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Catalogue 195

Proofs

Chemistry, Balneology, Pharmacology

& Metallurgy

Catalogue 195

"A Serious Scientific Contribution to the Subject"
Miss Currer's Copy

1. BANCROFT, Edward. *Experimental Researches concerning the Philosophy of Permanent Colours; and the Best Means of producing Them, by Dyeing, Calico Printing, &c.* [iii]-lxi, [2], 542 pp.; 2 p.l., 518 pp. Two vols. 8vo, cont. polished calf (quite expertly rebacked), single gilt fillet round covers, spines gilt, contrasting morocco lettering pieces on spines. London: T. Cadell & W. Davies, 1813. $1850.00

Second edition, greatly revised, "of an important book on the theoretical treatment of dyestuffs and methods and processes of dyeing. It is a serious scientific contribution to the subject, many years in advance of its time. Bancroft (1744-1821) was an American-born physician, one of the early ex-patriates, who spent most of his life abroad, especially in Dutch Guinea and Europe. He was an autodidact who went on to become a member of the Royal Society and the

College of Surgeons. He was friendly with Priestley and Franklin, among others, and has a threefold claim to fame: He discovered the dyeing properties (yellow) of the inner bark of the American Black Oak (Quercus velutina), which he introduced and marketed in Europe; he published this book; and he was an independent double agent, spying (for pay) for both sides during the American War of Independence."–Ron, *Bibliotheca Tinctoria,* pp. 44-45–(1st ed. of 1794).

This new edition includes Bancroft's numerous discoveries made during travels in North and South America.

Fine copy from the library of Miss Frances Mary Richardson Currer (1785-1861), "England's earliest female bibliophile" (De Ricci), with her bookplate in each volume. Half-titles lacking.

❧ *D.N.B.,* I, pp. 1025-26–"a valuable account and discussion of the theory of colours and the methods of fixing them." Duveen, p. 639. Partington, III, pp. 515-16. Ron, *Bibliotheca Tinctoria,* 66. Cole describes the first edition and the 1814 American printing of our second edition.

2. BAUER [von ADELSBACH], Joseph Heinrich. *Untersuchung nach der Naturkunde und Chymie, des uralten mineralischen Sauerbrunns zu Liebwerda im Königreiche Böhmen, nahe der Stadt Friedland Bunzlauer Kreises*. Engraved frontis. 3 p.l., 40 pp. 8vo, cont. wrappers (some foxing). Prague: J.F. Edlen von Schönfeld, 1785. $950.00

First edition of this rare account of the mineral springs at Liebwerda, a town in northern Bohemia near Frydlant. Bauer (1719-1802), was professor and dean of the medical school at Prague. In this monograph, Bauer describes the mineral springs, their chemical constituents, and medical benefits. He provides several interesting case histories.

The frontispiece depicts the handsome building covering the springs.

Very good.

❧ Hirsch, I, p. 381.

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

"Second edition, enlarged and improved." The first edition appeared in 1806. Bemiss was a Connecticut dyer and claims in the Preface that this is the first

book on the subject to appear in America. Actually, it is the third earliest and is a very comprehensive collection of dyeing recipes with information on dyeing techniques and equipment.

Very nice copy.

❧ Cole 75–"A book of detailed instructions presented in a form useful to practical dyers." Rink, *Technical America*, 1852. Ron, *Bibliotheca Tinctoria*, 87.

4. BERTHIER, Pierre. *Traité des Essais par la Voie Sèche; ou des Propriétés, de la Composition et de l'Essai des Substances Métalliques et des Combustibles.* 13 folding engraved plates. xxiii, [1], 654 pp.; xxxv, [3], 1008 pp. Two vols. 8vo, cont. green cloth-backed marbled boards, flat spines lettered in gilt. Paris: Thomine, 1834. $1250.00

First edition. Berthier (1782-1861), professor of assaying and chief of the laboratory at the École des Mines, did important work on mineral analysis and compounds of metals. The present work "was widely used by mineralogists and mining engineers because his analytical procedures were simple, relatively accurate, and practical."–*D.S.B.,* II, p. 72.

Fine and handsome set. From the library of His Serene Highness Prince Fürstenberg at Donaueschingen.

❧ Partington, IV, p. 98–"Berthier's book on assaying and chemical metallurgy, including some general chemistry, is still quoted in large treatises."

A Proper Basis for Chemistry

5. BERTHOLLET, Claude Louis, Comte. *Essai de Statique Chimique*. viii, 543 pp.; viii, 555, [1] pp. Two vols. 8vo, cont. sheep-backed paste-paper boards, flat spines nicely gilt. Paris: Firmin Didot, 1803. $1750.00

First edition of Berthollet's most important work in which he attempted to provide a proper basis for chemistry, so that its experimental results could be viewed in light of theoretical first principles. Here Berthollet laid the foundations of our understanding of the causes of chemical affinities and reactions.

A fine and fresh set of a rare and important book. There were translations into English, Italian, and German.

❧ Cole 122. *D.S.B.,* II, pp. 73-82. Duveen, p. 75. Partington, III, pp. 644-46 & IV, pp. 576-79.

6. BERZELIUS, Jöns Jacob. *Nouveau Système de Minéralogie*…traduit du Suédois sous les Yeux de l'Auteur, et publié par lui-même. 2 p.l., vi, 314,

[1] pp. 8vo, cont. calf-backed marbled boards (upper joint with crack at head, joints rubbed, some browning), spine gilt. Paris: Méquignon-Marvis, 1819. $850.00

First edition in French of the *Försök* (Stockholm: 1814), which describes Berzelius' first system of classifying minerals, based on chemical composition. "The translation from the Swedish edition was personally supervised by Berzelius, who states in his introduction that he was disappointed with the English version (London, 1814)."–Neville, I, p. 146. This edition contains additional material not in the first edition.

Very good copy.

❧ Hoover 122.

7. BERZELIUS, Jöns Jacob. *De l'Emploi du Chalumeau dans les Analyses chimiques et les Déterminations minéralogiques*…Traduit du Suédois par F. Fresnel. Four folding engraved plates. 2 p.l., vi, 396, [2] pp., one leaf of errata. 8vo, cont. marbled boards (corners & ends of spine a little worn), flat spine gilt, contrasting leather lettering piece on spine. Paris: Méquignon-Marvis, 1821. $950.00

First edition in French (1st ed., in Swedish: 1820) of this very scarce and famous work in which Berzelius describes the use of the blowpipe in chemistry and mineralogy. "The scientific apparatus and reagents available in Sweden when Berzelius began his work were very inadequate…The new forms of apparatus that he built were described in the various editions of his textbook and became standard pieces of equipment in laboratories all over the world. He was especially skillful in the use of the blowpipe, which had been developed in the Scandinavian countries. He utilized it in many of his analytical procedures, and the book that he wrote concerning it popularized its use abroad."–*D.S.B.*, II, p. 93.

The apparatus which Berzelius developed allowed him to greatly improve the accuracy of qualitative and quantitative analysis, and he introduced many new methods.

The translation by Fulgence Fresnel (1795-1855), is known to be excellent.

Very good copy. The plates depict cross-sections of the blowpipe and other chemical apparatus.

❧ Cole 137. Neville, I, p. 143. Partington, IV, pp. 146-49.

The Sondheimer Copy

8. BERZELIUS, Jöns Jacob. *The Use of the Blowpipe in Chemical Analysis and in the Examination of Minerals*…Translated from the French of M.

Fresnel, by J.G. Children…With a Sketch of Berzelius' System of Mineralogy; a Synoptic Table of the Principal Characters of the Pure Earths and Metallic Oxides before the Blowpipe, and numerous Notes and Additions by the Translator. Three engraved plates (foxed as usual) & one large folding printed table. xxxix, 343, [1] pp. 8vo, cont. blue pebbled half-cloth & marbled boards, spine lettered in gilt, uncut. London: Baldwin, Cradock, & Joy, 1822. $1650.00

First edition in English of this important work, with important additions and notes by the translator. Berzelius describes here the use of the blowpipe in chemistry and mineralogy.

Fine and rather attractive uncut copy. The plates depict cross-sections of the blowpipe and other chemical apparatus. Contemporary signature on title of Richard Edwards. Bookplate of Prof. Franz Sondheimer, the great chemist and collector of chemistry books.

❧ Cole 139. Hoover 123. Neville, I, pp. 143-44.

9. BERZELIUS, Jöns Jacob. *De l'Emploi du Chalumeau dans les Analyses chimiques et les Déterminations minéralogiques*…Traduit du Suedois par F. Fresnel. Édité par Méquignon-Marvis père. Four folding engraved plates. 2 p.l., 396 pp. 8vo, cont. polished green sheep-backed marbled boards, flat spine nicely gilt. Paris: Méquignon-Marvis, 1842. $500.00

A later edition in French (1st ed., in Swedish: 1820). The translation by Fulgence Fresnel (1795-1855), is known to be excellent.

Fine and attractive copy. Rare.

❧ Partington, IV, pp. 146-49.

10. BERZELIUS, Jöns Jacob. *De l'Analyse des Corps inorganiques*…Traduit de l'Allemand. One engraved plate (foxed). 2 p.l., iii, [1], 232 pp. 8vo, orig. printed wrappers (some wear), uncut. Paris: Méquignon-Marvis, Juillet 1827. $650.00

First edition in French, "a translation by E. Esslinger of the essay on the analysis of inorganic compounds, found at the end of volume 2 of the Blöde and Palmstedt translation of Berzelius's *Lehrbuch der Chemie* (Dresden, 1826), which itself was translated from the second Swedish edition of the *Lärbök i Kemien*…Rare."–Neville, I, p. 143.

Very good copy.

11. BERZELIUS, Jöns Jacob. *Théorie des Proportions chimiques, et Table synoptique des Poids atomiques des Corps simples, et de leurs Combinaisons les plus importantes*. 2 p.l., 477 pp. 8vo, orig. printed wrappers (spine & upper wrappers somewhat chipped, some dampstaining & light browning), uncut. Paris: Firmin Didot Bros. & J.B. Baillière, 1835. $500.00

Second edition. "The revised, corrected, greatly enlarged, and final French edition of this important work, in which the table of atomic and molecular weights is considerably augmented. Very scarce."–Neville, I, p. 147. The first edition of this book — Paris, 1819 — presented Berzelius' electrochemical (or dualistic) theory, which dominated the chemical world for many years. The table presented in the first edition, and here greatly enlarged, was the first attempt at a complete list of atomic weights.

Good copy.

12. BRANDIS, Joachim Dietrich. *Erfahrungen über die Wirkung der Eisenmittel im allegemeinen und des Driburger Wassers insbesondere*. xiv, 258 pp. 8vo, cont. marbled boards (a little rubbed). Hannover: Hahn, 1803. $850.00

First edition and very rare. Brandis (1762-1845), took his medical degree at Göttingen and became professor of medicine at Kiel. He later became physician to the royal family of Denmark. In this work, Brandis describes the famous saline-ferruginous springs at Driburg, a town and spa in Prussian Westphalia. The springs were discovered in 766 and Brandis describes their medical benefits for many diseases.

Fine copy.

❧ Hirsch, I, p. 677.

With Much Chemical Interest

13. BRISSON, Mathurin-Jacques. *Dictionnaire Raisonné de Physique*. Six vols. of text. 8vo, cont. polished marbled calf, spines richly & prettily gilt, green & red morocco lettering pieces on spines [**with**]: *Planches*. 2 leaves of text & 90 engraved plates (several double-page or folding). Large 4to, binding as above (a few minor defects). Paris: La Librairie Économique, An VIII [1800]. $2500.00

Second edition, revised, corrected, and greatly enlarged, of this dictionary of physics in the widest sense of the word, including astronomy, electricity, instruments, chemistry, etc. Brisson (1723-1806), was a close collaborator of Lavoisier and successor of Nollet to the chair of experimental physics at the Collège de Navarre. He was an important and influential disseminator of the

ideas of physics through his teaching and writings.

