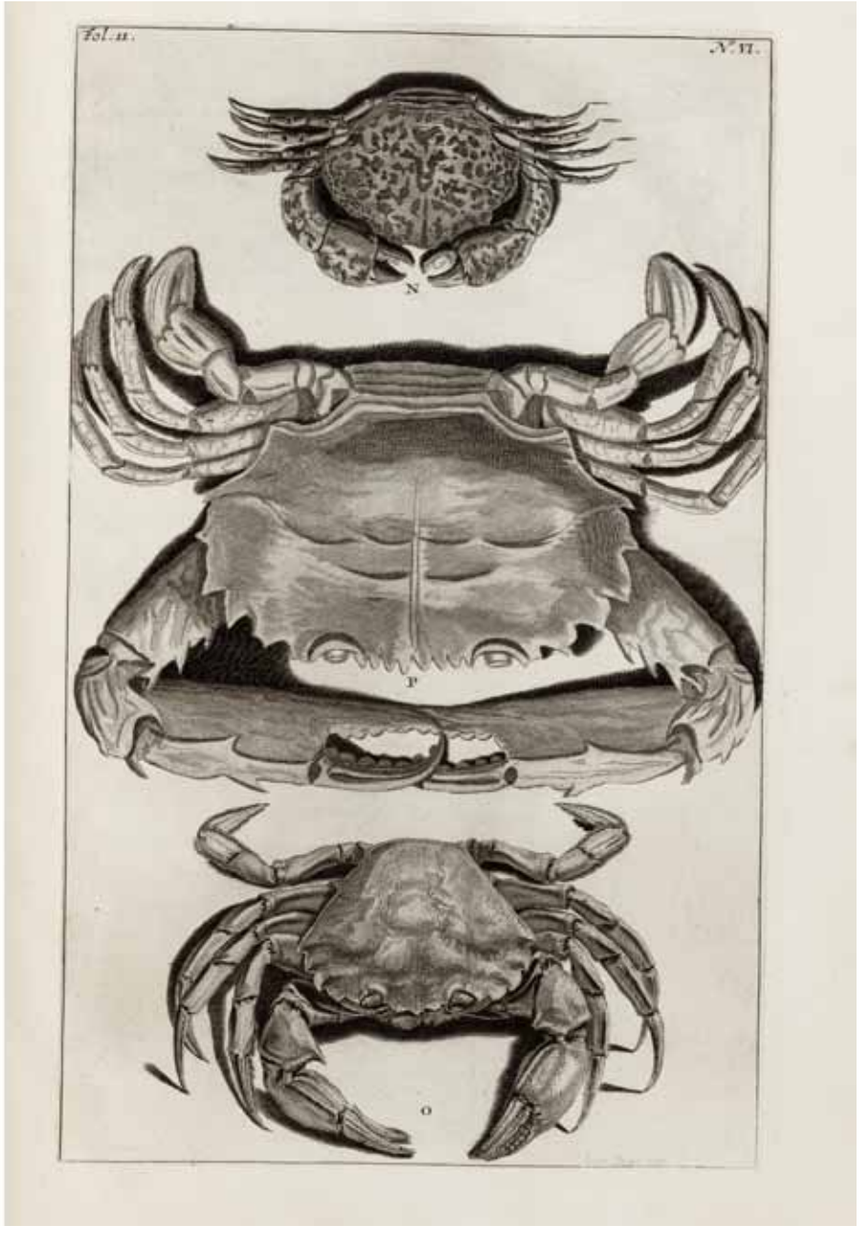
63. RUMPF, Georg Eberhard. *D'Amboinsche Rariteitkamer, Behelzende eene Beschryvinge van allerhande zoo weeke als harde Schaal-visschen, te weeten raare Krabben, Kreeften, en diergelyke Zeedieren, als mede allerhande Hoomtjes en Schulpen, die men in d'Amboinsche Zee vindt: Daar beneven zommige Mineraalen, Gesteenten . . .* Added fine allegorical title, vignette on printed title, fine port. of Rumpf, five head- & tail-pieces, & 60 fine plates (all engraved; two small & unimportant wormholes in outer margin to the final 50 plates, not touching the images). Title printed in red & black. 18 p.l. (incl. added title & port.), 340, [43] pp. Folio, cont. blind-stamped panelled pigskin over wooden boards, Jesuit stamp in center of upper cover, orig. clasps & catches. Amsterdam: F. Halma, 1705. $25,000.00



Gedruckt by FRANÇOIS HALMA Boekverkoper. 1705.

EFFIGIES
GEORGII EVERHARDI RUMPHII, HANOVIENSIS ÆTAT. LXVIII.

Cæcus habens oculos tam gnavæ mentis acutos,
Ut nemo melius detegat aut videat:
Rex [illegible] hic vultu est Germanus origine, totus
Belga fide et calamo: cætera dicet opus.

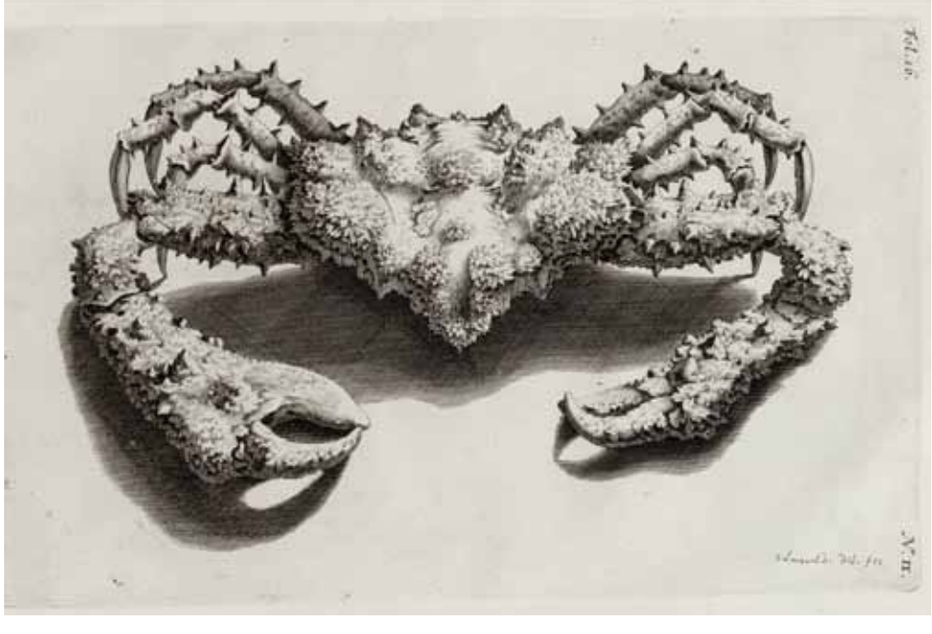

Fol. II.
N.VI.
N
P
O


Fol. 4.
N.II.
D
C

First edition, and a magnificent copy, of this notable cabinet catalogue, which describes Rumpf's great collection of marine flora and fauna, minerals, and fossils. This is one of the most important of the early shell books: "A signal early modern publication on shells . . . The very title of *The Amboinese Curiosity Cabinet* places the book in dialogue with collections of the time, whose curious contents redounded to the social, epistemological, and political credit of their owners."–Claudia Swan, "The Nature of Exotic Shells," in Bass et al., *Conchophilia. Shells, Art, and Curiosity in Early Modern Europe* (Princeton University Press: 2021), p. 22–(Rumpf's book is continually referred to throughout).

Rumpf (1627-1702), went to Amboina, a relatively small island in the Banda Sea west of New Guinea, in 1653. There he gathered natural history specimens and experienced a remarkable series of disasters: he went blind, his wife was killed in an earthquake, the original drawings for his *Herbarium Amboinense* were consumed in a fire, and the manuscript of the first six books of the same work was destroyed during a French military action.

"This remarkable man was employed by the Dutch East India Company



and spent the greater part of his life on the island of Amboina (Ambon), a small but important trading centre in the East Indies, where he conducted innumerable observations on plants and animals . . . Day by day Rumphius accumulated manuscript descriptions and drawings of everything he observed. Alas, total blindness robbed him of the chance to publish his work himself . . . Even a cursory examination of the *Amboinsche Rariteitkamer* reveals the outstanding talents of its originator; for the 'Amboinese Curiosity Cabinet', despite its unpromising title, is full of accurate and detailed observations on the invertebrate animals encountered by him and molluscs are given special attention. . . . He was a brilliant field naturalist. He was also a man with a remarkable gift for descriptions."–Dance, *Shell Collecting. An Illustrated History,* pp. 46-48.

The finely engraved added title-page is a masterpiece. We see a shell museum with a group of scholars studying and arranging shells, with cabinets flanking and behind them. The room is viewed through an arch with a shell-cartouche, with "Arcimboldo"-like shell grotesques, flanked by statues of Cybele and Poseidon. Bearers bring baskets and boxes of shells and other specimens to the scholars. An East Indian landscape is in the background. The fine portrait shows the blind Rumpf at his desk, surrounded by books, shells, plants, and other natural history objects.

Very fine copy. Most of the engraved plates are after drawings by Maria Sybilla Merian.

◖ Casey Wood, p. 545–"This rare folio is important because of its early descriptions and depiction of faunal (mainly marine) life in the Dutch East Indies (the Moluccas especially) at the end of the seventeenth century." Schuh, *Mineralogy & Crystallography: A Biobibliography,* 1469 to 1920, 4210–"Rare." Wilson, The History of Mineral Collecting 1530-1799, pp. 191 & 222.

The Discovery of Caffeine

64. RUNGE, Friedlieb Ferdinand. *Neueste Phytochemische Entdeckungen zur Begründung einer wissenschaftlichen Phytochemie.* Three lithographed folding tables in Vol. I; four folding engraved plates & one folding printed table in Vol. II. 1 p.l., xvii, [1], 204 pp.; 1 p.l., xxiii, [1], 264 pp. Two vols. in one. 8vo, cont. paste-paper boards (a bit worn), green & red leather lettering pieces on spine. Berlin: G. Reimer, 1820-21. $5000.00

First edition of the author's first major work, preceded only by his medical dissertation on belladonna, which appeared in 1819. The *Neueste Phytochemische Entdeckungen . . .* contains — on pages 144-59 of Vol. I — the earliest identification of caffeine (*Kaffebase*). The coffee beans used in Runge's laboratory experiments were given to him by Goethe. These beans had been sent to the poet by a Greek as a delicacy. Runge was also one of the first scientists to isolate quinine from cinchona bark. His experiments on cinchona bark and his isolation of quinine are first described in Vol. I, pages 160-71.

Runge (1795-1867), the co-discoverer of aniline dyes in coal tar, was associate professor in Breslau and later in the Prussian Marine service in Berlin and Oranienburg. "In 1831 Runge moved to Berlin and was offered a position as a chemist in a chemical factory at Oranienburg owned by the Royal Maritime Society. In this industrial laboratory he carried out his important study of synthetic dyes. Through the distillation of coal tar and subsequent extraction of the fractions, Runge isolated and named carbolic acid (phenol), leucol (a mixture of quinoline, isoquinoline, and quinaldine), pyrrol, and cyanol (aniline). He also produced aniline black from cyanol, noted its value as a dye, and obtained a patent in 1834."–*D.S.B.,* XI, p. 615.

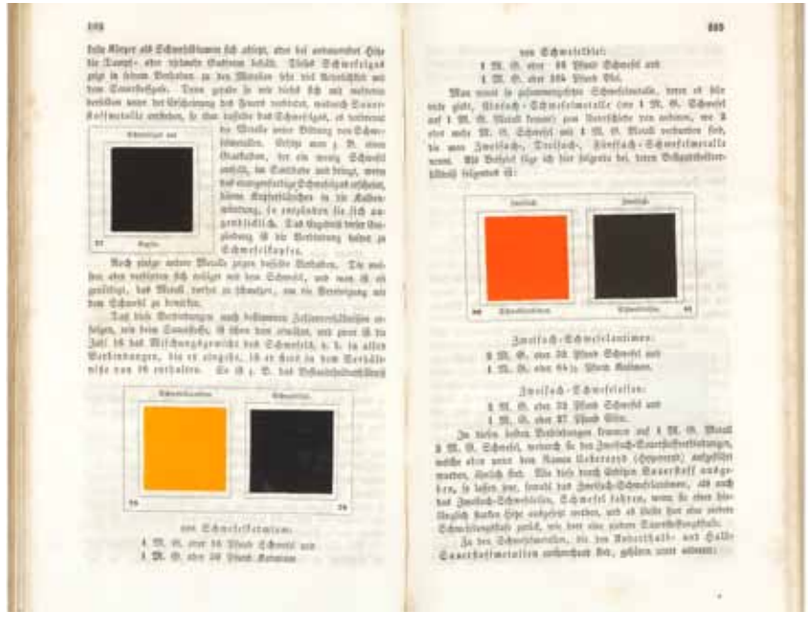
Runge isolated the alkaloids in belladonna — atropine and scopolamine — and discovered they could be used to dilate the eyes of animals and humans. These were first described in his medical dissertation of 1819 and, in the present work, are more fully reported on pages 120-32 of the first volume. Scopolamine is the active ingredient in some motion-sickness drugs, and atropine is still used to dilate patients' pupils during eye exams as well as to slow heart rates during surgeries.

Very good copy of a scarce book.

◖ Hein & Schwarz, *Deutsche Apotheker-Biographie,* Vol. II, pp. 548-49–"R[unge], der ein sehr vielseitiger Chemiker war, hat sich in erster Linie mit der Chemie des Steinkohlenteers befasst und wurde somit zum Begründer der Steinkohlenteerchemie." Partington, IV, pp. 183-84. Poggendorff, II, 721-22.

