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## 43 Papers by L. Euler & D. Bernoulli on the St. Petersburg Paradox

### 1

#### [Academiae Scientiarum Imperialis Petropolitanae]

Commentarii Academiae Scientiarum Imperialis Petropolitanae Tomus I. [- Tomus 8.]. Editio nova juxta editionem Petropolitanam. [Edited by Christian Goldbach] 8 Vols. Bononiae [Bologna]: ex Typographia Laelii a Vulpe, 1740 - 1753. 4°. Numerous pages with 8 etched Vignettes, 163 folding plates (incl. 2 maps) and 1 fold. table. Little later halfcalf with two morroco lettering pieces, rubbed and soiled, partly edges or spine carefully restored, one label renewed. Frontfly with institutional Ex Libris, stamped, also [unfortun-ately] title stamped and discarded. Else a fine set. \$ 10000.-

Complete set of the first series of the early Proceedings of the Academy of Sciences in St. Petersburg with sections covering mathematics, physics, and some other sciences (incl. a few papers in humanities). Reflecting the activities of the Academy at that time, they include papers by Euler [43 papers], Bernoulli father and son, Goldbach, Jakob Hermann, Krafft, Delisle, all prominent academicians, who had been summoned to St. Petersburg by Peter the Great to develop his newly-founded Academy. In volume 5 is the important paper Daniel Bernoulli "Theoriae Novae De Mensura Sortis" [Exposition of a New Theory on the Measurement of Risk], better known as the St. Petersburg Paradox: In economics, the St. Petersburg paradox is a paradox related to probability theory and decision theory. It is based on a particular (theoretical) lottery game (sometimes called St. Petersburg Lottery) that leads to a random variable with infinite expected value, i.e., infinite expected payoff, but would nevertheless be considered to be worth only a very small amount of money. The St. Petersburg paradox is a classical situation where a naïve decision criterion (which takes only the expected value into account) would recommend a course of action that no (real) rational person would be willing to take. The paradox can be resolved when the decision model is refined via the notion of marginal utility (and it is one origin of notions of utility functions and of marginal utility), by taking into account the finite resources of the participants, or by noting that one simply cannot buy that which is not sold (and that sellers would not produce a lottery whose expected loss to them were unacceptable). The first series, covering the years 1726-1746 was continued by the Novi commentarii (1747-1775). This edition printed in Bologna was made to spread the proceedings on the European continent, and show the close relationship of the members with mathematicians in Italy.- [Eneström 5a, 6a, 7a, 8a, 9a, 10a, 12a, 13a, 14a, 19a, 20a, 21a, 22a, 23a, 24a, 25a, 26a, 27a, 28a, 29a, 30a, 31a, 36a, 37a, 38a, 39a, 40a, 41a, 42a, 43a, 44a, 45a, 46a, 47a, 48a, 49a, 50a, 51a, 52a, 53a, 54a, 55a, 56a]. Weitere Beiträge von Jacob Hermann: "De Mensura Virium Corporum", "De Calculo Integrali", "De Construc-tione Aequationis Differentialis", "De Quadratura Curvarum Algebraicarum"

### 2

#### Apian, Petrus.

Cosmographia, per Gemmam Phrysiū, ... denuo restituta. Additis de eadem re ipsius Gemmae Phry. Libellis, quos sequens pagina docet. Antwerp: Coppenius for A. Birckmann, 1540. 4°. 61 numb. Leaves, 1 unnumb. leaf with woodcut printer's device. Large woodcut globe on title, many partly whole-page woodcuts in text, of which four with volvelles. Title with small cut-out to upper margin not affecting text and two small stamps. The whole-page woodcut on leaf V shaved to front margin slightly affecting image. Later vellum binding in period style. \$ 6800.-

