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Catalogue 187

Proofs

Science, Medicine, Natural History,

Chemistry, & Bibliography

Selective Subject Index on Following Pages

Selective Subject Index

Acoustics: 29
Aeronautics: 20
Agriculture: 84
Alchemy: 21, 77
Americana: 77
Anatomy: 1, 83
Architecture: 47
Art: 3, 21, 31, 52, 58, 71, 91
Artillery: 21
Astrology: 57, 79
Astronomy: 39, 60-63, 68-70, 72, 79, 99
Auction Catalogues: 3-8
Autographs, Manuscripts & Annotated Books: 14, 67, 84, 85
Bibliography: 2-8, 10, 14, 35, 53, 54, 73, 78, 82, 86, 90, 92, 94, 97
Biography: 34
Biology: 24
Botany: 59
Bridges: 46
Calculus: 37
Canals: 46
Cancer: 84
Cartography: 15
Catalogues: 3-8, 10, 16, 78, 82, 86, 92, 97
Ceramics: 21
Chemistry: 11-13, 17, 18, 21, 22, 26-28, 31-34, 42-45, 58, 64, 66, 77, 81, 84, 87, 91, 96, 98, 100
Coins & Medals: 96
Color Theory: 51, 52, 65, 74-76
Comets: 51, 72, 79
Computers: 67
Crystallography: 89
Dentistry: 56
Dibner items: 1, 21, 50, 55, 62, 63
Dyeing & Bleaching: 17, 28, 66, 84, 91, 98
Early Printed Books (before 1601): 1, 15, 19, 21, 49, 71, 79, 80
Economics: 9, 28
Electricity & Magnetism: 20, 50, 72, 80, 100
En Français dans le Texte items: 55, 62,

Engineering: 9, 43, 44, 46
Entomology: 24
Evolution: 24
Forests: 41
Gardens: 59
Garrison-Morton items: 24, 77, 79
Gastronomy: 33, 84
Gems: 49
Geology: 43, 44, 85, 89
Geometry: 15, 71
Glass: 28, 58, 84, 93
History: 84, 94
Hoover items: 11
Horblit items: 55, 62, 89
Horticulture: 41
Hydraulics: 36, 48, 72
Incunabula: 19
Instruments: 15, 32, 39, 60, 61, 93
Magic: 23, 57
Mathematics: 15, 19, 30, 37, 38, 40, 62, 63, 69-71, 95, 99
Mechanics: 30, 36, 38, 46, 47, 51, 55, 62, 63, 68, 72, 95, 99
Medicine: 1, 24, 35, 49, 56, 59, 64, 74-77, 79, 80, 87, 93
Metallurgy: 11-13, 21, 64, 84, 87, 96
Meteorology: 32, 72
Microscopy: 39
Mineralogy: 49, 88, 89
Mining: 11-13
Music: 29
Natural History: 24, 41, 45, 57, 59, 77, 83, 85, 88, 89
Navigation: 50
Newtoniana: 60, 61, 69, 70, 72, 99
Numismatics: 96
Occupational Diseases: 87
Oceanography: 1, 74-76, 93
Ophthalmology: 1, 74-76, 93
Optics: 1, 39, 51, 52, 55, 65, 74-76, 93
Paleontology: 83, 89
Perspective: 71
Pharmacology: 49, 59, 80
Philosophy: 19, 30, 79

Physics: 1, 29, 30, 38, 39, 47, 50-52, 55, 62, 63, 65, 72, 74-76, 95, 99
Printing & the Mind of Man items: 29, 62, 63, 89
Probability: 40
Psychiatry & Psychology: 24, 79, 80
Pyrotechnics: 21
Railroads: 9, 46
Surveying: 15
Technology: 9, 11-13, 17, 21, 28, 43, 44, 46, 48, 49, 67, 91, 98
Textbooks: 16, 18, 22, 42, 77
Textiles: 17, 66, 67, 91
Transport: 9, 47
Voyages & Travels: 61
Wine & Beer: 28, 91
Zoology: 49

Catalogue Begins on Following Page

Catalogue 187

*"One of the Greatest Students of Optics
of All Times"--Sarton*

1. **ALHAZEN.** *Opticae Thesaurus... Libri Septem, nunc primùm editi. Eiusdem liber De Crepusculis & Nubium ascensionibus. Item Vitellonis... Libri X. Omnes instaurati, figuris illustrati & aucti, adjectis etiam in Alhazenum commentariis, a Federico Risnero.* Woodcut printer's device on title, a fine woodcut on verso of title (repeated on the title to the second part), very numerous optical diagrams in the text, including one of the anatomy of the eye, & a woodcut printer's device on verso of final leaf (otherwise blank). 4 p.l. (the final leaf is blank), 288 pp.; 4 p.l., 474 pp., 1 leaf. Two parts in one vol. Folio, 18th-cent. boards (rebacked with the orig. spine laid-down, recornered, light browning throughout). Basel: Episcopius, 1572. \$85,000.00

First edition of Alhazen's *Optics*, the most important and most influential Arabic treatise on physics, and a work that exercised profound influence on Western science in the 16th and 17th centuries, especially upon Kepler, Snell, Fermat, and Harriot. Sarton calls Alhazen "the greatest Muslim physicist and one of the greatest students of optics of all times... [his book] showed a great progress in experimental method."

Alhazen (965-1039), "preserved for us all that was known by the ancients in the field of optics and added some contributions of his own. His book remained a

standard authority thru the 1600s. He understood that light emanated spherically from a point and greatly improved on Ptolemy's uncertain rule for refraction which, he showed, held true only for small angles. He covered many cases of reflection and refraction and his explanation of the structure and function of the eye was followed for 600 years. He noted the magnifying power of a segment of a glass sphere and believed the velocity of light to be finite. He studied spherical and parabolic mirrors, spherical aberration, lenses and atmospheric refraction, especially twilight."—Dibner, *Heralds of Science*, 138.

The medieval science of *perspectiva* as developed by Alhazen exerted a considerable influence on the optical and perspective theories in Renaissance and later art, particularly in the work of Ghiberti, Alberti, Leonardo da Vinci, Poussin, et al.

Certain ophthalmological terms originated from the Latin translation of Alhazen's Arabic text, such as *retina* and *cornea*.

The *De Crepusculis* contains Alhazen's ingenious calculation of the height of the atmosphere (1st ed.: 1542).

The second part contains Witelo's *Optica*, the earliest treatise on optics written by a European. It was first published in 1535.

An attractive copy and rather scarce, preserved in a strong cloth box. Occasional unimportant and light dampstaining.

• *D.S.B.*, VI, pp. 189-210—"The *Optics* is not a philosophical dissertation on the nature of light, but an experimental and mathematical investigation of its properties, particularly insofar as these relate to vision." Kemp, *The Science of Art*, pp. 22, 26, 55, 104, 127, 130, 131, 189, & 237. Sarton, I, pp. 721-22.

Presentation Copy from the Dedicatee, Magliabechi

2. [APROSIO, Angelico]. *La Visiera Alzata Hecatoste di Scrittori, che vaghi d'andare in Maschera fuor del tempo di Carnovale sono scoperti da Gio: Pietro Giacomo Villani*. 135, [1] pp. 12mo, cont. vellum over boards (some foxing). Parma: Heirs of Vigna, 1689. \$1950.00

First edition of the fundamental work for the identification of 17th-century pseudonyms, and an important source for all later bibliographers. "This was the first collection [of pseudonyms] in a vernacular language and the first to be limited to the authors of a single country . . . it is rare . . . A second bibliography contained in *La Visiera alzata* (pp. 5-22) lists the books dedicated to Magliabecchi and the eulogies written to honor him. It is perhaps unique in its species . . .

"It is not surprising that Angelico Aprosio, a man who chose a different disguise for his own name in almost every one of his dozen books became the first Italian bibliographer of pseudonyms."—Taylor & Mosher, *The Bibliographical History of Anonyma and Pseudonyma*, pp. 114-15.

This book was dedicated to Antonio Magliabechi, the famous polyglot librarian to the Grand-Duke Cosimo II of Tuscany and contains a presentation inscription

from Magliabechi to its next owner, Prosper Mandosi. Mandosi was a "great Italian bibliographer" (Taylor, p. 9) who compiled the *Bibliotheca Romana* (1682-92), the first Italian bibliography of anonymous literature.

Fine copy preserved in a red morocco-backed box. Modern bookplate of Renato Rabaiotti.

♣ Besterman, *The Beginnings of Systematic Bibliography*, p. 51.

3. (AUCTION CATALOGUE: ANON). *Notice de bons Livres, Estampes montées et en Feuilles, Dont la vente se fera le 11 Frimaire, an X, de relevée, rue des Bons-Enfants, No. 12, Salle Silvestre, Maison Du Citoyen Cramer, Imprimeur. 14, [1] pp. 8vo, later cloth-backed marbled boards. Paris: Regnault, Silvestre, & Thierry, An X [1802].* \$550.00

One of a series of trade sales held at the Salle Silvestre in the first decade of the 19th century. 23 lots containing books with various titles and 24 lots of prints, framed or loose.

Fine copy and rare with no copy in OCLC. Tiny hole in blank portion of title.

4. (AUCTION CATALOGUE: A[RTENAS], —). *Catalogue des Livres rares et précieux de la Bibliothèque de feu M. A...dont la vente se fera le premier Décembre 1806, et jours suivans... Renouard's anchor on title. 2 p.l., 136, [4] pp. 8vo, modern calf-backed marbled boards, spine gilt. Paris: A.A. Renouard, 1806.* \$1950.00

The very rare sale catalogue — no copy in OCLC — of the library of M. Artenas. This was the second auction organized by Antoine Augustin Renouard (1765-1853), the first being the Detune sale held in April of the same year. The collection, broad in scope, was particularly strong in natural history. 1390 lots, priced throughout in a contemporary hand.

Fine copy.

♣ Peignot, p. 77.

5. (AUCTION CATALOGUE: BERGERET, —). *Catalogue de Livres Anciens rares et curieux composant la Bibliothèque de M. Bergeret. viii, 341, [2] pp.; 2 p.l., [vii], 406 pp. Two vols. in one. 8vo, cont. purple sheep-backed marbled boards (joints rubbed, minor foxing), flat spine gilt. Paris: J. Techener, 1858-59.* \$1250.00

Bergeret, whose first name cannot be ascertained, was a collector living in Lyon about whose sales G. Brunet, in his *Dictionnaire de Bibliologie Catholique*, devotes a detailed two-column (cols. 414-16) account. The collection, numbering

5227 lots, was especially rich in books of Lyonese interest. The highest prices were paid for two Maioli bindings on the same edition of the same text, Blondus, *De Roma Triumphante* (Basel: 1531): lot 2279 in Part I (M. de Rothschild), 2000 frs. and lot 2942 in Part II (Hobson, Nos. 16 & 17), 2600 frs.

Very good copy. Bookplate of Comte L. de B.

• Blogie, cols. 88 & 90.

A Notable Collection of Illustrated Books

6. **(AUCTION CATALOGUE: DETIENNE).** *Catalogue des Livres rares et précieux, et Manuscrits sur Vélin, du Cabinet de feu M. Detienne, dont la vente se fera le Lundi 4 Mai 1807 et jours suivants.* v, [2], 88 pp. 8vo, attractive calf-backed marbled boards, spine gilt. Paris: De Bure & M. Poussin, 1807. \$1750.00

A rare sale catalogue with no copy in OCLC. "Beaucoup d'éditions de luxe, ornées de dessins originaux par Moreau le jeune, Lebarbier, Marillier, etc."—Peignot, p. 94. 891 lots including several superb illuminated MSS. Priced throughout in a contemporary hand and, oftentimes, with buyers' names.

Fine copy.

Rare

7. **(AUCTION CATALOGUE: FAGEL, Hendrik).** *Bibliotheca Fageliana. A Catalogue of the valuable and extensive Library of the Greffier Fagel, of the Hague . . . which will be sold by Auction, by Mr. Christie . . . on Monday, March 1, 1802, and the Twenty-nine following Days.* xii, 490 pp. 8vo, modern marbled boards (first & final leaves a little foxed). London: Printed at Barker & Son, 1802. \$2250.00

A rare auction catalogue; the collection was purchased before the sale *en bloc* by Trinity College, Dublin. The Fagel library, formed over the course of almost two centuries by a politically powerful Dutch family, today is one of the most important collections at Trinity College, Dublin. "The Fagel library was the product of a century of rich Amsterdam taste, remarkable for its large collection of maps and of European topography and views, though its ten thousand political pamphlets may have been the principal attraction for the College. Traditional Dutch interest in gardens was represented by *de luxe* copies of botanical works with the plates illuminated and the titles lettered in gold, and by volumes of drawings of flowers by Nicolas Robert and of tulips by a native artist, the latter annotated with the prices paid for Semper Augustus and other varieties during the tulip mania."—Hobson, *Great Libraries*, pp. 180-82.

"While Henrik Fagel, *Greffier* or Chief Minister of Holland, was in England on

a diplomatic mission during the winter of 1794-95, his country was overrun by French revolutionary forces, preventing his return to his family and home in The Hague. Initially his property was sequestered but it was released by mid 1798, and his art collections and library were shipped to London where Fagel, in straightened financial circumstances, had determined to sell them. Through the good offices of John Foster, Speaker of the Irish House of Commons and later described as 'the original proposer of the scheme', money was made available in May 1798 by the Erasmus Smith Charity in Dublin for the purchase of the library for Trinity. There was a delay in putting this scheme into effect and Fagel determined to sell it by public auction, the sale to start on 1 March 1802. The catalogue of almost 10,000 lots . . . created a sensation and must have galvanized the Dublin party, for they made a successful bid for the entire library in February. On 6 March the Erasmus Smith Charity released enough funds to cover Fagel's asking price of 8000 pounds sterling and the cost of transportation."—Vincent Kinane, "The Fagel Collection" in *Trinity College Dublin* (ed. by Peter Fox), Dublin, [1986], p. 158—(& see the rest of the article).

Very good copy.

*Large Paper Copy Printed on Thick Paper;
One of Twenty Copies*

8. (AUCTION CATALOGUE: MOTTELEY, J.C.). *Catalogue des Livres de la Bibliothèque de M. Motteley, composée d'une Collection considérable d'Elzéviirs et autres beaux Livres et Manuscrits rares, précieux et singuliers, la plupart reliés par Desseuil, Padeloup, Derome, Simier, Purgold, Thouvenin et Vogel; dont la vente se fera le jeudi 2 décembre 1824, et jours suivans . . .* 5 p.l., 219, [1] pp. 8vo, cont. boards, black leather lettering piece on spine. Paris: Silvestre, 1824. \$1250.00

An important sale. "Ce catalogue renferme une réunion très-nombreuse de livres imprimés par les Elzeviirs; il en est de très-rares et qui étaient jusqu'alors restés inconnus aux bibliographes."—Brunet, *Dictionnaire de Bibliologie Catholique*, col. 498. A large number of Motteley's books come from the libraries of de Thou and the Comte d'Hoym.

We learn from the same source that Motteley (d. 1850), lived as a hermit, alone and isolated in a rundown apartment. He was afraid to make home repairs because of his fear of disturbing the treasures on which he had spent so much money.

Of the 2173 lots, approximately 550 are attributed to the Elzeviirs; a number of the items are accompanied by useful printed notes and include an expansive contribution by Charles Nodier on lot 533.

Fine copy, printed on thick paper and priced throughout in a contemporary hand.

• Grolier Club, *Printed Catalogues of French Book Auctions . . . 1643-1830*,

587—"According to *Bibliographie de la France*, 20 large paper copies were printed."

9. BAADER, Joseph von. *Ueber die Vortheile einer verbesserten Bauart von Eisenbahnen und Wagen, welche an einer auf allerhöchsten Befehl zu Nymphenburg ausgeführten Vorrichtung durch wiederholte öffentliche Versuche sich bewährt haben.* 72 pp. Large 4to, self-bound. Munich: E.A. Fleischmann, [1826]. \$2250.00

First edition and scarce. Baader (1763-1835), a famous mining expert and Chief of the Bavarian Mining Council, traveled as a student in England and Scotland, where he learned of the most recent technological developments taking place there. While in Edinburgh, he designed a new blasting machine for iron mines which had considerable success and became known as the *Baadersches Geblaese*. His greatest contribution to science was, however, his devotion, through propaganda and the power of his position, to the building of railways in Bavaria.

In this work, Baader describes a series of tests which he undertook to develop lighter and stronger wagons and railways with greater durability. The author had constructed in the castle park at Nymphenburg a railway in August 1825 where he conducted a series of experiments for eight months. Baader describes his own results, the most recent developments in railway engineering taking place in Britain, and emphasizes the advantages railways have over canals. The present book was influential in France.