The Chemistry of Dyes with 247 Color Samples

65. RUNGE, Friedlieb Ferdinand. *Grundriss der Chemie.* 247 mounted color samples in the text. xxiv, 333, [1] pp.; xxxii, 316 pp., one leaf of errata. Two vols. 8vo, cont. pale blue paper-backed mar-



bled boards (several corners a bit worn), spines gilt, orange leather lettering pieces on spines. Munich: G. Franz, 1846-47. $2750.00

First edition of this rare work on the chemistry of dyes by the co-discoverer of aniline dyes in coal-tar. Nice set with all 247 mounted color samples. Old library stamps on each title.

◖ *D.S.B.,* XI, pp. 615-16. Hein & Schwarz, Deutsche Apotheker-Biographie, Vol. II, p. 549–"R., der ein sehr vielseitiger Chemiker war, hat sich in erster Linie mit der Chemie des Steinkohlenteers befasst und wurde somit zum Begründer der Steinkohlenteerchemie." Neville, II, p. 407–"An important treatise on the preparation, properties, and uses of inorganic pigments and dyes, by the codiscoverer of aniline dyes made from compounds isolated from coal tar." Partington, IV, pp. 183-84. Poggendorff, II, 721-22. Not in Ron, *Bibliotheca Tinctoria.*

A Magnificent Sammelband of Six Astronomical, Horological, & Astrological Works

66. SCHOENER, Johann. *De Judiciis Nativitatum Libri Tres . . . Item Praefatio D. Philippi Melanthonis.* Title with two fine woodcut vignettes, final leaf with a fine & large woodcut on verso, and numerous woodcut diagrams & printed tables in the text. Many fine woodcut initials. 8 p.l., clii numbered leaves. Folio, cont. richly blindstamped pigskin over bevelled wooden boards (two corners a little worn, first five leaves with unimportant marginal wormhole, second leaf with three small pale ink splatters), orig. clasps & catches. Nuremberg: J. Montanus & U. Neuber, 1545.

[BOUND WITH]:

APIAN, Peter & JABIR IBN AFLAH. *Instrumentum Primi Mobilis, à Petro Apiano nunc primum et inventum et in lucem editum . . . Accedunt ijs Gebri filii Affla Hispalensis . . . Libri IX. de Astronomia, ante aliquot secula Arabice scripti & per Giriardum Cremonensem Latinitate donati.* Title in red & black with large woodcut of two astronomers holding scientific instruments after Dürer, a full-page woodcut coat-of-arms on recto of a2, & numerous woodcut illus. & diagrams in the text. 40 p.l., 146 pp., one blank leaf. Folio. Nuremberg: J. Petri, 1534.


Astronomia.

Teutsch Astronomei.

Von Art/eygenschafften/vnd wirckung.
Der vij. Zeychen des Himels.
Der vij. Planeten.
Der xxxvj. Himelischen Bildern vnd jren Sternen.
Von den Spheren des Himels.
Bedeutung der finsternus Sonn vnd Mon.
Gestalt vnd bedeutung der Cometen.
Verenderung des luffts/nach art der Planeten vnd Zeychen.
Aspect vnd anblick der vij. Planeten.
Exaltation vnd erhöhung eynes Planeten vber den andern etc.
Auß den alten hochgelerten der Kunst Astronomei gezogen/ vñ in eyn kurtze summ gestelt/yetzt new in truck verfertiget.
Item C. Ptolomei.
Von Vffgang vnd Vndergang bedeutung vnd wirckung(in verenderung des luffts durchs gantze Jar alle tag) der Himelischer bilder vnd jrer sternen verteutschet.

Mit Keyserlicher freiheyt nit nach zu trucken.

[BOUND WITH]:

———. *Horoscopion Apiani generale dignoscendis horis cuiuscumque generis aptissimum, neque id ex Sole tantum interdiu, sed & noctu ex Luna, aliisque Planetis & Stellis quibusdam fixis, quo per universum Rhomanum imperium atque adeo ubivis gentium uti queas, adiuncta ratione, qua utaris, expeditissima, nunc ab illo primum & inventum & aeditum . . . Nocturna quoque adnexa est observatio horaria ex digitis manuum . . .* Title in red & black with a large woodcut depicting the fine "Horoscopion" instrument & numerous woodcuts in the text. 20 unnumbered leaves. Folio. Ingolstadt: [Printed at the author's private press], 1533.

[BOUND WITH]:

———. *Instrument Buch, durch Petrum Apianum erst von new beschriben. Zum Ersten ist darinne begriffen ein newer Quadrant, dardurch Tag und Nacht, bey der Sonnen, Mon, unnd andern Planeten, auch durch ettliche Gestirn, die Stunden, und ander nutzung, gefunden werden. Zum Andern, wie man die höch der Thürn, und anderer gebew . . . durch die Spigel und Instrument, messen soll. Zum Dritten, wie man das wasser absehen oder abwegen soll . . . und wie man die Brünne suchen soll. Zum Vierden, sindt drey Instrument, die mögen in der gantzen welt bey Tag und bey Nacht gebraucht werden . . . Zum Fünfften, wie man künstlich durch die Finger der Hände die Stund in der Nacht, on alle Instrument erkhennen soll. Zum Letzten, ist darin ein newer Messstab, des gleichen man nendt den Jacobs stab, dardurch auch die höch, brayt, weyt, vnd tieffe, auff newe art gefunden wirt.* Title printed in red & black with large woodcut depicting four astronomers at work with two cubes & a tower, full-page woodcut coat-of-arms of the dedicatee Hans Wilhelm von Laubenberg on verso, & numerous woodcuts in the text (several of the full-page woodcuts are slightly cropped at outer margins), without the nine supplementary plates which are usually missing. Ingolstadt: [Printed at the author's private press], 1533.

[BOUND WITH]:

MUENSTER, Sebastian. *Fürmalung und künstlich Beschreibung der Horologien, nemlich wie man der sonnen uren mit mancherley weys und form, und auff allerley gattung entwerffen soll an die mauren, auff die nider unnd auffgehebte ebne, auff rotund, schlecht, aussgraben und andere mancherley instrument . . .* Woodcut diagram on title of a sundial & numerous woodcuts in the text. 4 p.l., CLVII leaves, one blank leaf. Folio (a few leaves slightly soiled). Basel: H. Petri, [1537].

[BOUND WITH]:

ASTRONOMIA. *Teutsch Astronomei. Von Art, eygenschafften, und wirckung. Der vii. Zeychen des Himels. Der vii. Planeten. Der xxxvi. Himelischen Bildern und iren Sternen. Von den Spheren des Himels. Bedeutung der finsternus Sonn und Mon. Gestalt und bedeutung der Cometen . . . in eyn kurtze summ gestelt, yetzt new in truck verfertiget. Item C. Ptolomei. Von Uffgang und Nidergang bedeuttung und wirckung in verenderung des luffts durchs gantze Jar alle tag der Himelischer bilder und irer sternen verteutscht.* Woodcut diagram on title and 95 handsome woodcuts including a world map and astrological & astronomical woodcuts in the text. Woodcut printer's device on recto of last leaf. 76 unnumbered leaves. Folio (lower corner of leaf D5 torn away but rejoined at an early date, final few leaves with minor marginal worming). [Frankfurt: C. Jacob, 1545]. $95,000.00

One of the finest sammelbands I have encountered; an early collector — it would be wonderful to know who he was — has assembled here six related works on astronomy, horology, scientific instruments, and astrology, all richly illustrated. They reflect the state of scientific knowledge in the period just as the revolutionary ideas of Copernicus were being disseminated.

I. First edition of a rare and noteworthy book; it is one of the very first books to comment favorably on the new discoveries of Copernicus. Professor of mathematics at the newly founded University of Nuremberg, Schöner (1477-1547), was one of the greatest geographers and mathematicians of the first half of the 16th century. It was Schöner who had urged Copernicus to publish his milestone *De Revolutionibus* (1543).

INSTRVMENTVM
PRIMI MOBILIS, A' PETRO APIANO
NVNC PRIMVM ET INVENTVM ET IN LVCEM EDITVM.

Ad cuius declarationem & intellectū Pronunciata centū hīc proponuntur, & quibus Instrumenti nobilissimi usus innotescit & compositio. Inquirere autē & inuenire licebit in hoc instrumento, quicquid usquam, in uniuerso primo mobili nouæ quadā sinuum ratione indagari potest: nec quicquā in eo ipso primo mobili desiderare poterit, quod nō per instrumentum hoc inueniri facile queat.

Accedunt ijs
GEBRI FILII AFFLA HISPALENSIS ASTRO
nomi ueruſtiſſimi pariter & peritiſſimi, libri IX. de Aſtronomia, ante aliquot ſeculā Arabice ſcripti, & per Girardū Cremonenſem latinitate donati, nunc uero omniū primum in lucem editi.

Omnia hæc induſtria & beneuolentia Petri Apiani Mathematici prelo cōmiſſa, & Reuerendiſs. in Chriſto patri & D. D. CHRISTOPHORO A' STADIO, &c. ornatiſſimo Præſuli Auguſtenſi, ob illuſtrationem ſuæ familiæ inſignium, dedicata: Quibus & tu ſtudioſe lector benignus fruere, tanto Præſidi perpetuō gratiſſimus.

NORIMBERGAE APVD IO. PETREIVM. ANNO M. D. XXXIIII.

Inſtrument Buch / durch
Petrum Apianum erſt von new beſchriben.

Zum Erſten iſt darinne begriffen ein newer Quadrant / dardurch Tag vnd Nacht / bey der Sonnen / Mon / vnnd andern Planeten / auch durch etliche Geſtirn / die Stunden / vnd ander nutzung / gefunden werden.

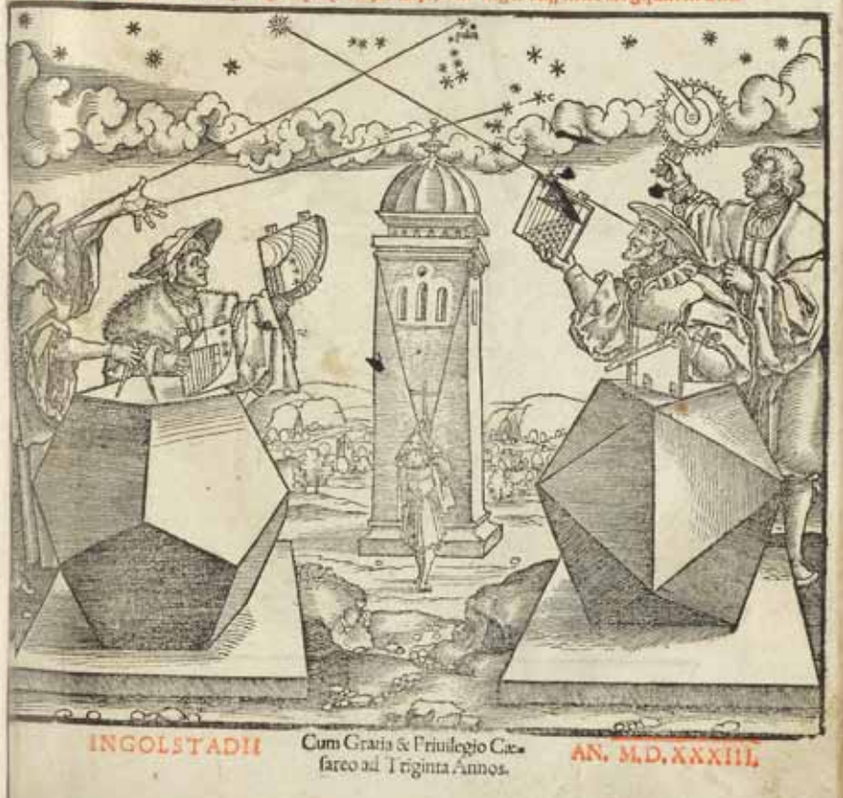
Zum Andern / wie man die höch der Thürn / vnd anderer gebew / des gleichen die wept / trapt / vnd tieffe / durch die Spigel vnd Inſtrument / meſſen ſoll.

Zum Dritten / wie man das waſſer abſehen oder abwegen ſoll / ob mans das in ein Schloß oder Statt füren möge / vnd wie man die Brünne ſuchen ſoll.

Zum Vierden / ſindt drey Inſtrument / die mögen in der gantzen welt bey Tag vnd bey Nacht gebraucht werden: vnnd haben gar vil vnd mancherley bereüche / vnd alle geſchlecht der Stunden / behalten alle zu gleich jre Lateiniſche nämen.

Zum Fünfften / wie man künſtlich durch die Finger der Hände die Stund in der Nacht / on alle Inſtrument erkhennen ſoll.

Zum Letzten / iſt darin ein newer Meßſtab / des gleichen man nendt den Jacobs ſtab / dardurch auch die höch / trapt / wept / vnd tieffe / auff newe art gefunden wirt.



INGOLSTADII Cum Gratia & Priuilegio Cæſareo ad Triginta Annos. AN. M.D.XXXIII.

DE IVDICIIS NATIVITATVM Libri Tres.

SCRIPTI A' IOANNE SCHONERO CAROLOSTADIO, PROFESSORE PVblico Mathematum, in celebri Germaniæ Norimberga.

ITEM

PRAEFATIO D. PHILIPPI MELANTHONIS, in hos de Iudicijs Natiuitatum Ioannis Schoneri libros.

Cum Priuilegio, Ioanni Schonero concesso.

Norimbergæ in officina Ioannis Montani & Vlrici Neuber, Anno Domini M. D. XLV.