Early edition, with four woodcuts with several volvelles (no volvelles on leaf XI). A fine copy of this handsome edition. The text is Gemma Frisius' edition of Apianus cosmography, one of the most fundamental and influential texts of astronomy and geography in the sixteenth century. "Apian's first major work, Cosmograp-hia ... (1524), was based on Ptolemy. Starting with the distinction between cosmography, geography, and chorography, and using an ingenious and simple diagram, the book defines terrestrial grids; describes the use of maps and simple surveying; defines weather and climate, ... In its later form, as modified by Gemma Frisius, the Cosmographia was one of the most popular texts of the time and was translated into all major European languages." [DSB] The world map first appeared in the 1544 Antwerp edition. This edition here contains two treatises by Gemma Frisius "Libellus de locorum describendorum ratione" (leaves 47v-53), with the first description of triangulation used for surveying purposes and his "Usus annuli astronomici" (leaves 54-60). The first appearance of Frisius's important treatise on topographical triangulation, Libellus de Locurum Describen-do-rum Ratione, was in 1533, being a landmark in the history of topography. This short but extremely important treatise by Gemma Frisius (1508-55) had an enormous influence on cartography.



## Important Architecture – a Present by Truman to Berlin

3

### [Architecture; Photographs] Congress Hall Berlin.

[Presentation folder] Private Folder with photographs and memorabilia of the construction, and opening of the Berlin Congress Hall in 1957. Possibly one of a few copies given to important persons working for the project. \$ 4000.-

The Haus der Kulturen der Welt (“House of the Cultures of the World”) in Berlin is Germany’s national centre for contemporary non-European art. It was formerly known as the Kongresshalle conference hall, a gift from the United States, designed in 1957 by the American architect Hugh Stubbins Jr. as a part of the Interbau exhibition. John F. Kennedy spoke here during his June 1963 visit to West Berlin. It is considered to be one of Berlin’s most interesting buildings. It was constructed in 1957 and is now a listed building. Its extraordinary architecture makes the Congress Hall a new type of building. Its symbolic function as a manifesto for the freedom of thought and expression is reflected in the architecture. The most outstanding features of the building, which was designed by American architect Hugh Stubbins, are its spacious and very open room-design and its remarkable curved roof. Stubbins himself always felt that he had created a “roof containing a great promise”, and that no limitations should be placed on the activities carried out beneath it. The structural engineering necessary to implement these programmatic goals ran up against certain problems. Stubbins’ original design foresaw a suspended roof supported by just two columns. The idea of resting the roof on only a few points reflected the spirit of an age that cherished the ideals of organic building. As early as 1953-56, Eero Saarinen had designed a roof resting on three points for the Kresge Auditorium of the Massachusetts Institute of Technology in Cambridge. However, it was not possible to construct the suspended roof for the Congress Hall in the manner originally envisaged by Stubbins. In spite of this, the idea was not abandoned, it simply called for some kind of reinforcement. An additional peripheral tie around the exterior walls of the auditorium was needed to provide greater support for the roof, which only rested on two points. Architects were divided in their opinions about the structure: some were enthusiastic, others vehemently opposed it. “Never before has a suspended roof been constructed with such an expensive and clumsy structure.” It was with these words that Frei Otto passed judgement on the building in 1956, even though he himself had already used similar roof forms for his Music Pavilion in Kassel. In view of the extremely complex and sensitive load-bearing structure of the Congress Hall roof, there were, understandably enough, some reservations of a technical nature too. Hugh Asher Stubbins Jr. (1912 - 2006) was an architect who designed several high profile buildings around the world; this is one of his earliest projects. He was born in Birmingham, Alabama, United States, and attended Georgia Institute of Technology before getting his master’s degree from Harvard University. He was to remain on the faculty there until 1972. He formed Hugh Stubbins and Associates. Its successor company is The Stubbins Associates, Inc. After his death, TSA merged with Philadelphia-based Kling to form KlingStubbins. Some of his projects are: 1960 Loeb Drama Center, Harvard University; 1965 Francis A. Countway Library of Medicine, Harvard Medical School; 1966 Southwest Residential Area at University of Massachusetts Amherst; 1968 Forsyth Wickes Addition, Museum of Fine Arts, Boston; 1970 George Robert White Wing, Museum of Fine Arts, Boston; 1971 Veterans Stadium in Philadelphia; 1976 Federal Reserve Bank of Boston; 1976 Seeley G. Mudd Manuscript Library at Princeton University; 1977 Citigroup Center in New York; 1981 Porter College, University of California Santa Cruz; 1983 One Cleveland Center in Cleveland; 1984 PacWest Center in Portland, Oregon.