"Though this is a dictionary of physics there are many entries of chemical interest, e.g. Acids, Air Pur, Calcination, Combustion, Eau, Feu, Metaux, Phlogistique, etc."–Cole 200–(referring to the first edition of 1781).

Fine set from the library of the Dukes of Bavaria.

A Very Pretty Set

14. CHAPTAL DE CHANTELOUP, Jean Antoine Claude, Comte. *Élémens de Chymie*. 2 p.l., civ, 270 pp.; 2 p.l., 445 pp.; 2 p.l., 436 pp. Three vols. 8vo, cont. mottled sheep (one or two unimportant defects to binding of Vol. I), flat spines nicely gilt, red & green morocco labels on spines. Paris: Deterville, An 3 [1795]. $1000.00

Second edition, revised, and enlarged, of one of most important textbooks of chemistry of the period; it was written for the course on chemistry which Chaptal gave at Montpellier where he was appointed to the new chair of chemistry in 1780. In this work, Chaptal develops the general principles, pointing out their consequences and their applications. He adopts Lavoisier's oxygen theory which he found of great benefit in both theoretical and practical chemistry.

A pretty set and scarce on the market.

❧ *D.S.B.*, III, pp. 198-203. Partington, III, pp. 557-60. Not in Cole.

15. CHAPTAL DE CHANTELOUP, Jean Antoine Claude,Comte de. *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."

16. CHAPTAL DE CHANTELOUP, Jean Antoine Claude, Comte. *Chimie appliquée a l'Agriculture*. 2 p.l., vi, lvi, 298 pp.; 1 p.l., 484 pp. Two vols. 8vo, cont. sheep-backed paste-paper boards (minor foxing at front & back of each vol.), flat spines nicely gilt, red morocco lettering piece on spines. Paris: Huzard, 1823. $1250.00

First edition of Chaptal's important treatise on agricultural chemistry. "It will be noted that Chaptal does not limit his discussions to the chemistry of the atmosphere, soils, fertilizer, and plant growth, as was done by Davy and most previous writers on agricultural chemistry, but that he enormously amplifies the scope of his volume by making these subjects . . . an introduction to the main practical part of his book . . . The operations of cooking; food preservation; fermentation of wine, cider and beer; alcohol distillation; butter and cheese manufacture; preparation of fruit juices and other beverages; purification of water; farm sanitation; washing and cleaning of fabrics; indigo fabrication, and beet sugar manufacture; all are described with a wealth of historical references and personal observations which were the result of Chaptal's immense learning and long years of practical experience."–C.A. Browne, *A Source Book of Agricultural Chemistry,* pp. 183-89.

Pretty set. Lacking half-title in Vol. II.

❧ Cole 250–"This is a book that had some impact on agricultural chemistry."

17. CHEVREUL, Michel Eugène. *Considérations Générales sur l'Analyse Organique et sur ses Applications*. 3 p.l., xxi, 256 pp., 1 leaf (several preliminary leaves misbound). 8vo, cont. green sheep-backed marbled boards (minor rubbing), flat spine nicely gilt. Paris: F.G. Levrault, 1824. $1250.00

First edition. "Following the completion of his investigation of natural fats, Chevreul wrote a work of a more general nature, *Considérations générales sur l'analyse organique* (1824), which is a reflection on the many years of research with organic materials. Here Chevreul considered the methods of research in organic chemistry, methods that he himself used with such success in his investigations. The primary analytical problems were how to determine whether one had a pure substance or a mixture and how to resolve the frequently complex animal or plant material into its immediate principles. It was Chevreul who placed this

immediate analysis on a rigorous basis. He considered the methods used in handling natural products, in isolating pure substances from them in unaltered form, and in recognizing their purity. He gave precise criteria for what constituted a pure organic compound and presented for the first time a clear and accurate account of the methods of immediate analysis that must necessarily precede elementary analysis."–*D.S.B.,* III, p. 243.

Very nice copy.

"Contains Many Interesting Details"–Duveen

18. COTTEREAU DU CLOS, Samuel. *Observations sur les Eaux minerales de plusieurs Provinces de France, faites en l'Academie Royale des Sciences en l'Année 1670. & 1671*. Engraved royal arms on title & one engraved headpiece. 203 pp., [4] leaves. 12mo, cont. calf (extremities a little rubbed & worn), spine nicely gilt. [Paris]: de l'Imprimerie Royale, 1675. $1250.00

First edition of an important and comprehensive balneological work. "This work contains many interesting details referring to the chemistry of the waters of various places which are listed and described."–Duveen, p. 183.

Nice copy. Library bookplate and inoffensive accession stamp on verso of title.

19. COTTING, John Ruggles. *An Introduction to Chemistry, with Practical Questions: designed for Beginners in the Science. From the latest and most approved Authors. To which is added a Dictionary of Terms*. One folding printed table of metals & five engraved plates (one folding). vii, [4], 420 pp. 8vo, cont. American sheep (joints a little split at feet but strong), flat spine gilt, black morocco lettering piece on spine. Boston: C. Ewer, May 1822. $350.00

First edition. "An American textbook published to 'bring the principles of chemistry into as small a compass as possible, and . . . exhibit the various subjects treated of by the most eminent chemical writers of the present day' (Preface). The brief 'Dictionary of terms' occupies pages 377-403. Cotting (1783-1867), lectured on natural and experimental philosophy, chemistry, and botany in Boston, Massachusetts."–Neville, I, p. 298.

Very good copy.

20. CREVE, Carl Caspar. *Beschreibung des Gesundbrunnens zu Weilbach im Herzogthum Nassau*. One folding engraved map. xliv, 188 pp. 8vo, cont. marbled boards. Wiesbaden: Schellenberg, 1810. $850.00

First edition. Creve (1769-1853), was a physician at Mainz, where he obtained a professorship in 1793. A prolific author, he wrote books on a variety of medical subjects including obstetrics and Galvanic electricity. In this book, Creve describes the mineral springs of Weilbach, which is located between Mainz and Frankfurt. He provides a very detailed history and chemical analysis of the waters as well as the various therapies which the waters could provide.

The well-engraved map shows the location of Weilbach.

Fine copy and very rare with no copy in OCLC.

❧ Hirsch, II, 142-43.

The Leblanc Process

21. [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.

22. (DAVY, H.). *Memoirs of the Life of Sir Humphry Davy, Bart. LL.D. F.R.S.*... By his brother John Davy, M.D. F.R. S &c. Finely engraved mezzotint port. of Sir Humphry & diagrams in the text. xii, 506, [1] pp.; vii, 419, [1] pp. Two vols. 8vo, cont. green calf, sides & spines richly gilt,

red morocco lettering pieces on spines. London: Longman, etc., 1836. $1350.00

First edition of the best early biography of Sir Humphry Davy, written by his brother John (1790-1868), himself a chemist and physiologist (see *D.S.B.*, III, pp. 604-05).

Fine and pretty set. Errata slip in Vol. I.

A Rare & Popular Work on Medicaments

23. DUPUIS, Guillaume. *De Medicamentorum quomodocunque purgantium facultatibus, nusquam anteà neque dictis, neque per ordinem digestis Libri Duo*. Woodcut vignette on title depicting Hippocrates & Galen. 4 p.l., 179 pp. Small 4to, antique reversed calf (a few headlines shaved). Lyon: M. Bonhomme, 1552. $6750.00

First edition of this very popular and rare book on medicaments; it was reprinted for more than one hundred years. Dupuis (or Puteanus) was professor of medicine at the University of Grenoble where he had the reputation as an excellent physician. Dupuis "was another who came to the defense of Mesue against Manard and Fuchs as to the use of aloes and rhubarb. He further asserted that a good part of recent physicians had overwhelmed medicine with innumerable errors, basing their judgment not on reason but witnesses, as if there were no art, no method handed down teaching physicians to know the qualities and properties of medicinal simples."–Thorndike, V, pp. 449-50.

There are a number of references to rhubarb in the text.

Fine copy with some contemporary marginal annotations (some cropped).

❧ Partington, II, p. 97. Wellcome, I, 5300.

24. EISSFELD, Martin Friedrich Ludwig. *Abhandlungen von dem Nutzen der Schlackenbäder mit einer Zugabe*. 8 p.l., 80 pp. Small 8vo, cont. wrappers. Quedlinburg: Widow of G.H. Schwan & Reussner, 1766. $950.00

First edition of this very rare work on mineral springs rich in iron. Eissfeld, a medical doctor at Quedlinburg provides a historical introduction regarding the usefulness of drinking and bathing in mineral springs impregnated with iron to cure many diseases. The author offers many case histories.

Fine copy.

❧ Ferchl, p. 140.

25. ERCKER, Lazarus. *Aula Subterranea Domina dominantium Subdita subditorum. Das ist, Untererdische Hofhaltung, ohne welche weder die Herren regieren, noch die Unterthanen gehorchen können. Oder Gründliche Beschreibung der jenigen Sachen, so in der Tieffe der Erden wachsen, als aller Ertzen der Königlichen und gemeinen Metallen, auch fürnehmster Mineralien, durch welche nächst Gott, alle Künste, Ubungen und Stände der Welt gehandhabet und erhalten werden…* Engraved title (a little wormed in lower inner corner, just barely touching the image), woodcut printer's device on title, & 38 large woodcuts in the text. 8 p.l. (incl. engraved title, last leaf a blank), 332, [4] pp.; 2 p.l., 47 pp. Two parts in one vol. Small folio, cont. vellum MS. over boards (quite browned throughout, some mostly marginal worming). Frankfurt: J.D. Zunner, 1672 [engraved title dated 1673]. $2250.00

Fifth edition of this finely illustrated technological work; the first edition, issued in 1574 in Prague, is an extremely rare book. The present edition is the first "to contain the important annotations and *Interpres phraseologiae metalllurgicae* (glossary of mining terms) of Christian Berward, separately paginated with its own title page dated 1673 . . . This is the first edition to appear with the title *Aula Subterranea.*"–Neville, I, pp. 421-22.

This is the first manual of analytical and metallurgical chemistry. Ercker (ca.1530-94), held various mining posts at Dresden, Goslar in the Tyrol, Prague, and elsewhere during a twenty year period. Because of these positions, Ercker acquired extensive experience in chemistry and metallurgy. The present work — the author's magnum opus — offers "a systematic review of the methods of testing alloys and minerals of silver, gold, copper, antimony, mercury, bismuth, and lead; of obtaining and refining these metals, as well as of obtaining acids, salts, and other compounds. The last chapter is devoted to saltpeter. Ercker described laboratory procedures and equipment, gave an account of preparing the cupel, of constructing furnaces, and of the assaying balance and the method of operating it. He used as his model Agricola's *De re metallica,* yet he was quite original and included only the procedures he himself had tested. Ercker was so hostile to alchemy that he did not use alchemical symbols . . ."–*D.S.B.*, IV, p. 393.

Good copy but quite browned.

❧ Hoover 283. Sisco & Smith, p. 330.

26. FARADAY, Michael. *Manipulations Chimiques…* traduit de l'Anglais par M. Maiseau…et revu pour la Partie technique par M. Bussy. Woodcuts in the text. xxiv, 428 pp.; 2 p.l., 364 pp., one leaf of errata. Two vols. 8vo, orig. paste-paper wrappers (minor wear, some light foxing, minor dampstain to last 20 leaves of Vol. II), uncut, orig. printed labels

on spine (chipped). London: W. Phillips, 1827. $750.00

First edition in French (1st ed.: London, 1827). "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…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.

The valuable notes have been added by the translator Raymond Balthasar Maiseau (1782-1843), who also converted English weights and measures into the metric system. Much of the text was reviewed by Antoine Alexandre Brutus Bussy (1794-1882).

Very good set.

❧Neville I, p. 443–"Rare."