Fine copy.

• A.D.B., I, pp. 725-26. Poggendorff, I, 80-81—(erroneously giving the date of this work as 1825).

Von Ostheim's Library

10. STAATLICHE BIBLIOTHEK, BAMBERG. *Katalog der Bibliothek des Freiherrn Emil Marschalk von Ostheim.* 1 p.l., 623 pp.; 1 p.l., [625]-1325 pp.; 2 p.l., [1329]-1513 pp., 2 p.l., xxvi pp. Three vols. Large 8vo, orig. printed wrappers, uncut. Bamberg: J. Nagengast, 1911. \$600.00

The catalogue of the large and important collection of Freiherr Emil Marschalk von Ostheim (1841-1903), donated upon his death to the library at Bamberg. Marschalk's library, containing more than 13,000 books, was strong in history, literature, and travel.

Fine set. Rare.

11. BARBA, Alvaro Alonso. *The Art of Metals, in which is declared the Manner of their Generation, and the Concomitants of them. In Two Books.* Written in Spanish by Alvaro Alonso Barba...in the year, 1640. Translated in the year, 1669. By the R.H. Edward Earl of Sandwich. One engraved plate. Titles within ruled borders. 2 p.l., 156 pp.; 1 p.l., 91 pp. Two vols. in one. 8vo, antique panelled calf (library stamp in upper margin of A2 and lower margin of D2, some minor browning). London: S. Mearne, 1674. \$4750.00

Second edition in English of the first two books of this celebrated treatise on mining and metallurgy, the first significant work on the subject in Spanish, and the first work on mining in the Americas. The first book deals with the generation of metals and things accompanying them, and the second with the extraction of silver by mercury. It also includes the earliest special chapter on petroleum products (Book I, ch. 9) in Peru and elsewhere. The methods of extraction that Barba himself discovered were in large part responsible for the vast wealth that Spain gained from Peru. The book was kept secret in Spain, but when the Earl of Sandwich was Ambassador to Spain, he obtained a copy and translated two of the five books and had them published by Samuel Mearne, the royal bookbinder and publisher.

A very good copy. No complete English edition of all five books was done until 1923.

• See Wing B678 & 682: another issue (or possibly edition) of the first book has the title *The First Book of the Art of Mettals*. Hoover 83. Duveen p. 42. Neville I, p. 70 (both with the alternate title). Sabin 3254.

12. BARBA, Alvaro Alonso. *Arte de los Metales, en que se enseña el verdadero Beneficio de los de Oro, y Plata por azogue. El modo de fundir los todos, y como se han de rafinar, y apartar unos de otros. Nuevamente aora añadido. Con el tratado de las antiguas minas de España, que escribió Don Alonso Carrillo...* Woodcuts of furnaces & other metallurgical apparatus in the text. viii, 224, [4] pp. 4to, cont. pale sheep (paper lightly browned), spine gilt, red morocco label. Madrid: En la Imprenta de B. Peralta. A costa de F. Assensio... [1729]. \$3250.00

Second edition. The first edition, published at Madrid in 1640, is extremely rare. The present edition includes the treatise on the mines of Spain by Alonso Carrillo, first published in 1724.

A fine copy. While the Hoover catalogue has the first edition; there is no Spanish edition in Cole, Duveen or Ferguson.

• Neville I, pp. 69–70.

13. BARBA, Alvaro Alonso. *Metallurgie, ou l'Art de tirer et de purifier les Métaux*, traduite de l'Espagnol d'Alphonse Barba avec les Dissertations les plus rares sur les Mines & les Opérations métalliques. Two folding engraved plates. xlv, [xii], 360, 371–393, 1 leaf, 387–456, [16] pp.; [xii], 456, [20], [4] blank pp. Two vols. 12mo, cont. mottled sheep (ends of spines & corners worn, small stain in fore-edge margin of pp. 30–35 of Vol. 1, dampstain in upper corner of some leaves of Vol. 2), spines gilt. Paris: P.A. Le Prieur, 1751. \$1500.00

First complete edition in French (the 1730 edition was abridged), containing all five books of Barba's celebrated treatise on mining and metallurgy, *Arte de los Metales* (1640), translated by Lenglet-Dufresnoy. "The first volume comprises the translation of Barba's five 'books,' plus a list of Peruvian mines (not in the Spanish editions of 1640 and 1729) and extracts from Vargas on metals. The second volume contains reprints (some of which are extracts), from earlier and contemporary metallurgical works by Malus, Bertereau, Granger, Bourgueville, Arcons, Browne, Merret, Jussieu, Réaumur, Homberg, Du Fay, Amand, Chambon, et al. . . . One of the most important translations of Barba, the present French edition is especially valuable for these additional reprints of early metallurgical works, most of which are now extremely rare."—Neville I, p. 72.

Such was the importance of Barba's treatise that the original Spanish edition, the first English edition, and this first French edition were all printed by government or royal printers.

An 18th-Century French Provincial Bookseller's Sales Book

14. BARBIER, Jean François, fils, Bookseller. Manuscript on paper entitled "Journal de vente pour servir à nous Jean-François Barbier, fils, Libraire, au Mans." 378 pp. Small folio (330 x 210 mm.), disbound. [Le Mans]: 9 April 1756-10 February 1773. \$12,500.00

A very rare survival: this is the daily sales book, listing the name of each client, his profession, books sold, date, and prices of the books for a 17-year period, recorded by a provincial French bookseller. These kinds of detailed records, listing sales on a daily basis, are extremely rare and provide a fascinating glimpse into the French provincial book trade and the reading tastes of his clientele. Approximately 3500 transactions are recorded.

In fine condition. The handwriting is quite legible.

15. BARTOLI, Cosimo. *Del Modo di Misurare le Distantie, le Superficie, I Corpi, le Piante, le Provincie, le Prospettive, & tutte le altre cose Terrene.* Two folding woodcut plates. Title within allegorical woodcut border, woodcut portrait of the author on A2r, and numerous pictorial & diagrammatic woodcuts in the text (some full-page). Text printed throughout in italic. 4 p.l., 141, [3] leaves. 4to, 18th-century half-vellum & marbled boards (original paper flaw in H2 affecting a few letters without loss), gilt label on spine. Venice: F. Franceschi, 1564. \$2750.00

First edition of a popular work on surveying and practical mensuration. Riccardi considered this to be among the best of the 16th-century books on mensuration. It deals with solid or hollow bodies of various shapes and sizes, as well as the measurement of large heights, distances and areas. The book gives a particularly good account of early surveying methods and instruments, and Book IV is on cartographic surveying and the compass. Book V is on Euclidean proofs relating to measurements contained in Book I, and Book VI is on square and cube roots. Bartoli was a translator of many learned works, mathematical elements of which are included in the present work, including those of Oronce Finé, Leon Battista Alberti, Apianus, etc.

An excellent copy.

♣ Berlin Kat. 1701. Kiely, *Surveying Instruments*, p. 190. Mortimer 45. Riccardi, I, 90. Smith, *Rara Arithmetica*, 315–(describing 2nd ed. of 1589 only). See Bryce, *Cosimo Bartoli (1503–1572). The Career of a Florentine Polymath* (Geneva, 1983), pp. 163–183.

16. BAUMÉ, Antoine. *A Manual of Chemistry, or a Brief Account of the Operations of Chemistry, and their Products.* Translated from the French...The second edition corrected, with additions. vi, 399, [1] pp., 1 leaf of ads. Small 8vo, cont. mottled calf (short crack at top of lower joint, small puncture hole in upper cover and fore-edge margin of first 20 leaves), floriated gilt border round sides, spine gilt, red morocco lettering piece on spine. Warrington: Printed by W. Eyres for J. Johnson, 1786. \$1500.00

Second edition in English, enlarged, of Baumé's important *Manuel de Chymie*, translated by John Aikin, and, like the first, printed in Warrington by William Eyres. Aikin added some notes of his own, principally "relating to...fixed air, with which Mr. Baumé appears not to have been acquainted" (from the Preface). This edition is expanded with additional material which did not appear in the first English edition.

An attractive copy. Bookplate of William Downes.

♣ Cole 57. Neville I, p. 98–(commenting that this edition is even rarer than the first English edition). Several copies also appear to be imperfect, including both

William Cole's and Roy Neville's.

17. BERTHOLLET, Claude Louis. *Über die dephlogistisirte Salzsäure und ihre Anwendung zum Bleichen der Leinwanden und Garne, zu Wiederherstellung beschmutzter Kupferstiche und Bücher, zu Herausbringung der Dintenflecke, zu Vernichtung aller Farben, und zu verschiedenen andern nützlichen Unternehmungen . Zwey Abhandlungen in den Pariser Annalen der Chymie.* Aus dem Französischen übersetzt. One folding engraved plate. 1 p.l., 60 pp., one leaf explaining the plate. 8vo, attractive antique calf-backed speckled boards, spine gilt, red morocco lettering piece on spine. Vienna: Joseph Edlen von Kurzbeck, 1790. \$1500.00

First edition in German, translations of Berthollet's articles on hydrochloric acid used in bleaching and cleaning engraved copper plates. They were first printed in the *Annales de Chimie* (1789), II, pp 151-90 and the *Rapport d'une Mémoire de M. Chaptal* by Lavoisier and Berthollet, also from the *Annales de Chimie* (1789), I, pp. 69-72.

Fine copy of a very rare book.

☛ Cole 128.

18. BERZELIUS, Jöns Jakob. *Traité de Chimie minérale, végétale et animale.* Traduit par A.J.L. Jourdan, sur les Manuscrits de l'Auteur. 13 folding engraved plates & one folding table. 8 vols. 8vo, cont. mauve quarter-morocco & marbled boards (spines faded to brown, pale dampstain at the end of Vol. 8). Paris: Firmin Didot Frères, 1829–33. \$1750.00

First edition in French of Berzelius' great *Lärbok I Kemien* (1808–30), "the most authoritative chemical text of its day" (D.S.B.). The translation, by A.J.L. Jourdan and Melchior Esslinger, was supervised by Berzelius himself, and incorporated additional information supplied by Berzelius, to the point where it became a new edition.

A fine set.

☛ Cole 149. Duveen p. 75. Neville I, p. 147. Partington IV, pp. 142–149.

The Diffusion of Hellenism

19. BESSARION, Johannes Basilius of Trebizond, Cardinal. *Adversus Calumniatorem Platonis. — Correctio Librorum Platonis de Legibus Georgio Trapezuntio interprete. — De Natura et Arte adversus Georgium Trapezuntium.* Roman & Greek type. 10-line initial opening text in red & blue with purple pen work decoration & extensions, 7-line initials opening subsequent books in red or blue, headings in red, chapter numbers in red in margins, paragraph marks alternating in red & blue. 231 leaves (lacking the first & final two blanks). Folio (280 x 197 mm.), 18th cent. sheep (a few small wormholes in first two & final three quires, some spotting & browning), sides ruled in blind, spine gilt, contrasting leather lettering piece on spine. Rome: C. Sweynheym & A. Pannartz, [before 28 Aug. 1469]. \$150,000.00

First edition of "one of the most important texts in the history of Platonism."—J. Hankins, *Plato in the Italian Renaissance*, p. 215. Bessarion wrote this book to counter the attacks of George of Trebizond, who, in his translation of the *Laws* of Plato, had sharply criticized their author, exalting Aristotle instead. In defending Plato, Bessarion provides a general exposition of Platonic philosophy. It was one of the earliest expositions on Platonism to appear in print, published well in advance of any of Plato's own works, and therefore contributed greatly to disseminating and popularizing Platonic philosophy in the West. Bessarion's work was not merely a defense of Plato, but a defense of Greek culture and heritage. One of his main strategies in countering Trebizond was to prove the deficiency of Latin translations of Plato's works, which consequently resulted in western misconceptions. Included in this edition is Bessarion's detailed and sharp enumeration of the faults in Trebizond's own translation and commentary of Plato's *Laws*.

Bessarion (1403-72), united the two worlds of Byzantine and Renaissance Italian culture. After 1440, the cardinal remained in Italy for most of the rest of his life and established himself as a dominant figure in Italian culture. At Rome, the house of Bessarion functioned as a humanist academy, frequented by Poggio, Filelfo, Trebizond (until the quarrel), Argyropulus, Cusanus, and Regiomontanus. The cardinal's promotion of Greek no doubt helped to turn the minds of Nicholas V and Duke Federico of Urbino to the patronage of Greek studies. Bessarion's immense collection of Greek manuscripts represents a major landmark in the transmission of classical Greek culture to Renaissance Italy. His collection of 800 Greek manuscripts was given by him in 1468 to the Republic of Venice and today forms the nucleus of the famous library of St. Mark's.

Bessarion had considerable mathematical interests which are reflected in the present book. He received lessons in the subject from Gemistus Pletho in the early 1430s and, during his reorganization of the University of Bologna, planned to provide four professorships in mathematics. "At Rome the Byzantine cardinal

became a close friend of Cusanus, that dedicated admirer of Archimedes. The influence of Cusanus can be seen in Bessarion's great work *In Calumniatorem Platonis* (directed against Trapezuntius), where the author defends Plato as a mathematician and adduces Archimedes in support of his contention . . . While on a mission to Nuremberg and Vienna (1460-1461), Bessarion met the astronomers Peurbach and Regiomontanus, then at Vienna University. Following the death of Peurbach, Bessarion persuaded the younger astronomer to accompany him back to Italy in 1461, thus introducing Regiomontanus to the humanists and mathematicians of Rome and Venice."—Rose, *The Italian Renaissance of Mathematics*, p. 44.

A fine copy of this handsome book printed by Sweynheym and Pannartz, who introduced the art of printing into Italy. It is known that this work was printed in an edition of three hundred copies.

☛ Goff B-518.

A Ballooning Rarity

20. BIOT, Jean Baptiste. [Drop-title]: *Relation d'un Voyage Aérostatique, fait par MM. Gay-Lussac et Biot; lue à la classe des sciences mathématiques et physiques de l'Institut national, le 9 fructidor an 12.* 12 pp. 8vo, later wrappers. [Paris?: 1804?]. \$2500.00

First separate edition, originally published in the journal *Moniteur* of one of the great rarities of ballooning literature. In the years 1804-1809 Biot undertook several scientific projects in collaboration with other men, notably fellow members of the Arcueil group and the Bureau des Longitudes. On 24 August 1804, Biot and Gay-Lussac made a balloon ascent from the garden of the *Conservatoire des Arts et Métiers*.

"The primary object of the ascent was to see if the magnetic intensity at the earth's surface decreased with altitude. De Saussure had reported an appreciable decrease but, by observing the period of oscillation of a magnetized needle, Biot and Gay-Lussac were unable to find any change and concluded that it was constant up to 4,000 metres. The balloonists calculated their altitude from the barometer reading making use of a formula worked out by Laplace. They also carried long wires to test the electricity of different parts of the atmosphere. The third object of their ascent was to collect a sample of air from a high altitude to compare its composition with that of ordinary air . . . In their first ascent, Biot and Gay-Lussac were so preoccupied with reading their barometer, thermometer and hygrometer that they did not have time to collect any air."—Crosland, *The Society of Arcueil*, p. 263.

A few minor stains but a fine copy. Stamps of Bibliothèque Renand and the Bibliothèque de l'Hirondelle de Paris.

☛ D.S.B., II, pp. 134-35 & V, p. 318.

The Whole Field of Metallurgy

21. BIRINGUCCIO, Vannuccio. *La Pyrotechnie, ou Art du Feu, contenant Dix Livres, ausquels est amplement Traicté de toutes sortes & diversité de Minières, Fusions & Separations des Metaux: des Formes & Moules pour getter Artilleries, Cloches & toutes autres Figures; des Distillations, des Mines, Contremines, Pots, Boulets, Fusees, Lances & autres Feuz artificiels, concernans l'Art militaire, & autres choses dependantes du feu...* traduite d'Italien en François, par feu maistre Jacques Vincent. Woodcut device on title & numerous woodcuts in the text. 4 p.l., 168 leaves. 4to, old boards (spine and corners worn, paper slightly browned). Paris: G. Jullian, 1572.

\$6500.00

Second edition in French of the only printed work to cover the whole field of metallurgy as known at that time, and the first comprehensive account of the fire-using arts. This work is the fruit of Biringuccio's actual experience, and embraces virtually the whole field of technology. It is divided into ten books, which deal with (1) metallic ores; (2) the "semi-minerals" (including mercury, sulphur, gems and glass); (3) assaying and preparing ores for smelting; (4) the parting of gold and silver, both with nitric acid, and with antimony sulfide or sulphur; (5) alloys of gold, silver, copper, lead, and tin; (6) the art of casting large statues and guns; (7) furnaces and methods of melting metals; (8) the making of small castings; (9) miscellaneous pyrotechnical operations, including alchemy, distillation, smithing and pottery; and (10) the making of saltpetre, gunpowder and fireworks.