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**Baier, Johann Jacob.**

Joh. Jacobi Bajeri | Philos. et Med. D. Hvjvsqve in Acad. | Altdorf. Prof. Pvbl. | Illvstr. Reip. Norimb. Physici | ORYKTOGRAPHIA | Norica, | sive | Rervm Fossilivm | et | Ad Minerale Regnum | Pertinentivm, | in | Territorio Norimbergensi | Ejvsqve Vicinia Observatarvm | Svccincta | Descripto. | Cvm Iconibvs Lapidvm Figvratovrm | Fere Dvcentis. | ... Norimbergae [Nürnberg], Impensis Wolfgangi Michahellis, Bibliopolae, Anno MDCIIX [1708]. 4° [196 x 157 mm] [2 pgs], Engraved title page, verso "In Frontem Libri."; [2 pgs], Printed title page, verso blank.; [4 pgs], Dedication, signed Joh. Jacobvs Bajervs.; [2 pgs], "Praefatio | Ad Lectorem."; 1-95, Text.; 96, "Syllabvs Capivm."; 97-102, "Index."; with 6 fold. plates. Kleisterpapierband d. Zt., berieben und bestoßen, R. ausgebessert, Vorsatz mit Besitzvermerk: Gebhardt, Titel und leicht eingerissen, sonst ordentl. \$ 3600.-

Rare first edition. A classic work on the fossils and some minerals found in the region surrounding the city of Nürnberg in Germany. Baier's *Oryctographia Norica* was a new, systematic attempt to organize the natural mineral objects he found around his home city into a coherent classification. Baier did not believe in sweeping theoretical pronouncements, instead the specimens are fully described with many of the most interesting fossils depicted on the finely engraved plates. By this means he laid the foundation for the investigation of Jurassic fauna and of scientific paleontology in general and help disprove the notion that fossils were simple jests of nature. He clearly indicates that these fossils were created in the single act of the Deluge, which he considered the only great change since the Creation. The foundation Baier thus created, helped prepare the path for subsequent researchers to see the world differently and look past the myth and create through thorough observation the science of geology. The frontispiece depicts a beach with putti presenting Cybele with baskets of ammonites, fossil echinoderms, belemnites, etc., while Neptune rides on a shell on the sea surrounded by naiads bearing baskets of shells; i.e. the affinities of the living and fossil forms. This and the six plates (which figure some 300 fossils) are the work of J. G. Puschner. Baier clearly states in his forward that supplemental volumes will appear to expand on the *Oryctographia Norica*, but time considerations in his life only allowed him to publish the rare 1730 supplement. However, at the time of his death, he had left material enough to allow his son Ferdinand to issue an additional supplemental volume in 1757. The publication of this, probably caused enough interest that the following year, 1758, Ferdinand issued what should be considered a second edition of the *Oryctographia Norica*, with a reworking of his father's original text, and a small number of plates. An excellent modern German translation with extensive commentary of *Oryctographia Norica* and its 1730 supplemental volume appears in *Erlanger Geologische Abhandlungen*, 29 (1958), [1]-133 p. Johann Jakob Baier (1677 Jena - Altdorf 1735), a German physician & naturalist. He was educated at Jena and Halle, becoming professor of medicine in Altdorf near Nürnberg in 1704. In 1731, he was appointed personal physician to the Emperor. Baier was elected a member and ultimately president of the Leopoldina Academy.- ADB I, 774; DSB I, 392-393 [by B.v. Freyberg]; Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834; Lambrecht & Quenstedt, *Catalogus*, 1938: 17; NDB I, 543 [by A. Kreiner]; Pogg. I, 88; Sarjeant, *Geologists*, Suppl. 1, 1986: 1, 265-6; Will, *Nürnbergisches Gelehrten-Lexicon*, 1755-1808.