27. 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 marbled boards, spine gilt, black leather 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.

28. FAUJAS DE SAINT-FOND, Barthélemy. *Mémoire sur la Maniére de reconnoitre les différentes Espéces 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.

29. 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.

A Definitive Work on Mineral Springs and Baths

30. [FUCHS, Georg Friedrich Christian, ed.]. *Systematische Beschreibung aller Gesundbrunnen und Bäder der bekannten Länder vorzüglich*

Deutschlands, sowohl nach ihrer physisch-chemischen Beschaffenheit als auch ihrem medicinischen Gebrauch. Für Aerzte und jeden, der eine Uebersicht und Beschreibung aller bis jetzt existirenden Bäder und Gesundbrunnen verlangt, von einigen Aerzten und Chemisten herausgegeben. viii, 518 pp.; xv, [1], 671 pp. Two vols. 8vo, cont. blue boards. Jena & Leipzig: C.E. Gabler, 1798-99. $1950.00

First edition of a rare book with no copy in *N.U.C.*; it is one of the most complete accounts of mineral springs of the world. This is a remarkable work: Vol. I lists all the known mineral springs and baths in Germany, Austria, and Bohemia along with their histories and extensive details regarding their chemical and mineral qualities and therapeutic uses. In excess of 300 springs and baths are listed. Pages 440-502 contain a full bibliography, arranged chronologically, of writings on mineral waters, beginning with Fuchs' *Historia Omnium Aquarum* (1542). This is the second earliest bibliography on the subject and was unknown to Besterman.

Vol. II is devoted to mineral springs and baths in the rest of Europe, Britain, America, etc. For example, on pages 21-22, we find a very good description of Saratoga.

Fuchs (1760-1813), was professor of medicine at Jena and wrote numerous chemical works including a bibliography of chemistry from 494 B.C. until 1806.

Fine set.

❧ Hirsch, II, p. 639.

31. GAY-LUSSAC, Joseph Louis. [Drop-title]: *Essai des Potasses du Commerce*. One engraved plate. 32 pp. 8vo, modern marbled boards (some foxing). [Paris: 1829]. $250.00

First separate edition, a newly paginated offprint from the *Annales de Chimie et de Physique* (1829). The great chemist Gay-Lussac (1778-1850), spent much of his career investigating the properties of potassium and its compounds.

Very good copy and very rare with no copy in OCLC. Old ownership stamp on first leaf.

❧ Poggendorff, I, 863.

32. GESNER, Johann Albrecht. *Nachricht von dem Canstatter Sultz-Wasser. Oder Beschreibung derer bey der Würtembergischen Amsts-Stadt Canstatt befindlichen mineralischen Bronnen und Quellen, Besonders aber deselbstigen Bades*. Von J.A.G. M.D. 64 pp. Small 8vo, cont. paste-paper

boards. Stuttgart: J.C. Erhardt, 1749. $1250.00

First edition and very rare with no copy in OCLC. Gesner (1694-1760), took his medical degree at Altdorf and is the author of the famous *Pharmacopoea Wirtembergica* (1741) as well as a number of balneological works.

In the present work, Gesner provides a history of the saline and chalybeate springs of Canstatt (a town now subsumed by greater Stuttgart) and describes the geological and mineralogical surroundings, the chemical constituents of the waters, and their medical uses.

Fine copy in attractive state.

❧ Hirsch, II, p. 733.

33. GIBBS, Josiah Willard. "On the Equilibrium of Heterogeneous Substances . . . Abstract by the author," pp. 441-58 in *The American Journal of Science and Arts* (Eds. James D. & E.S. Dana, and B. Silliman), Third Series, Vol. XVI, No. 96, December 1878. 8vo, orig. printed wrappers (spine frayed & text leaves loose in wrappers). New Haven: 1878. $1000.00

"Abstract of Gibbs' contribution which originally appeared in its entirety in the *Transactions of the Connecticut Academy of Arts and Sciences*."–Roberts & Trent, *Bibliotheca Mechanica*, p. 138.

Good copy preserved in a slip case. Ex Bibliotheca Mechanica.

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

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

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

It is interesting to note that in 1793 Klaproth, along with Hermbstädt, discredited Gren and other phlogistonists who had denied the accuracy of

Lavoisier's account of his famous experiment in which he reduced mercuric oxide. This did not prevent Klaproth from revising this, one of Gren's most important textbooks.

Nice set.

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

The Earliest Fuel Cell

35. GROVE, William Robert. *On the Gas Voltaic Battery. Experiments made with a View of Ascertaining the Rationale of its Action and its Applications to Eudiometry . . . from the Philosophical Transactions. — Part II. for 1843*. One plate (detached & quite foxed). 1 p.l., [91]-112 pp. London: R. & J.E. Taylor, 1843. $750.00

Offprint with a specially printed title-page; presentation copy, inscribed on the title "From the Author" (cropped). This is the first description of Grove's "gas battery", "which was, in fact, the earliest fuel cell; its possibilities have only recently been exploited."–*D.S.B.,* V, p. 559.

Very good copy. Ex Bibliotheca Mechanica.

36. HASSENFRATZ, Jean Henri. *Traité théorique et pratique de l'Art de calciner la Pierre calcaire, et de fabriquer Toutes Sortes de Mortiers, Cimens, Bétons, etc., soit a bras d'Hommes, soit a l'aide de Machines*. Fine lithographed frontis. port. of the author & eleven folding engraved plates. xvi, 430 pp. Large 4to, cont. sheep-backed marbled boards (upper joint a little rubbed), flat spine gilt, black leather lettering piece on spine. Paris: Carilian-Goeury, 1825. $1250.00

First edition. "Although this work by Hassenfratz gives an excellent overall picture of the manufacture of mortars all over Europe and shows the state of knowledge which existed at this fruitful and productive period in the development of the material, the history behind its writing is also of great interest. Hassenfratz wrote it in his seventies, at the end of a long and distinguished career both in the Corps des Mines and as a professor at the Ecole Polytechnique, and in his rueful preface he laments that young men, specifically Vicat who had been his pupil, fail to acknowledge the work of their predecessors as they forge ahead with their new discoveries. Consequently his own book gathers together and describes the work of every scientist, chemist and engineer, ancient and modern, ever concerned with the development of cement and includes all sorts of different mixes of mortar without distinguishing between good and bad, much to the disgust of his young contemporaries, notably Raucourt de Charleville. Nevertheless, it does contain a great deal of detailed

information, though it is probably more useful to the modern historian than it was to the engineers of his own time searching for a strong and reliable mortar among this forest of facts."–Elton, *Cat. 6*, 220.

Hassenfratz (1755-1827), learned chemistry while working in Lavoisier's laboratory. He later became professor of physics at the École Polytechnique and later taught the industrial applications of mineralogy at the École des Mines.

Fine copy. Bookplate of General J. Doreau.

❧ Cole 609–"This extensive work covers quicklime and limestone, their properties, both physical and chemical, the calcination of limestone, including much information concerning the furnaces used, and the manufacture of mortars and cements. *D.S.B.*, VI, pp. 164-65.

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

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

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

Fine copy.

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

38. HERMBSTAEDT, Sigismund Friedrich. *Anleitung zu der Kunst wollene, seidene, baumwollene und leinene Zeuge ächt und dauerhaft selbst zu färben; desgleichen Leinewand und baumwollene Zeuge zu bleichen, und degruckte Kattune und leinene Zeuge, so zu waschen, dass die Farben nicht zerstört werden*. x, 114 pp. 8vo, cont. marbled boards (extremities a little worn), contrasting leather lettering piece on spine. Berlin: C.F. Amelang, 1815. $1500.00

First edition and rare. "A 19th-century handbook on domestic dyeing, bleaching, and washing."–Ron, *Bibliotheca Tinctoria*, 518. The author wrote several other classic works on dyeing and bleaching.

Very good copy. This copy lacks the two leaf publisher's ads at end. Old

private library stamp on verso of title ("v. Böhl. Cramon").

❧ Partington, III, pp. 577-80. Poggendorff, I, 1082-83.

The True First Edition

39. HIGGINS, Bryan. *Experiments and Observations made with the View of Improving the Art of Composing and Applying Calcareous Cements and of preparing Quick-lime; Theory of these Arts; and Specification of the Author's cheap and durable Cement, for Building, Incrustation or Stuccoing, and artificial Stone*. xi, [1], 233 pp. 8vo, cont. speckled calf, joints neatly repaired, flat spine gilt, red morocco lettering piece on spine, initials of the Royal Geological Society of Cornwall on both covers. London: T. Cadell, 1780. $1250.00

The true first edition; see Cole 642 for details regarding how to determine the first edition from the reprint which was issued in 1796 or later. Cole himself did not own the first edition.

This is an account of the author's patented invention of a cheap and durable cement, which was composed of washed sand, slaked lime, limewater, and bone ash. Higgins provides numerous descriptions of chemical experiments which he conducted.

Higgins (1737?-1820), chemist and physician, opened a "School of Practical Chemistry" in 1774 and offered regular lectures for a number of years. His auditors included Edward Gibbon, Joseph Priestley, and Benjamin Franklin. "Beside lecturing, experimenting, consulting, and advising across a broad range of chemical topics, Higgins also developed a considerable business in the manufacture and supply of reagents and chemicals."–*D.S.B.*, VI, pp. 382-84.

Very good copy with half-title. Minor spotting to half-title and final leaf.

❧ Partington, III, pp. 727-36.

"An Excellent Monograph"

40. HILDEBRANDT, Georg Friedrich. *Chemische und mineralogische Geschichte des Quecksilbers*. x, 476 pp. 4to, cont. half-sheep & marbled boards, flat spine nicely gilt, green morocco lettering piece on spine. Braunschweig: Schulbuchhandlung, 1793. $1950.00

First edition. "Hildebrandt (1764-1816), M.D. (Gottingen, 1783), became professor of medicine, chemistry, and physics at the University of Erlangen. In this book, his first, he presents a detailed history of mercury and its compounds, with reference to the works of earlier chemists (e.g., Paracelsus, Basil Valentine, Becher, and Stahl), as well as those of more recent authors (e.g., Crell, Macquer, Priestley, Scheele, and Lavoisier)... Hildebrandt also published one of the

earliest German textbooks to use the new theory of chemistry of Lavoisier, entitled *Anfangsgründe der Chemie* (Erlangen, 1794) . . . Scarce."–Neville, I, p. 640.

A fine and attractively bound copy.

❧ Ferguson, I, p. 404–"An excellent monograph with numerous lists of books and papers."

The First Systematic Analysis of the Mineral Waters of Germany

41. HOFFMANN, Carl August. *Systematische Uebersicht und Darstellung der Resultate von zwey hundert und zwey und vierzig chemischen Untersuchengen mineralischer Wasser, von Gesundbrunnen und Bädern, in den Ländern des deutschen Staatenvereins, und deren nächsten Begränzungen. Nebst Anzeige aller über diese Heilwasser erschienenen Schriften*. 2 p.l., vi, 408 pp., one leaf of errata (with ads on verso). 8vo, cont. boards (joints a bit rubbed), orange leather lettering piece on spine. Berlin: Gädicke Brothers, 1815. $1950.00

First edition of an important balneological/chemical work; according to Ferchl, this work is the first to contain mineral water tables, systematically analyzing the chemical constituents of the mineral springs and baths of Germany.

Hoffmann (1756-1833), was court apothecary at Weimar and pharmaceutical adviser to Goethe. He specialized in the analysis of drugs, plants, and, especially, mineral waters.

Fine copy of a very uncommon book.

❧ Ferchl, p. 243. Hein & Schwarz, *Deutsche Apotheker-Biographie,* Vol. I, pp. 283-84. Poggendorff, I, 1127.