"Virtually all of Biringuccio's descriptions are original. He is important in art history for his description of the peculiarly Renaissance arts of casting medallions, statues, statuettes, and bells. His account of typecasting, given in considerable detail, is the earliest known. The *Pirotechnia* contains eighty-three woodcuts, the most useful being those depicting furnaces for distillation, bellows mechanisms, and devices for boring cannon and drawing wire...

"[It] is a prime source on many practical aspects of inorganic chemistry...Biringuccio's approach is in strong conflict with that of the alchemists, whose work he evaluates in eleven pages of almost modern criticism, distinguishing their practical achievements from their theoretical motivations...

"Biringuccio has been called one of the principal exponents of the experimental method."—D.S.B. This is Biringuccio's only published book and the sole source for his work.

Very good copy.

• Duveen p. 80. See Dibner 38; Parkinson, *Breakthroughs*, 1540; Stillwell, *The Awakening Interest in Science*, VI, 827. Partington, II, pp. 32–37. Singer, *History of Technology*, III, p. 27.

First Appearance of Boerhaave's Chemistry

22. **BOERHAAVE, Hermann.** *Institutiones et Experimenta Chemiae*. One folding engraved plate. 2 p.l., 290, [2] blank pp.; 8 p.l., 375 pp. Two vols. Small 8vo, cont. speckled calf (head of spine of Vol. I worn and Vol. II nicked, joints of Vol. I cracking at top), spines gilt, red morocco labels. Paris: 1724. \$2750.00

First edition of Boerhaave's famous textbook of chemistry. "Always popular, his lectures were collected in manuscript by his students and published surreptitiously, in the present volumes, without Boerhaave's authorization. The book was very successful, was several times reprinted, and was translated into English, French and German. Its publication annoyed Boerhaave, and he published his own enlarged edition as *Elementa Chemiae* (Leyden, 1732, 2 vols, 4to)."–Neville.

Although it bears a Paris imprint, no printer or publisher is given, and this edition was actually published at Leiden. Boerhaave was enraged at its publication, and railed against the booksellers who sold it.

A very nice set. Signature in both volumes of P. Keir, October 5th 1725.

♣ Cole 162. Duveen pp. 83–84. Lindeboom 444. Neville I, p. 171. Partington II, p. 743 et seq.

"Ouvrage Fort Rare et Très Recherché"

23. **BOISSARD, Jean Jacques.** *Tractatus posthumus . . . De Divinatione & Magicis Praestigis, quarum Veritas ac Vanitas solidè exponitur per Descriptionem Deorum Fatidicorum qui olim Responsa dederunt . . .* Engraved title with architectural framework, full-page dedication leaf with engraved coat-of-arms on verso, portraits of the author & the engraver, & 48 interesting illus. in the text, all finely engraved by J.T. de Bry. 14 p.l., 358, [11] pp. Small folio, cont. vellum over boards (clean 7 cm. tear in title neatly repaired on verso, minor soiling here & there, unimportant occasional dampstaining). Oppenheim: [ca. 1616]. \$6500.00

First edition of Boissard's treatise on divination and magic printed posthumously from his manuscript and illustrated with a remarkable series of "portraits" of the best-known oracle gods, seers, and sages of antiquity. These engravings, typical of de Bry's style and technique, are especially interesting for their unusual iconography which is only loosely based on earlier models such as Cartari.

The text is mainly a compilation from earlier writers but, as Thorndike (V, p. 504) points out, the accounts of the ancient oracle gods and seers are original and valuable. Especially remarkable are the portrait of Boissard and the unusual self-portrait of de Bry which shows him holding his coat-of-arms, with copies of his

voluminous geographical works underneath.

Very good copy with good impressions of the delicate engravings. Bookplate of André Lambert.

• Brunet, I, 1068. Caillet 1348—"Ouvrage fort rare et très recherché."

24. BONNET, Charles. *Oeuvres d'Histoire Naturelle et de Philosophie.* Fine engraved frontis. port. of Bonnet in Vol. I, three folding printed tables, 56 engraved plates (mostly folding), & many engraved vignettes. Eight vols. bound in ten. Large 4to, cont. red sheep-backed marbled boards, flat spines gilt. Neuchâtel: S. Fauche, 1779-83. \$4750.00

First edition, and a very fine and pretty set of the large 4to issue, of the collected scientific and philosophical writings of Bonnet (1720-93). He "is considered one of the fathers of modern biology. He is distinguished for both his experimental research and his philosophy, which exerted a profound influence upon the naturalists of the eighteenth and nineteenth centuries."—*D.S.B.*, II, p. 286.

Fine set in an attractive binding.

• See Garrison-Morton 308 & 472.

25. BOREL, Pierre. *Tresor de Recherches et Antiquitez Gauloises et Françoises, reduites en Ordre Alphabetique. Et enrichies de beaucoup d'Origines, Epitaphes, & autres choses rares & curieuses, comme aussi de beaucoup de mots de la Langue Thyoise ou Theuthfranque.* Engraved printer's vignette on title. 52 p.l., 611, [23] pp. 4to, 18th-cent. mottled calf (joints very nicely repaired, minor browning), spine richly gilt, red morocco lettering piece on spine. Paris: A. Courbé, 1655. \$1750.00

First edition and scarce; this book, "a collection of linguistic antiquities listed in alphabetical order (1655) was the basis for Favre's greatly enlarged *Dictionnaire du vieux François*, published in 1882."—*D.S.B.*, II, p. 305. Borel (1620-71), born at Castres, studied medicine at Montpellier and began practice at Castres in 1641. In 1653 he went to Paris and a year later was appointed physician to the King. During his whole life he ardently pursued the study of natural history, chemistry, optics, astronomy, antiquities, philology, and bibliography. Among his works are the first bibliography of chemistry (1654) and the first history of the telescope (1655).

Besides practicing medicine, Borel was a devoted collector of various rarities including plants, antiquities, and minerals from the town and countryside of Castres. He established a museum in his hometown.

In the preliminary leaves, Borel thanks his friends Gassendi, Marolles, La

Mothe le Vayer, Patin, etc. for their help in the preparation of this book.

Fine copy. Ownership inscription of the Dijonnais collector and scholar Jean Baptiste Du Tillot, dated 1700, on title. Du Tillot formed a rich cabinet of paintings, prints, and books.

• Brunet, I, 1112—"Cet ouvrage est peu commun."

Cannizzaro's Principle; Presentation Copy

26. CANNIZZARO, Stanislao. *Scritti intorno alla Teoria Molecolare ed Atomica ed alla Notazione Chimica.* Woodcut frontis. port. of the author. 2 p.l., 387 pp., one leaf. 8vo, orig. red cloth (spine soiled and worn at ends, upper cover marked, hinges weak, margins slightly browned almost throughout, edges of endpapers browned and brittle, library stamp on front endpaper and shelfmark in lower corner of title). Palermo: Tipografia "Lo Statuto", 1896. \$650.00

First edition. Cannizzaro (1826–1910), in his *Sunto di un Corso di Filosofia Chimica* (1858), reprinted here, made his classic statement on the determination of atomic weights. Cannizzaro was the first since Gaudin to appreciate the full significance of Avogadro's hypothesis, and to show that its application could yield a unique system of atomic weights. "It was the recognition of true atomic weights that permitted Meyer and Mendeleev to formulate the periodic law at the end of the 1860s."—*D.S.B.*, III, pp. 45-49.

Inscribed by the author in upper corner of the title-page: "Omaggio di S. Cannizzaro riconoscente."

• Neville, I, p. 236. Partington, IV, pp. 489–494. Thorpe, *History of Chemistry*, in 1910 described the *Sunto* as "the keystone to the edifice of modern chemistry."

27. CAVENTOU, Joseph Bienaimé. *Nouvelle Nomenclature Chimique d'après la Description adoptée par M. Thenard; Ouvrage spécialement destiné aux Personnes qui commencent l'Étude de la Chimie, et à celles qui ne sont pas au courant des nouveaux Noms.* One folding printed table. 4 p.l., v–xvi, 298 pp., one leaf of errata. 8vo, cont. mottled sheep, flat spine gilt, blue morocco lettering piece on spine. Paris: Crochard & Gabon, 1816. \$1500.00

First edition of a valuable work containing the ancient and modern designations of chemical substances, preceded by discussions of their nature, properties, and chemical history, with an extensive table of synonyms at the end. This is one of the earliest publications of the distinguished chemist J.B. Caventou (1797–1877), who became famous for his discovery of quinine with Pelletier in

1820.

A nice copy. Bookplate of Franz Sondheimer.

• Cole 242. Duveen p. 128. Neville I, p. 252.

28. CHAPTAL, Jean Antoine Claude. *Chimica applicata alle Arti*. Tradotta dal Francese. 12 folding engraved plates. xci, 238 pp.; viii, 408 pp.; xii, 464 pp.; xv, 456 pp. Four vols. 8vo, cont. vellum over boards (some foxing,, mostly quite mild, throughout). Naples: dalla Stamperia Orsiniana a spese di Fr. Romilly, 1807-1808. \$1250.00

First edition in Italian of the earliest treatise on chemical technology based on the new principles of chemistry. Partington describes this work as "one of the best treatises on technical chemistry of its time, and the preface contains some economic and political considerations which are still true" (Vol. III, p. 557). There are important sections on dyeing, pottery, glass making, tanning, soap making, gunpowder, and distillation. The plates depict chemical apparatus and processes.

A very good set.

• Cole 254. *D.S.B.*, III, pp. 198–203. Neville, I, p. 261: "containing a detailed account of contemporary commercial developments. Apart from the wide-ranging survey of new chemical discoveries and their practical application, Chaptal discusses the importance of economic analysis in industry, such as labor costs and the siting of plant in relation to sources of raw materials" (note to French edition). Ron, *Bibliotheca Tinctoria*, 186: "includes a large section on dyeing."

"The Foundation of the Modern Science of Acoustics"

29. CHLADNI, Ernst Florens Friedrich. *Die Akustik*. Engraved vignette port. of the author on title & eleven plates. 2 p.l., [iii]-xxxii, 304 pp., 1 leaf, 305-310 pp. Large 4to, cont. mottled half-calf & marbled boards (very nicely rebacked preserving the orig. spine & corners restored, minor foxing). Leipzig: Breitkopf & Härtel, 1802. \$4750.00

First edition. "Chladni, professor of physics in Breslau, was the first to reduce the general association between vibration and pitch to a tabular basis and thus to lay the foundation of the modern science of acoustics. His first results were reported in 'New Discoveries in the Theory of Sound', 1787, and were greatly enlarged in 'Acoustics', 1802. He spread sand on plates made of metal and glass, which were fixed in clamps. He then applied a violin bow to the edge of each plate and recorded the patterns produced thereby in the sand. These figures are still known by Chladni's name."—*Printing & the Mind of Man* 233b.

A fine copy with the bookplate of E.N. da Andrade. In the collation given by

N.U.C., the vignette on the title-page is counted as plate XII. Ex Bibliotheca Mechanica.

♣ Roberts & Trent, *Bibliotheca Mechanica*, p. 70—"the consummation of Chladni's classical researches in the theory of sound . . . Timoshenko credits this work with arousing great interest in the theory of plates." Sparrow, *Milestones of Science*, 38.

30. CLARKE, Samuel. *A Collection of Papers, which passed between the late Learned Mr. Leibnitz, and Dr. Clarke, in the Years 1715 and 1716. Relating to the Principles of Natural Philosophy and Religion. With an Appendix. To which are added, Letters to Dr. Clarke concerning Liberty and Necessity; From a Gentleman of the University of Cambridge: With the Doctor's Answers to them. Also Remarks upon a Book, Entituled, A Philosophical Enquiry concerning Human Liberty.* xiii, [3], 416, 46 pp. 8vo, cont. panelled calf (expertly rebaked to match, some browning throughout due to the quality of the paper), spine gilt, red morocco lettering piece on spine. London: J. Knapton, 1717. \$2500.00

First edition. Clarke (1675-1729), was a close friend of Newton and defended him against the charges of atheism posed by Leibniz. This defense sparked an exchange of ten letters, each of increasing length, between Clarke and Leibniz, that lasted until the latter's death in November of 1716. This book prints these important letters for the first time.

"Clarke saw the conflict with Leibniz as involving not merely a differing interpretation of the physical universe and its phenomena but as a far more basic one implying a struggle between freedom and necessity...Clarke's most direct contribution to physics during the course of this correspondence came in a footnote to his fifth paper, in which he considered the problem of computing the force of a moving body."—*D.S.B.*, III, p. 296.

Apart from the browning, a fine copy. Lacking the leaf of ads at end. Ex Bibliotheca Mechanica.

♣ Babson 229. Roberts & Trent, *Bibliotheca Mechanica*, p. 75.

31. COPPENS, Bernard. *Über die Verkalchung des Bleies und das Verfahren dieselbe Arbeit in Bleiweissfabriken im Grossen zu veranstalten.* Aus dem Französischen von Ph. Loos. One folding engraved plate. vi, [7]-70 pp. 8vo, attractive antique calf-backed speckled boards (minor foxing), spine gilt, red morocco lettering piece on spine. Erfurt: Beyer & Maring, 1797. \$1650.00

First edition of this very book on the manufacture of white lead (*blanc de plomb*), the principal white of classical European oil painting. The traditional

method of making white lead — the so-called “Dutch process” — produced the pigment in very small amounts. Coppens (1756-1801), describes here an improved method which would produce far larger quantities.

The detailed plate depicts the various steps of the process and the equipment needed.

Fine copy.

“Dalton’s Law”; Presentation Copy

32. DALTON, John. *Philosophical Essays, from Vol. V, Part II. of the Memoirs of The Literary and Philosophical Society, Manchester.* One hand-colored engraved map & one folding engraved plate. Five parts in one vol., each separately paginated: 1 p.l., 29 pp.; 28 pp.; 14 pp., (2) pp. blank; 70 pp.; 9 pp. Separate title-page to each part except the last, which has a cap-title. 8vo, cont. tree sheep (nicely rebacked, preserving the original red morocco label, inner hinges strengthened with blue tape, one corner a little worn). Manchester: Printed by R. & W. Dean & Co., 1802.

\$6000.00

First edition in book form, presentation copy, inscribed by Dalton on the front free endpaper: “To Dr. Fell, Ulverston, this volume is respectfully inscribed by The Author.” This rare work contains offprints of five of Dalton’s earliest papers on chemistry, physics and meteorology, including probably his most important one (number 4):

1. *Experiments and Observations to determine whether the quantity of Rain and Dew is equal to the quantity of Water carried off by the Rivers and raised by evaporation; with an Enquiry into the origin of springs.* This paper contains a further development of his theory of aqueous vapour, and the earliest definition of the dew-point.

2. *Experiments and Observations on the Power of Fluids to conduct Heat; with reference to Count Rumford’s Seventh Essay on the same subject.* In this paper he “combated Count Rumford’s view that the circulation of heat in fluids is by convection solely” (D.N.B.).

3. *Experiments and Observations on the Heat and Cold produced by the Mechanical Condensation and Rarefaction of Air.* Contained the understated but important result that the temperature of air compressed to one-half its volume is raised 50 degrees F” (D.N.B.).

4. *Experimental Essays on the Constitution of mixed Gases; on the force of steam or vapour from water and other liquids in different temperatures, both in a Torricellian vacuum and in air; on evaporation; and on the expansion of gases by heat.* “The first... formal enunciation of the law of gaseous partial pressures” (D.S.B.). This first paper gave Dalton at once a European reputation, and contains results of the greatest importance. It consisted of four distinct essays. The first, on mixed gases, expressed the generalization that the maximum density of a vapour in

contact with its liquid remains the same whether other gases be present or not. The second, "On the Force of Steam," gave the first table of its varying elasticity and described the dew-point hygrometer. The third essay, "On Evaporation," showed the quantity of water evaporated in a given time to be strictly proportional to the force of aqueous vapour at the same temperature, and to be the same in air as in vacuo. The fourth announced the law (arrived at almost simultaneously by Gay-Lussac) "that all elastic fluids expand the same quantity by heat." This is known as "Dalton's law of the equality of gaseous dilation." By these discoveries meteorology was constituted a science. (See *D.N.B.*).

5. *Meteorological Observations*. Dalton's observations made with a barometer in 1801.

Very good copy.

♣ Smyth 6—incorporating 26, 27, 28, 29 and 30. This volume is extremely rare (it is not in Cole, Neville or Duveen).