## Fixing the Past – Impressive Albumin Photographs of Egypt

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### **Béchar, Henri [Photographer]**

A lot of 188 photographs containing a comprehensive series of views including historic monuments and buildings, and the people and environs of Cairo. One hundred and seventy-five photographs of Egypt, and thirteen photographs of Nubia; a series of albumen prints, each image approximately 10½ x 14½ inch [265 x 370 mm], titled, numbered and signed in the negatives, mounted on papercard. Not bound previously. [Egypt, ca. 1865 - 1875] [Carton: 497 x 377 mm, image: 379 x 272 mm; variable] 188 leaves with mounted albumin prints / photographs. Unbound and never have been. Modern Cloth-Folder. \$ 48000.-

An impressive collection of 188 photographs by Henri Béchar (active 1868-1880) of Egypt & Nubia; a comprehensive series of views including historic monuments and buildings, and the people and environs of Cairo, bought by an Englishman on "tour", most probably by Shalcross Fitzherbert Widdrington (1826 - 1917) who had been in Egypt in the late 1860s, early 1870s. Henri Béchar (late 1869-1880) operated a photographic studio in Cairo in the Ezbekiah Garden District from which he sold standard tourist views, as well as a series of types and costume studies. No doubt he was attracted by the influx of visitors and potential customers at the time of the opening of the Suez Canal, which also coincided with the first package tourist trips to Egypt. In 1888 A. Palmiere published a set of 150 photogravures out of the work of Henri Béchar: 'L' Egypte et la Nubie', which is valued high today. Béchar received a medal at the Paris Universal Exposition of 1878. No land more intrigued the scholar and sparked the imagination of the nineteenth-century traveller than Egypt. Fueled by the Romantic poetry of Victor Hugo, Lord Byron and Gustave Flaubert, from the earliest days of photography its practitioners traveled to the ancient sites of Egypt and the Near East. Photography's speed and apparent objectivity offered the means to record and share the experience of distant lands. Scholars in the emerging field of archaeology valued the photographs, and the affluent travellers in ever-increasing numbers who toured places celebrated for their antiquities prized them as souvenirs. Béchar's photographs are rarely reproduced in modern publications, and until now he has been known primarily for his photographs of Egyptian antiquities and archaeological sites. However he also produced many photographs of people, both inside the studio and out of doors. His work, whatever the subject, is characterized by a dramatic sense of presentation and careful attention to composition. In the studio, Béchar often

posed his subjects against a dramatic array of large plants on a dirt ground which provided a more realistic setting than the painted backdrop and flowered carpet favoured by Bonfils. He was adept at arranging compositions of several people, each of whom appeared to be isolated in his or her own private space. He posed people against stone buildings, or against plastered walls, or in a garden, apparently able to take advantage of photographic opportunities that he encountered. Béchard is somehow able to keep his subjects still, but looking reasonably natural. The people in his photographs often look somber, but they do not generally have the very unhappy expressions that are often found in other commercial photographs from this period and region. Bechard's Plate-Numbers present: 1, 3-6, 8, 10-21, 23-40, 43-44, 46, 48-51, 53-61, 63-73, 75-95, 97, 99, 100, 103-121, 123, 125, 127-138, 140-144, 146-177, 179-191, 193-211 [all pictures of Palmiere present except: plate number 40, 43, 77, 79, 81, 99, 100, 105, 107, 109, 118, 119, 129, 137] [Nancy Micklewright. Annie Brassey. A Victorian traveler in the Middle East: the photography and travel writing, pp. 118 - 121]; Encyclopedia of nineteenth-century photography, I, 131. Ausstellungen: 1989 Amsterdam, Rijks-Mus., Rijksprentenkabinet: Fotokunst 19e eeuw (Kat.): Köln, Röm.-German. Mus.: An den süßen Ufern Asiens (Kat.); L'Égypte d'Henri Béchard. Photographe actif au moyen-orient dans les années 1870 - 1880. Galerie Yves di Maria; Museum Ludwig. Bestandsaufnahme: Die Photographien von Henri Béchard aus Ägypten und dem übrigen osmanischen Reich; Pioniere der Kamera, ..., Die Slg R. Lebeck (Kat.), Bremen 1987; N. Nissan Perez, Focus east, Early photography in the near east (1839-1885) 132; Allgemeines Künstlerlexikon; Die Bildenden Künstler aller Zeiten und Völker, Saur, München, VIII, 1994, 111 (Thilo Koenig); Lily Farhoud; Andreas Blühm. Focus Orient. Orientalist Photography from the Late 19th and Early 20th Century. 2009.