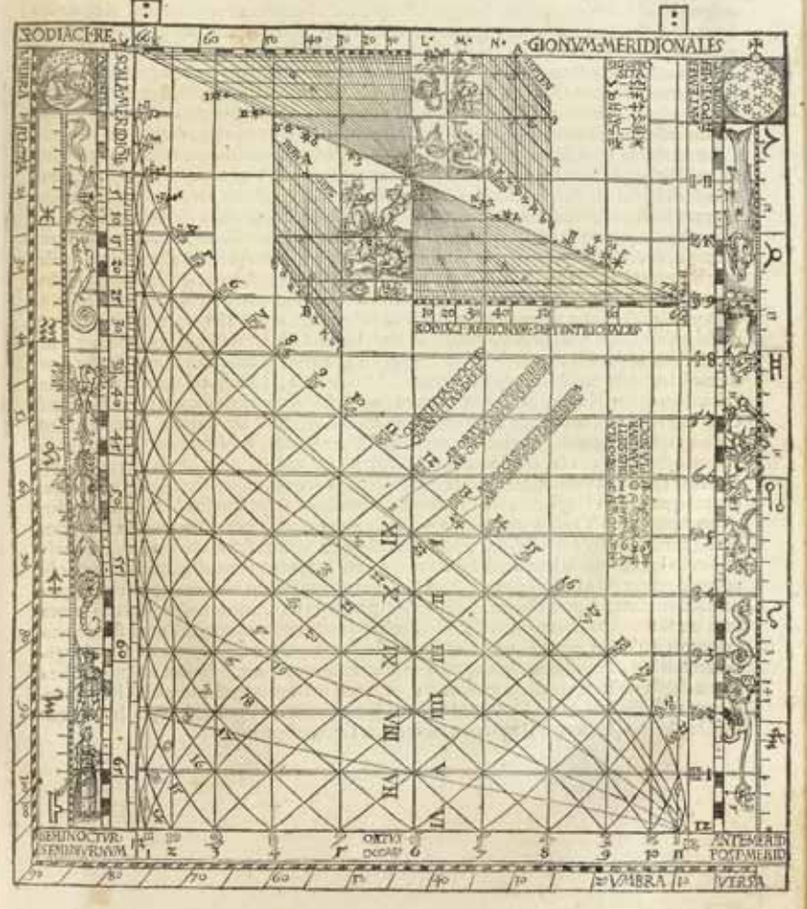
HOROSCOPION APIANI

GENERALE DIGNOSCENDIS HORIS CVIVSCVMQVE

generis aptissimum, nec id ex Sole tantum intendit, sed & noctu ex Luna, aliisq; Planetis & Stellis quibusdam fixis, quo per vniuersum Rhomanum imperium atq; adeò vbiuis gentium vti queas, adiuncta ratione, qua vtaris, expeditissima, nunc ab illo primum & inuentum & edituin.

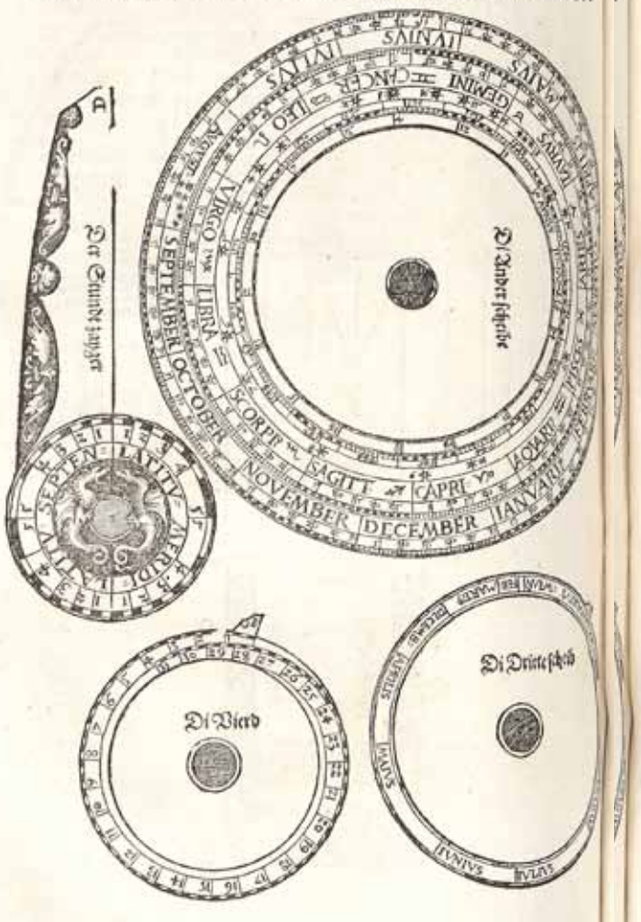
His accedit distantiarq, altitudinum, & profunditatum per idem hoc instrumentum dimetiendarum ratio longè accuratissima & ingeniosa. Similiter in quam altitudinem aqua naturaliter citrà omne artis beneficium, Deinde quanto sublimius scaturigine sua adminiculo artis per cannales deduci possit.

Nocturna quoq; adnexa est obseruatio horaria ex digitis manuum, priori illa quæ superiori anno vnà cũ Quadrante edita est, tũ promptior tũ expeditior.

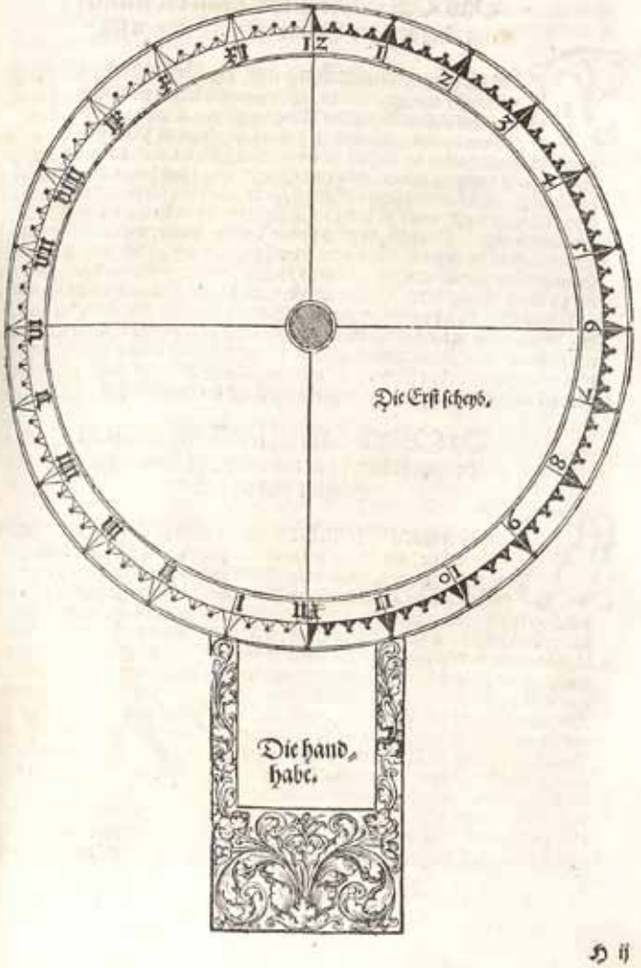


Das Ander Capittl / von dem Rucken disses Instruments / vnd seiner zwberaitung.

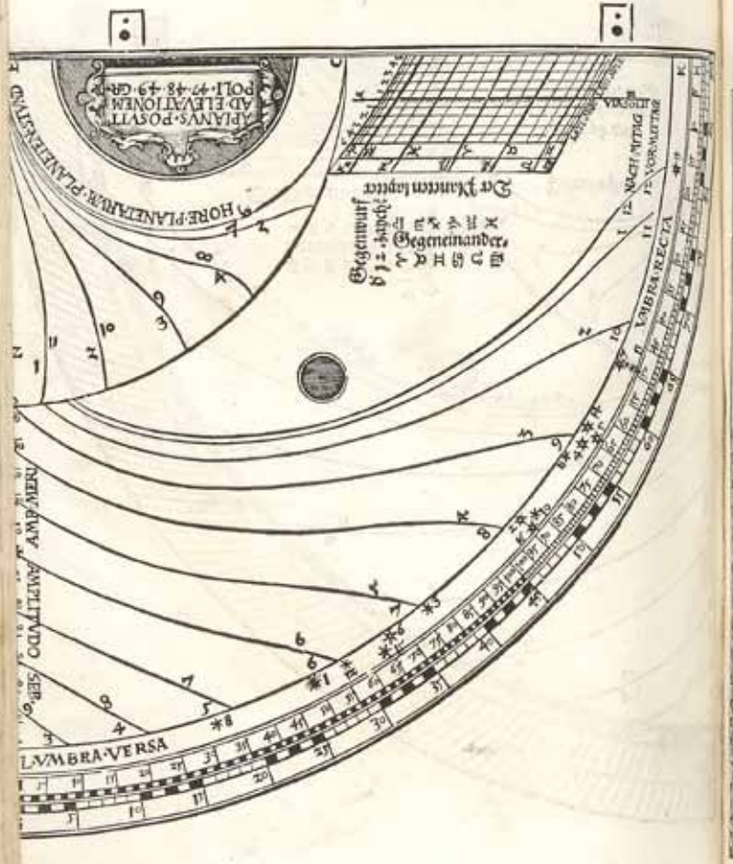
DEr Rucken oder hindertail sal in aller massn vñ form zübereit werden / wi der rucken des Quadranten / als ich dich im 12 / 13 / 14 / 15 / 16 vnd 17 Capitteln des ersten tails gelernt habe. Also / du salt die ander / die dritt / vnd vnnffte scheibn zů sambt dem stundt zaigr mit einem durchsichtigen naal zů sammen hefften / so isst es zů dem brauch fertig. Von kurtz wegen hab ich di scheibn hernach gege-



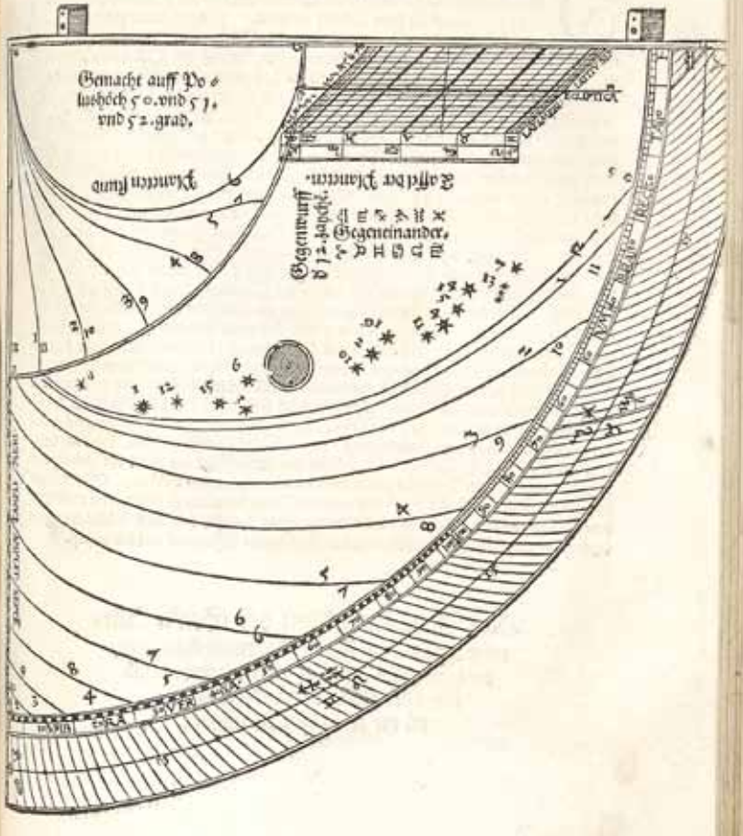
Das ist die figur des Ruckens / vnd wirdt nachuolgend / wie auch vorgeend gehört ist / die Erst scheyb genandt.

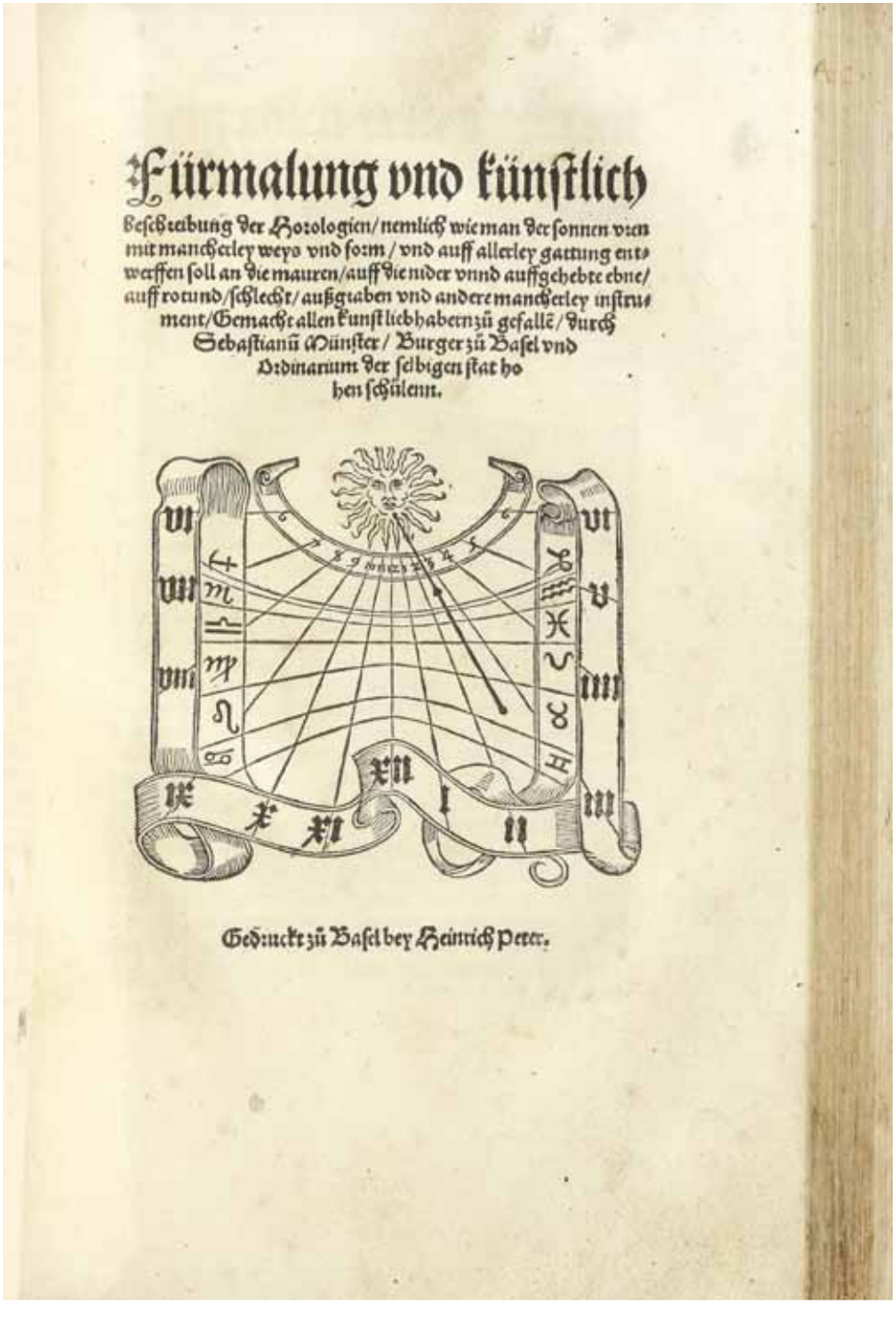


Der Dritt Quadrant wirdt gebraucht/ wie nachvolgend die Landttaffel außweyßt/ im Hungern Osterreich/ Kernten/ Bayrn/ Schwaben/ Schweitz vnd mitten durch Franckreich/ vnd ist gemacht auff die Polushöch 47. 48. vnd 49. grad.