The Leblanc Process

33. [DARCET, J., A. GIROUD, C.-H. LELIEVRE, & B. PELLETIER]. *Description de Divers Procédés pour extraire la Soude du Sel Marin, faite en exécution d'un arrêté du Comité de Salut Public du 8 Pluviose, an 2 de la République Française. Imprimé par ordre du Comité du Salut Public*. Eleven folding engraved plates. 1 p.l., 80 pp. 4to, later boards (title slightly foxed). Paris: de l'Imprimerie du Comité de Salut Public, an 3 [1794].

\$1750.00

First edition of the earliest account of the discovery, made in 1789 by Nicolas Leblanc, of the use of limestone in the conversion of salt drawn from sea water into soda for commercial consumption. Upon this discovery rested almost the entire alkali industry throughout much of the nineteenth century, during the time when it was the most extensive single chemical industry. Jean D'Arcet and his fellow commissioners examined and published for the Committee of Public Safety all the known processes for making artificial soda in the present volume, "which remains the most important source of knowledge of the Leblanc process and of all the others" (Gillispie).

The plates depict the construction and arrangement of Leblanc's furnaces.

Very good copy. Early signature of "Bigot Morogues eleve des mines" on title.

♣ Cole 369. Duveen p. 169—"rare pamphlet." Partington III, pp. 562–565. Gillispie, "The Discovery of the Leblanc process" in *Isis*, 48 (1957), pp. 152 ff.

- 34. DAVY, Sir Humphry.** *Consolations in Travel, or the Last Days of a Philosopher.* 6 p.l., 281, [1] pp. 8vo, orig. boards (a little marked, neatly rebacked), uncut. London: J. Murray, 1830. \$275.00

First edition of Davy's last book, edited by his brother and published posthumously. The preface is dated from Rome, where Davy was already ill.

Signature of Elizabeth Digby, March 15th 1830, on the half-title. Armorial bookplate of Ormathwaite on front pastedown.

♣ Neville I, p. 333—"The first edition is scarce." Fullmer 1830.

By the "Founder of German Bibliography"

- 35. ERSCH, Johann Samuel.** *Literatur der Medicin seit der Mitte des achtzehnten Jahrhunderts bis auf die neueste Zeit. Systematisch bearbeitet und mit den nöthigen Registern versehen...* 6 p.l., 750 columns [=375 pp.], [1] pp. Thick 4to, cont. blue boards (some wear). Amsterdam & Leipzig: Kunst- und Industrie Comptoir, 1812. \$500.00

First edition, specially offprinted from the author's great *Handbuch der deutschen Literatur* (1812-14). In this work, Ersch (1766-1828), the "founder of German bibliography" (*Encycl. Brit.*) provides a bibliography of medical literature published in Germany between 1750 and 1810. It is arranged by subject and lists about 4000 titles. There are three useful indexes at the end.

A very good, interleaved, copy.

♣ Petzholdt, p. 579. Thornton, *Medical Books, Libraries, and Collectors*, p. 246—"a very complete bibliography."

"A Major Contribution"

- 36. EULER, Leonhard.** *Scientia Navalis seu Tractatus de Construendis ac Dirigendis Navibus.* 65 folding engraved plates. 1 p.l., 44, 444, [1] pp.; 1 p.l., 534 pp. Two vols. Large 4to, antique mottled calf (a little foxing), spines richly gilt, red morocco lettering pieces on spines. St. Petersburg: Typis Academiae Scientiarum, 1749. \$9500.00

First edition and one of the scarcest of Euler's major books. "With this work Euler made a major contribution to the study of fluid mechanics. In the first volume he presents a general theory of equilibrium of floating bodies with an original theory of stability and small oscillations in the neighborhood of the equilibrium position. The second volume applies the general theory to ship design, and deals with ships in general, stability and equilibrium, the motion of ships, and the wind; as well, it treats of such parts as masts, sails, oars, and

rudder."—Roberts & Trent, *Bibliotheca Mechanica*, p. 105.

Very good set. This is a decidedly uncommon book on the market.

• D.S.B., IV, p. 480—"Euler's first large work on fluid mechanics was *Scientia navalis*."

The Second in his Trilogy

37. EULER, Leonhard. *Institutiones Calculi Differentialis cum eius Usu in Analyysi Finitorum ac Doctrina Serierum*. xxiv, 880 pp. Large 4to, cont. cat's paw calf (ends of spine expertly repaired, some browning), spine richly gilt, red morocco lettering piece on spine. St. Petersburg: Academiae Imperialis Scientiarum, 1755. \$8500.00

First edition of Euler's second great contribution to analytical mathematics. "This is the first text-book on the differential calculus which has any claim to be regarded as complete, and it may be said that until recently many modern treatises on the subject are based on it."—Ball, *A Short Account of the History of Mathematics*, p. 396.

"Euler developed the calculus of finite differences in the first chapters of his *Institutiones calculi differentialis*, and then deduced the differential calculus from it. He established a theorem on homogeneous functions, known by his name, and contributed largely to the theory of differential equations, a subject which had received the attention of I. Newton, G.W. Leibniz, and the Bernoullis, but was still undeveloped."—Cajori, *A History of Mathematics*, pp. 238-39.

Very good copy.

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

First edition. "The *Theoria motus corporum solidorum*...is related to the *Mechanica*. In the introduction to this work, Euler gave a new exposition of punctual mechanics and followed Maclaurin's example (1742) in projecting the forces onto the axes of a fixed orthogonal rectilinear system. Establishing that the instantaneous motion of a solid body might be regarded as composed of rectilinear translation and instant rotation, Euler devoted special attention to the study of rotatory motion... Euler thus laid the mathematical foundation of the numerous studies on variational principles of mechanics and physics which are still being carried out."—D.S.B., IV, p. 480.

Nice copy preserved in a very strong morocco-backed box. Early signature of

N.P. Morville (?) on blank portion of title. Ex Bibliotheca Mechanica.

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

*“Laid the Foundations of the Calculation of
Optical Systems”*

39. EULER, Leonhard. *Dioptricae*. Six folding engraved plates. 2 p.l., 337 pp.; 3 p.l., 592 pp.; 4 p.l., 440 pp. Three vols. Large 4to, attractive antique mottled calf, spines gilt, black & white vellum lettering pieces on spines. St. Petersburg: Impensis Academiae Imperialis Scientiarum, 1769-70-71. \$12,500.00

First edition of one of Euler’s rarest books; his writings on optics were widely known and important in the physics of the 18th century. In the *Dioptricae*, Euler “laid the foundations of the calculation of optical systems.”—*D.S.B.*, IV, p. 482.

Vol. I contains Euler’s views on the relative merits of the emission and undulatory theories of light. The second volume deals with the construction of telescopes and the third with microscopes.

A fine set.

One of Euler’s Rarer Works

40. EULER, Leonhard. *Opuscula Analytica*. Two folding engraved plates. 2 p.l., 363 pp.; 2 p.l., 346 pp. Two vols. Large 4to, cont. sheep (well-rebacked), spines gilt. St. Petersburg: Typis Academiae Imperialis Scientiarum, 1783-85. \$5000.00

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 $fx + gyy = hzz$, utrum ea Resolutionem admittat necne? Considerationes super Theoremate Fermatiano,’ etc. etc.”—*Sotheran*, 2nd Supp., 1464.

Fine and fresh copy.

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

A Fine Copy in Contemporary Red Morocco

41. EVELYN, John. *Silva: or, a Discourse of Forest-Trees, and the Propagation of Timber in his Majesty’s Dominions: as it was delivered in the Royal Society on the 15th Day of October, 1662 . . . together with an Historical Account of the Sacredness and Use of Standing Groves.* With Notes by A.

Hunter, M.D. F.R.S. *A New Edition. To which is added the Terra: A Philosophical Discourse of Earth*. Finely engraved frontis. port. of Evelyn by Bartolozzi, 42 engraved plates, & three folding printed tables. 23 p.l., 311, [9] pp.; 5 p.l., 74, [4], 343, [9] pp. Two vols. in one. Large thick 4to, cont. red morocco, gilt roll tool round sides, flat spine gilt. York: A. Ward for J. Dodsley et al., 1786. \$2950.00

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

"Hunter's edition of *Sylva* [is] a handsome quarto volume with extensive notes to bring it up to date and illustrated with a number of whole-page engravings. The numerous whole-page illustrations depicting the foliage, flower, and fruit of the trees described are drawn and engraved by John Miller, otherwise Johann Sebastian Mueller, the noted eighteenth-century botanical draughtsman and engraver. The excellence of these figures resulted in their being used to illustrate later works on silviculture, even up to the present day."—Henrey, I, pp. 107-111.

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

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

Fine and handsome copy.

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

42. FARADAY, Michael. *Chemical Manipulation; being Instructions to Students in Chemistry, on the Methods of performing Experiments of Demonstration or of Research, with Accuracy and Success*. vii, [1], ix, [1], 11–656 pp. 8vo, 19th-cent. half calf & cloth (first four leaves affected by damp but with almost no staining, the first two leaves backed at an early

date, the second two with slit in center). London: W. Phillips, 1827.

\$1500.00

First edition. "This is Faraday's only monograph; it gives a splendid picture of his experimental genius, his ability to turn things to new uses, and also of the laboratory practice of the day... The book went through three editions with few changes of substance; parts of it at least can still be read with profit by a chemist wishing to improve his basic laboratory techniques."—Knight, *Natural Science Books in English*, p. 141.

A very clean copy. This first edition is very scarce.

♣ Cole 432. Duveen p. 207. Neville I, p. 149—"One of the great milestones in the development of the chemical textbook."

43. FAUJAS DE SAINT-FOND, Barthélemy. *Recherches sur la Pouzzolane, sur la Théorie de la Chaux et sur la Cause de la Dureté du Mortier, avec la Composition de différens Cimens en Pouzzolane, & la maniere de les employer, tant pour les Bassins, Aqueducs, Réservoirs, Citernes & autres Ouvrages dans l'eau, que pour les Terrasses, Bétons & autres Constructions en plein air.* 4 p.l., x, 125 pp. 8vo, attractive antique calf-backed speckled boards, spine gilt, red morocco lettering piece on spine. Grenoble: J. Cuchet; Paris: Nyon, 1778. \$1500.00

First separate edition. The chemistry of cement is very complex and was only fully understood in the mid-19th century. This work, by the great geologist Faujas (1741-1819), describes the chemical properties of pozzolana, similar to cement, which was known to and utilized by the ancient Roman builders and engineers. Faujas also discusses its uses in civil engineering works in modern times.

"In 1775 he discovered a rich pozzolana mine on Mount Chenavary, which was used by the French government for building the port of Toulon. The use of pozzolana (a volcanic ash containing silica, alumina, lime, etc.) for the preparation of mortars and hydraulic cements is covered in this work, as is the chemistry of these materials."—Neville, I, p. 447.

A fine copy.

♣ D.S.B., IV, pp. 548-49.

44. FAUJAS DE SAINT-FOND, Barthélemy. *Mémoire sur la Manière de reconnoitre les différentes Espèces de Pouzzolane, et de les employer dans les constructions sous l'eau et hors de l'eau; pour servir de Suite & de Supplément aux Recherches sur la Pouzzolane de M. Faujas de Saint-Fond.* Two engraved plates. 52, [3] pp. 8vo, attractive antique calf-backed speckled boards,

spine gilt, red morocco lettering piece on spine. Amsterdam & Paris: Nyon, 1780. \$1500.00

First edition, "a sequel to the author's *Recherches sur la Pouzzolane* (Paris, 1778), describing the different kinds of pozzolana employed in building and construction."—Neville, I, p. 446.

This is the most uncommon of the several works Faujas wrote on pozzolana. "In the course of his journeys in Southern France [Faujas] found a volcanic tuff identical with the Pozzuolo earth, and established the flourishing industry of the preparation of cement."—Zittel, p. 46.

Fine copy.

45. FOURCROY, Antoine François. *Elements of Natural History, and of Chemistry: being the Second Edition of the Elementary Lectures on those Sciences, first published in 1782, and now greatly enlarged and improved, by the Author...* Translated into English. With occasional Notes, and an Historical Preface, by the Translator. Eight letterpress tables (7 folding) in vol. 4 and two folding tables in the supplement. Five volumes (4 volumes & the Supplement). 8vo, cont. tree calf (the Supplement apparently rebacked at a very early date to match, lower joint of Vols. I and II cracking, brown morocco label missing from Vol. I), red and brown morocco labels on spines. London: Printed for G.G.J. & J. Robinson, 1788 [**and:**] *Supplement to the Elements of Natural History and of Chemistry...carefully extracted from the Edition of 1789, and adapted to the English;* by the Translator of that Work. London: Printed for G.G.J. and J. Robinson, 1789. \$1750.00

Second edition in English, but the first edition of William Nicholson's translation, done from the improved and updated second edition of 1786, with important notes and a valuable preface on recent events in chemistry by Nicholson. It was in the preliminary discourse to the second edition that Fourcroy finally renounced the phlogiston theory. The supplement, which is not always found with the main work, is not a translation of P.-A. Adet's supplement to Fourcroy's second edition, but was prepared independently by Nicholson.

A nice set. Signature of Thomas Sydenham at head of title in Vol. I.

• Cole 464. Neville I, p. 468 (without the supplement). Partington III, p. 537.IA. Smeaton, *Fourcroy*, pp. 8, 96–98, & 177–180; bibliography nos. 10 and 11.

Canals

- 46. FULTON, Robert.** *A Treatise on the Improvement of Canal Navigation; exhibiting the Numerous Advantages to be derived from Small Canals . . . with a Description of the Machinery for facilitating Conveyance by Water through the most Mountainous Countries, independent of Locks and Aqueducts: including Observations on the great Importance of Water Communications, with Thoughts on, and Designs for, Aqueducts and Bridges of Iron and Wood.* 17 engraved plates (lightly dampstained). xvi, 144 pp. Large 4to, cont. polished calf (rebacked, corners a little worn, some browning). London: I. & J. Taylor, 1796. \$2250.00

First edition of this handsome and significant book in the history of early American engineering and technology. "The only substantial work ever published by this pioneer of steam navigation. It contains an account of his patent of a double-inclined plane, the object of which was to set aside the use of locks; also plans for the construction of cast-iron aqueducts and bridges. Chapter XVIII treats 'Of Cast Iron Rail Roads'."—Sotheran, 1st Supp., 6768.

"For his steamboat experiments he [Fulton] systematically studied not only the works of previous inventors, but also theoretical work on ship resistance, notably the works of Bossut and Beaufoy in France. In this way, Fulton became the earliest example of the theoretically trained American engineer-inventor."—Struik, *The Origins of American Science* (1957).

The attractive plates illustrate Fulton's lifts and inclined planes in detail as well as several designs for bridges and aqueducts.

Nice copy. Ex Bibliotheca Mechanica. Without the advertisement leaf at end.

A Remarkable Book

- 47. FUNCH, Diderich Hansen.** *Praktisk Skibbyggerie. Et Forsög.* 76 folding (some are quite large) lithographed plates, including 28 in full color & many others tinted or heightened in color. 76 pp., 1 leaf of errata; 64 pp.; 223, [4] pp., 1 leaf of errata. Three parts in one vol. Large thick 4to, cont. half-sheep & cloth (somewhat worn, occasional light dampstaining), spine gilt (spine abraded). Copenhagen: Luno & Schneider, 1833-34-34. \$7500.00

First edition of this extraordinary and rare book; there is no copy in N.U.C., OCLC, or RLIN. Funch (1791-1856), was a leading naval architect in Scandinavia and the author of another comprehensive work on ship building. Master of ship construction at Holmen, Funch was in charge of the building of the Corvet Galathea. The present work is a major contribution to the technical problems of building large wooden commercial ships, a subject in which the Danes excelled.

The first 28 lithographed plates depict cross-sections of various species of

timber suitable for wooden hulls. Each plate is finely hand colored and quite handsome. The balance of the plates show cross-sections of hulls, rigging, problems of stability and resistance, methods of increasing strength, etc.

The list of subscribers indicates that 98 copies were originally ordered. It is hard to imagine, considering the complexity of the making of this book, that many more copies were printed.

Very good.

☛ *Nederlandsch Scheepvaart Museum, II, 757.*

Presentation Copy Bound in Red Morocco

48. GARNIER, F. *De l'Art du Fontenier Sondeur et des Puits Artésiens, ou Mémoire sur les différentes Espèces de Terrains dans lesquels on doit rechercher des Eaux Souterraines, et sur les Moyens qu'il faut employer pour ramener une Partie de ces Eaux a la Surface du Sol, a l'Aide de la Sonde du Mineur ou du Fontenier.* Nineteen folding engraved plates (a little foxed as usual) containing 126 figures. 143 pp. Large 4to, cont. red morocco, sides decorated in gilt & blind, spine finely gilt, a.e.g., blue silk endpapers. Paris: Huzard, 1822. \$3000.00

First edition, and a magnificent presentation copy in contemporary red morocco, of "the most copious work ever published on artesian wells."—Sotheran 8275 (2nd ed. of 1826). The manuscript of this work won a prize of 3000 francs given by the Société d'Encouragement pour l'Industrie Nationale in 1818 for the best introductory treatise on improved drilling techniques. The excellent and highly detailed plates depict the various drilling equipment and bits described in the text.