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**Becher, Johann Joachim.**

Chymischer Glücks-Hafen, oder Grosse Chymische Concordantz und Collection, von funffzehen hundert chymischen Processen: durch viel Mühe und Kosten auss den besten Manuscriptis und Laboratoriis in diese Ordnung, wie hier folgendes Register auss-weist, zusammen getragen ...  
 Franckfurt: in Verlegung Johann Georg Schiele, 1682. 4° [210 x 165 mm] [8], 810 pp., [36] with title in red & black, with woodcuts on 407, 472. Vellum of time, nice and clean copy.

\$ 2800.-

His last work, published a few months before he died. First edition. One of his most important books, it contains practical details on 1500 chemical processes, including the preparation of numerous pure chemical compounds, as well as directions for making the philosopher's stone. This was a significant sourcebook for his pupil Stahl, who republished it in 1726, adding his own preface. It played an important role in the development of Stahl's phlogiston theory, which was an elaboration of Becher's combustion hypothesis. The combustibility of coal gas is first mentioned in this book. Johann Joachim Becher (1635 - 1682) was a German physician, alchemist, precursor of chemistry, scholar and adventurer, best known for his development of the phlogiston theory of combustion, and his advancement of Austrian cameralism. In 1657, he was appointed professor of medicine at the University of Mainz and body-physician to the archbishop-elect. In 1666, he was made councillor of commerce (Commerzienrat) at Vienna, where he had gained the powerful support of Albrecht, Count Zinzendorf, prime minister and grand chamberlain of the emperor Leopold I. Sent by the emperor on a mission to the Netherlands, he wrote there in ten days his *Methodus Didactica*, which was followed by the *Regeln der Christlichen Bundesgenossenschaft* and the *Politischer Discurs von den eigentlichen Ursachen des Auf- und Abnehmens der Städte, Länder und Republiken*. In 1669, he published his *Physica subterranea*, and the same year was engaged with the count of Hanau in a scheme for settling a large territory between the Orinoco and the Amazon. Meanwhile he had been appointed physician to the elector of Bavaria; but in 1670 he was again in Vienna advising on the establishment of a silk factory and propounding schemes for a great company to trade with the Low Countries and for a canal to unite the Rhine and Danube. In 1678, he crossed to England. He travelled to Scotland where he visited the mines at the request of Prince Rupert. He afterwards went for the same purpose to Cornwall, where he spent a year. At the beginning of 1680, he presented a paper to the Royal Society in which he attempted to deprive Huygens of the honour of applying the pendulum to the measurement of time. In 1682, he returned to London, where he wrote the *Chymischer Glücks-Hafen, Oder Grosse Chymische Concordantz Und Collection, Von funffzehen hundert Chymischen Processen* and died in October of the same year.- Bolton 289, DSB I, 549; Duveen 57; Ferguson I, 86; Ferchl 31; Partington II, 642; Thorndike VII, 582; Roy Neville Hist. Chemical Library I, 103/04.

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**Bekker, Balthasar.**

De betoverde weerd, Zynde een grondig ondersoek van 't gemeen gevoelen aangaande de Geesten, deselver Aart en Vermogen, Bewind en Bedryf: als ook 't gene de Menschen door derselver kragt en gemeenschap doen. Four parts in 1. Amsterdam: D. van den Dalen, 1691-1693. 4°. [xx], 32, 136, [viii], 246, [xxii], [viii], 188, [ii], [vi], 277 (= 293), [3] pp., engraved frontispiece portrait. Contemporary gilt panelled calf, some slight browning and occasional waterstaining, a very good tight copy.