Der Vierdt Quadrant/ ist gemacht auff Meyssen/ Düringen/ Hessen/ Schleßi/ Sachßen/ Pomern vnd Preüssen/ Holandt/ Brabant/ Flandern/ Engelandt/ vnd was am Britanischen Meer gelegen ist/ wirdt auch gebraucht in Beham halben tayl gegen mitternacht. Die andern Landt vnnd Steett findest du in der Landttaffel/ bald im anfang des Andern tayls/ vnnd ist gesetzt auff 50/ 51/ vnd 52 Grad.





Fürmalung vnd künſtlich

Beſchreibung der Horologien/ nemlich wie man der ſonnen vren mit mancherley weyo vnd form/ vnd auff allerley gattung entwerffen ſoll an die mauren/ auff die nider vnnd auffgehebte ebne/ auff rotund/ ſchlecht/ außgraben vnd andere mancherley inſtrument/ Gemacht allen kunſtliebhabern zů gefallē/ durch Sebaſtianū Münſter/ Burger zů Baſel vnd Ordinarium der ſelbigen ſtat hohen ſchůlenn.

Gedruckt zů Baſel bey Heinrich Petri.

"Schöner in 1545 printed another work of his own of considerable length, namely, three books on the judgments of nativities, with another preface by Melanchthon. Schöner had been one of those who encouraged Copernicus to published his magnum opus. Now in the present work, although preferring the method of Ptolemy in astrological judgments to those of subsequent astrologers, Schöner maintained that the Copernican system was not unfavorable to astrology."–Thorndike, V, p. 367.

A rebound copy of just this work sold for $54,000 in the Streeter sale in 2007.

II. First editions of these two important texts: Apianus' treatise describing an instrument designed to explain the primum mobilis of the universe and the *Islah* of Jabir ibn Aflah in which he provides a commentary of Ptolemy's *Almagest*. His commentary is important in the introduction of spherical trigonometry in the West.

Apianus' text, which occupies the first 80 pages, describes an instrument for explaining the primum mobile of the universe; it is his most important scientific work, containing tables "where he calculates sines for every minute, with the radius divided decimally. These are the first such tables ever printed."–*D.S.B.,* I, p. 179–(citing the title of the second edition of this work but giving the correct date).

The remaining portion (pp. 146) of this book contains the first printing of Gerard of Cremona's translation into Latin of Jabir ibn Aflah's *Islah*. This is a revision and commentary of Ptolemy's *Almagest*, composed in Seville in the first half of the 12th century. "Jabir describes the principal differences between the *Islah* and the *Almagest* in the prologue: Menelaus' theorem is everywhere replaced by theorems on right spherical triangles, so that a proportion of four quantities is substituted for one of six; further, Jabir does not present his theorems in the form of numerical examples, as Ptolemy did . . .

"Jabir criticized Ptolemy . . . on a number of astronomical matters. Ptolemy's 'errors' are listed in the prologue of the *Islah*. The most substantial, and most famous, deviation from the *Almagest* concerns Venus and Mercury. Ptolemy placed them beneath the sun, claiming that they were never actually on the line joining the eye of the observer and the sun. Jabir contradicted this justification, putting Venus and Mercury above the sun. The *Islah* is the work of a theorist. The demonstrations are free of all numbers and there are no tables. Jabir does, however, describe a torquetum-like instrument, which he says replaces all the instruments of the *Almagest* . . .

"Jabir was better known in the West through Gerard of Cremona's translation. His name was used as that of an authority who criticized Ptolemy. But more serious was his influence on Western trigonometry . . . His most important influence was upon Regiomontanus' *De triangulis*, written in the early 1460's and printed in 1533, which systematized trigonometry for the Latin West."–*D.S.B.,* VII, p. 38.

III. First edition, printed at the author's private press. The book describes and illustrates Apian's "horoscopion," an instrument in the form of a quadrant for telling the time by day and night and for measuring heights, depths, and distances. Dodgson ascribes some of the fine woodcuts to Hans Brosamer and Michael Ostendorfer. "According to Van Ortroy, the first two parts translated appeared as the *Instrument Buch,* and the third part is derived from the *Quadrans astronomica,* 1532."–Stillwell, *The Awakening Interest in Science during the First Century of Printing*, 811.

IV. First edition of this important work on early mathematical and astronomical instruments, interesting for the descriptions of a number of newly invented quadrants designed individually to measure both time and distances. "This is a profusely illustrated work on the use of over forty different mathematical instruments (mainly sighting devices such as the quadrant and Jacob's staff). Written in German it is one of the earliest technical books to use a language other than Latin."–Tomash A83.

This copy, like many other examples, does not have the nine supplementary plates (see Van Ortroy's comments regarding their rarity). There are two issues of the title-page: one, like ours, is printed in red and black. The other issue, presumably later, is printed entirely in black.

V. First edition in German (1st ed.: *Horologiographia,* 1533). This uncommon book is the first to deal exclusively with sun dials and the first really comprehensive work on the subject. The very numerous woodcuts depict many kinds of sun dials and other astronomical instruments.

VI. First edition of this very rare and handsome astronomical/astrological text. According to Zinner 1869, this book was printed from a very old manuscript which Hans Orth von Bacharach supplied. Orth was not the author but, on the contrary, the writings gathered here appeared in German manuscripts of the 15th century. Zinner cites an edition of 1502 (no. 803) but, without examining a copy, we cannot be sure if it has the same text. There are later editions — 1551, 1571, 1578, and 1583 — but it seems these all

have varying texts and are quite dissimilar from our edition.

This is a fine and remarkable collection of important German scientific texts.

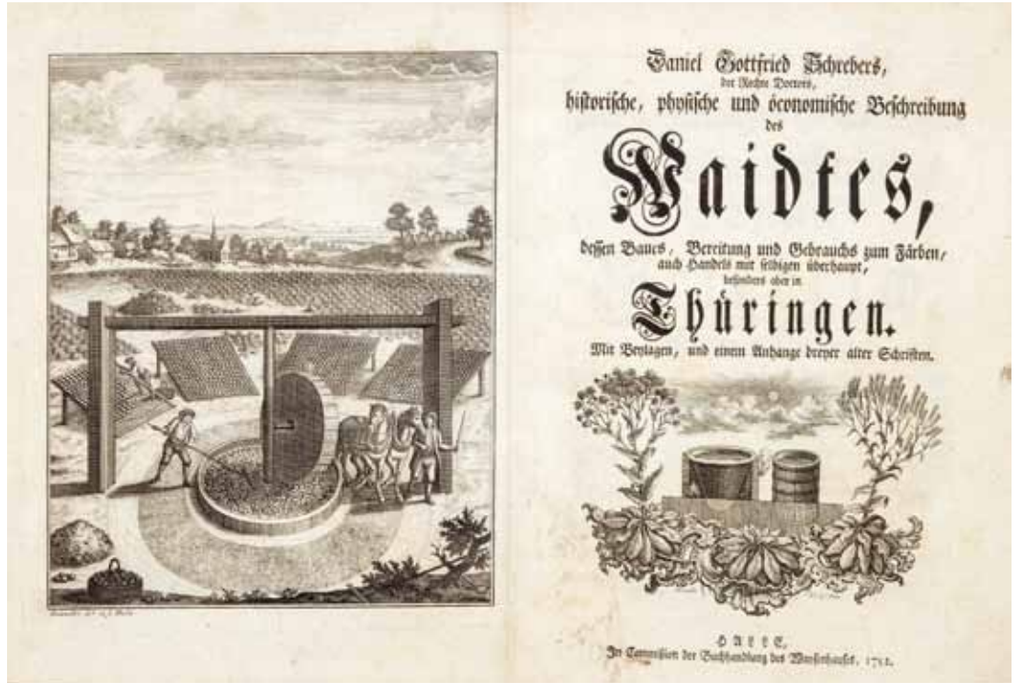
◖ I. Zinner 1884. II. Stillwell, T*he Awakening Interest in Science during the First Century of Printing,* 21 (Apianus), 68 (Jabir for astronomy), & 181 (Jabir for mathematics). Tomash A84. Van Ortroy 107. Zinner 1553. III. Van Ortroy 100. Zinner 1512. IV. Stillwell, *The Awakening Interest in Science during the First Century of Printing,* 812. Van Ortroy 104-"Ces planches manquent dans plusieurs exemplaires que nous avons consultés." Zinner 1514. V. Hoover 600. Zinner 1672. Zinner, *Astronomische Instrumente des 11. bis 18. Jahrhunderts,* p. 456. VI. Zinner 1869.

Woad into Indigo

67. SCHREBER, Daniel Gottfried. *Historische, Physische und Öconomische Beschreibung des Waidtes, dessen Baues, Bereitung und Gebrauchs zum Färben, auch Handels mit selbigen überhaupt, besonders aber in Thüringen. Mit Beylagen, und einem Anhange dreyer alter Schriften.* Finely engraved frontis., an attractive engraved vignette on title, & three folding engraved plates. 8 p.l. (incl. frontis.), 157, [3], 120, [8] pp. Two parts in one vol. Large 4to, cont. half-sheep & speckled boards, spine gilt, contrasting leather lettering piece on spine. Halle: Buchhandlung des Waysenhauses, 1752. $2950.00

First edition of this extremely comprehensive work. "The 1st edition of an extensive 18th-century German treatise on the cultivation, processing, commerce, and use of woad (Isastis tinctoria L.) in Thuringia. The aim of the writer was to promote the production of woad in Thuringia for the economic benefit of the region. The book contains the treatise itself, pt. I, pp. 1-157, and an extensive supplement, pt. II, pp. 1-120. The supplement includes: a collection of laws and regulations about woad in Thuringia between the years 1480 and 1704 (pp. 1-42); excerpts from earlier works — e.g. Hellot's *Art de la Teinture* — (pp. 42-58); the reprint in full of Crolachius' *Isatis Herba* (pp. 59-90); Laurentius Niska's *Waidtbedencken* (pp. 91-108), 1631; and Niska's appeal to 'Gustav Adolph, king of Sweden' (pp. 109-120), 1633, asking the king to promote the cultivation of woad in Thuringia, for economic reasons."–Ron, *Bibliotheca Tinctoria,* 950.

Indigo, extracted from the woad plant, was widely used in dyeing. The



fine frontispiece depicts the harvesting and processing of the woad plant, and the plates depict the plant.

Schreber (1708-77), a government administrator, was appointed professor of economics and cameral sciences at the University of Leipzig in 1764. His great grandson, Daniel Paul Schreber, was one of Freud's greatest patients.

Fine copy. Scarce.

◖ Ferchl, p. 485.

The Anatomical Collections at Kiel

68. SEIDEL, Johann Friedrich. *Index Musei Anatomici Kiliensis . . . loco Dissertationis inauguralis conscriptus.* xiv, 80 pp., one leaf. Small 4to, cont. paste-paper boards (joints a little worn). Kiel: C.F. Mohr, 1818. $2500.00

First edition and very rare; WorldCat locates no copy in North America. Johann Daniel Major (1634-93), started the University of Kiel's anatomical collection shortly after the school's foundation in 1665. Major wrote the first book on intravenous infusion for anesthetic purposes, in which he described his own experiments. The anatomist and pathologist Johann Leonhard Fischer (1760-1833), who made the establishment of a scientific collection the main concern of his academic activity from 1793 onwards, furnished a foreword to the present book.

Fischer's student Seidel (1790-1857), lists here 1150 anatomical specimens.