Garnier was an engineer in the Corps Royal des Mines. Presentation copy, inscribed on the verso of the half-title.

A very fine and pretty copy of a scarce book.

*A Very Handsome Sammelband;
With Fine New Woodcuts*

49. GART DER GESUNDHEIT *zu latein, Hortus Sanitatis. Sagt in vier Büchern . . .* Title within fine woodcut border & over 530 woodcuts in the text (some repeated). Woodcut printer's device on verso of final leaf (otherwise blank). Title printed in red & black & highlighted in red by a contemporary hand. 6 p.l. (the last a blank), CXLI leaves, [1] leaf. Folio, cont. blindstamped pigskin over wooden boards (minor browning &

foxing), orig. catches & clasps. Strasbourg: M. Apiarius, 1536.

[bound with]:

TACITUS, Cornelius. *Der Romischen Keyser Historien . . . Item das Buchlein von der alten Teutschen brauch und leben . . .* One fine full-page woodcut, fine woodcut initials, & a woodcut printer's device on verso of final leaf. 12 p.l., 452, [2] leaves. Folio (first few leaves with unimportant marginal worming in lower margin, final leaf partly dampstained). Mainz: I. Schoffer, 1535. \$40,000.00

A very fine and handsome *sammelband* from the library of His Serene Highness Prince Fürstenberg at Donaueschingen.

I. An extremely rare German translation, issued by the publisher in the same year as the much more common parallel Latin edition. For this and the Latin edition, the woodcuts have been newly drawn and cut. While the section on herbals of former editions has been omitted, this edition serves as an encyclopedia of the zoological and mineralogical kingdoms and the medical applications of their products.

The very numerous woodcuts in the part devoted to the mineral world depict jewelers and goldsmiths, mining and metallurgical activities, etc.

There is no copy listed in *N.U.C.*, OCLC, or RLIN; we have located one copy at München.

II. First edition in German of the *Annals* of Tacitus; this is a very rare edition and OCLC locates only one copy in the U.S. (and that copy lacks the final leaf with the printer's device).

This is an important edition, the first to appear in German, translated and edited by Jakob Moltzer (or Micyllus, 1503-58), humanist and professor of Greek at Heidelberg. He was known as one of the most learned scholars of his time.

The *Annals* record the history of the emperors of the Julian line from Tiberius to Nero (A.D. 14 to 68). He has given us a striking and vivid account of the empire in the 1st century.

Fine crisp copies.

♣ I. Nissen, *ZBI*, 4730. VD 16, H 5127. II. VD 16, T 20.

Henry Oldenburg's Copy

50. GILBERT, William. *Tractatus sive Physiologia Nova De Magnete, Magnetisque corporibus et magno magnete Tellure Xex Libris comprehensus... Omnia nunc diligenter recognita & emendatius quam ante in lucem edita, aucta & figuris illustrata operâ & studio Wolfgangi Lochmans.* Engraved title, 12 engraved plates (two folding), & woodcut illus. in the text. 10 p.l., 115, (1) blank, 116-232 pp., 17 leaves. 4to, modern mottled calf (original paper flaw in Q3 affecting two words of a side note, pale

dampstain in upper corner throughout, wormhole in upper margin of last 40 leaves and plates), single gilt fillet round sides, spine richly gilt, red morocco lettering piece on spine. Stettin: Typis Götzianis Sumptibus Authoris, 1628. \$9500.00

Second edition (the first published on the Continent) of the first work of experimental physics published in England. "Gilbert, physician to Elizabeth I, gathered all known opinions relating to the magnet and put them to the test of experiment, thereby being the first to initiate the experimental method of science. He treated the attractive power of magnets, their orientation to the earth's poles, variation and declination, use in navigation and proposed that the earth itself was a large magnet...Book II is devoted exclusively to electrical phenomena, the first ever published" (Dibner). For a full appreciation of Gilbert and this extraordinary book, see Stephen Pumfrey, *Latitude & the Magnetic Earth* (2002).

This copy belonged to Henry Oldenburg (ca. 1619–77), founding member and secretary of the Royal Society, and founder of the *Philosophical Transactions*. As Oldenburg did not leave his home town of Bremen until 1641, he may have acquired this book while still there. Oldenburg's signature is found on the lower margin of the engraved title.

This issue was published at the expense of the author. Another issue exists with the imprint "Typis Götzianis Sumptibus Joh: Hallervordii." Both issues are considerably rarer than the first edition. This copy has 10 preliminary leaves and the final errata leaf; some copies (e.g. the Norman copy) have only 8 preliminary leaves and no errata leaf.

A fine copy.

• Norman catalogue 906 (Hallervord issue). See PMM 107, Dibner 54, Horblit 41, etc., for the first edition of 1600.

Optics & Color Theory

51. GRAINDORGE, André. *De Natura Ignis, Lucis, et Colorum, Dissertatio*. Woodcut printer's device on title & several woodcut diagrams in the text. 6, [2], 122 pp. 4to, fine 18th-cent. calf, gilt border round covers (well re-backed with the orig. spine laid-down), contrasting morocco lettering piece on spine. Caen: M. Yvon, 1664. \$6750.00

First edition of this very scarce work on the nature of fire, light, and color. Graindorge (1616-76), studied medicine at Montpellier and practiced in Narbonne for more than twenty years before returning to his native city of Caen where he founded, along with Daniel Huet, the Académie de Physique in 1666.

In this work, Graindorge, discusses the classic problems of optics. "The position of Gassendi on light seemed preferable to him to those of Aristotle and Descartes, but he was ready to follow a method based on experiments and

reason and which investigated not what Aristotle or Descartes or Gassendi thought but what nature itself dictated, and Voss seemed to him to approach close to the truth. But he had not overthrown the arguments of Gassendi that light was a corporeal emission. He agreed with Voss that a vacuum existed, and that there was vacant space beyond the air, but he held that water as well as earth and air had pores, and that diaphanous bodies were a mixture of vacuum and solid parts. Color was a little fire; the properties of flame and color were common; and Graindorge agreed with Voss that the material of colors was sulphur. But he disagreed as to black and white. White was maximum color, while black was darkness and privation of light. Light alone devoid of color was not visible. Voss's theory of comets was very probable."—Thorndike, VII, p. 662.

Fine and handsome copy.

♣ Hirsch, II, p. 827. Poggendorff, I, 938.

The Discovery of Optical Diffraction

52. 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. 12 p.l. (6th leaf a blank), 535 pp., 8 leaves. Thickish 4to, cont. speckled sheep (printed title with a tiny hole in blank margin, following leaf with a 10 cm. tear carefully repaired, slight damage to gathering Aaa including two small holes with loss of about ten letters), spine gilt (ends of spine a little worn & repaired). Bologna: Heirs of V. Benati, 1665. \$55,000.00

First edition, and a very fine, large, and crisp copy, of the author'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 it 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.

Fine and fresh copy. Early stamp of D.S.A (or, more likely, D.A.S.) on blank portion of printed title. Stamp well-removed from blank portion of final leaf.

• 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 make the first scientific attempt to establish the wave theory.” Kemp, *The Science of Art*, p. 285.

53. HEDERICH, Benjamin. *Notitia Auctorum Antiqua et Media . . .* 7 p.l., 114, 1114, [18] pp. Thick 8vo, cont. vellum over boards (minor browning). Wittenberg: G. Zimmermann, 1714.

[bound with]:

— . *Fasti Consulares Romani, oder Chronologie der Römischen Bürgermeister.* 4 p.l., 162 pp. 8vo, Wittenberg: G. Zimmermann, 1713. \$600.00

First editions. Hederich (1675-1748), rector of the College of Grossenhain, was a famous lexicographer whose various works were reprinted for more than a hundred years with editions appearing in Germany and Britain.

The first work is a useful bibliographical work — Petzholdt describes it as having considerable standing during its time — which describes more than 5000 editions.

Very good copies. The second work is rare.

• I. Petzholdt, p. 75.

54. HORBLIT, Harrison D. *One Hundred Books Famous in Science. Based on an Exhibition held at the Grolier Club.* Facsimiles. 449 pp. Small folio, orig. cloth, t.e.g., slipcase. New York: The Grolier Club, 1964. \$650.00

Limited to 1000 copies. Fine copy with prospectus.

The Wave Theory of Light

55. HUYGENS, Christian. *Traité de la Lumiere. Où sont expliquées les Causes de ce qui luy arrive dans la Reflexion, & dans la Refraction. Et particulièrement dan l’etrange Refraction du Cristal d’Islande . . . Avec un Discours de la Cause de la Pesanteur.* Woodcut device on general & divisional titles and numerous woodcut diagrams & illus. in the text.

General title printed in red & black. 4 p.l., 124, [2], 125-128, [2], 129-180 pp. 4to, cont. vellum over boards. Leyden: P. vanderAa, 1690.

\$55,000.00

First edition of one of the great classics of optics. This book contains Huygens' classical formulation of optical phenomena in terms of the wave theory of light, opposing the corpuscular theory advanced by Newton. Huygens showed how all points of a wave front originate partial waves and thereby propagate further wave motion. Thus reflection and refraction of light could also be explained. By the same means the complicated phenomena of double refraction and the polarization by double refraction were also explained. Huygens' wave theory of light remained unaccepted for over 100 years until Thomas Young used it to explain optical interference.

The second part of this book — the *Discours de la Cause de la Pesanteur* — contains Huygens' mechanical explanation of gravity. His "point of view was that gravity should not be attributed to a quality or propensity of bodies, but should be explained, like every other natural process, in terms of motion."—Wolf, I, p. 164.

This copy belongs to the issue in which Huygens' initials are on the title rather than his full name (no priority established).

A fine and fresh copy.

• Dibner, *Heralds of Science*, 146. *En Français dans le Texte* 125. Evans, *First Editions of Epochal Achievements in the History of Science* (1934), 32. Horblit 54. Sparrow, *Milestones of Science*, 111.

"Offre un Grande Interesse"

56. JOURDAIN, Anselme Louis Bernard Bréchillet. *Essais sur la Formation des Dents, comparée avec celle des os, suivis de plusieurs expériences tant sur les os que sur les parties qui entrent dans leurs Constitutions.* One large folding engraved plate. viii, [4], 139, [1] pp., 2 leaves of publisher's ads. Small 8vo, cont. mottled calf, spine gilt, red morocco lettering piece on spine. Paris: d'Houry, 1766. \$2500.00

First edition of this scarce book on the formation of the teeth. He "describes with great accuracy the dental follicle from its first appearing to the moment of birth, following it throughout its evolution. This lengthy book is most interesting, for it is not a mere compilation, but gives the results of personal research and experience."—Guerini, *A History of Dentistry*, p. 311.

Jourdain (1734-1816), the first surgeon to limit his practice to oral and maxillary diseases, wrote the first book on oral surgery.

• Poletti, *De Re Dentaria apud Veteres*, pp. 109-10—"offre un grande interesse."

"Curieux et Recherché"—Caillet

57. **KORNMANN, Heinrich.** *Templum Naturae Historicum . . . in quo, De Natura et Miraculis Quatuor Elementorum; Ignis, Aeris, Aquae Terrae, ita disseritur . . .* 334 pp. 8vo, cont. vellum over boards (a few signatures browned due to the quality of the paper). Darmstadt: J.J. Porssio, 1611.
\$2500.00

First edition of this scarce book on the "miracles of the four elements." Kornmann (d. ca. 1620), studied law and then travelled throughout France and Italy. He returned to Frankfurt where he established himself as a lawyer and wrote several other books on the "miracles of the living," "miracles of the dead," and "miracles of virginity."

"The work on the miracles of the four elements has the alternative title, Historical Temple of Nature, and is largely drawn from antiquated authors. Not only are the elements still four, but comets are still exhalations in the supreme region of air. Tides, however, are attributed to the moon . . . Besides miracles of each element, there are alphabetical treatments of birds, quadrupeds, mountains, bodies of water, forests, gardens, trees, herbs, flowers, fruits, cities, temples, towers, bridges, and so on, passing from the realm of nature to that of art."—Thorndike, VII, p. 280.

Fine copy with the Nordkirchen bookplate.

♣ Caillet 5831. Ferchl, p. 283—(knowing of the 1666 ed. only).

58. **KUNST** *englisches Bleyweiss zu verfertigen. Nebst einem Anhang über die englische Glassmalerey und die Verwandlung des Rüböhls in Baumöhl.* 48 pp. 12mo, attractive antique speckled calf, double gilt fillet round sides, spine gilt, red morocco lettering piece on spine. Gotha: Ettinger, 1798.
\$1350.00

First edition of this very rare anonymous work on white lead, the principal white of classical European oil painting. The author describes methods of manufacturing the paint in Holland and England and makes recommendations for producing it in Germany.

Page 21-48 deals with English methods of painting on glass and techniques of producing various colors.

Fine copy of a rather fascinating little book. No copy in OCLC.

*The Inaugural Lecture Delivered at the Opening
of the Jardin du Roi;
The Jussieu Family Copy*

- 59. LA BROSSE, Guy de.** *L'Overture du Jardin Royal de Paris, pour la Demonstration des Plantes Medecinales.* 38 pp., 1 blank leaf. 12mo, cont. marbled wrappers, stitched. Paris: J. Dugast, 1640. \$19,500.00

First edition and of the greatest rarity; the only other copy we can only locate is at the Natural History Museum Library of Paris. This is the inaugural lecture delivered at the official opening in 1640 of the Jardin du Roi (or Jardin Royal des Plantes) of Paris, one of the most important of all scientific gardens. The lecture was given by the founder and first director of the garden, La Brosse, and it is addressed to the first students. La Brosse retraces the history of the creation of the garden and mentions the benefactors who had aided in the realization of this massive project. The Jardin du Roi is compared to other great medical gardens including those at Padua, Pisa, Leyden, and Montpellier. La Brosse goes on to describe the reasons for studying botany and the methods the students should employ along with the regulations of the garden.

Minor foxing but in fine condition, preserved in a most attractive box. This book belonged to the Jussieu family of botanists, who were intimately involved in the Jardin du Roi for three generations over a nearly 150 year period. Not in *N.U.C.*

♣ Brunet, III, 719. Jussieu sale catalogue (1857), no. 531. Pritzel 1188—(citing this copy).

- 60. LA CONDAMINE, Charles Marie de.** *Mesure des Trois Premiers Degrés du Méridien dans l'Hémisphere Austral, Tirée des Observations de M.rs de l'Académie Royale des Sciences, Envoyés par le Roi sous l'Équateur...* Engraved vignette on title & three engraved plates (two of which are folding). 6 p.l., 266, x pp. Large 4to, cont. marbled calf, spine nicely gilt, red morocco lettering piece on spine. Paris: de l'Imprimerie Royale, 1751. \$4750.00

First edition of the first complete account of the scientific operations undertaken during the author's famous geodetic mission to Peru, in conjunction with Bouguer and Godin, for measuring the meridian near the equator, co-operating with another mission sent to Lapland, and led by Maupertuis, Clairaut, and Celsius, to measure the meridian near the north pole. These two missions first established the correctness of Newton's views of the earth having the shape of an ellipsoid — a fact previously much doubted as the result of a faulty meridian measurement by Cassini and Picard.

The book is divided into two parts: the first relates to the geodetical

measurements and the second to the astronomical observations. La Condamine's notable zenith sector is illustrated on one of the plates and is described in the text. We also find an account of the author's important research on the pendulum.

Very fine and handsome copy. Bound-in at end is the *Supplément* (Paris: 1752; viii, 52 pp.). A second supplement was issued in 1754 and is not present (it is extremely rare).

• D.S.B., XV, pp. 269-73.

A Lovely Copy

61. LA CONDAMINE, Charles Marie de. *Journal du Voyage fait par Ordre du Roi, à l'Équateur, servant d'Introduction historique à la Mesure des Trois Premiers Degrés du Méridien.* Three maps & three plates (all engraved & mostly folding) and one folding printed table. 1 p.l., xxxvi, 280, xv pp. Large 4to, cont. marbled calf, spine nicely gilt, red morocco lettering piece on spine. Paris: de l'Imprimerie Royale, 1751. \$5750.00

First edition and a very pretty copy. This is the second account by La Condamine (1701-74), of the famous expedition to Peru which "had as its goal the verification of Newton's hypothesis on the flattening of the terrestrial globe in the polar regions and, thereby, the resolution of the controversy regarding the form of the earth that was then dividing French scientists. Maupertuis, Clairaut, and Le Monnier went to Lapland to measure several degrees of meridian at the arctic circle, while Godin, Bouguer, and La Condamine were sent to Peru."—D.S.B., XV, p. 270.