\$ 1800.-

First editions of all four parts of Bekker's central work, each part authenticated with his signature. Bekker had to weed out defective copies by methodically inspecting them (see Israel, p. 383). Bound before the first book is the 32-page "Naakte uitbeeldinge .: Van der Linde 16, 17, 19, 20, 21. 'There can be no question as to the unparalleled extent of his influence. If ever there was a writer who was thought by contemporaries to have had an immense impact on attitudes in society at many levels, and across several different countries, then it was Bekker. he was indisputably one of the foremost figures of the European Early Enlightenment' (Jonathan Israel, *Radical Enlightenment*, p. 405). 'Bekker provided a historical overview of popular opinions about spirits from antiquity to his own day, showing that the roots of beliefs about spirits lay in heathen antiquity. Such beliefs had been perpetuated by the Roman Catholic Church and even within the Reformed tradition. [He] denied that belief in spirits and the power of the devil was supported by either reason or the Bible. Following Descartes, Bekker held that the material and the spiritual worlds could not interact with each other (except in man). Therefore spirits without bodies, such as the devil and evil spirits, could not act on man. In fact, neither reason nor experience proved that any spirits without bodies even existed, aside from human souls. This gave rise to a firestorm of controversy, first in Amsterdam and then right across the Dutch Republic. . Critics said that denying the power of the devil contradicted Scripture and would lead to a denial of belief in divine mysteries and even to a rejection of belief in God himself. Bekker's ideas were called heretical, scandalous, and slanderous to God. [and] had tremendous influence. It has been said that Bekker almost single-handedly ended support for witch trials and persecutions in northern Europe' (Dictionary of Seventeenth and Eighteenth-Century Dutch Philosophers).

## Würzburg Mineral Cabinet

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**Blank, Josef Bonavita.**

Handbuch der Mineralogie, von ... Würzburg: gedruckt bey Franz Ernst Nitribitt, Universitätsdrucker, 1810. 8°. [4], 596 pp., [2, Errata] Zeitgenössischer Halblederb., sauber und frisch. Schönes Exemplar. \$ 1200.-

Very scarce. The author's complete introduction to mineralogy based upon the theories of Werner. It was intended to accompany Blank's lectures at the University of Würzburg, however a contemporary review of this work, states: "This work intended as an introduction to the author's lectures, has many defects. For example, the author has often created mistakes in completeness by struggling to keep the the mineral descriptions brief. He also appears to have only a limited knowledge of so-called 'new discoveries,' and the discussion of the various external characters is not ordered logically." [Leonard's Taschenbuch VI, 309-10]. Joseph Bonavita Blank (1740 - 1827), German naturalist, mineralogist & art collector. Blank was a member of the Franciscan order and professor of philosophy and natural history at the University of Würzburg. He was also appointed curator of the University's art and natural history collections. In this position, he continued to successfully add to the collections, most especially when his own immense personal collections of art and natural history specimens were acquired by the University.- ADB II, 689; DBA I, 106, 170-192; II 131, 169; 131, 196-202; Hamberger & Meusel, Gelehrte Teutschland, 1796-1834; Pogg. I, 209; LKG: XII 185; KVK: Erfurt, Halle, Jena; COPAC: no copy; OCLC: only Madison- Wisconsin.

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**[Blasius, Johann Heinrich]**

Zoologie, Vorgetragen von H[errn] Professor Blasius. Winter-semester 1860/61. [Mitgeschrieben von] R. Frühling. [Handwritten **manuscript** in legible hand, black ink on paper] [Braunschweig, 1860-1861] 8° [205 x 165 mm] [2, blank], [2], 527 pp., [21, blank] with around 40 handdrawn little illustrations [Feder- und Bleistiftzeichnung] Contemporary green cloth, gilt printed title, marmorated edges, only little used. Fine condition. \$ 1600.-