42. KEIR, James. *Versuche und Beobachtungen über die Auflösung der Metalle in Säuren und ihre Niederschlagungen nebst einer Nachricht von einem neuen zusammengesetzten sauren Auflösungsmittel, zum Gebrauch bey einigen technischen Operationen, zur Scheidung der Metalle* . . . Aus dem Englischen übersetzt von Ludewig Lentin. 40 pp. Small 8vo, modern boards. Göttingen: J.C. Dieterich, 1791. $1650.00

First edition in German and very rare; this is a translation of Keir's paper in the *Phil. Trans*. (1790) entitled "Experiments and Observations on the Dissolution of Metals in Acids; and Their Precipitations; With an Account of a New Compound Acid Menstruum, Useful in Some Technical Operations of Parting Metals." "This paper contains suggestions which probably contributed to the discovery of the electro-plate process."–*D.N.B.,* X, p. 1202.

Keir (1735-1820), "a pioneer industrial chemist . . . developed the first

commercially successful process for making synthetic alkali and did much to disseminate chemical knowledge."–*D.S.B.,* VII, p. 277. He was a member of the Lunar Society (other members included Erasmus Darwin, Matthew Boulton, Josiah Wedgewood, James Watt, and Joseph Priestley).

The translator was Augustin Gottfried Ludwig Lentin (1764-1823), an instructor at the University of Göttingen and inspector of saltworks at Sülbeck. He wrote several other chemical and metallurgical works including one on the famous copper mine in the Parys Mountain on the Welsh island of Angelsea. He constructed a large metallurgical furnace at Rammelsberg.

Fine copy.

❧ Ferguson, I, p. 453.

A Pretty Set from the Library of the Dukes of Bavaria

43. KLAPROTH, Martin Heinrich & WOLFF, Friedrich Benjamin. *Dictionnaire de Chimie*…traduit de l'Allemand, avec des Notes, par E.J.B. Bouillon-Lagrange…et par H.A. Vogel. Engraved frontis. port. & 8 engraved plates. Four vols. 8vo, cont. marbled sheep (a few minor abrasions), spines richly gilt, red & pale green morocco lettering pieces on spines. Paris: Klostermann fils, 1810-10-11-11. $1950.00

First edition in French of the first German chemical dictionary, originally published in Berlin in 1807–10. "Klaproth was the foremost supporter of Lavoisier's antiphlogistic theory in Germany, and in addition to his classic researches in analytical chemistry, he wrote an excellent chemical dictionary…The translators added valuable notes and state in their preface that all the important advances in chemistry since the beginnings of the science have been included. Detailed quantitative analytical data on chemical compounds and minerals, as well as the latest theories, are presented."–Neville, I, 732.

A very pretty set from the library of the Dukes of Bavaria.

❧ Cole 729. Duveen, p. 325.

A Royal Copy

44. LA MÉTHERIE, Jean Claude de. *Essai Analytique sur l'Air pur, et les différentes Espèces d'Air*. 3 p.l., 474, [2] pp. 8vo, early 19th-cent. marbled boards, flat spine gilt, orange leather lettering piece on spine. Paris: Rue et Hotel Serpente, 1785. $1500.00

First edition. La Métherie (1743-1817), an inveterate opponent of Lavoisier's theories, was chief editor of the famous *Journal de Physique* from 1785 until the year of his death. He wrote a number of important works on mineralogy and was a friend to many of the leading scientists of his time, especially Cuvier.

In this work, La Métherie stated that "all combustibles (including perhaps

diamond) contain inflammable air, which he identified with phlogiston and thought it is contained in metals . . . He called oxygen 'pure air' and nitrogen (phlogisticated air) 'impure air'. Pure air consists of vesicles inflated by the principle of heat. Nitrous air (nitrous oxide) is a compound of nitric acid and inflammable air or phlogiston. Fixed air, which he called 'acid air', can be converted into phlogisticated air or into pure air."–Partington, III, pp. 494-95.

A fine copy. Stamp on verso of half-title and title of Prince Ernest Augustus, Duke of Cumberland, and the subsequent Kings of Hanover.

❧ Cole 742–"The book is a survey of existing information concerning various kinds of airs and the experiments and discoveries of Lavoisier, Priestley, Scheele and others." *D.S.B.,* VII, pp. 602-04. Duveen, p. 335. Neville, II, pp. 5-6.

45. LANDRIANI, Marsilio. *Opuscoli Fisico-Chimici*. One folding engraved plate & five finely engraved headpieces. 2 p.l., 190 pp. 8vo, orig. limp boards, uncut. Milan: G. Pirola, 1781. $1950.00

First edition and a very handsome copy in original state. Landriani (ca. 1751-not later than 1816), Court Marshal of the Duke of Saxony-Teschen in Vienna, is best known for the invention of the eudiometer which "entered the history of science as a valued instrument for analyzing gases."–*D.S.B.,* VII, p. 621.

"Included in this collection are memoirs on latent heat (giving J. Black credit for the discovery), the nature of acids (all acids are derived from 'acido mefetico') and the production of dephlogisticated air. Apparently other volumes were planned but not published."–Cole 748. Memoirs on meteorology and physics are also included in the present work.

Fine copy. Engraved armorial bookplate of G.C. v. Fechenbach.

❧ Partington, III, p. 323. Not in Duveen.

The Most Important Milestone in the Development of Chemical Nomenclature

46. LAVOISIER, Antoine Laurent et al. *Méthode de Nomenclature Chimique, Proposée par MM. de Morveau, Lavoisier, Bertholet, & De Fourcroy. On y a joint un nouveau Systême de Caractères Chimiques, adaptés à cette Nomenclature, par MM. Hassenfratz & Adet*. One large folding printed table & six folding engraved plates. 2 p.l., 314 pp. 8vo, cont. mottled calf (foot of one joint repaired). Paris: Cuchet, 1787. $2000.00

First edition, second issue, of one of the key books in the history of modern chemistry. Lavoisier's discoveries made a new and rational chemical nomenclature imperative. Initiated by Guyton de Morveau, still an adherent of the phlogiston theory, the project was taken up by Lavoisier, who soon

convinced Guyton of the truth of his system. They entered into collaboration with Berthollet and Fourcroy. The result of their combined efforts is contained in the present volume, the most important milestone in the development of chemical nomenclature. The new nomenclature, with only slight modifications, is still the basis of the language of modern chemistry.

In the second printing of the first edition, the following pages are misnumbered: 241-56 instead of 257-72.

Very good copy.

❧ Cole 566. Duveen & Klickstein 129. Sparrow, *Milestones of Science,* p. 27 and plate 113.

47. LAVOISIER, Antoine Laurent. *Opuscules Physiques et Chymiques…Seconde Édition*. Three folding engraved plates. xxx, [2], 443 pp. Two parts in one vol. 8vo, cont. half-sheep & speckled boards, flat spine gilt, blue morocco lettering piece on spine. Paris: Deterville, 1801. $1250.00

Second edition of this "pioneer work in which [Lavoisier] first gives a historical survey of previous workers' efforts and then describes his own experiments on gases and the conclusions to be derived from them."–Duveen & Klickstein, p. 94.

"The genuine second edition in which Deterville has reprinted the entire book with the errata corrected in the text and with the plates reengraved by Tardieu senior. Another so-called *seconde edition* published in 1801 is merely a reissue of the first edition, with the replacement of the dedication leaf to Trudaine de Montigny by a half title and a new title page, and with the same plates as the 1774 issue. The present edition is the first new printing of the *Opuscules* since Lavoisier's death in 1794."–Neville, II, p. 19.

A very fine copy.

❧ Cole 769. Duveen & Klickstein 123. Neville, II, p. 19–"It exerted a tremendous influence on Continental chemists and set the stage for Lavoisier's overthrow of the phlogiston theory."

48. LAVOISIER, Antoine Laurent. *Trattato Elementare di Chimica presentato in un Ordine nuovo dietro le Scoperte moderne*. Two folding printed tables & 13 folding engraved plates. Four vols. 8vo, cont. limp boards (Vol. III sympathetically rebacked to match), uncut. Venice: A. Zatta & Sons, 1792. $1250.00

Second edition of the Dandolo translation into Italian; this edition contains some additional notes and corrections. Volume III, entitled *Esame delle Affinità Chimiche,* is Dandolo's translation of parts of the essay on chemical affinity by

Guyton de Morveau in the *Encyclopédie Methodique*. Volume IV is Dandolo's adaptation in Italian of the "Synonimie" and the "Dictionnaire" of the *Nomenclature Chimique* (Paris, 1787).

"One of the great milestones in the history of chemical literature. By common consent modern chemistry begins with this work, 'which finally freed the science from its phlogiston chains and formed the starting point of its modern progress. It may be said to have done almost as much for chemistry as Newton's *Principia* did for physics' (Zeitlinger). Lavoisier used the balance to demonstrate the weight of matter at every chemical change, defined the terms element and compound, explained combustion and the rusting of metals as a chemical combination with oxygen, and through his concept of the conservation of matter developed methods of chemical analysis. The book contains the first list of twenty-three chemical elements and their compounds."–Neville, II, p. 21.

Dandolo (1758-1819), a wealthy Venetian, occupied himself with the breeding of sheep, the production of silk, the manufacture of grape sugar, and oenology; he wrote on these and other economical subjects.

Very good set with half-titles. Bookplate of the "Bibliothecae Nobilis Collegii Ptolemaei." Some light staining to the early leaves of Vol. III. The first edition in Italian appeared in 1791.

❧ Cole 793. Duveen & Klickstein 150 & 181. Neville, II, p. 26.

The Pirated Edition

49. LAVOISIER, Antoine Laurent. *Traité Élémentaire de Chimie, présenté dans un Ordre nouveau et d'après les Découvertes modernes . . . Seconde Édition*. Two folding printed tables & 13 folding engraved plates, drawn & engraved by Madame Lavoisier. xliv, 322 pp.; viii, 327 pp. Two vols. 8vo, cont. calf-backed paste-paper boards, flat spines gilt, green morocco lettering pieces on spines. Paris: Cuchet, 1793. $1250.00

The rare pirated "second" edition, printed by de Boiste, and issued without the knowledge or authorization of Lavoisier.

Very good set.

❧ Cole 777. Duveen & Klickstein 156. Neville, II, p. 21-23.

50. LAVOISIER, Antoine Laurent. *Traité Élémentaire de Chimie, présenté dans un Ordre nouveau et d'après les Découvertes modernes . . . Seconde Édition*. Two folding printed tables & 13 folding engraved plates, drawn & engraved by Madame Lavoisier. xliv, 322 pp.; viii, 331 pp. Two vols. 8vo, antique sheep-backed marbled boards (some foxing), flat spines gilt.

Paris: Cuchet, 1793. $1250.00

Although described as the "seconde édition" on the title, this seems to follow a pirated "seconde édition" printed by de Boiste earlier in the same year. Our edition was printed by Chardon.

Very good set.

❧ Cole 778. Duveen & Klickstein 157. Neville, II, p. 23.

51. LAVOISIER, Antoine Laurent. *Elements of Chemistry, in a New Systematic Order, containing All the Modern Discoveries*…Translated from the French, by Robert Kerr…Second Edition, with Notes, tables, and considerable Additions. Two folding printed tables & 13 folding engraved plates. xlvii, [49]-592 pp. 8vo, cont. marbled calf (joints & ends of spine carefully repaired). Edinburgh: W. Creech, 1793. $1750.00

Second edition of the Kerr translation, with an additional eighty-one pages of new material and the type completely reset. Weights have been converted to English units and the temperatures are given in degrees Fahrenheit. Plate XI contains for the first time an important change (see Duveen & Klickstein, p. 159 for a discussion). This edition was published because the first edition of 1790 was exhausted.

Very good copy. Early engraved bookplate of Giulio Doria. Signature of Mr. R. M. Thomas, August 1811 and "Gul. Bolts." William Bolts (1739-1808), was a merchant, speculator, and adventurer in India (see ODNB for more about this fascinating man).