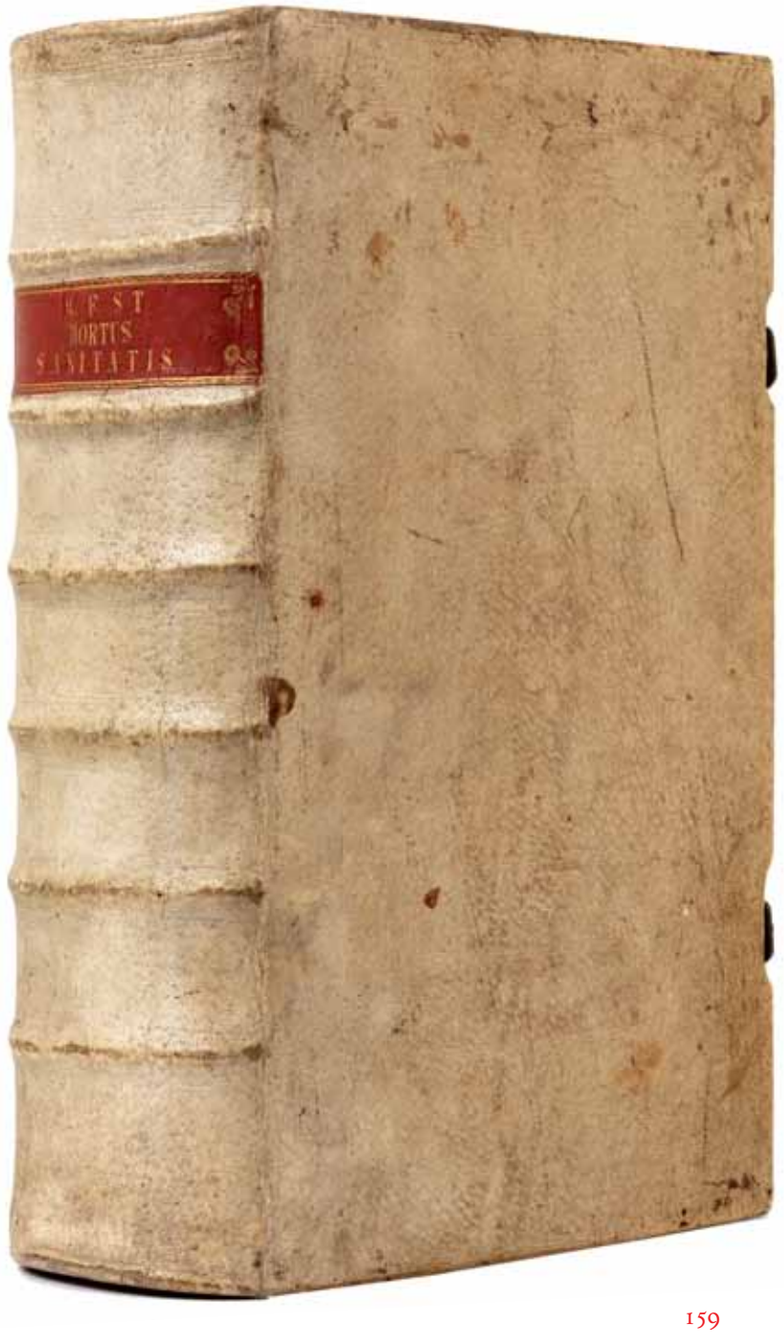
Very good copy. Stamp, with release stamp, of the Royal Pathological Institute of the University of Leipzig on title and a few other places.

"Executioner Medicine"

69. STEIGENDESCH, Maximus Fidelis. Manuscript on paper, written in one neat and legible hand throughout, entitled *"Hortus Sanitatis das ist Gesundheits Garten. Darinnen Unterschiedliche Areol & Feldlein und Bettlein anzutreffen, aus denen zu der Gesundheit bestens dienenende Früchten und Mittel können Colligiret werden, alles dises ist in vier Bücher abgetheilt . . . alles aus den bewehrtesten Autoribus genommen."* Calligraphic general title, two calligraphic divisional titles for Parts II and III, & some decorative vignettes, all in pen & ink. Each page with a ruled border. Three parts in one vol. 4 p.l., 1557 pp., 16 leaves. Thick folio (355 x 215 mm.), cont. blind-stamped pigskin over heavy wooden boards, orig. clasps & catches. Ochsenhausen, Upper Swabia: 1775-[85]. $35,000.00

One of the most remarkable and seemingly contradictory items I have had: a medical manuscript on the subject of health and materia medica, written by a town executioner. Well into the 19th century, executioners, who had considerable knowledge of the human anatomy from their work as hangmen, beheaders, and torturers, also served as medical healers. They enjoyed considerable social and medical respectability.

We know of many executioner-bonesetters and executioner-physicians in medical history. This dual role became known as "executioner medicine." Frequently they had a superior knowledge of anatomy and medicine in



comparison to local doctors. And oftentimes these executioners, as in the case of Steigendesch, also had a great knowledge of herbal medicines.

Maximus Fidelis Steigendesch (1730-1810), came from a family of executioner-physicians, knackers, and skinners, active especially in Swabia in southern Germany; his father, Johann Georg (1711-?), had held the same position. Some members of the family spelled their last name as Deigendesch. On the finely executed title-page of this manuscript treatise, Steigendesch rather proudly describes himself as "Justitiae Executore in und zu Ochsenhausen" ("Executor of the Law in and at Ochsenhausen"). According to the Foreword, his love of medicine goes back to his ancestors, who employed their knowledge of the healing arts in surgery and horse medicine. He expressly mentions Johann Deigendesch (1670-1747), executioner at nearby Balingen, who wrote *Schau-Saal der Arzeney-Kunst*, first published by Cotta at Tübingen in 1719. In 1716, this same Deigendesch also first published a treatise on horse medicine, *Nachrichters nützliches und aufrichtiges Pferd- oder Ross-Arzneybuch*, which saw several editions through 1790.

In 1793, Maximus Fidelis wrote another medical manuscript, entitled

"Comes Medicus oder Medicinischer Reise-Begleiter," in which he describes himself as "a lover of medical science." This was a much smaller manuscript, also prepared at Ochsenhausen, and was sold in May 1965 by Karl & Faber in Munich (auction 105, lot no. 378).

The present massive and imposing manuscript contains the largest and richest collection of pharmaceutical recipes I have yet encountered; it is important to add that the arrangement makes it easy to use, and the handwriting is extremely neat and legible.

The manuscript begins with a detailed Foreword, in which Steigendesch gives the reader a general summary of the history of medicine and describes the special relationship his family has always had with the art of healing.

Part I (pp. 1-36) contains five chapters, on methods of determining illness by taking the pulse, examination of urine, bloodletting, cupping, and analysis of the patient's diet. The second part (pp. 37-185), entitled "Fabrica receptorum," describes the actual methods of preparing emulsions, infusions, decoctions, ointments, electuaries, pills, powders, etc.

The third, and by far the largest, part (pp. 159-1490) — "Selectus materiae medicae experimentalis" — provides an alphabetical list of medications and

ailments, from "Abluentia" (a complex cleaning and purifying agent) to "Zwerchfells-Entzündung" (paraphrenitis). Thousands of diseases of all parts of the body, afflicting all ages, are listed, with several pharmaceutical recipes provided for each. The constituents of each recipe and its formulation are clearly given.

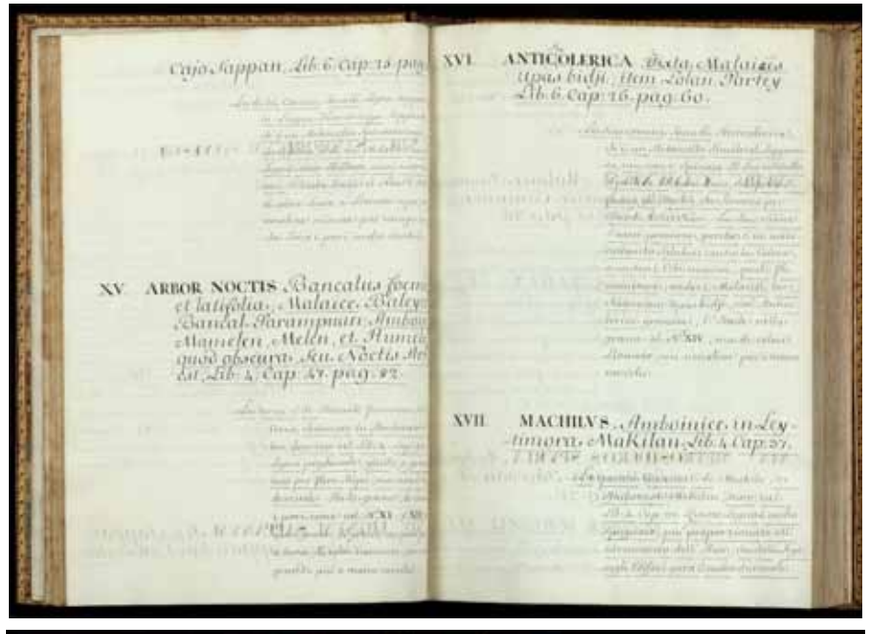
Pages 1491-1557 comprise a list of all medications described in this treatise, for the most part drawn from the *Pharmacopoea Wirtenbergica,* and dated 1785 in a chronogram. The entire work is made accessible by a detailed 16-leaf index.

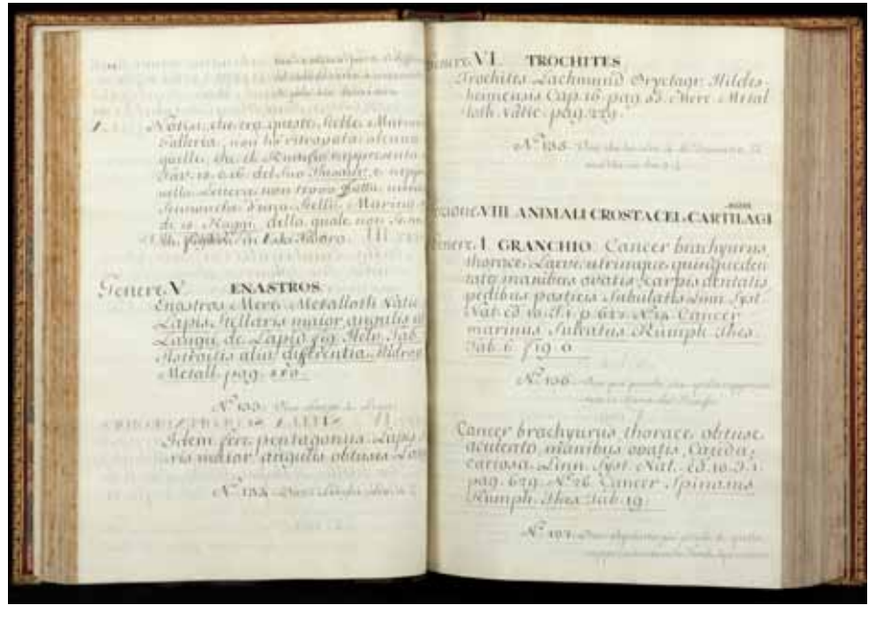
In excellent condition. Front paste-down endpaper with the bookplate of the library at Sommershausen near Ochsenhausen.

Prepared for the Holy Roman Emperor Francis I; The Important Natural History Collections of Florence

70. TARGIONI-TOZZETTI, Giovanni. Deluxe manuscript fair copy on paper prepared for Emperor Francis I (title leaves on vellum) entitled *"Catalogo Delle Produzioni Naturali che si conservano nella Galleria Imperiale di Firenze[.] Disteso nell' Anno 1763. per Comando di Sua Maesta Cesarea partecipato da Sua Eccellenza il Sigr. Maresciallo Marchese Antoniotto Botta Adorno[.] Dall Dottr. Giovanni Targioni Tozzetti Decano del Collegio Medico di Firenze Professor Pubblico di Bottanica Prefetto della Bibliotreca Pub. Magliabechiana."* Written throughout, with the exception of the calligraphic titles, in one clear cursive hand in brown ink. Titles for each vol. written in black ink within elaborate calligraphic rococo framed border, elaborate imperial arms at top, one line of title in gold. 1 p.l. (title), 338 unnumbered leaves, 3 blank leaves; 1 p.l. (title), 123 unnumbered leaves, 3 blank leaves; 126 unnumbered leaves, one blank leaf. Three parts in two vols. Small folio (307 x 210 mm.), orig. red morocco, richly gilt, sides decorated with floral & arabesque designs, arms of Emperor Francis I in gilt on each cover, spines richly gilt, a.e.g. [Florence: ca. 1763]. $125,000.00

This handsome manuscript, prepared for presentation to Emperor Francis I (1708-65), Holy Roman Emperor and Grand Duke of Tuscany, is a beautifully written contemporary fair copy of the original holograph manu-





script now in the Museo Galileo (formerly the Institute and Museum of the History of Science in Florence), compiled by Targioni-Tozzetti (1712-83), the great natural historian, librarian, director of Florence's botanical garden, and professor of botany. He was, after Spallanzani, the most active Italian naturalist of the 18th century.

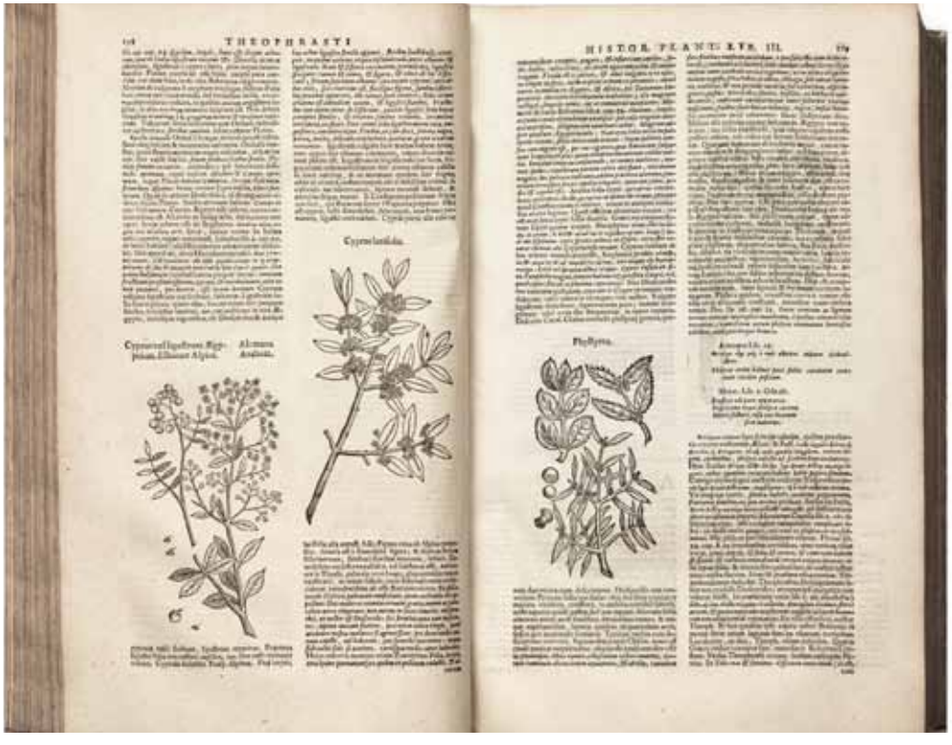
Emperor Francis I, the husband of Maria Theresa, was well-known for his interests in the natural sciences and for assisting his wife in running the complicated Austrian dominions.