A Fundamental Work

62. LAPLACE, Pierre Simon, Marquis de. *Traité de Mécanique Céleste.* Folding engraved plate in Vol. IV. Five vols. Large 4to, handsome antique blue morocco-backed marbled boards, flat spines nicely gilt. Paris: J.B.M. Duprat & others, An VII [1798]-1825. \$19,500.00

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 of the titles of Vols. I and II and all the supplements. It lacks the title leaf for the first supplement in Vol. IV as well as the half-title and title leaf for the second supplement of the same volume.

♣ 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 First Great Scientific Work Issued in the
United States”—Sotheran*

63. LAPLACE, Pierre Simon. *Mécanique Céleste*. By the Marquis de la Place . . . Translated, with a Commentary, by Nathaniel Bowditch. Three engraved ports. Four vols. Large thick 4to, orig. cloth (some repairs to the spine of each vol., Vol. IV rebaked to a near match, minor browning to the first two vols.), orig. printed labels on spines, uncut. Boston: Hilliard, et al., 1829-39. \$5000.00

First edition of the first complete English translation, limited to 250 copies. In the original edition of the *Traité de Mécanique Céleste*, Laplace codified and developed the theories and achievements of Newton, Euler, d’Alembert, and Lagrange. 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.

Bowditch (1773-1838), undertook the translation of Laplace’s great book in order to supply steps omitted from the original text, to incorporate later results into the translation, and to give credits omitted by Laplace. In the translation and extensive commentary, Bowditch sought to make Laplace’s extremely difficult text more accessible. “Outside of France, particularly in English-speaking countries, Bowditch’s edition, rather than the original, was often the means of learning about the mechanics of the heavens.”—*D.S.B.*, II, p. 368.

Bowditch published this large work at his own expense. The biography of him in Vol. IV, prepared by his son Henry Ingersoll Bowditch, remains the best to this day.

Good set. Ex *Bibliotheca Mechanica*.

♣ Babson 82. Dibner 14 (note). Horblit 63 (1st ed.). *Printing & the Mind of Man* 252 (note). Roberts & Trent, *Bibliotheca Mechanica*, p. 198. Sotheran, I, 2444-45.

Practical Chemistry

64. LIBAVIUS, Andreas. *D.O.M.A. Alchymistische Practic: Das ist, von künstlicher Zubereytung der vornembsten Chymischen Medicinen.* Several woodcuts of chemical apparatus in the text. Title-page printed in red & black. 293, [3] pp. 4to, attractive antique calf (light browning due to the quality of the paper), covers with gilt arabesque stamp in center, single gilt fillet round sides, spine gilt, red morocco lettering piece on spine. Frankfurt am Main: J. Saur for P. Kopff, 1603. \$8500.00

First edition of Libavius' book on practical chemistry; it is one of his few works in German and is very rare. "Libavius' main value to the history of science resides in his extraordinarily voluminous alchemical works, which represent a compendium of the chemical knowledge of his times... Libavius can be regarded as one of the founders of chemical analysis, even though he took almost all his information from the books of Agricola, Ercker, and M. Fuchs... His books were used by many adepts of chemistry throughout most of the seventeenth century."—*D.S.B.*, VIII, pp. 310-12.

In this work, Libavius deals with distillation of waters; quintessences and oils of vegetables; of spirit of wine; the sublimation of sulphur, antimony, sal ammoniac, arsenic, mercury (corrosive sublimate); etc.

Very good copy.

♣ Ferguson, II, p. 32. Partington, II, pp. 244-67.

A New Theory of Colors

65. LOMONOSOV, Mikhail Vasilievich. *Oratio de Origine Lucis sistens Novam Theoriam Colorum, in Publico Conventu Academiae Scientiarum Imperialis... ex Rossica in Latinam Linguam conversa a Gregorio Kositzki.* 1 p.l., 40 pp. 4to, attractive antique half-calf & marbled boards by Aquarius, spine gilt, red morocco lettering piece on spine. St. Petersburg: Academy of Sciences, 1756. \$8500.00

First edition and, like all of Lomonosov's publications, an extremely rare book; this is his major contribution to optics and light in which he presents his theory on the origin of light and a new theory of colors. This paper — *Oration on the Origin of Light, Presenting a New Theory of Colors* — was read at a public meeting of the St. Petersburg Academy of Sciences on 1 July 1756.

"Here he describes at length these vibrating movements of the particles of the ether which constitute light waves. Thus, regarding the question of the nature of light, Lomonosov is in accord with the physicists of the nineteenth century."—Menshutkin, *Russia's Lomonosov*, p. 67.

After studying the sciences and humanities at Moscow, Marburg, and Freiburg, Lomonosov (1711-65), returned to St. Petersburg in 1741 where he

remained for the rest of his life. He performed research and wrote treatises on electricity, mining, and metallurgy; developed an atomic theory and a theory of heat; attacked the phlogiston theory; constructed the first scientific chemical laboratory in Russia; and studied optical phenomena.

“Unique in the history of Russian culture and science, Lomonosov had an encyclopedic education. The first great Russian scientist, he united in himself knowledge not only of every basic area of the sciences of his time but of history, languages, poetry, literary prose, and art . . . He was a distinguished teacher and social reformer, an enlightened humanist who worked to develop his country’s productive forces.”—*D.S.B.*, VIII, p. 471.

Fine copy. It is recorded that the St. Petersburg Academy of Science printed 400 copies of this work and that only four copies of the present book exist in Russian libraries.

✦ Filov, V.A., et al., *Svodnyi Katalog knig na inostrannykh iazykakh, isdannykh v Rossii v VXIII veke, 1701-1800*, Vol. II, no. 1814—“400 copies.”

66. MACQUER, Pierre Joseph. *Arte de la Tintura de Sedas*. Escrito en Frances . . . y traducido al Castellano de orden de la Real Junta General de Comercio, Moneda, y Minas. Six folding engraved plates. xlvii, [2], 334 pp., 1 blank leaf. 16mo, cont. vellum (rear hinge split, some light soiling & small marks throughout). Madrid: Blas Roman, 1771. \$1250.00

First edition in Spanish of this important work on the dyeing of silk, revealing for the first time many secrets jealously guarded by those in the French dyeing industry. “Dyeing and porcelain manufacture were the techniques that benefited most from Macquer’s researches. After his success with Prussian blue, he was appointed to assist Hellot as government inspector of the dyeing industries. A leading silk dyer who allowed him to visit his workshop explained the processes, and this led to the publication of Macquer’s *Art de la teinture en soie* (1763).”—*D.S.B.*, VIII, p. 621.

The plates depict the techniques and apparatus used in preparing the dyes and the methods of dyeing.

✦ Ron 701. Edelstein, “Thirteen Key Books in the History of Dyeing . . .” in his *Historical Notes on the Wet-Processing Industry*, 4 (both citing the French edition).

Weaving & Jacquard’s Cards

67. MATON, Charles. Manuscript on paper entitled “Cours de Tissage de Saint-Quentin.” 112 pasted-in schematic drawings & numerous other illus. & diagrams in the text. 76 unnumbered leaves. Small folio (297 x 190 mm.), green half-cloth & marbled boards. N.p. [but Saint Quentin]: ca.

1890.

\$1500.00

This attractive manuscript, written in a highly legible cursive hand on graph paper, is divided into two sections: "Tissage," and "Tissage Mécanique. Mécanique Jacquart." Our manuscript describes different methods of weaving and the various ornamentations and effects which can be achieved by employing these weaving techniques. Pasted-in are 112 highly detailed schematic drawings, in red, black, and white, along with their accompanying diagrams, worked out by textile designers, and depicting the warp and weft threads. Several of these schematic drawings are full-page. The author describes how to weave serge, many kinds of satin, coteline, ribbed silk, velours of many types, and other fabrics.

Also pasted-in are several full-page diagrams in red, black, and grey depicting further weaving techniques.

The final section is devoted to Jacquard's weaving machine and cards. There are a number of black and white as well as colored illustrations of mechanized weaving methods and a discussion of how to make the cards.

Saint Quentin in northern France has been an important center for the manufacture of various kinds of textiles since the Middle Ages. In the 18th- and 19th centuries, the city became a major exporter of textiles throughout Europe and the Americas. In the 19th-century it was known as a city always searching for new technologies to develop their export trade.

Fine condition.

*His First Book;
Presentation Copy To William Jones*

68. MAUPERTUIS, Pierre Louis Moreau de. *Discours sur les différentes Figures des Astres; d'ou l'on tire des Conjectures sur les Étoiles qui paroissent change de grandeur; & sur l'Anneau de Saturne. Avec une Exposition abrégée des Systemes de M. Descartes & de M. Newton.* Woodcut diagrams in the text. 2 p.l., 83 pp. 8vo, cont. calf, spine gilt, red morocco lettering piece on spine. Paris: de l'Imprimerie Royale, 1732. \$17,500.00

First edition of Maupertuis's first book and a fine presentation copy, inscribed by him to William Jones (1675-1749), mathematician, vice-president of the Royal Society, and the man who introduced the Greek letter π as the symbol for the ratio of the circumference of a circle to its diameter. Maupertuis had met Jones during the Frenchman's three-month sojourn in London in 1728. Armed with a letter of introduction for Hans Sloane of the Royal Society, Maupertuis met during this time all the leading British mathematicians and became a devout Newtonian.

This book — Maupertuis's first — brought him to the attention of the Marquise

du Châtelet and Voltaire. It is thoroughly Newtonian and contains a sustained attack on Descartes' model of celestial vortices. "The book demystified Newton, and gravity, for French readers, by insisting that the force of impulse was no more intelligible than the force of attraction . . .

"The apologia, then, accomplished two parallel objectives: to deny the absurdity of logical impossibility of attraction, and to call into question the transparent intelligibility of impulse as the cause of motion."—Terrall, *The Man Who Flattened the Earth. Maupertuis and the Sciences in the Enlightenment*, pp. 70-71—(& see pp. 64-78 for a discussion of this book).

Maupertuis (1698-1759), was the foremost proponent of the Newtonian movement in France.

Very fine copy.

69. MAUPERTUIS, Pierre Louis Moreau de. *Discours sur la Parallaxe de la Lune, pour perfectionner la Théorie de la Lune et celle de la Terre.* Numerous woodcut diagrams in the text. xxxii, 133 pp. 8vo, cont. calf (short crack at head of upper joint), double gilt fillet round sides, spine richly gilt, red morocco lettering piece on spine. Paris: Imprimerie Royale, 1741. \$4000.00

First edition and a fine copy, printed on thick paper. This is a further work by Maupertuis to determine the shape of the earth through the accurate measurement of a degree of the meridian, using the results of the French expedition to Lapland in 1735.

Maupertuis (1698-1759), was the foremost proponent of the Newtonian movement in France.

❖ D.S.B., IX, pp. 186-89. Not in Babson or Wallis.

*"The First Unequivocal Newtonian Text to Come
from a Frenchman"*

70. MAUPERTUIS, Pierre Louis Moreau de. *Discours sur les Differentes Figures des Astres. Ou l'on donne l'Explication des Taches lumineuses qu'on a observées dans le Ciel: Des Etoiles qui paroissent s'allumer & s'éteindre: De celles qui paroissent changer de grandeur: De l'Anneau de Saturne: Et des effets que peuvent produire les Comètes.* Engraved mezzotint frontis. printed in light blue ink & woodcut illus. in the text. 8 p.l., 176 pp. 8vo, cont. calf, double gilt fillet round sides, spine richly gilt, red morocco lettering piece on spine. Paris: G. Martin et al, 1742. \$3750.00

Second edition, enlarged (1st ed.: 1732) and a very lovely copy printed on thick paper. This book — Maupertuis' first — brought him to the attention of the

Marquise du Châtelet and Voltaire. It is thoroughly Newtonian and contains a sustained attack on Descartes' model of celestial vortices. "The book demystified Newton, and gravity, for French readers, by insisting that the force of impulse was no more intelligible than the force of attraction . . .

"The apologia, then, accomplished two parallel objectives: to deny the absurdity of logical impossibility of attraction, and to call into question the transparent intelligibility of impulse as the cause of motion."—Terrall, *The Man Who Flattened the Earth. Maupertuis and the Sciences in the Enlightenment*, pp. 70-71—(& see pp. 64-78 for a discussion of this book).

Maupertuis (1698-1759), was the foremost proponent of the Newtonian movement in France.

Very fine copy.

♣ Gjertsen, *The Newton Handbook*, p. 347—"first unequivocal Newtonian text to come from a Frenchman."

Charles of Valois' Copy in Contemporary Green Morocco with Arms

71. 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. 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, 6 with monogram repeated, a.e.g. Pesaro: G. Concordia, 1600.

\$45,000.00

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 Angoulême. He served in numerous military campaigns and was imprisoned for a number of years for having taking 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 twenty 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 Five (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.

72. MUSSCHENBROEK, Petrus van. *Essai de Physique...avec une Description de nouvelles sortes de Machines Pneumatiques et un Recueil d'Expériences...* Traduit du Hollandois par Mr. Pierre Massuet. Engraved frontis. port. & 34 folding engraved plates (incl. 5*). Titles in red & black. xxv, [3], 502 pp.; 1 p.l., 501 [i.e. 503]-864, 869-914, [32], 63, 8 pp. Two vols. Large 4to, orig. boards (some minor foxing & browning, a little waterstaining in Vol. II). Leyden: S. Luchtmans, 1739. \$3000.00

First edition in French of one of the best 18th-century introductions to Newtonian physics. This is a book filled with interesting experiments and problems. Some of the subjects covered are gravity, mechanics, machinery, elasticity, electricity, capillarity, hydraulics, optics (with a long account of vision and the eye), celestial mechanics, comets, and the weather system.

Musschenbroek (1692-1761), professor of natural philosophy and mathematics at Utrecht and, later, professor of experimental physics at Leyden, was one of the most celebrated physicists and most important investigators of his time. The experiments described in his books have become classics in elementary instruction. "Underlying Musschenbroek's lectures demonstrated with experiments was the experimental philosophy...the principal source of inspiration was Newton, but Galileo, Torricelli, Huygens, Reaumur, and others were important to this school."—*D.S.B.*, IX, p. 596.

Nice set in original state.

♣ Roberts & Trent, *Bibliotheca Mechanica*, pp. 232-33. Wheeler Gift Cat. 300.

Evelyn's Rare Translation

73. **NAUDÉ, Gabriel.** *Instructions Concerning Erecting of a Library: Presented to My Lord The President De Mesme... And now Interpreted by Jo. Evelyn, Esquire.* Title within rules. 8 p.l., 96 pp., 1 leaf of errata. Small 8vo, cont. sheep (well rebacked), spine gilt, red morocco lettering piece on spine. London: G. Bedle & T. Collins, 1661. \$22,500.00

First edition in English and a very scarce book. Evelyn's translation of Naudé's *Advis pour dresser une Bibliotheque* (1st ed.: Paris, 1627) is one of the most important and influential English books on the subject of scholarly book collecting, and is one of the minor classics in the language.

As Archer Taylor points out in the Introduction to his edition of Evelyn's translation (Berkeley & Los Angeles: University of California Press, 1950), "this is one of the earliest works on librarianship. It begins with a defense of collecting books and includes an account of books to be bought and books to be passed by, a discussion of schemes for arranging a library, and a description of a proper library building and its ornaments. His recommendations concerning the purchase of books are especially interesting..."

"To the modern reader perhaps the most impressive parts of the book are those which show Naudé's liberal and open mind. He insists that a library should contain books on both sides of important questions..."

"The seventh chapter deals with the arrangement of books in a library... He chose... what is virtually the modern classification by subjects..."

"Evelyn's translation was printed in a small edition only, and this contained many printer's errors. Evelyn was so displeased that he endeavored to buy up and destroy the copies that had passed into circulation. Thus the English version was never widely distributed." (pp. x-xii).

A very good crisp copy, with the errata leaf.

✦ Keynes, *John Evelyn*, pp. 105-07—"It is interesting to note that this book contains the first reference in print to the Royal Society, this name having then happily occurred to Evelyn to denote the new 'philosophic assembly' of which he was an original member... Evelyn told both his correspondents that he had tried to suppress the book as far as he was able. Perhaps it is owing to his efforts that the book is somewhat scarce at the present day, though it is probable that only a small edition was printed. Some attempt was made to remedy the typographical shortcomings, for a leaf of *errata* was inserted in some copies at the end."