❧ Cole 783. Duveen & Klickstein 166. Neville, II, p. 24.

52. LAVOISIER, Antoine Laurent. *Traité Élémentaire de Chimie, présenté dans un ordre nouveau et d'après les découvertes modernes…Troisième Edition, corrigée et augmentée de plusieurs Mémoires nouveaux*. Two folding printed tables & 13 folding engraved plates, drawn & engraved by Madame Lavoisier. xliv, 386 pp.; vii, 377, [1] pp. Two vols. 8vo, cont. calf-backed paste-paper boards (joints & ends of spines carefully repaired), flat spines gilt, green morocco lettering pieces on spines. Paris: Deterville, 1801. $1250.00

Third edition, with important additions. For the first time, the first two of the three papers Lavoisier wrote on respiration are reprinted in this work, as well as his two memoirs on transpiration, the second of which had not been previously published.

Very good set with half-titles.

❧ Cole 780. Duveen & Klickstein 159. Neville, II, p. 23-24.

53. LIEBIG, Justus von. *Chimie organique appliquée à la Physiologie végétale et à l'Agriculture suivie d'un Essai de Toxologie*…traduction faite sur les manuscrits de l'auteur par Charles Gerhardt. 4 p.l., 392 pp. 8vo, cont. green sheep-backed marbled boards, flat spine nicely gilt. Paris: Fortin, Masson, 1841. $850.00

First edition in French of one of the great books on agricultural chemistry. It "contains three main sections: the chemical process of respiration and nutrition; the metamorphosis of forms,…and the phenomena of movement in animal organisms, followed by discourses on the theories of disease and of respiration. The medical value of the book…consists in the clear explanation of the chemical process in respiration (including the importance of oxygen), the introduction of the concept of metabolism, and a classification of the organic foodstuffs. With these three sections, von Liebig laid the foundation of subsequent biochemical knowledge."–Lilly Library, *Notable Medical Books* (comp. by W.R. LeFanu), p. 197–(referring to the first edition, in German, 1840).

Very nice copy.

❧ Garrison-Morton 677–"First classification of the organic foodstuffs and the processes of nutrition. With this book Liebig introduced the concept of metabolism into physiology." *Printing & the Mind of Man* 310b–with this book he "became the founder of modern nutrition."

54. LIEBIG, Justus von. *Familiar Letters on Chemistry, and its Relation to Commerce, Physiology, and Agriculture*…Edited by John Gardner, M.D. 180 pp. Small 8vo, orig. black cloth-backed tan boards, orig. printed label on spine. New York: D. Appleton, 1843. $350.00

First American edition of this famous work, containing sixteen letters. Subjects include an introduction to chemistry, chemical technology, organic chemistry, biochemistry, and agricultural chemistry. The final chapter announces the author's discovery of the importance of phosphates in agriculture.

Very good copy. The first edition appeared in English in London in the same year.

55. LIEBIG, Justus von. *Chemische Briefe*. xi, [1], 342 pp. 8vo, orig. brown patterned cloth (some foxing), spine lettered in gilt. Heidelberg: C.F. Winter, 1844. $500.00

First complete edition. "The first edition in book form of this collection of twenty-six letters (in the original German). Their first appearance in print was in the *Augsburger Allgemeine Zeitung,* 1842-44. This original German text was preceded in 1843 by an English and an American edition, each containing sixteen letters…Despite the fact that this was one of Liebig's most popular works, the

German first edition is now rare."–Neville, II, 69.

Apart from the foxing, a nice copy.

56. LIEBIG, Justus von. *Letters on Modern Agriculture…* Edited by John Blyth, M.D. xxviii, 284 pp., 8 pp. of ads. 8vo, orig. patterned brown cloth (head of spine a little worn), upper cover & spine stamped in gilt. London: Walton & Maberly, 1859. $500.00

First edition in English of this important compendium of Liebig's researches and theories on agricultural chemistry. "Liebig dedicated these fourteen long letters (i.e., essays) on agricultural chemistry to Maximilian II, king of Bavaria. John Blyth was professor of chemistry in Queen's College, Cork, and this English translation was overseen by Liebig."–Neville, II, p. 72.

Very good copy. Stamp on title of William P. Endicott and bookplate of George Peabody of Salem. Peabody (1795–1869), was an entrepreneur and philanthropist who founded the Peabody Institute.

Pretty Set

57. MACQUER, Pierre Joseph. *Élémens de Chymie-Pratique, contenant la Description des Opérations fondamentales de la Chymie, avec des Explications & des Remarques sur chaque Opération*. Engraved vignette on each title. 2 p.l., lxxii, 519, [1] pp.; 8 p.l., 576 pp. Two vols. Small 8vo, cont. mottled calf, spines richly gilt, red & green morocco lettering pieces on spines. Paris: J.T. Hérissant, 1756. $1500.00

Second edition, revised and corrected; this book "presents the operations of chemistry as applied to mineral, vegetable and animal substances and is, as well, an extensive account of compound substances."–Cole, p. 361.

Fine and handsome set. 18th-century engraved French armorial bookplate in each volume.

❧ Cole 883–"The second edition has some corrections and additions. The Avant-Propos was expanded and a long section, Eclairissemens, responding to criticisms of the first edition by the unknown translator of Cramer's Elementa artis docimasticae and by the editor of Lemery's Cours de chymie, Théodore Baron d'Hénouville (1715-1768)."

58. 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. xlvi, [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).

59. [MARCET, Jane]. *Conversations on Chemistry, in which the Elements of that Science are familiarly explained and illustrated by Experiments and Plates. To which are added, Some late Discoveries on the subject of the Fixed Alkalies, by H. Davy, Esq. of the Royal Society. A Description and plate of the Pneumatic Cistern of Yale College.— and a short Account of Artificial Mineral Waters in the United States. With an Appendix, consisting of Treatise on Dyeing, Tanning and Currying*. Engraved frontis. & 11 engraved plates. xi, 358, 17, [7] pp. 8vo, cont. American marbled sheep (joints slightly cracked but strong, some foxing due to the quality of the paper), flat spine gilt. New Haven: Sidney's Press for I. Cooke, 1809. $250.00

"The third American edition (first and second: Philadelphia, 1806, and 1809), to which the anonymous editor has added new material on mineral waters and the principles of dyeing, tanning, and currying. The recent isolation of the alkali metals, potassium and sodium, by Humphry Davy is described."–Neville, II, pp. 141-42. E.F. Smith has suggested that the editor was Benjamin Silliman the elder (1779-1864), professor of chemistry at Yale. If that is correct, this edition might well proceed the Philadelphia edition of the same year.

This was one of the most popular introductory chemical textbooks ever written.

Some light dampstaining but a very good copy. Signature of "Ann Eliza Whitney, April 3d 1820" on recto of frontispiece and on title.

❧ Cole 912.

60. MARPERGER, Paul Jacob. *Curieuse Nachricht, von Erfindungen und Erfindern der Wissenschafften, Künste und Handwercken, mit Angeführten Autoren in bequemer Kürtze nach alphabetischer Ordnung eingerichtet*.

Woodcut vignette on title. 167, [1] pp. Small 8vo, modern vellum. Hamburg: B. Schiller, 1704. $1500.00

First edition of this rare work. Marperger (1656-1730), was a prominent German economist who wrote a long series of books on trade, banking, stock exchanges, fairs and markets, etc. These books were all concerned with methods of increasing industry, trade, and national wealth.

The present work — an encyclopedia of inventions — contains more than 500 short articles on useful discoveries and industrial techniques. A few of the topics discussed are dyeing, bookbinding, paper making, manufacturing pharmaceuticals, tobacco, brewing beer, metallurgy, mining, milling, etc., etc.

Very good copy.

❧ *N.B.G.*, Vol. 33, cols. 936-38.

Mayer's Dissertation

61. MAYER, Julius Robert von. *Ueber das Santonin. Eine Inaugural-Dissertation welche zur Erlangung der Doctorwürde in der Medicin & Chirurgie unter dem Praesidium von Wilhelm von Rapp*. 46 pp. 8vo, self-bound. Heilbronn: M. Müller, 1838. $750.00

First edition of Mayer's inaugural dissertation, for which he was awarded his doctorate of medicine. Mayer (1814-78), was one of the early formulators of the principle of the conservation of energy, along with Joule, Thomson, and Tait (see *D.S.B.*, IX, pp. 235-40).

Santonin is an anthelmintic used to poison the round worm *Ascaris lumbricoides*. It must be administered while fasting and be followed by a purgative in order to expel the worm.

Fine copy. Stamp on title of Starkenstein. Ex Bibliotheca Mechanica.

62. MORELL, Karl Friedrich. *Chemische Untersuchung einiger der bekanntern und besuchtern Gesundbrunnen und Bäder der Schweiz*. One folding engraved plate. 11 p.l., 385, [1] pp. 8vo, orig. paper wrappers, uncut. Bern: E. Haller, 1788. $1250.00

First edition of the best early survey of the numerous mineral springs in Switzerland. Morell (1759-1816), an apothecary in Bern, wrote several other books and articles on balneology. He has described each spring, provided a history, and given an account of the properties the waters have along with the diseases they could cure.

Attractive copy in original state. The folding plate depicts distillation equipment.

❧ Poggendorff, II, 201.

63. MUELLER, Gottfried. *Thermae Volccensteinenses, Historice, Physice, Moraliter ac Theologice descriptae; oder Historisch-physicalische Beschreibung auch Moral-theologische Betrachtung des Warmen Bades unter Wolckenstein, und mit Anfügung einer besondern Bade-Predigt . . . ans Licht gestellet*. Title printed in red & black. 8 p.l., 352 pp.; 208, [42] pp., [3] pp. of errata. Two parts in one vol. 8vo, later 18th-cent. boards. Dresden & Leipzig: J.J. Winckler's Widow, 1721. $1350.00

First edition of this very rare book; OCLC locates no copy in the U.S. In the first part Mueller, pastor of Wolkenstein, has provided a very detailed history of the most notable mineral springs of the world. He then describes the springs of his own town and gives accounts of the famous people who have taken the waters there. The springs of Wolkenstein, located in the Erz mountains of the Czech Republic, are famous for their great heat and radioactive qualities. Mueller gives accounts of the various maladies which could be cured by taking and bathing in the waters.

Fine copy. Finely engraved bookplate of Philipp Heinrich Boecler (1718-59), a member of a prominent medical family in Strasbourg (see Hirsch, I, pp. 591-92).

64. NATERER (or NATTERER), François Xavier. *Beschreibung der Mineral-Wässer, des Leucker-Bades, samt dessen Ursprung, Wirkungen, und Gebrauch*. Folding engraved frontispiece. 8 p.l., 164, [11] pp. 8vo, cont. speckled boards (a little foxed). Sitten: S. Naterer, 1769. $1250.00

First edition of this very rare account of the mineral springs at Leuk (or Leukbad), an ancient little town in the Swiss canton of the Valais. The mineral springs are very hot and their therapeutic actions included curing rheumatism, gout, paralysis, scaly eruptions, and female complaints. Naterer, a medical doctor, has provided a chemical analysis of the water and outlines their therapeutic use.

The attractive and charming frontispiece depicts the town situated in a deep valley.

Fine copy. Presentation copy from the author.

❧ Ferchl, p. 378.