The collections of natural history specimens in the "Specola" next to the Pitti Palace trace their origins to earlier Medicis and to Georg Eberhard Rumpf, who had sold a large collection of 360 shells to Cosimo III de' Medici in 1682. The present catalogue was compiled at the instigation of Antoniotto Botta Adorno (1688-1774), prime minister of the Duchy of Tuscany. Thanks to Cosimo III's other natural history acquisitions, by the middle of the 18th century, Florence could boast one of the greatest collections of shells, botanical, and mineralogical samples in Europe. In 1775, all the collections were gathered into the "Specola" at the instigation of Grand Duke Peter Leopold which was the only scientific museum or "Wunderkammer" of its kind specifically created for the public to view.

The present catalogue, following Targioni-Tozzetti's original manuscript, describes 3449 items, of which 2340 are zoological (mostly shells), 375 botanical, and 734 mineralogical and rock specimens. The preface to the catalogue describes the collections and their histories, their provenances including the Far East, etc. The main body of the catalogue is divided into three sections: zoological, botanical, and mineralogical samples. Each description is quite elaborate with full accounts of each specimen, references to other books, references to where other examples are illustrated, etc.

PROVENANCE: This manuscript entered the Apponyi family library in Oponice, Slovakia in the latter part of the 18th century and was sold in Prague in June 1939.

◖ Dance, *Shell Collecting, an Illustrated History,* pp. 56-57. *D.S.B.,* XIII, pp. 257-58. Martelli, ed., *Le Collezioni di Giorgio Everardo Rumpf acquistate dal Granduca Cosimo III de' Medici, una Volta esistenti nel Museo di Fisica e Storia Naturale di Firenze* (1903).



One of the Best Editions of Theophrastus

71. THEOPHRASTUS. *De Historia Plantarum Libri Decem, Graece & Latine. In quibus Textum Graecum variis Lectionibus, emendationibus, hiulcorum supplementis: Latinam Gazae versionem nova interpretatione ad margines: totum Opus absolutissimis cum Notis tum Commentariis: item rariorum Plantarum iconibus illustravit.* Finely engraved title-page (a trifle shaved at outer edge) & 675 woodcuts in the text. 11 p.l. (incl. engr. title), 1187 (i.e., 1185), [87] pp. Folio, cont. Dutch vellum over boards (upper joint with small split of 7 cm. at foot, minor pale dampstaining to first 20 leaves & last third of book), panelled in blind, central arabesque in blind to each cover, ties gone. Amsterdam: H. Laurentius, 1644. $8500.00

First edition to be edited by Joannes Bodaeus à Stapel; it "is one of the best and most thoughtfully prepared of all the editions of Theophrastos."–Hunt 240.

H.H. Bartlett wrote in his *Fifty-five Rare Books* (Ann Arbor: 1949) of this edition: "It is interesting not only because of the brilliance of the editing, but, curiously enough, to the American botanist as well, for involving in the discussion certain species from Virginia, other parts of the New World, and Asia. The illustrations of these plants have been largely overlooked in botanical history, because of their incidental presence in a work which might not be expected to contain anything of the sort. Some were merely borrowed from l'Escluse or de Lobel, but others seem to be original in this work."

A fine and crisp copy. Bookplate of Piergiorgio Borio, M.D.

D.S.B., XIII, pp. 328-34. See Garrison-Morton 1783.

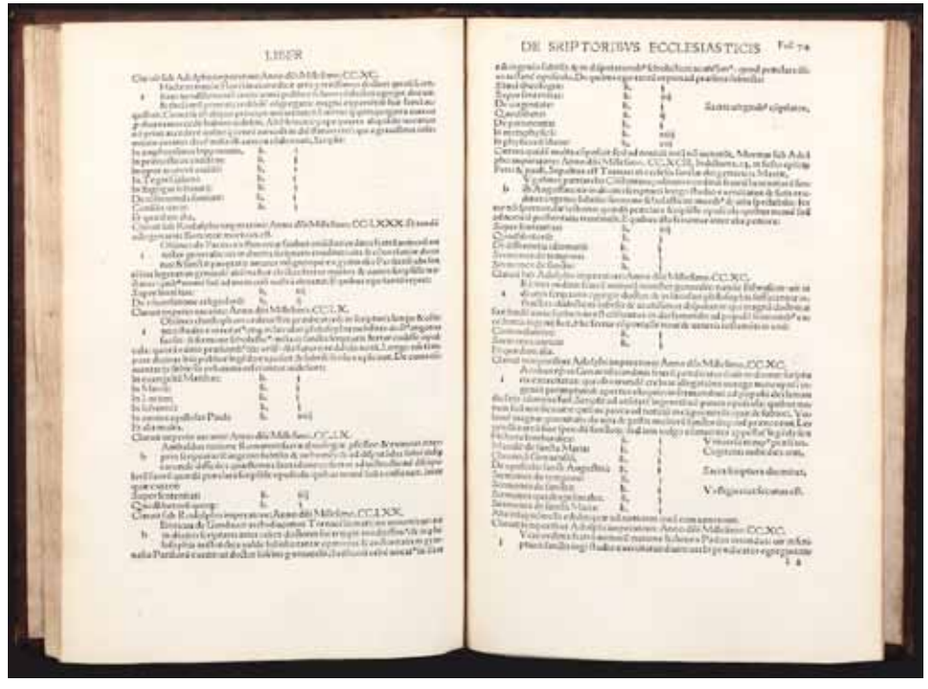
The Father of Bibliography

72. TRITHEMIUS (or TRITHEIM), Johannes. *Liber de Scriptoribus Ecclesiasticis.* 148 leaves, including the final blank), Roman letter (except for the two-line title in gothic type), 51 lines & headline, capital spaces with guide letters. Folio (290 x 188 mm.), late 17th-cent. panelled English speckled calf (rebacked with the orig. spine laid-down, minor staining to a few leaves in blank upper margins). Basel: J. Amerbach, 1494. $75,000.00

First edition of the "first bibliography to be compiled as a practical work of reference."–Grolier Club, *Bibliography,* 7.

Tritheim (1462-1516), one of the leading polymaths of his age, was appointed the 25th abbot of the monastery at Sponheim in 1483. "One of the first of his many self-imposed tasks was the reorganization and cataloguing of the monastic library, if one can call reorganization the process of transforming forty-eight mongrel volumes into a splendid collection of 2,000 printed books and manuscripts, many of great importance and rarity . . .

"It was during the progress of this work, no doubt, as his exceptional knowledge of books caused inquiries frequently to be addressed to him, that he conceived the notion of compiling a new and ambitious bibliography of ecclesiastical writers. He began work in 1487, and by the spring of 1492 he was able to send the complete manuscript to the bishop of Worms. He then revised it, and in 1494 the *Liber de scriptoribus ecclesiasticis*, a folio of nearly 300 pages, issued from the Basle press of Johann Amerbach . . .



"From Alexander, bishop of Cappadocia, down to himself, Tritheim sets out in chronological order nearly a thousand writers, largely but not exclusively ecclesiastical, giving a short account of each followed by a list of his (or her) writings. Nor are these lists merely perfunctory: it is obvious from such a heading as that for St. Augustine, under which he enumerates 277 works, that Tritheim must have lavished an immense amount of genuine research on his bibliography. In all about 7,000 books are recorded. An alphabetical index of authors, arranged of course by Christian names, is added. The contrast between the feeble theological bibliographies of the manuscript age and this first attempt in the printing era is very striking."–Besterman, *The Beginnings of Systematic Bibliography,* pp. 7-8.

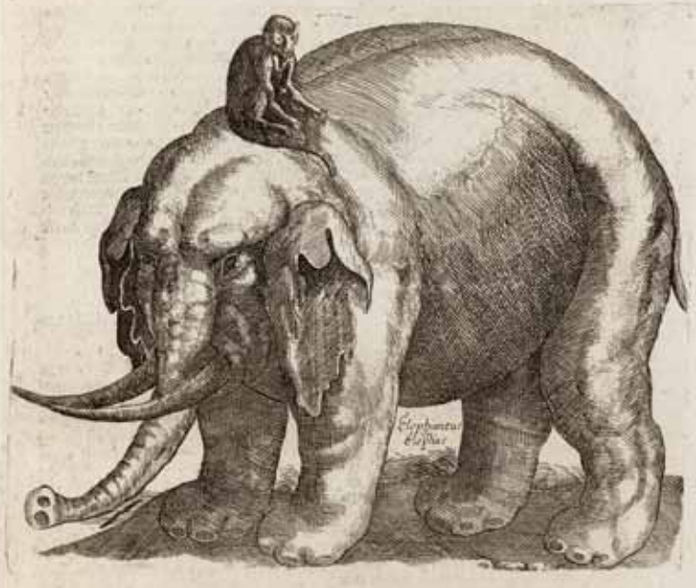
The title of the book is somewhat misleading since the work is not restricted to ecclesiastical writers but also includes authors such as Dante, Poggio, and Sebastian Brant.

A fine and crisp copy of a book which has become uncommon on the market, preserved in a box. Bookplate of the Society of St. John the Evan-

§. 14.
Die Menschen-Haut oder CUTIS HUMANA

soll die schwere Geburth befördern / von welcher *D. I. P. Brom de medicam. ex homine desumtis* schön geschrieben hat.

Das II. Capitel.
Von den Elephanten-Zähnen / auch rohen / und gebrandten Helffen-Bein.



§. 1.

DJe **Elephanten-Zähne** oder DENTES ELEPHANTI sind sehr grosse / lange und dicke Zähne / auswendig gelb und inwendig weiß / deren jeder zu Zeiten zwey Centner wieget / wie dergleichen einer von dem Apothecker *Pielbeer* in **Beschreibung frembder Materialien** *pag.* 189. abgerissen und vorgestellet worden / kommen in grosser Quantität aus Ost-Indien / und werden so wohl ganz / als in *fragmentis* von denen Materialisten geführet.

§. 2.

Gleichwie nun der Löw aus den Klauen erkandt wird / also kan man aus diesen Zähnen allein die ungeheure Grösse dieses Thiers / so

ELEPHAS

oder **Elephant** genennet wird / leichtlich ermessen / aus dessen Ober-Kiefen diese Zähne / an beyden Seiten deß Mauls 8. bis 10. Schuh / und so weit herunter stehen / daß ohne einige Beschwerde des Thiers auff jedem ein Mann sitzen kan /


Tab. XVII
Cabelau
Thiak


Tab. XXIX

gelist, Cowley, Oxford. With a note on the rear paste-down referring to "Derby" (the Earls of Derby?) and a shelf-mark.

◖ Goff T-452.

"The Single Most Valuable Contribution to Wunderkammer Studies" The Wonders of the World

73. VALENTINI, Michael Bernhard. *Museum Museorum, oder Vollständige Schau Bühne aller Materialien und Specereyen, Nebst deren Natürlichen Beschreibung, Election, Nutzen und Gebrauch, Aus andern Material- Kunst- und Naturalien-Kammern, Oost- und West-Indischen Reiss- Beschreibungen . . .* Two added engraved titles, 97 plates (many folding), and 287 engraved illus. & several woodcuts in the text. 14 p.l. (incl. added engraved title), 520, [4], 76, 119, [12] pp.; 12 p.l. (incl. added engraved title), 196, 116 pp.; 4 p.l., 228, [11] pp. Three vols. in two. Folio, cont. mottled calf (extremities a bit rubbed & worn), sides ruled in gilt, spines nicely gilt, black & red morocco lettering pieces on spines. Frankfurt am Main: J.D. Zunner, 1714-14-14. $25,000.00

First complete edition, comprising the second issue of Vol. I (1st: 1704) and first editions of Vols. II and III, printed throughout on superior fine white paper. This is a most attractive set of a marvelous work; it is one of the great illustrated books of the Baroque era and an inexhaustible *repertorium* of all oversea products of the late 17th century. Valentini has also described all known cabinets of natural history specimens.

"Valentini was the personal physician to the Margrave of Assia and professor of experimental science and medicine at Giessen. His *Museum Museorum* is the single most valuable contribution to *Wunderkammer* studies as it reprints many early collection catalogues and gives a list of all the museums known to exist at the time (some 159). Valentini also includes a catalogue of his own cabinet at Giessen, illustrates the interior of the Royal Library and Raritäten-Kammer at Vienna, and gives an unusual view of the bear pit (with an elaborate fountain, 'tree-houses' and spectators leaning over the enclosure) at the Dresden Zoo . . .

"The first volume deals with plants, animals, minerals and metals, their properties and commercial and medical use. The second volume covers stones, fossils, coins, tropical plants, shells, unicorns, and monstrosities. Several plates give an early attempt at the reconstruction of fossil skeletons. A separate appendix, *Ost. Indianish Send-Schreiben,* is a compilation from Rumph, Kaempfer, Ten Rhyn and others, on the rarities, mostly botanical, of the East Indies. The third volume is devoted to experiments in physics and natural philosophy with fine illustrations of the apparatus, and concluding with a dissertation on the divining rod . . .

"The catalogues printed by Valentini are for the Royal Museum at Vienna; Treasury of the Abbey of St. Denis and the Anatomy Cabinet at St. Victoire; the Royal Museums at Copenhagen and Dresden; the Hesse-Cassel Museum; the Treasury of Loretto; relics in the Liebfrauen Kirche at Aachen; the Royal Society; the Anatomy Theatres at Leyden and Amsterdam and the Garden Gallery at Leyden; Apothecary Petiver's cabinet; the museums of Tobias Reymer of Lüneburg, C.M. Spener of Berlin, Lorentz von Aldershelm of Leipzig, the fossils of J.G. Kisner of Frankfurt, Gottfried Nicolai of Wit-

tenberg, J.C. Ratzel of Halberstadt, the Museum Brackenhofferianum, Professor Weigel of Jena's astronomical instruments, J.D. Major's *Kunstkammer* and the cabinet of an unnamed collector which was for sale."–Grinke, *From Wunderkammer to Museum,* 46.