74. **NEWTON, Isaac.** *Opticks: or, a Treatise of the Reflections, Refractions, Inflections and Colours of Light. The Second Edition, with Additions.* Twelve folding engraved plates. 4 p.l., 382 pp., one leaf of ads. 8vo, cont. English

panelled calf (well-rebacked with the orig. red morocco label laid-down, two corners a bit worn, a little dusty). London: W. & J. Innys, 1718.

\$8000.00

Second edition, revised and enlarged by Newton. This is the second issue with the title-page dated 1718 (1st issue: 1717). For this second edition, the first in octavo, the plates were newly engraved to suit the new format. While Newton left the body of the treatise largely untouched, "the number of Queries at the end was increased from 16 to 31, including the celebrated Query No. 28 on the nature of light."—Babson, I, p. 67.

Very good copy with a few plates just shaved. Contemporary signature on free front endpaper: "Ex libris Hci Jefferson. ex Coll: Div: Joh: Cant: Dec: 27mo die, 1719. Pre: 6."

• Babson 134.

Influential on the Continent

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

\$5750.00

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

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

• Babson 138.

The Definitive Edition

76. NEWTON, Isaac. *Opticks: or, a Treatise of the Reflections, Refractions, Inflexions and Colours of Light.* Twelve folding engraved plates. 4 p.l., 382 pp., one leaf of ads. 8vo, cont. calf (small portions of ends of spine & one corner carefully repaired), spine gilt, red morocco lettering piece on

spine. London: W. Innys, 1730. \$7500.00

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

Fine crisp copy. Contemporary armorial bookplate of Edward Powell.

♣ Babson 136.

An Appealing Sammelband

77. **ORTA, Garcia de.** *Aromatum, et Simplicium aliquot Medicamentorum apud Indos Nascentium Historia... nunc verò primùm Latina facta, & in Epitomen contracta à Carolo Clusio.* Woodcut printer's device on title & 16 woodcuts in the text. 250, [10] pp., one leaf of errata. 8vo, late 16th cent. richly blindstamped pigskin over wooden boards, orig. clasps & catches. Antwerp: C. Plantin, 1567.

[bound with]:

PICODELLA MIRANDOLA, Giovanni Francesco. *Libri III. De Auro... Accessit Bernhardi Comitis antiqui Trevirensis... Per Chemeias* :[in Greek] *Opus Historicum & dogmaticum, ex Gallico in Latinum simpliciter versum, & nunc primùm in lucem editum.* Woodcut printer's device on title. 13, [3] (blank), 223 pp. 8vo. OberUrsel: C. Sutor, 1598. \$10,000.00

An attractive sammelband in a lovely and fresh richly blindstamped pigskin binding.

I. First edition in Latin of this important account of Indian plants; it is "the first account of Indian materia medica and the first textbook on tropical medicine written by a European. It includes a classic account of cholera."—Garrison-Morton 1815—(the first edition was published in Goa in 1563 and is a legendary rarity).

Clusius (1526-1609), has substantially modified Orta's text and added much new material relating to the New World, derived from Oviedo and Thevet.

The woodcuts depict plants, fruits, etc.

II. Third edition (1st ed.: 1586) of this well-known alchemical book. "His only alchemical work was this on gold. It was written so early as 1515 and in it he endeavours to prove the possibility of the transmutation of metals both speculatively and historically by actual cases, some of which he himself was eye-witness."—Ferguson, II, p. 203—(a copy is in the Young collection). All three of the 16th-century editions are extremely rare.

The author also comments on the medicinal properties of gold and discusses potable gold. There is material culled from many different sources, including Hermes Trismegistus, Plato, Aristotle, Theophrastus, Rhazes, Avicenna, Dioscorides, Geber, Fernel, Arnaldus of Villanova, Ramon Lull, and Johannes of

Rupescissa.

Fine copies with the contemporary ownership inscription of Jesuit College at Ingolstadt, dated 1603.

• I. D.S.B., X, pp. 236-38—(Orta) & VIII, pp. 120-21 (Clusius). Sabin57,663. Voet 1838.

78. BIBLIOTHECA ANTONIANA, PADUA. *Catalogo dei Codici Manoscritti esistenti nella Biblioteca di Sant'Antonio di Padova.* Compiled by Luigi Maria Minciotti. [iii]-vii, [1], 161, [1] pp. 8vo, orig. printed wrappers (spine frayed, some foxing), uncut. Padua: Minerva, 1842. \$400.00

The scarce and detailed catalogue of 617 early MSS. preserved in the library of Padua's most famous church, Saint Anthony.

Fine copy.

• Ottino & Fumagalli 3284.

*A Fine Sammelband of his Writings on Science
& Mental Illness;
From the Library of Paul von Praun*

79. PARACELSUS. *Das Büch Meteorum . . . Item: Liber Quartus Paramiri de Matrice.* Title within typographical border & fine woodcut port. of the author on next leaf. 2 p.l., 106 numbered leaves. 4to, cont. blind-stamped pigskin-backed wooden boards, clasps & catches, upper cover stamped in black "P v P." Cologne: Heirs of A. Birckmann, 1566.

[bound with]:

— . *Astronomica et Astrologica . . . Opuscula aliquot, jetzt erst in Truck geben, und nach der Vorred verzeichnet.* Title within typographical border. Fine full-page woodcut port. of Paracelsus on recto of 9th preliminary leaf, woodcut arms on recto of penultimate leaf of the city of Cologne (repeated on p. 179), on verso the arms of Paracelsus, & another full-page woodcut port. of the author on recto of final leaf. Several other woodcuts in the text. 10 p.l., 235, [3] pp. 4to (minor browning). Cologne: Heirs of A. Birckmann, 1567.

[bound with]:

— . *Philosophiae Magnae . . . Tractatus aliquot, jetzt erst in Truck geben, unnd hiernach verzeichnet.* Title within typographical border & a full-page woodcut portrait of the author, aged 47, on verso of A4. 4 p.l., 247, [2] pp.

4to (minor spotting). Cologne: Heirs of A. Birckmann, 1567.

[bound with]:

— . . . *Schreyben, von den Kranckheyten, so die vernunfft berauben, als da sein S. Veyts Thantz, hinfallender siechtage, Melancholia und Unfinnigkeit, etc. sampt ihrn warhafften curen. Darzu auss gemeldts Authoris Büchern gethan sein etliche lustige und nutzbare Process, Administrationes und würckungen dess Vitriols und Erdenhartzes in rechter treuw publiciert, durch Adamum von Bodenstein.* [58] leaves (the last leaf is blank). 4to. [Basel: Perna ?], 1567.

\$47,500.00

A magnificent *sammelband* in a handsome contemporary binding from the library of Hans Fürstenberg with his bookplate. Stamped on the upper cover are the initials "P v P"; it is also signed on the front free fly-leaf in a contemporary hand "Paulus v Praun [?]." Paul von Praun (1548-1616), a wealthy merchant and art connoisseur from Nuremberg, was one of the greatest art collectors of his time. He lived in Bologna and formed a collection of over 250 major paintings (including two by Michelangelo and one by Leonardo da Vinci) and large collections of drawings, copper engravings, and woodcuts by the most important artists of the 15th and 16th centuries (including the finest group of Dürer prints ever formed). The "Praunsche Kabinett" was moved to Nuremberg after Praun's death and remained intact until 1803.

I. First edition of one of Paracelsus's major contributions to natural philosophy in which he strongly attacks Aristotelianism. This text is followed by the first printing of his *Book on the Matrix* (in German), certainly one of the most searching texts on the nature of women.

The fine woodcut portrait depicts Paracelsus at age 45 and is one of the finest renderings of him.

II. First edition of the first collection of Paracelsus' writings on astrology and astronomy; it contains an extensive introduction by the editor, Balthasar Flöter (fl. 1567). "Paracelsus based his astrology on the age-old theory of the interaction of man (microcosm) with the universe (macrocosm) and he considered astral influences to be one of the five causes of disease which also included poisonous and impure substances, psychological, spiritual, and divine causes."—*Heirs of Hippocrates* 211.

The first woodcut portrait of Paracelsus is after the original Augustin Hirschvogel engraving. Paracelsus is 47 years old, shown holding a sword with his arms and a long inscription round the four sides. The second portrait, also by Hirschvogel and dated 1538, depicts the author at age 45.

III. First edition of this important collection of writings; it is the chief collection of Paracelsus's works on natural philosophy, translated here into German. The texts are: "De Vera Influentia rerum"; "De Inventione Artium"; "De Sensu & Instrumentis"; "De Tempore Laboris & Requiei"; "De Bona & Mala Fortuna"; "De Sanguine ultra Mortem"; "De Obsessis a Malis Spiritibus"; "De Somniis, &

Erynibus in Somno & annexis"; "De Animabus Hominum post Mortem appetibus"; "De Lunaticis"; "De generatione Stultorum"; "De Homunculis"; "De Nymphis, Sylvanis, Pygm. Salamand. &c."; "De Imaginatione"; "De Maleficis & eorum operibus"; and "De Animalibus ex Sodomia natis."

IV. First edition. This treatise on illnesses of the mind — *Diseases that Deprive Man of his Reason* — was written circa 1526, and predates Weyer's *De Praestigiis Daemonum* by nearly forty years. "Paracelsus anticipated the descriptive method in psychiatry, giving a purely medical account of the clinical manifestations of epilepsy, mania, and hysteria, refuting previous theories that these diseases were caused by demonic possession or other supernatural means." —Garrison-Morton 4916.1.

Fine copies, in very fresh condition.

♣ I. Sudhoff 73. Zinner 2400. II. Sudhoff 85. Zinner 2432. III. Sudhoff 86. IV. Sudhoff 91.

80. PARACELUS. ... *Etliche Tractetlein zur Archidoxa gehörig. 1. Von dem Magneten, unnd seiner wunderbarlichen Tugend, in allerley Kranckheiten...* 2. *De occulta Philosophia...* 3. *Die recht weisz zu Administrirn die Medicin...* 4. *Von vilerley giftigen Thiern.* Woodcut port. of Paracelsus on verso of title & two woodcuts in the text. 36 unnumbered leaves. 4to, cont. blind-stamped pigskin over boards (recased with new endpapers, final leaves with some mostly marginal dampstaining). Munich: A. Berg, 1570. \$7500.00

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

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

Good copy. Rare.

♣ Sudhoff 128.

81. PARKINSON, James. *The Chemical Pocket-Book; or Memoranda Chemica: arranged in a Compendium of Chemistry. Third Edition. With appropriate Tables & Accounts of the latest Discoveries.* Engraved frontis., title engraved with a vignette. 1 p.l., xii, 272 pp., 4 pp. of ads. Small 8vo, orig.

boards (neatly rebacked, corners a little worn), uncut. London: C. Whittingham for H.D. Symons, 1803. \$500.00

"In this updated third edition Parkinson states in the preface 'that these memoranda have been enriched by a careful collation with the Course of Lectures on Chemistry, delivered at the Royal Institution of Great Britain, by Mr. Davy and with the *Système des Connaissances Chymiques* of Fourcroy.' He also acknowledges his indebtedness to Wollaston, Chenevix, Hatchett, Babington, Crichton, Pearson, and Powell. This edition is the first to introduce 'those alterations in the names of substances which have been proposed by Mr. Chenevix' (in Richard Chenevix, *Remarks on Chemical Nomenclature*, London, 1802)...The physician and surgeon Parkinson (1755–1824), who practised in Hoxton (east London), is best remembered as the first to give the classic description of the shaking palsy (Parkinson's disease) in 1817" (Neville).

A fine copy.

♣ Cole 1011. Neville II, pp. 266–267.

82. PEIGNOT, Gabriel. *Catalogue d'une Partie des Livres composant la Bibliothèque des Ducs de Bourgogne, au XV^e Siècle. Seconde Édition revue et augmentée du Catalogue de la Bibliothèque des Dominicains de Dijon, rédigée en 1307, avec détails historiques, philologiques et bibliographiques.* 143, [1] pp. 8vo, cont. calf-backed marbled boards (joints rubbed), spine gilt, contrasting leather lettering piece on spine. Dijon: V. Lagier, 1841.

\$425.00

Second edition, revised and enlarged (the first edition was published in 1830 in one hundred copies only).

Fine copy. Bookplate of Julia Parker Wightman.

♣ Brunet, IV, 468.

83. PICTET, François-Jules. *Traité de Paléontologie ou Histoire naturelle des Animaux Fossiles considérés dans leurs Rapports zoologiques et géologiques. Seconde édition, revue, corrigé, considérablement augmentée.* Four vols of text in 8vo & one atlas in 4to. Text: xiv, 584 pp.; 2 p.l., 727 pp.; 2 p.l., 654 pp., 1 leaf of ads; xvi, 768 pp. Atlas: 1 p.l., 77 pp. of text & 110 lithographed plates containing several hundred figures. Text bound in cont. blue half calf, the atlas in the original printed boards, blue cloth spine (a bit soiled & one corner worn). Paris: J.B. Baillièrre, 1853-1857. \$1000.00

Second edition, revised, corrected, and greatly enlarged, of Pictet's "excellent" (Zittel) and richly illustrated treatise on paleontology, the first elementary

treatise on the subject in French. The first edition appeared in 1844–46. For the present edition the text was considerably improved and the number of plates enlarged and published separately in an atlas for the first time, which the author considers to be the most complete series of paleontological illustrations published to date.

"Pictet treated paleontology as an essential part of the studies of Zoology, Comparative Anatomy, and Botany. He confined himself in his treatise to fossil animals, and adhered to a strict systematic order throughout his work, constantly keeping in view the characteristics of the corresponding living forms. At the same time, the geological occurrence of the fossils is nowhere omitted...Pictet's work was taken as a model for a number of text-books which rapidly made their appearance" (Zittel, *History of Geology and Paleontology*, pp. 366–367).

Pictet (1809–1872) was born in Geneva, and was appointed Professor of Zoology at the Geneva Academy, but later resigned in order to devote himself to paleontology.

Signature of Arthur Lennox, 1863, in the text volumes, library stamp on several leaves and lower margin of some plates of the atlas.

84. PUYMAURIN, Jean Pierre Casimir, Baron de Marcassus. Manuscript, in part autograph, entitled "*Recueil d'Observations Historiques [et Scientifiques]*." Ca. 450 pp., 4to, orig. boards (spine perished, upper cover nearly detached). Ca. 1825-39. \$2500.00

Puymaurin (1757-1841), a member of a wealthy and distinguished family from Languedoc, devoted himself to liberal political activities, rural economy, and chemical experiments. In 1787, he introduced into France the technique of engraving on glass using hydrofluoric acid. Puymaurin was the director of the Imperial factory at Albi, a manufacturing town near Toulouse, which specialized in the manufacture of woad indigo and various textiles including coarse linen clothes, sacking, cottons, tablecloths, handkerchiefs, etc. He was the first to demonstrate the viability of extracting from woad a dye as good as the indigo from Bengal and Guatemala.

This highly interesting manuscript is divided into four sections. The first (pp. 1-101) is devoted to historical and political matters. The subjects are very varied: consumption of beer in London, the desired qualities Italian and Spanish men search for in women, copies of letters addressed to Puymaurin on political subjects, an account of an aeronautical ascension in 1785, a fascinating three-page "*Vocabulaire des Voteurs*" in which we learn all sorts of political slang, historical notes on a famine in France in 1693-94, etc.

The second section (pp. 147-249) is medical and contains a great many remedies and cures (how to whiten teeth, combat cancer, etc.) and hundreds of

pharmacological recipes.

The third section (pp. 287-413) is concerned with the sciences and the arts. Here we find chemical and metallurgical experiments, research into porcelain manufacture, development of dyes of many colors including blue, techniques of painting enamel on metal, manufacturing glass, mineralogical researches, manufacturing cement, phosphorescence of the ocean, etc.

The final section (pp. 431-94) deals with agriculture and rural economy. Here Puymaurin describes how to make wine, conserves, consommé, cakes, *blanc manger*, more on making dyes, making a paint from milk and the blood of cows, recipes for many kinds of varnish, etc.

At the end are 60 unnumbered pages devoted to a recapitulation by month of expenses for the household of Puymaurin in 1838.

Altogether, a fascinating document.

The Cave of Ratelstein

85. (RATELSTEIN, Cave of). A collection of four manuscripts describing the famous cave at Ratelstein (Retelstein) in Styria, the mountainous province of Austria, written by Carl Gustav Heraeus (1671-1730), poet and inspector of Medals and Antiquities under Emperor Charles VI (1685-1740), of Austria. Heraeus was an intimate friend of Leibniz. 45 pp., in folio & 4to. Excellent condition. Ca. 1720. \$1250.00

The famous cave of Ratelstein in Styria was one of the first to be explored on a scientific basis. Heraeus made his explorations on 8 May 1719 and prepared a detailed report to be submitted to the French Academy. The present collection contains four versions of the same report, two in Latin and two in French. One in each language is in the same hand and I suspect these are authorial. The other two manuscripts — again, one in Latin and one in French — are clearly fair copies. A note in the hand of the geologist Louis de Launay (1860-1938), states that apparently these manuscripts were sent to Bernard de Jussieu for presentation to the French Academy.