A Very Fine Copy

65. NICHOLSON, William. *The First Principles of Chemistry*. Engraved plate serving as the frontis. xxxi, 546, [4] pp. 8vo, fine cont. calf, spine gilt,

red morocco lettering piece on spine. London: G.G.J. & J. Robinson, 1792. $1750.00

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

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

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

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

66. PAJOT DES CHARMES, Claude. *L'Art du Blanchiment des Toiles, Fils et Cotons de tout genre, rendu plus facile et plus général, au moyen des nouvelles découvertes . . . et des découvertes faites par l'Auteur dans l'art de blanchir les papiers . . . ouvrage élémentaire composé en faveur des fabricans, des blanchisseurs, des teinturies, des imprimeurs en toiles et des papetiers*. Nine large folding engraved plates. 2 p.l., 280 pp. 8vo, orig. speckled wrappers (minor foxing, last three leaves with a light stain at foot), uncut. Paris: A.J. Dugour, An VIII [1800]. $1500.00

Second edition, a corrected reprint of the first edition of 1798. "Formerly an inspector of manufactures at Abbeville (ca. 1791), Pajot des Charmes (1756-1835) established a soda factory in the department of Aisne (1779-84) and later (1808) assisted in running a glass factory at Tourlaville. In this book he gives a detailed account of Berthollet's bleaching process using chlorine water. In an attempt to lessen the deleterious effects of breathing chlorine on the health of the workmen, he added potash or soda, or both, with quicklime to the chlorine water, in order to lower the vapor pressure of the chlorine over the solution. He discusses the harmful effects of breathing air containing chlorine and urges his workers to use gas masks of his own design and chew licorice. This recommendation by the author represents one of the earliest attempts to protect

the health of workers in the chemical industry."–Neville, II, p. 249.

Very good copy.

❧ Partington, III, p. 507. Ron, *Bibliotheca Tinctoria*, 800.

"An Important Work"

67. PARKES, Samuel. *Chemical Essay, principally relating to the Arts and Manufactures of the British Dominions*. 23 engraved plates (several lightly browned with faint offsetting onto opposing pages). Five vols. Small 8vo, attractive cont. patterned cloth, red leather labels on spines. London: Printed for the Author, 1815. $1750.00

First edition, and a lovely set, of "an important work in which Parkes gives a detailed account of the chemically based industries of the early nineteenth century. Included are chapters on the manufacture of glass, dyes and pigments, bleaching, soapmaking, acids, alkalies, salts, metals, nonmetals, ceramics, pottery, glazes, mortars, cements, leather tanning, distillation, and brewing. 'In selecting the subjects, the author has fixed upon those which seem to have been the least examined by other chemical writers' (I, vii)…The plates are of fine quality, clear and precise. A detailed index to the five volumes completes the work."–Neville, II, p. 265–(our copy's collation identical to Neville's).

Parkes (1761-1825), was a soapmaker and technical chemist.

Fine set of a popular work. There were later editions in English and translations into German, French, and Italian.

❧ Cole 1006–"A collection of essays on industrial processes by a practical manufacturing chemist. The essays contain much of historical interest. The plates are for the most part from the original drawings of equipment for new processes." Partington, III, p. 706.

First National Russian Pharmacopoeia

68. PHARMACOPOEA ROSSICA. Engraved title-page incorporating the insignia of Empress Catherine II. 156 pp., 2 blank leaves. 8vo, cont. sheep-backed blue paste-paper boards, flat spine gilt, red morocco lettering piece on spine. St. Petersburg: 1782.

[**bound with**]:

PHARMACOPOEA NAVALIS ROSSICA. *Aut Catalogus omnium necessariorum Medicamentorum quae secundum ordinum navivm classicarum pro itinere semestri in scrinio navali habere oportet*…Edita ab Andrea

Bacheracht. 60 pp. 8vo. St. Petersburg: 1784. $4750.00

I. Second edition of the first national Russian pharmacopoeia. According to Callisen, *Medizinischer Schriftsteller-Lexicon*, the *Pharmacopoea Rossica* is the work of two members of the St. Petersburg medical college, Christian Paeken (1731-99) and Georg Thomas von Asch (1729-1807), and was first published in 1778. The original edition of 1800 copies was sent by order to all physicians, pharmacies, hospitals, etc., and was soon exhausted; new editions were required in 1782 and 1798, and the manual was reprinted as recently as 1891 and 1930.

II. First edition in Latin, much revised. In 1784, sheets of the second edition of the *Pharmacopoea Rossica* were re-issued together with a new version of Heinrich Bacheracht's naval formulary. Heinrich or Andrei Gavrilovich Bacheracht (or Bakherakht) (1724/5-1806), studied medicine at Leyden and upon his return to St. Petersburg, served as physician in the artillery, and subsequently attained a high ranking medical post with the fleet. His formulary was first published in Russian in 1783 and shortly thereafter this Latin version appeared, "revisa et approbatra a Collegio Medico Imperiali." According to Berman, it is the earliest and most important of the Russian naval formularies and enjoyed several later editions and translations.

The first part of the work contains a table of supply listing about 150 drug items necessary for a voyage of six months' duration. There is a similar table listing required pharmaceutical and surgical equipment. There follows a collection of 42 prescriptions, directions on how to maintain a sick bay, and a discussion of diet for sick personnel.

Fine copies.

❧ Both works are described with reproductions of title-pages, etc., in A. Berman, "Early Russian Military and Naval Formularies," in *American Journal of Hospital Pharmacy,* 17 (1960), pp. 211-18, and by H. Mueller-Dietz, "Frühe russische Pharmakopoen," in *Berliner Medzin,* 16 (1965), pp. 308-12.

Very Fine in Red Morocco

69. REICHEL, Wilhelm. *Ueber die Eigenthümlichkeiten der Stahlquellen Stebens, in pharmakodynamischer Hinsicht*. viii, 171 pp. 8vo, cont. red morocco, double gilt filet round sides, flat spine gilt, a.e.g. Hof: G.A. Grau, 1838. $850.00

First edition of this rare work — no copy in OCLC — on the mineral springs of Steben which is near Bayreuth in Bavaria. The water is impregnated with iron. Reichel, a physician at Steben, provides a history of the springs and their chemical constituents. He offers a great many case histories in which the waters were used to treat a wide variety of physical and mental illnesses.

A very pretty copy.

70. REUSS, Franz Ambrosius. *Physisch-chemische Untersuchung des Stecknitzer Gesundbrunnens im Saazer Kreise, nebst einigen medicinischen Bemerkungen über den Nutzen desselben in verschiedenen Krankheiten des menschlichen Körpers*. 52 pp. Small 8vo, self-wrappers. Prague: Haase & Widtmann, 1802. $950.00

First edition of this very rare balneological work, describing the mineral waters at Stecknitz in Bohemia. Reuss provides a very thorough chemical analysis of the waters and discusses the diseases which could be successfully treated there.

Reuss (1761-1830), took his medical degree in 1783 and established a practice at Prague; during the same period he also conducted mineralogical and geological investigations and went to Freiberg to hear Werner lecture at the Bergakademie. He wrote an important geological textbook which contained the most complete exposition of Werner's ideas.

"In 1784 Reuss became physician to Prince Lobkowitz and moved to the northwestern Bohemian city of Bilin . . . Bilin was already famous as a spa, and Reuss, in addition to his medical duties, supervised the exploitation of the mineral springs and mines belonging to his patron. In this connection he continued his mineralogical and geological researches and concurrently began an investigation of the spas of northern Bohemia."–*D.S.B.*, XI, p. 387.

Very good copy.

One of the Earliest English Books on Occupational Medicine

71. 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).

A Royal Copy

72. ROULAND, N. *Tableau historique des Propriétés et des Phénomènes de l'Air, considéré dans ses différens États et sou ses divers Rapports*. xvi, 636 pp., one leaf of errata. 8vo, early 19th-cent. marbled boards, flat spine gilt, orange leather lettering piece on spine. Paris: Gueffier, 1784. $1500.00

First edition. "This extensive work on gases is in three parts: I. physical properties of air, II. discussion of individual gases and III. the atmosphere. Each part gives up to date as well as some historical material including principles and experiments. Part II. is of special interest with chapters on fixed air, inflammable airs, dephlogisticated air and nitrous air. The works of Priestley, Cavendish, Ingenhousz, Fontana, Lavoisier, Volta and others are described. In general, the author uses the phlogiston theory but does describe Lavoisier's experiments on the composition of water (pp 414-418). Rouland admits it is difficult to deny the results and that the theory might explain a number of phenomena but he will not follow it. Earlier, in Part I. (pp 168-177), Guyton de Morveau's mechanical theory of combustion was given. The chapter on inflammable airs has a long section on balloons and the experiments and early flights of the Montgolfier brothers, P. de Rozier, Charles and Robert, and others."–Cole 1136.

Rouland (d. ca. 1820), was the nephew of Sigaud de la Fond whom he succeeded as professor of experimental physics at the University of Paris.

Fine copy. Stamp on verso of half-title and title of Prince Ernest Augustus, Duke of Cumberland, and the subsequent Kings of Hanover.

❧ Neville, II, p. 400.

An Early German Supporter of Lavoisier

73. ROUSSEAU, Georg Ludwig Claudius. *…Kurze Erinnerungen seiner chemisch-mineralogischen Lehrstunden für seine Schüler*. 2 p.l., 330, [16] pp., one leaf of errata. 8vo, cont. polished sheep, spine nicely gilt, green morocco lettering piece on spine. Ingolstadt: A. Attenkhover, 1789. $1950.00

First edition of a very rare book; OCLC locates no copy in the U.S. Rousseau (1724-94), an apothecary and professor of chemistry and natural history at the University of Ingolstadt, is noteworthy for being one of the earliest followers of Lavoisier's system in Germany.

"Rousseau stellte das Experiment in den Vordergrund seiner

naturwissenschaftlichen Forschungen und kam schon frühzeitig zu einer Ablehnung der Phlogistontheorie. Besondere Aufmerksamkeit widmete er der Mineralogie; in der Arzneimittellehre trat er dafür ein, wenige aber bewährte Mittel auch chemischer Natur zu verwenden."–Hein & Schwarz, *Deutsche Apotheker-Biographie,* Vol. II, p. 543.

Fine and pretty copy from the library of the Dukes of Bavaria.

❧ Hirsch, IV, p. 897. Poggendorff, II, 705-06.

74. SAGE, Balthazar Georges. *Mémoires de Chimie*. One folding engraved plate of chemical symbols. vii, [1], 262, xxxviii pp. 8vo, cont. mottled calf, spine gilt, red morocco lettering piece on spine. Paris: de l'Imprimerie Royale, 1773. $1350.00

First edition. "A collection of papers, chiefly on analyses of ores and minerals containing arsenic, antimony, cobalt, silver, etc. Other topics include coal, glass, the crystallization of metals from amalgams, metallic calces and remarks on a table of chemical affinities. Many, if not all, of the papers are reprinted from *Mémoires* de l'Académie des Sciences (1766–1772). Of some interest is the paper on 'animal salt' (pp. 59–65) in which Sage describes the preparation of crystalline potassium ferrocyanide."–Cole 1147.

Fine copy.

❧ Duveen, p. 523. Neville II, p. 414. Partington, III, p. 97.

"Smelling Salts"

75. SAGE, Balthazar Georges. *Expériences propres à faire connoître que l'Alkali Volatil-Fluor est le Remède le plus efficace dans les Asphyxies; avec des Remarques sur les Effets avantageux qu'il produit dans la Morsure de la Vipère, dans la Rage, la Brûlure, l'Apoplexie, &c.* 1 p.l., vii, [2], 62 pp. 8vo, later marbled boards. Paris: l'Imprimerie Royale, 1777. $950.00

First Paris edition, published in the same year as the first edition (issued at Nancy and very rare). This is a monograph on the chemical properties of sal volatile, prepared from sal ammoniac and slaked lime, and its uses in cases of asphyxiation and other accidents. It begins with the description of the experiment performed by Lavoisier at the Académie des Sciences, in which he demonstrated the asphyxiating power of carbon dioxide on a bird, which was then revived by Sage using volatile alkali fluid (ammonium carbonate), a preparation later known as "smelling salts." The Lieutenant-General of Police ordered a large number of copies to be printed for the welfare of the public.

Very good copy.

❧ Cole 1145. Neville II, pp. 413–414–(describing this as the first edition).