The first part illustrates plants (including American specimens) — flowers, herbs, trees — many of which were used in pharmaceutical preparations. There are sections on tobacco, coffee, tea, cocoa, sugar, cotton, silk, minerals, metals, and animal husbandry. Part II treats geological specimens, jewels, fossils, coins, shells, tropical plants, monsters, unicorns, and other mythological creatures. The third part is dedicated to natural history and physics, with descriptions of Boyle's air pump, acoustic and optical apparatus, Lana's airship (with suggestions for other aeronautical machines), a chapter on the divining-rod, the lodestone, the threshing machine, etc.

Fine and handsome set, from the Macclesfield library. Most copies are printed on paper that has turned various shades of brown. Our set, printed on superior paper, has retained its whiteness throughout.

◖ Alden, *European Americana,* 704. Nissen, *BBI,* 2035. Nissen, *ZBI,* 4217. Pritzel 9663. Sabin 98357. Schlosser (English ed.), pp. 1884.

Valturio's Famous Illustrated Military Treatise

74. VALTURIUS, Robertus. *De Re Militari. Opera de Facti e Praecepti Militari.* Trans. by Paolo Ramusio. 313 leaves (of 314), lacking final blank, otherwise complete, including blank leaves *1 and a1. 37 lines & headline, Roman type. Numerous initials in various sizes supplied in red and blue. 96 fine woodcut illustrations. Folio (310 x 208 mm.), cont. Italian blind-tooled brown calf over wooden boards (upper cover a little defective, crack in the wood of one board repaired), compartments of spine decorated with floral stamps, covers with floral and geometrical borders, metal bosses with engraved flowers in the corners, paper label on spine "L'Arte Militare del Ramusio." Verona: Boninus de Boninis, 17 February 1483. $150,000.00

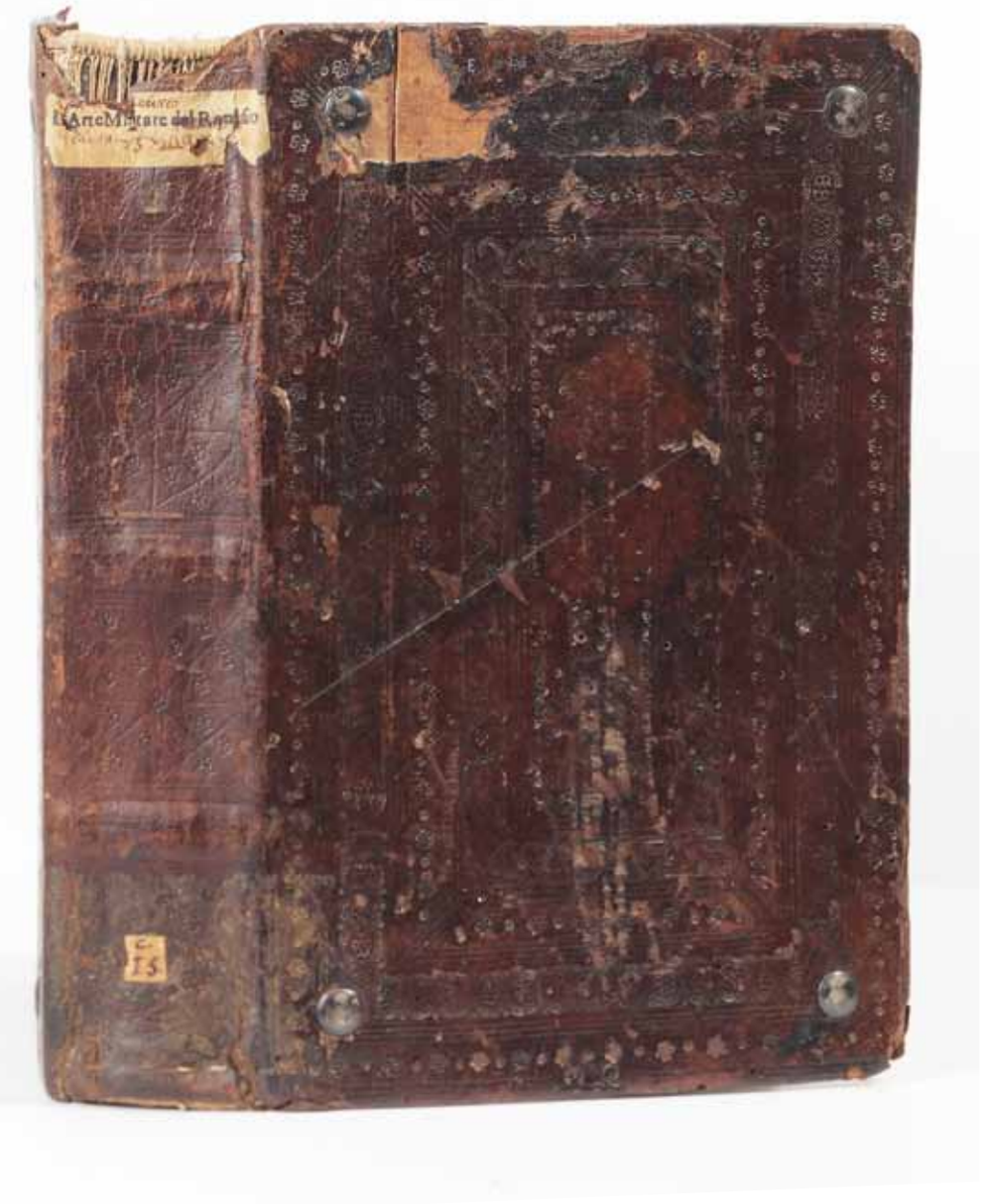
First edition in Italian and a fine and large copy of this handsomely illustrated book on the art of war which contains the earliest technical illustrations in a printed book. The first edition, issued in 1472 in Latin, contained only 95 woodcuts.

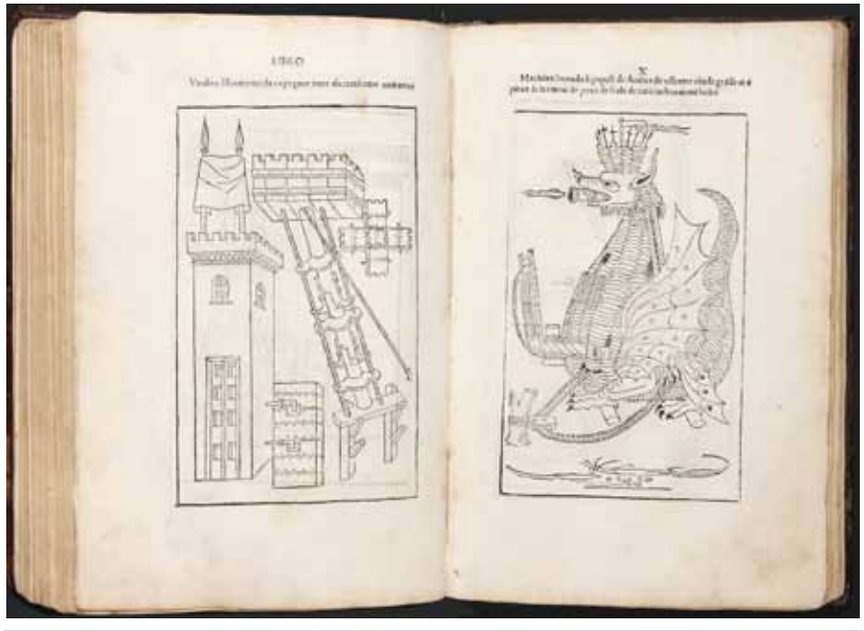
"Roberto Valturio, a native of Rimini, after having been Apostolic Secretary in Rome, became technical adviser and engineer to Sigismondo Malatesta, Lord of Rimini. He composed his book 'On Military Matters' about 1460. After wide circulation in manuscript, it was printed in 1472 . . .

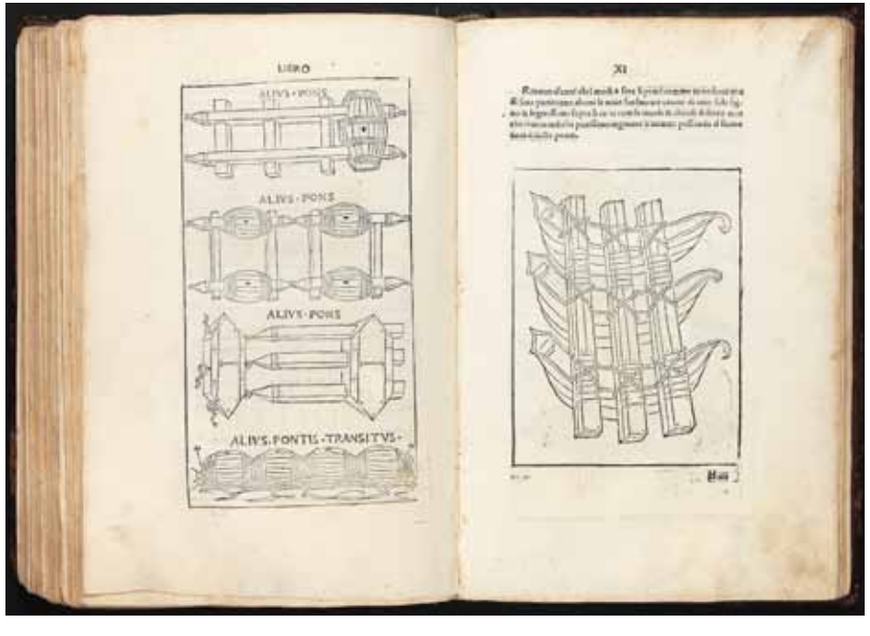
"The historical importance of the *De Re Militari* lies in the fact that it is the first book printed with illustrations of a technical or scientific character depicting the progressive engineering ideas of the author's own time. The woodcuts illustrate the equipment necessary for the military and naval engineer; they include revolving gun turrets, platforms and ladders for sieges, paddle-wheels, a diver's suit, a lifebelt, something resembling a tank, pontoon and other bridges, a completely closed boat that could be half submerged, etc. . . . The Verona Valturius and its reprints were the handbooks of the military leaders of the Renaissance, and Leonardo da Vinci, when acting as chief engineer to Cesare Borgia, possessed a copy and borrowed some of its designs."–*Printing & the Mind of Man* 10–(1st ed. of 1472).

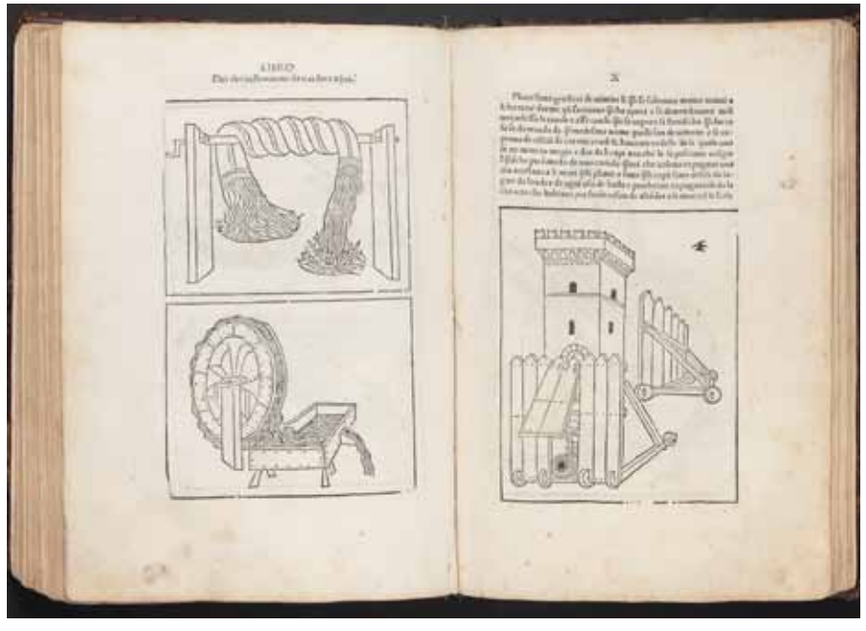
This is one of the rare copies which contains the additional six unsigned leaves at the beginning (the first is a blank) with a dedicatory letter from Ramusio to Roberto de Aragonia.

The printer Bonino de Boninis (1454-1528), a cleric from Ragusa (today Croatia), had worked at Venice in 1479 with Andreas de Paltasichis, from









whom he acquired his typographic knowledge. During his stay in Verona, from 1481 to 1483, Bonino printed not less than seven editions, the Italian Valturius being the last. Afterwards, he moved to Brescia, where he produced another ca. 35 editions, mainly of humanist and legal texts, before he finished his career as a bookseller and publisher in Lyon.

PROVENANCE:

1. The first two end leaves contain notes and ownership inscriptions in ink by a 16th-century Italian hand, verse of Ariosto (Orl. fur., 1516-1532, XXXIII, 44), and a table of contents (in another hand); on the last flyleaf and pastedown are several pen trials and two grotesque drawings of the same time, in dark ink. The excerpted verse from Ariosto are the following: "Ecco, mal grado de la lega, prende / Milano, e accorda il giovene Sforzesco. / Ecco Borbon che la città difende / pel re di Francia dal furor tedesco. / Eccovi poi, che mentre altrove attende / ad altre magne imprese il re Francesco, / né sa quanta superbia e crudeltade / usino i suoi, gli è tolta la cittade."

2. The copy belonged to Ladislao Reti, with his bookplate on pastedown. Reti (1901-73), was an Italian chemist, industrialist, scholar, and a great expert on Leonardo da Vinci.

A fine and large copy with wide margins. An additional quire of five leaves bound in at the front, first leaf with manuscript index up to fol. 173. Some slight staining, marginal tears at leaves e1 and r3, some worming to covers and first and last few leaves.