In these manuscripts, Heraeus notes the large number of fossilized bones and compares them to findings in other caves in the area.

• A.D.B., Vol. 12, pp. 15-16.

Privately Printed

86. (REIMMANN, Jacob Friedrich). *Catalogus Bibliothecae Theologicae, Systematico-Criticus, in quo, Libri Theologici, in Bibliotheca Reimanniana extantes . . .* Engraved frontis. port of the collector. Title printed in red & black. 12 p.l. (incl. port.), 638 pp.; 1 p.l., 639-1142, 70 pp. Two vols. 8vo,

cont. vellum over boards. Hildesheim: [Printed by] L. Schroeder [for the owner], 1731. \$1500.00

The very rare catalogue of the theological books in the vast library of Reimmann (1668-1743), German bibliographer, inspector of the gymnasium of Hildesheim, and friend of Leibniz and many other prominent intellectuals of the time.

Reimmann has provided very copious annotations for each book and the catalogue is made all the more useful by the full author index at end.

A very fine and fresh set. From the library of His Serene Highness Prince Fürstenberg at Donaueschingen. Further parts were issued in 1739 and 1747; they are, as is usual, not present.

• Folter 618-19. Loh, p. 3. Peignot, p. 470. Taylor, *Book Catalogues*, p. 257.

One of the Earliest English Books on Occupational Medicine

87. RICHARDSON, William, Surgeon. *The Chemical Principles of the Metallic Arts; with an Account of the Principal Diseases incident to the Different Artificers; the Means of Prevention and Cure; and a concise Introduction to the Study of Chemistry.* Three folding printed tables. vi, (v), xx-cii, 1 leaf, 201, [4] pp. 8vo, modern half-calf (slightly browned, library stamp in lower margin of title). Birmingham: Knott & Lloyd, 1806. \$2000.00

First edition, second issue (the sheets of the first issue with a new title-page dated 1806); at the top of the title are the words "Designed chiefly for the use of manufacturers." The first third of the book presents a short course in chemistry to give manufacturers an overview of the subject. Much of the remainder is devoted to descriptions of different ores with their properties, methods of assaying, metals and metal alloys, and so on.

The last 16 pages are occupied by a study of the diseases to which workers in metal manufactories are exposed, whether by swallowing, inhalation, or absorption through the skin, and as such it is one of the earliest books in English on occupational or industrial medicine. Birmingham was, of course, an important center for the manufacture of metal goods, and in particular the production of cheap goods in large quantities, and it is appropriate that Richardson, as a Birmingham surgeon, should address what was then a significant problem, but one which was largely ignored by factory owners.

This was the only edition of the author's only book, and is very uncommon.

• Cole 1114 (first issue of 1790, but recording this copy of this issue, in R.D. Gurney's catalogue 77). Ferguson II, pp. 269-270. Neville II, p. 376 (first issue).

88. ROSE, Gustave. *Éléments de Cristallographie...* traduit de l'Allemand par M. Victor Regnault. Ten double-page lithographed plates depicting 120 crystal structures. 2 p.l., 270, [1] pp.; 11, [1] pp. Two parts in one vol. 8vo, cont. green sheep-backed marbled boards (binding a little rubbed), flat spine gilt. Paris: L. Hachette & Firmin Didot Frères, 1834. \$2500.00

First edition in French (1st ed., in German: 1833) of this important book which "represented the latest advances of the science at the time."—*D.S.B.*, XI, p. 539. Rose (1798-1873), worked for several years in Berzelius' laboratory at Stockholm and became professor of mineralogy and director of the Mineralogy Museum at Berlin. He was the author of many highly significant works, especially concerning crystallography.

A few fore-edges lightly dampstained but an attractive copy. Scarce.

*A Magnificent Large Paper Copy of a
Pioneer Work in Modern Geology*

89. STENO, Nicolaus. *De Solido intra Solidum Naturaliter contento Dissertationis Prodromus.* Engraved arms of the Grand Duke of Tuscany on title, a large folding engraved plate, & a folding sheet with descriptive letterpress. Title printed in red & black. 1 p.l., 78 pp., 1 leaf. 4to (274 x 204 mm.), cont. vellum over boards (slightly warped, a bit of foxing). Florence: ex Typographia sub signo Stellae, 1669. \$95,000.00

First edition of a fundamental work for the modern sciences of geology, crystallography, and paleontology; this is a wonderful large paper copy printed no doubt for presentation purposes. Our copy is simply gigantic when compared to regular paper copies.

In this book, Steno "described the composition of the earth's crust in Tuscany and a famous diagram in his book shows six successive types of stratification: the first attempt ever made to represent geological sections. This was a sequence which he believed would be found all over the world. He explained the true origin of fossils found in the earth as being remains of once living things and he discriminated between the volcanic, chemical and mechanical modes of the origin of the rocks. He was the first clearly to recognize that the strata of the earth's crust contain the records of a chronological sequence of events from which the history of the earth can be reconstructed. He attempted to find the principles of stratigraphy... He deduced that these changes in the original position of the strata are the real causes of the unevenness of the earth's surface. This was in direct contradiction to the accepted belief that mountains had existed ever since the beginning of things or had simply grown."—*Printing & the*

Mind of Man 151.

"This work also contains the first formulated crystallography and, of the constancy of interfacial angles of crystals of quartz, a study basic to mineralogy."—Dibner, *Heralds of Science*, 90.

A very nice copy with the inscription "Ex lib Jo Bapt Monnajoi [?]" on title.

✦ *D.S.B.*, XIII, p. 34—"Almost every sentence or paragraph contains new insights." Horblit 96. Sparrow, *Milestones of Science*, 185.

"Deservedly Successful"—Taylor

90. STRUVE, Burkhard Gotthelf. *Introductio in Notitiam Rei Litterariae et usum Bibliothecarum* . . . cura Jo. Christiani Fischeri. Title in red & black with engraved vignette. 23, [1], 988, [65] pp. 8vo, cont. sheep-backed marbled boards, flat spine gilt, orange lettering piece on spine. Frankfurt & Leipzig: H.L. Broener, 1754. \$1500.00

Final and best edition of this important and successful survey of scholarship which was first published in 1704 and was enlarged and improved for the next three generations by a series of bibliographers such as Coler, Lilienthal, and Koehler. The present edition is the result of the complete revision of J.C. Fischer. In this edition, Fischer "kept the original title and followed the plan of adding footnotes containing new material and corrections. This expansion of the edition of 1729 is consequently somewhat difficult to use, since the original text is burdened with the notes of at least three commentators. The section devoted to catalogues of private libraries has become almost a bibliography of them and has lost its original selective character."—Taylor, *Book Catalogues*, p. 181.

Fischer's edition is rivalled only by that of J.F. Jugler's revision of the 1729 edition of Struve.

A very fine copy from the library of His Serene Highness Prince Fürstenberg at Donaueschingen.

91. SUCKOW, Georg Adolph. *Bemerkungen über einige chymische Gewerbe*. 36 pp. 8vo, attractive antique calf-backed speckled boards, spine gilt, red morocco lettering piece on spine. Mannheim: in der Hof- und Akademie-Buchhandlung, 1791. \$1500.00

First edition. Suckow (1751-1813), a member of the famous family of scientists, was professor of physics, chemistry, and natural history at the University of Heidelberg. He wrote many books and articles on chemistry, natural history, botany, and mineralogy.

This is a rather interesting book in which Suckow reviews the activities and developments which have taken place in several chemical industries including the manufacture of cream of tartar; verdigris, the green copper pigment used

in painting (*grünspanes* or *vert-de-gris*); distilled spirits; various kinds of oils; bleaching and dyeing; and producing sulphate of magnesia.

Fine copy and very rare with no copy in the U.S., according to OCLC.

♣ A.D.B., Vol. 37, pp. 105-06. Ferchl, p. 523. Poggendorff, II, 1046-47.

Revised Edition

92. **TAYLOR, Archer.** *Book Catalogues: Their Varieties and Uses.* Frontis. illus. 284 pp. 8vo, orig. cloth, dust-jacket. [New York]: F.C. Beil, 1987.

\$45.00

Second edition, revised by Wm. P. Barlow, Jr. Mr. Barlow's corrections and additions are most useful.

93. **THOMIN, Marc Mitoufled.** *Traité d'Optique Mécanique, dans lequel on donne les règles & les proportions qu'il faut observer pour faire toutes sortes de Lunettes d'approche, Microscopes simples & composés, & autres Ouvrages qui dépendent de l'Art. Avec une instruction sur l'usage des Lunettes ou Conserves pour toutes sortes de vûes.* Finely engraved vignette on title & four folding engraved plates. xii, 372, [3] pp. 8vo, cont. mottled calf (faint dampstaining in upper margin of early leaves), spine gilt, red morocco lettering piece on spine. Paris: J.B. Coignard & A. Boudet, 1749.

\$3000.00

First edition. "An eighteenth century treatise on mechanical optics, containing rules and proportions for making all kinds of spectacles and microscopes . . . [followed by instructions] for the use of glasses for the different kinds of defects."—*B.O.A.C.*, I, 210. Thomin describes other optical instruments including telescopes, magnifying glasses, and the magic lantern.

Fine copy.

♣ Poggendorff, II, 1097.

94. **(TORRENTINO, Lorenzo).** *Annali della Tipografia Fiorentina di Lorenzo Torrentino, Impressore Ducale.* [By D. Moreni]. lxxxvi, 427 pp. 8vo, cont. half-vellum & marbled boards, uncut, red & green morocco lettering pieces on spine. Florence: F. Daddi, 1819.

\$400.00

Second edition, corrected and augmented; the first edition appeared in 1811. An excellent bibliography of the imprints of the Flemish Torrentino from 1547-

63. With several indexes.

Fine copy with the bookplates of Francesco Riccardi of Vernaccia and Baron Landau.

• Bigmore & Wyman, II, p. 50.

His First Book

95. [VARIGNON, Pierre]. *Projet d'une Nouvelle Mécanique. Avec un Examen de l'opinion de M. Borelli, sur les propriétés des Poids suspendus par des Cordes*. Engraved vignette on title, 13 folding engraved plates, & several engraved head-pieces. 9 p.l., 133, [2] pp. Large 4to, cont. mottled sheep (rubbed, upper joint with a short crack, some browning), spine gilt, red leather lettering piece on spine. Paris: la Veuve d'E. Martin, J. Boudot, & E. Martin, 1687. \$3000.00

First edition of the author's first book and the first treatise in which the whole science of statics was deduced from the principle of the parallelogram of forces which the author here enunciates, simultaneously with and independently of Newton. Due to the simultaneous publication of the principle by Varignon and Newton (in his *Principia*), it is difficult to make a judgment regarding priority. However, Varignon alone grasped two important points: "the unification of 'mechanics' (the science of simple machines) was to be carried out on the basis of the composition of forces. The second concerns the inclined plane."—*D.S.B.*, XIII, pp. 585-86. This work is, in part, a commentary on Borelli's milestone *De Motu Animalium* of 1680-81.

Varignon (1654-1722), one of the outstanding scientists of his time, was an intimate friend of Newton, Leibniz, and the Bernoullis. He was the first French scientist of note to advocate the new differential calculus.

Good copy. Two old library stamps on title and on versos of plates.

• Roberts & Trent, *Bibliotheca Mechanica*, p. 337.

96. VAUQUELIN, Louis Nicolas. *Manuel de l'Essayeur...approuvé par l'Administration des Monnoies, sur le rapport du Citoyen Darcet, Inspecteur-général des Essais*. 2 p.l., [5]-80 pp. 4to, later sheep-backed marbled boards (half-title dusty), red morocco label on spine. Paris: chez le Citoyen Bernard...An VII [1799]. \$1850.00

First edition of one of the best handbooks of assaying. "Vauquelin's useful and informative assay manual discusses balances, furnaces, the purification of aqua fortis, the operation of coupellation, how to recognize fraudulent alloys of gold and silver with platinum, the determination of copper in coins, and other topics. The directions given are concise, simple, and clear. The report by J.P. Darcet,

who was inspector general for the mint, contains an outline of the book and ends with the recommendation that it be printed and placed in the hands of the Bureau's assayers since it will be of great use" (Cole). It was republished as late as 1835 and translated into German and Spanish. Vauquelin became official assayer of precious metals for Paris.

This first edition is very rare.

☛ Cole 1314. Duveen, p. 577. Neville II, p. 582. Partington III, p. 551.

97. (VIOLLET-LE-DUC, Emmanuel Louis Nicolas). *Catalogue des Livres composant la Bibliothèque Poétique de M. Viollet le Duc, avec des Notes Bibliographiques, Biographiques et Littéraires sur chacun des Ouvrages catalogués.* 11, [1], 624 pp.; xii, 252 pp. Two vols. 8vo, cont. half-morocco & marbled boards (extremities a bit rubbed), spines gilt, t.e.g. Paris: L. Hachette, 1843-47. \$500.00

The uncommon private library catalogue of the great collection of early French poetry formed by Viollet-le-Duc (1781-1857). The notes are very full and learned and this catalogue is considered to be an important source for the history of French literature.

Fine set with the bookplate of Isaac Norris.

☛ Brunet, V, 1262—"Ce catalogue contient des notes curieuses qui le font rechercher."

Describing Scheele's Method

98. WEINLIG, Christian Gottlob. *Gründlicher Unterricht der so genannten hausmannischen Bleiche, wie in sehr kurzer Zeit Kattune, baumwollenes Garn, Flachs, Leinwand, Zwirn, und Hanf-Gespinnste gebleicht werden können, nach dem Original des Herrn Scheelens...* One folding engraved plate. 30 pp. 8vo, attractive antique calf-backed speckled boards, spine gilt, red morocco lettering piece on spine. Berlin: M.L. Pauli, 1792. \$1500.00

First edition of this very rare work on the bleaching of various fabrics employing Scheele's method which used chlorine. The plate depicts several bleaching apparatus. Weinlig, an apothecary, was fully aware of the new chemistry and incorporated it in the present book.

Fine copy. No copy in OCLC.

☛ Ron, *Bibliotheca Tinctoria*, 1099.

99. WHISTON, William. *Praelectiones Astronomicae Cantabrigiae in Scholis... Quibus Accedunt Tabulae plurimae Astronomicae Flamstedianae correctae, Halleianae, Cassiniane, et Streetianae.* Woodcut diagrams in the text. 1 p.l., 459, [1] pp. 8vo, cont. panelled calf (joints at head a little cracked). Cambridge: Typis Academicis, 1707. \$2750.00

First edition of one of the earliest popularizations of Newton's discoveries. Whiston (1667-1752), was selected by Newton to succeed him in the Lucasian chair at Cambridge and he edited Newton's *Arithmetica Universalis* (1707). However, in 1710 he was sacked from his Chair and banished from the University due to his unorthodox religious beliefs.

Fine copy. Scarce. Armorial bookplate of Sir Orlando Bridgman of Ridley in Cheshire, dated 1704.

♣ Babson 126.

100. WILKINSON, Charles Hunnings. *Elements of Galvanism, in Theory and Practice; with a Comprehensive View of its History, from the First Experiments of Galvani to the present Time. Containing also, practical directions for constructing the Galvanic Apparatus, and plain systematic Instructions for performing all the various Experiments.* Engraved frontis. & 12 engraved plates (one is colored & two are folding). xv, 468 pp.; 2 p.l., [iii]-xi, 472, [40] pp. Two vols. 8vo, cont. half-russia (joints a little cracked, foot of one spine and two corners worn). London: J. Murray, 1804. \$1750.00

First and only edition of one of the best early books on galvanism, "a very comprehensive review of the discovery from the time of Galvani's early experiments" (Mottelay). Wilkinson gives detailed coverage of the history of galvanism from Galvani to the time of the book's publication. Vol. I is chiefly historical, and Vol. II treats of the method of producing the electric current and of its application to medical cases. Some of the sections of particular interest to chemistry are in Vol. II, e.g. Chapter XXXII on the decomposition of water, and Chapter XXXV, which deals with theories of respiration, citing Crawford, Lavoisier and others. The whole of Chapter XXXVI is devoted to the application of galvanism to medicine. Wilkinson also refers to the electricity of the torpedo, and devotes much space to observations recorded on animal electricity.

A nice set from the library of Matthew Boulton, with Christie's ticket for the sale of his books on the front pastedown. Plate numbers and some imprints cropped (as in the Cole copy), being larger than the text.

♣ Cole 1377. Ekelöf 732—"voluminous and respectable handbook on galvanism." Mottelay pp. 269-270(& numerous other references). Wheeler Gift 667.