Asphyxiation

76. SAGE, Balthazar Georges. *Expériences propres a faire connoitre que l'Alkali Volatil Fluor est le Remede le plus efficace dans les Asphyxies; avec des Remarques sur les Effets avantageux qu'il produit dans la Morsure de la Vipère, dans la Rage, la Brulure, l'Apoplexie, &c*. Woodcut arms on title. 2 p.l., xvi, 76 pp. 8vo, attractive modern marbled boards, red morocco lettering piece on spine, outer & lower edges uncut. Paris: de l'Imprimerie de Monsieur, 1778. $400.00

Third edition, enlarged, of this monograph on the chemical properties of sal volatile and its use in cases of asphyxiation and other accidents by the well-known French chemist Sage (1740-1824). It was the first book printed by P.Fr. Didot after his appointment as printer to the brother of Louis XVI, later Louis XVIII, to whom it is dedicated.

Fine copy. This was an extremely successful book with many later editions and translations.

❧ *D.S.B.,* XII, pp. 63-69. Duveen, p. 523. Partington, III, pp. 97-98. See Cole, p. 476.

A Very Rare Pharmaceutical Book

77. SALA, Angelo. *Ternarius Bezoarticorum ou Trois Souverains Medicaments Bezoardiques, contre tous venins et empoisonnements tant externes que internes corruption de sang, & autres humeurs*. Finely engraved title-page. 14 p.l., 91, [1] pp. 4to, cont. vellum over boards (binding a little stained). Leyden: G. Basson, 1616. $9500.00

First edition of this extremely rare book. Sala (1576-1637), who converted to Calvinism when his family moved to Geneva from Vicenza about 1602, was the first chemist to perform an experiment in which a synthesis was confirmed by analysis. He also holds an important place in the early history of photography as he was the first to observe, in 1614, that silver salts darkened when exposed to the sun.

The years 1602 to about 1612 were Sala's *Wanderjahre* during which he worked as a physician and pharmacist in a number of cities, including Dresden, Sondrio, Ponte, Nuremberg, Frauenfeld, and Geneva. In 1612, he settled in The Hague where he practiced medicine and gave instruction in chemistry to medical students from various countries. He later moved to Oldenburg, Hamburg, and, due to the troubles caused by the Thirty Years War, several other German cities. In all these cities, he continued his chemical and pharmaceutical researches.

"Of his nineteen books, only a few have attracted the attention of historians…He followed the teachings of Paracelsus…Sala's chemical ideas proved to be historically influential."–*D.S.B.,* XII, p. 79. All of his books are rare.

The present text contains a number of pharmaceutical recipes created to remedy poisons of various kinds.

The superb architectural title-page depicts the statues of King Mithridates VI, whose body was so saturated by poisons that none could injure him, and Andromache, the inventor of theriac, the antidote to poisons. Below within an oval frame is a scene of a chemical laboratory.

Fine copy. The 1618 *Ternarius Bezoardicorum et Hemetologia* (1618) is an entirely different work (see Partington, II, p. 277). Bookplate of Dr. Maurice Villaret.

❧ Ferguson, II, pp. 315-16–"He was an able physician and an excellent chemist, an admirer and to some extent a follower of Paracelsus, an advocate of chemical remedies, an opponent of quackery, and he was able to judge fairly the merits both of the chemical and Galenic systems of medicine then in conflict…He ridiculed both transmutation and the universal medicine." Partington, II, pp. 276-80.

The Foundations of Phytochemistry & Ecology

78. SAUSSURE, Nicolas Théodore. *Recherches Chimiques sur la Végétation*. One folding engraved plate & 16 folding printed tables. viii, 327, [8] pp. 8vo, cont. green calf-backed marbled boards (rather well-rebacked with the orig. spine laid-down), flat spine gilt. Paris: Nyon, 1804. $1350.00

First edition of the work which "laid the foundations of a new science, phytochemistry. Saussure examined the chief active components of plants, their synthesis, and their decomposition. He specified the relationships between vegetation and the environment and here, too, did pioneering work in what became the fields of pedology and ecology."–*D.S.B.*, XII, p. 124.

In this work, Saussure systematically applied for the first time the quantitative method of chemical research, as founded by Lavoisier, to living subjects. He was able to establish the quantity of oxygen absorbed by a plant at night and also the quantity of water consumed in association with the absorption of carbonic acid that is required for the growth of the plant. He also determined the indispensability of mineral constituents drawn from the soil by the plant.

This is the first important scientific work to use the metric system which was introduced in 1801.

Very good copy. Booklabel of M. Midan-Deschastillon.

❧ Duveen, p. 531. Partington, III, pp. 283-84.

79. SCHEELE, Carl Wilhelm. *Traité Chimque de l'Air et du Feu*…Avec une introduction de Torbern Bergman…Ouvrage traduit de l'Allemand, par le Baron de Dieterich [sic]. One folding engraved plate. xliv, [45]-268

pp. 12mo, cont. mottled calf, spine gilt, brown morocco lettering piece on spine. Paris: Rue et Hôtel Serpente, 1781.

[with]:

—. *Supplement*…contenant un Tableau abrégé des Nouvelles Découvertes sur les Diverses Espèces d'Air, par Jean-Godefroi Léonhardy; des Notes de M. Richard Kirwan, & une Lettre du Docteur Priestley à ce Chimiste anglois, sur l'Ouvrage de M. Scheele; traduit et augmenté de notes…par M. le Baron de Dietrich. xiv, [2], [13]-214 pp. 12mo, cont. mottled calf (head of spine worn & foot chipped, one corner a little worn), spine gilt, brown morocco lettering piece on spine (binding not quite uniform with above). Paris: Rue et Hotel Serpente, 1785.
$3000.00

First edition in French of Scheele's famous treatise describing his independent discovery of oxygen. The translator was Baron P.F. de Dietrich (1748–1793), a distinguished scientist who became mayor of Strasbourg at the outset of the French Revolution and was later executed. His notes are added at the end of the volume. Lavoisier submitted a favorable report to the Académie des Sciences on this translation (see Duveen & Klickstein 61) and, with Berthollet, applied for the printing privilege.

Partington calls the book "very rare," and it is even rarer with the supplement, published four years later, in which are incorporated the additions to the second German edition of 1782, viz. Leonhard's survey of the new discoveries on gases (with additions and notes by the translator), remarks by Kirwan, a letter by Priestley, Scheele's treatise on the amount of "air pur" (oxygen) in the atmosphere, and indexes.

A very good set. Bookplates of J. Laissus.

❧ Cole 1165 & 1166. Duveen p. 533–(lacks Supplement). Neville II, p. 431. Partington III, p. 211, no. VII A and B. See Dibner, *Heralds of Science*, 41 and Horblit 92 for the first edition.

"A Monumental Work"–Neville

80. SCHEELE, Carl Wilhelm. *The Chemical Essays*…Translated from the Transactions of the Academy of Sciences at Stockholm [by F.X. Schwediaur]. With Additions [by Thomas Beddoes]. xii, ii, 406 pp., one blank leaf. 8vo, cont. calf (tiny wormhole becoming a short wormtrack in lower margin of final 40 leaves & inside lower cover). London: J. Murray, 1786. $2500.00

First edition in English. This important and rare book, edited by Thomas Beddoes from the translation by F.X. Schwediauer, contains the writings in

English of Scheele other than the *Chemical Observations…on Air and Fire,* and includes his many discoveries in organic and inorganic chemistry, which are "astonishing both in number and importance" (Partington). Scheele isolated tartaric, gallic, oxalic, citric, malic, and other acids, including uric acid (see Garrison-Morton 668 for the Swedish original). In inorganic chemistry, he isolated hydrogen fluoride, hydrogen cyanide, and hydrogen sulphide. He discovered chlorine, and copper arsenite ("Scheele's green"). He was the first to demonstrate the presence of calcium phosphate in bone; he obtained molybdic acid from molybdenite, which he was the first to distinguish from graphite; he proved that the acidity of sour milk is due to what was later called lactic acid; he obtained tungstic acid from what is now called scheelite (calcium tungstate); he experimented with ether; and he investigated the properties of glycerine and prussic acid.

"Scheele's contributions to inorganic chemistry should not overshadow his research in organic chemistry, which may be considered more imposing, since he had no precedent…When this work is added to his research in protein and fat, it is clear that Partington's judgment that Scheele's influence in organic chemistry was fundamental was fully justified."–*D.S.B.,* XII, p. 148.

Apart from the worming, a very nice copy.

❧ Cole 1167. Duveen, p. 533. Neville II, p. 429– "A monumental work." Partington III, pp. 205–234.

81. SCHREIBER, A. *Baaden in der Marggraffschaft mit seinen Bädern und Umgebungen*. Engraved frontis., one engraved plate depicting a view of the town (caption at foot cropped), & one folding engraved map. xvi, 222 pp. 8vo, cont. speckled boards, red leather lettering piece on spine. Carlsruhe: Macklots, 1805. $850.00

First edition and very rare with no copy in OCLC. The author, a professor at the Electoral lyceum of Baden, has provided a history of Baden-Baden since Roman times and a very full description of the town and the 29 hot springs. During the 19th century, Baden-Baden became a very fashionable watering place with beautiful gardens and pleasure grounds.

The frontispiece depicts the main bathing establishment and the map depicts the area surrounding Baden-Baden.

Fine and attractive copy.

82. SHORT, Thomas. *The Natural, Experimental, and Medicinal History of the Mineral Waters of Derbyshire, Lincolnshire, and Yorkshire, particularly those of Scarborough. Wherein, They are carefully examined and compared, their Contents discovered and divided, their Uses shewn and explained, and an*

Account given of their Discovery and Alterations. Together with the Natural History of the Earths, Minerals and Fossils through which the Chief of them pass. Five engraved plates (four folding). 10 p.l., xxii, 359, [3] pp. Large 4to, cont. panelled calf (well rebacked). London: Printed for the Author & sold by F. Gyles, 1734. $1250.00

First edition of this publication sponsored by the Royal Society. Short (1690?-1772), physician, established his practice at Sheffield, and wrote a series of books on mineral waters, tea and other beverages, and medicine in general.

Very good crisp copy.

❧ *D.N.B.*, XVIII, pp. 154-55. Hirsch, V, pp. 251-52.

A Royal Copy

83. SIGAUD DE LA FOND, Joseph Aignan. *Essai sur différentes Especes d'Air-Fixe ou de Gas, pour servir de suite & de supplément aux Elémens de Physique du même Auteur* . . . Nouvelle Édition, revue et augmentée, par Mr. Rouland. Eight folding engraved plates. xxviii, 499, [1] pp. 8vo, early 19th-cent. marbled boards, flat spine gilt, orange leather lettering piece on spine. Paris: P.F. Gueffier, 1785. $1500.00

Second edition, greatly revised and enlarged by Rouland, Sigaud's nephew (1st ed.: 1779). "In the 1770's Sigaud collaborated with Macquer in investigating the aeriform fluids or 'airs,' newly discovered by Priestley. In 1776 they burned a quantity of the so-called 'inflammable air' (hydrogen), and by holding a porcelain saucer over the flame they managed to collect a few drops of a colorless liquid that both researchers agreed was water. The experiment is often cited as an anticipation of some of the work later done by Cavendish, Lavoisier, and Monge on the synthesis of water."–*D.S.B.*, XII, p. 427.

Sigaud (1730-1810), succeeded Abbé Nollet to the chair at the Collège Louis-le-Grand where he taught experimental science, anatomy, and physiology.

A fine copy. Stamp on verso of half-title and title of Prince Ernest Augustus, Duke of Cumberland, and the subsequent Kings of Hanover.

❧ Cole 1214–"Late discoveries have been added, e.g. the experiments of Priestley, Ingen-housz and Senebier on plants; Cavendish and Lavoisier on the combustion of inflammable and dephlogisticaed airs giving water; Lavoisier on the decomposition of water and the Montgolfier brothers, Charles and Robert on balloon ascents." Duveen, p. 551. Neville, II, p. 475–"The second, final, and best edition."