◖ Dibner, *Heralds of Science,* 172–(1st ed.). Goff V-90. Klebs 1015.1.

75. VESALIUS, Andreas. *De Humani Corporis Fabrica Libri Septem.* Printer's woodcut device on title, 20 full-page & about 130 smaller anatomical woodcuts in the text. 6 p.l., 510, [46] pp. Folio, early 18th-cent. mottled sheep, spine gilt. Venice: F. Franceschi & J. Criegher, 1568. $27,500.00

Fourth edition (the third to be illustrated), posthumously published. It is well-printed on durable paper and set up with marginal notes exactly as in the Basel 1555 edition. The woodcuts are slightly reduced. "The new woodcuts for the illustrations, however, were so well executed that the engraver might almost have passed for the same person who in Venice at the behest of Vesalius had cut the original blocks for the larger work."–Cushing p. 92.

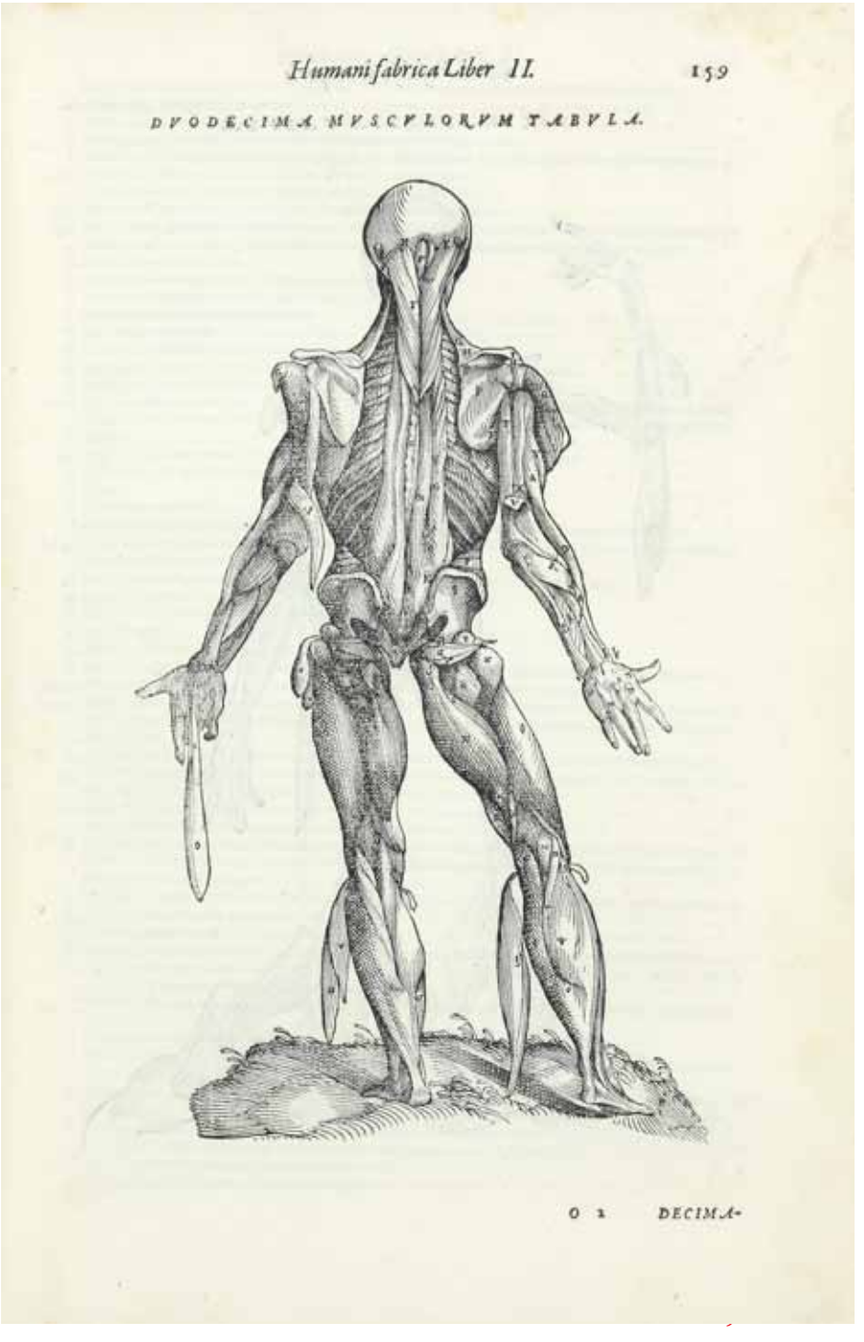
A nice crisp copy in attractive condition of a book which has become scarce. Bookplates of Piergiorgio Borio, M.D.

◖ Cushing *VI.A.-4.*

A Fine Copy

76. VIVIANI, Vincenzo. *De Maximis et Minimis Geometrica Divinatio in Quintum Conicorum Apollonii Pergaei.* Two full-page engraved plates on one double-page sheet, two woodcut plates, & numerous woodcut diagrams in the text. Woodcut of Medici arms on titles which are printed in red & black. Two parts in one vol. 8 p.l., 154 pp.; 2 p.l., 154 pp., one leaf of errata. Folio, cont. vellum over boards (a bit of foxing). Florence: J. Cocchini, 1659. $10,000.00

First edition and a splendid copy of the author's first book in which Viviani attempted a reconstruction of the important fifth book of Apollonius' *Conics*, a text at that time lost. The *Conics* was in eight books, but only the first four have come down to us in the original Greek. There was some knowledge of the fifth book due to hints supplied by other Greek



mathematicians and it was this information which Viviani used. While Viviani was working on his reconstruction of the fifth book, Borelli discovered in an Arabic manuscript in the Medicean Library the text of books five through seven (book eight is lost). These were then translated into Latin by Borelli and Ecchellensis and were published in 1661. The similarity between Viviani's reconstruction and the actual text was very great.

It is Book V which has particularly evoked the admiration of modern mathematicians. It "reveals better than any other the giant intellect of its author. Difficult questions of *maxima* and *minima* . . . are here treated exhaustively . . . Here are also found the germs of the subject of *evolutes* and *centres of osculation.*"–Cajori, *History of Mathematics*, pp. 40-41–(on Apollonius).

In this book, Viviani also "published his results on what is now called the *Steiner problem* (although the designation *Fermat problem* would be more appropriate) as an appendix to his celebrated reconstruction of the fifth book of Apollonius's *Conic Sections* where the ancient author treated maximum and minimum problems related to conic sections."–Hildebrant & Tromba, *The Parsimonious Universe*, p. 92.

Viviani (1622-1703), a disciple and biographer of Galileo, established his reputation with this work.

Fine, crisp, and large copy with half-title. Preserved in a box.

◖ Cinti 135. Riccardi, II, 625–"Raro e pregiato."

With Surreal & Delicate Mezzotint Illustrations

77. WRIGHT, Thomas. *An Original Theory or New Hypothesis of the Universe, founded upon the Laws of Nature, and Solving by Mathematical Principles the General Phaenomena of the Visible Creation; and particularly the Via Lactea. Compris'd in Nine Familiar Letters from the Author to his Friend.* 32 engraved plates (of which 8 are mezzotints & 2 are folding). Title printed in red & black. viii, 84, [4] pp. Large 4to, cont. calf (joints slightly cracked at ends), spine gilt, red morocco lettering piece on spine. London: Printed for the Author, 1750. $35,000.00

First edition, and a fine and large copy, of a very remarkable book, famous for its influential theory of the Milky Way and for its beautiful, almost surreal, mezzotint plates. In this work, Wright (1711-86), explained the Milky Way as an optical effect caused by our immersion in a layer of stars. Wright also enunciated here that the stars circulate around a center as do the planets around the Sun.

"To Thomas Wright of Durham undoubtedly belongs the bold and original idea of transcending Newton on his own lines, by carrying his conception of the finite solar system into the infinite world of the stars beyond it . . . He was the first to propound the idea that the stars are not scattered without order or connection in space, but have a systematic arrangement or constitution, like the solar system, whereby they are all bound into one immense unity and connection."–W. Hastie, *Kant's Cosmogony* (Glasgow: 1900).

This is today a most uncommon book on the market.

Fine copy, with the plates in beautifully fresh condition, preserved in a box. 18th-century typographical bookplate of Joseph Woolfe.

◖ *D.S.B.,* XIV, pp. 518-20–His latter model of the universe, "in which the stars lie in a plane and orbit their center as the planets orbit the sun, appealed to Immanuel Kant, who, not realizing the center of Wright's system was supernatural, credited Wright with originating a disk-shaped model of the galaxy."

PLATE. XXXI.

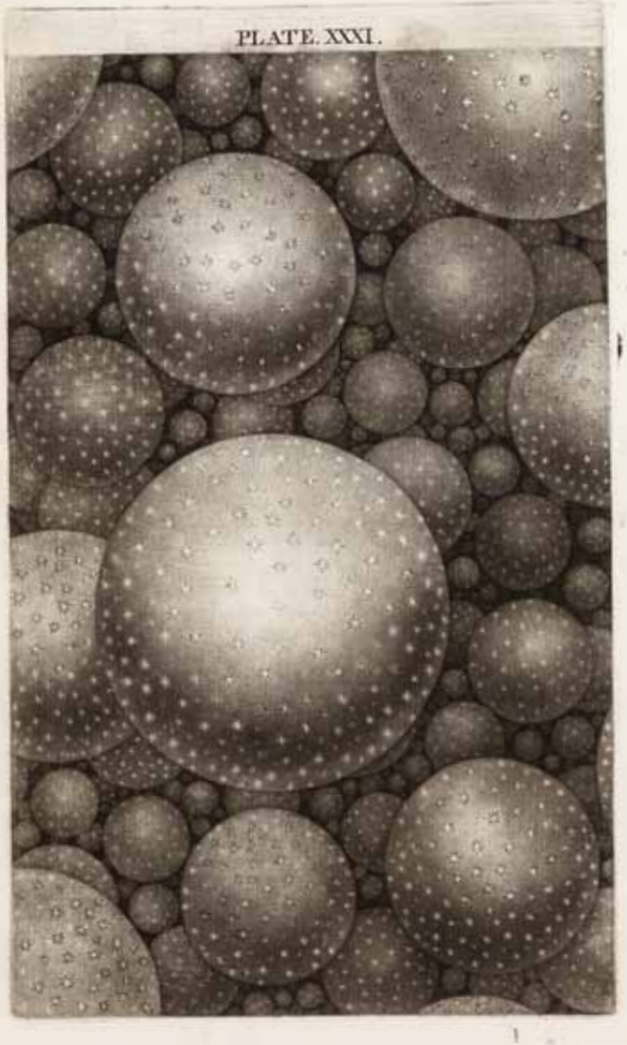
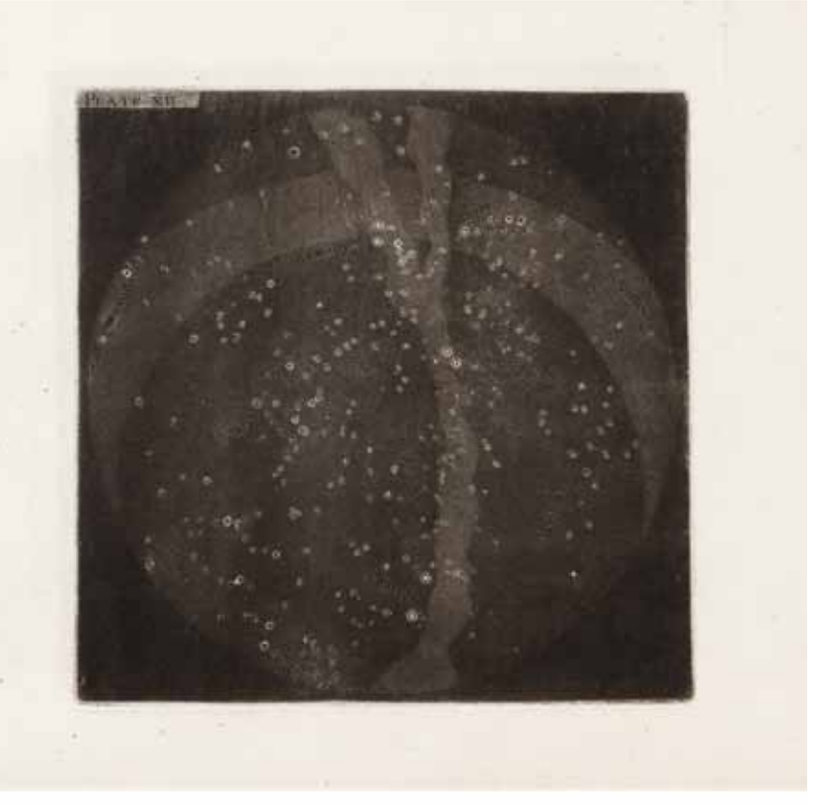


PLATE XVI.


PLATE. XV.



78. [YOUNG, Arthur]. *National Danger, and the Means of Safety. By the Editor of the Annals of Agriculture.* 2 p.l., 73 pp., one leaf of ads. 8vo, attractive antique calf-backed marbled boards, spine gilt, red morocco lettering piece on spine. London: W. Richardson, 1797.

$1250.00

First edition, presentation copy, inscribed on the half-title: "From the Author." Young's trips to France were primarily to look at French farms and farming techniques. His trips also gave him an excellent perspective on the political upheavals of the country. "Young's experiences in France brought about a permanent change in his political views. From being a liberal and a reformer, by 1792 he had become an opponent of the revolution and a conservative in English matters. He was highly critical of the *ancien régime* but, equally, he attacked the excesses of the revolution, and now he was fearful of the consequences of reform in England, necessary though it was."–ODNB.

This work deals with Young's proposal for the formation of a voluntary yeomanry to defend England from any possible French invasion.

Fine copy with half-title and final advertisement leaf. Faint dampstaining to final few leaves.

Selective Subject Index

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PHOTOGRAPHY BY ROBERT LORENZSON.
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