A Royal Copy

84. SPALLANZANI. Lazzaro. *Opuscules de Physique, Animale et Végétale* . . . traduits de l'Italien, et augmenté d'une Introduction dans laquelle on fait connoître les decouvertes microscopiques dans les trois Règnes de la Nature . . . par Jean Senebier . . . On y a joint plusieurs Lettres relatives à ces Opuscules écrites . . . par Mr. Charles Bonnet & par d'autres Naturalistes célébres. Six folding engraved plates. 4 p.l., cxxiv, 255, [2] pp.; 1 p.l., 405, [3] pp. Two vols. 8vo, early 19th-cent. marbled boards, flat spine gilt, orange leather lettering piece on spine. Geneva: B. Chirol, 1777. $1950.00

First edition in French (1st ed., in Italian: 1776) of one of Spallanzani's most important works, containing "five reports that displayed unexcelled experimental skill, remarkable powers of observation and lucid literary talent."–*D.S.B.*, XII, p. 557–(& see pp. 557-58 for a full discussion of this book's contents).

The first volume contains Spallanzani's refutation of Needham's theories on spontaneous generation. The main treatise in the second volume confirmed and extended Leeuwenhoek's observations on spermatozoa and refuted Buffon's concepts of their nature and origin.

The translation into French by Senebier is known for its accuracy.

A fine set. Stamp on verso of title of Prince Ernest Augustus, Duke of Cumberland, and the subsequent Kings of Hanover.

❧ Garrison-Morton 102–(1st ed.)–"Later confutation of the theory of spontaneous generation. Spallanzani's conclusions were similar to those expressed by Pasteur nearly a century later." Neville, II, p. 499–"In the present treatise of chemical interest he demonstrated that the duration of heat necessary to render an organic infusion sterile varied with the type of microorganism. He hermetically seals his flasks and proved that if both the infusion and contained air had been sterilized, no living cells developed. The views of Buffon and J.T. Needham on spontaneous generation were thus overturned, paving the way for the research of Pasteur almost a century later." Prandi, p. 80–"Bella edizione, non comune."

The First History of Chemistry in the English Language

85. THOMSON, Thomas. *The History of Chemistry*. Frontis. port. of Joseph Black. Two vols. 8vo, orig. mauve cloth (faded to brown as usual, spines marked & slightly worn at ends). London: H. Colburn & R. Bentley, 1830-31. $750.00

First edition of the first history of chemistry in the English language. Over 700 chemists are referred to, and excellent biographies are given for 57 of them.

Bolton noted that "the progress of analytical chemistry is reviewed with consummate skill," and Partington (III, p. 720) comments that it "gives a large amount of valuable information, is largely based on original sources, and is still of value."

"His *History of Chemistry* (London, 1830–1831), unique and authoritative from 1760 onward, was professional propaganda that *inter alia* legitimated chemistry for the educated layman as a noble, rational, and autonomous science."–*D.S.B.*, XIII, p. 373.

A very good set in original state, uncut and partly unopened.

❧ Cole 1275–(having the second edition only, "a reprint"). Duveen, p. 577. Neville II, p. 549.

86. TOROSIEWICZ, Theodor von. *Die Schwefelquelle zu Konopkówka, in Königreiche Galizien. Physikalisch-chemisch untersucht und beschrieben von . . .* Nebst ärztlichen Bemerkungen über deren Heilkräfte, von Gottf. Heinrich Mosing. Four fine folding lithographed plates. 2 p.l., v, [7], 117 pp. 8vo, cont. fine green leather, richly stamped in gilt & blind, flat spine richly gilt. Lemberg: Piller, 1831. $1250.00

First edition and an exceptionally attractive copy of this rare book; there is no copy in OCLC. Konopkówka, a town near Tarnapol in the Polish province of Galicia, is famous for it mineral springs. The author provides a very full account of the town; its accommodations with prices for lodging, eating, and bathing; and the bathing facilities. He also gives a detailed chemical analysis of the waters. Pages 87-117 were written by Mosing, a local physician, and in this section he furnishes a number of case histories.

The handsome plates include a map of the town, and three views of the buildings for bathing.

Fine copy of a most appealing book.

❧ Poggendorff, III, 1360.

A Pioneering Work

87. TREDGOLD, Thomas. *Practical Essay on the Strength of Cast Iron, and other Metals; intended for the Assistance of Engineers, Iron Masters, Architects, Millwrights, Founders and Others engaged in the Construction of Machines, Buildings, &c. containing Practical Rules, Tables, and Examples; founded on a Series of New Experiments*. Four engraved plates (somewhat browned due to the quality of the paper) & illus. in the text. xix, 305, [1] pp. 8vo, attractive antique half-calf & marbled boards (title a little stained in gutter, some foxing), spine gilt. London: J. Taylor, 1824. $1250.00

Second edition, "improved and enlarged." "This pioneering work on the

strength of cast iron 'contains the results of the author's experiments and gives many practical rules for designers of cast iron structures.' Tredgold was the first to introduce a formula for calculating safe stresses for columns. As the use of iron for building increased, this book was widely used and translated into French, Italian, and German. –Timoshenko, 100 . . .

"While Pearson finds much to disagree with in this work, he states that one of its paragraphs contains something entirely new: Paragraph 233 on page 121 bears an attempt to determine the position of the neutral line which yields the same result as that obtained by a more accurate method . . .

"The text discusses the properties of iron and provides three tables for different kinds of resistance, with an explanatory section on their use. Further, it discusses the strength of iron beams of various conformations, and gives an account of various experiments on cast iron and on malleable iron and other metals. It continues to give testing results on resistance to torsion and to impulsive force and on the strength of supports compressed or extended along their length."–Roberts & Trent, *Bibliotheca Mechanica,* pp. 326-27.

Very good copy. Perforated stamp of the Franklin Institute on title. Ex Bibliotheca Mechanica. The first edition appeared in 1822.

88. TROMSDORFF (or TROMMSDORF), Johann Bartholomäus. *Arte de Formular, segundo as Regras da Chimica Pharmaceutica*. xii, 116 (i.e. 216) pp. 8vo, cont. blue sheep-backed marbled boards (rubbed). Lisbon: Impressao Regia, 1817. $1500.00

First edition in Portuguese of the *Chemische Receptirkunst* (1st ed: 1797); there is no copy in *N.U.C.* Schelenz calls this "probably the first textbook devoted to the dispensing of medicines" (p. 614). This was a very popular book and went through many editions in 47 years. Clear directions are given for the preparation of the various medicines.

Trommsdorff (1770-1837), was professor of chemistry and physics at Erfurt. "The great aim of his life was to improve the scientific position of pharmacy, and the value and success of his efforts were universally recognized . . . His library, laboratory and apparatus, all provided by himself, were superior to those of many public institutions."–Ferguson, II, p. 473.

Good copy and rare. Contemporary signature on title.

❧ *D.S.B.,* XIII, pp. 465-66. Partington, III, pp. 587-89.

89. URE, Andrew. *A Dictionary of Chemistry, on the Basis of Mr Nicholson's; in which the Principles of the Science are investigated anew, and its Applications to the Phenomena of Nature, Medicine, Mineralogy, Agriculture, and Manufactures, detailed*. 15 folding engraved plates & tables. xix, [1], [752] pp. 8vo, cont. vellum over boards (occasional light dampstaining),

spine gilt, red morocco lettering piece on spine. London: T. & G. Underwood, et al., 1821. $1250.00

First edition of a rather scarce book. The great interest Ure "took in the application of science to the arts and industry bore fruit in his *Dictionary of Chemistry* (1821). This work was originally undertaken at the request of the publishers as a revision of William Nicholson's *Dictionary of Chemistry,* but Ure said that so much of the latter was obsolete that the work had largely to be rewritten."–*D.S.B.,* XIII, p. 547.

Ure (1778-1857), a pioneer in the teaching of science to artisans, was one of the first scientists to earn his living as a consultant.

Very good copy.

❧ Cole 1304. Duveen, p. 594. Partington, III, pp. 722-23.

90. VICAT, Louis Joseph. *Praktische Anweisung de hydraulischen Kalk (Cement oder künstliche Puzzolane) zu bereiten und denselben bei Wasserbauten aller Art anzuwenden. Nebst Beschreibung und Abbildungen der dazu nöthigen Brennöfen, Apparate und Geräthschaften*. Uebersetzt von Dr. E.G. Schmidt. Twelve folding lithographed plates. viii, 120 pp. 8vo, cont. marbled boards, red leather lettering piece on spine. Quedlingburg & Leipzig: G. Basse, 1847. $950.00

First edition in German of Vicat's *Nouvelles Études sur les Pouzzolanes artificielles* (1846). "Although the strength and hydraulic properties of pozzolana had been well known since Roman times, the reasons for these qualities remained obscure. Poirel's pioneering use of pozzolanic concrete blocks for the Algiers breakwater revealed the possibilities of such construction, and Vicat set out to investigate pozzolana in depth and to produce a more reliable artificial pozzolana (burnt clays mixed with hydraulic or common limes) than hitherto. The results of his highly systematic series of experiments are contained here. For the first time he studied the properties of many kinds of clay, fired at different temperatures, from all over France, testing and analysing the resulting pozzolanas and comparing them with natural Italian pozzolana. He was then able to recommend mixes suitable for concretes in both fresh and salt water."–Elton, *Cat. 6,* 263.

"The artificial cements were made by mixing together chalk or limestone and clay or mud in proportions that had to be empirically determined, because the chemical reactions involved in the setting and hardening of cement were then unknown; they are in fact highly complicated. Important pioneer work on this subject was done in France by L.J. Vicat."–Singer et al., *A History of Technology,* p. 448.

Vicat (1786-1861), was engineer-in-chief of the department of bridges and roads of France.

Fine copy and very rare with no copy in OCLC. Two old library stamps on

title.

All Volumes in First Edition

91. WATSON, Richard. *Chemical Essays*. One folding printed table. Five vols. Small 8vo, cont. calf (small chip to top of one spine, Vols. IV & V slightly taller & not quite uniform with the others), spines ruled in gilt, red morocco lettering pieces. Cambridge: Printed by J. Archdeacon for T. & J. Merrill, & J. Deighton, 1781-86 [Vols. I-IV]; London: T. Evans, 1787 [Vol. V]. $1750.00

First editions, and an attractive set, of Watson's *Chemical Essays* (four volumes), together with the first edition of the fifth volume which was published with the London reprint of Vols. I-IV. "These five volumes collect all of the printed works by Watson on chemical subjects. Vols. I–IV contain a total of 36 essays not published in journals, while Vol. V includes four papers previously published in the Philosophical Transactions and his three separate works."–Cole 1342.

"Watson is best known for his *Chemical Essays*, some of which are still valued for their lucidity, in particular his account of the phlogiston theory…which has been frequently been cited. He also described the classic experiment in which hot water in a tightly stoppered flask can be made to boil by pouring cold water over the air space. His 'Of the Saltness and Temperature of the Sea'…is a perceptive contribution to early marine science."–*D.S.B.,* XIV, p. 191. The fifth volume contains his important investigation of the phenomena of solution and his anticipation of Blagden's Law.

A set of all first editions is really quite rare (I have been looking for such a set as this for more than thirty years). Cole was unable to identify any set in first edition throughout, and had not seen the first edition of Vol. IV. The book's evident and immediate success prompted its reprinting in London (1782–6), and the addition of the fifth volume in 1787.

A fine set. Armorial bookplate of George Baillie in Vols. I–III and of Wm. Constable in Vols. IV–V. Inscribed in Vol. I "The Gift of Mr. John North, Septr. 1784."

❧ Duveen, p. 610–(one volume in second edition).

Describing Scheele's Method

92. WEINLIG, Christian Gottlob. *Gründlicher Unterricht der so gennanten 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.