Rare handwritten lecture notes by Rudolf Frühling, later chemist, of zoological lectures held by Johann Heinrich Blasius at Braunschweig University. Johann Heinrich Blasius was a German zoologist. In 1836, he was appointed as a professor at the Collegium Carolinum in Braunschweig. In 1840, he founded the Botanic Garden of the TU Braunschweig. In 1859 he was appointed as the director of the newly founded Naturhistorisches Museum (Braunschweig) and in 1866 also of the Herzog Anton Ulrich Museum. He was the author of two books on vertebrates: Fauna der Wirbelthiere Deutschlands (1857), which Wood called "an uncompleted but important systematic treatise on the zoology of middle Europe", and Die Wirbelthiere Europa's (1840) (with Alexander Keyserling). Provenance: Wilhelm Blasius (1913-95), Physiologist. Seltene Vorlesungsmitschrift von zoologischen Vorlesungen, die Blasius im Winter 1860-1861 am Carolinum in Braunschweig hielt. Neben Wirbeltieren werden ebenso Amphibien und Vögel abgehandelt. Johann Heinrich Blasius (1809 - 1870), deutscher Zoologe. 1836 wurde er als außerordentlicher Professor (seit 1842 ordentlicher Professor) für beschreibende Naturwissenschaften an das Collegium Carolinum nach Braunschweig berufen, wo er bis zu seinem Tod wirkte und es rasch zu hohem ansehen brachte. Er setzte sich für den Bau eines botanischen Gartens ein. Dieses führte 1840 zur Gründung des Botanischen Gartens Braunschweig. Bereits vor seiner Berufung hatte er mit seinem Freund Alexander Graf Keyserling große Teile Osteuropas bereist, und die Resultate dieser Forschungsreisen wurden 1840 gemeinsam veröffentlicht. Es folgten in den Jahren 1840 und 1841 eine gemeinsame Reise nach Russland, über die Blasius 1844 berichtete, sowie weitere Reisen in den Alpen und Italien. Im Laufe der Zeit schuf Blasius eine Sammlung am Collegium Carolinum, die 1857 mit der Naturkundesammlung des Herzoglichen Kunst- und Naturalienkabinetts vereinigt wurde, was zur Gründung des Naturhistorischen Museums führte, zu dessen Leiter er im Jahr 1859 ernannt wurde. [wikipedia] "Sein großes Talent im Herausfinden scharfer Merkmale, verbunden mit einer vorzüglichen Gabe der Schilderung des Gesamthabitus und der Lebensweise concentrirte sich von Anfang an auf die Wirbelthiere, doch hat er leider nur einen geringen Theil des aufgespeicherten Materials, die Säugethiere Europa's, publicirt, da er im letzten Jahrzent seines Lebens durch das Directorat des Carolinums und der herzoglichen Kunstsammlungen übermäßig in Anspruch genommen war. Das von ihm organisirte zoologische Museum ist besonders werthvoll in der Abtheilung der Vögel." [Oscar Schmidt] "Als sorgfältiger Beobachter hat dieser sich besonders um die Kenntnisse europäischer Säugetiere und Vögel große Verdienste erworben. Nach Naumann's Tod galt er den deutschen Ornithologen als einer ihrer geistigen Führer." [Erwin Stresemann]; ADB II, 695; NDB II, 289; Wood 1857.

## II

**Boas, Franz.**

Arier und Nicht-Arier. [S.l.] : Internat. Hilfs-Vereinigung; Oslo: Aasen [Drucker], [1934] 8°. 20 pp. Original-Wrappers. \$ 160.-

Underground anti-Nazi publication calling for solidarity with the victims of the fascist terror unleashed by the German Nazi police-state. Franz Boas (1858 - 1942) was a German-American anthropologist a pioneer of modern anthropology who has been called the "Father of American Anthropology" and "the Father of Modern Anthropology." Like many such pioneers, he trained in other disciplines; he received his doctorate in physics, and did post-doctoral work in geography. He applied the scientific method to the study of human cultures and societies; previously this discipline was based on the formulation of grand theories around anecdotal knowledge. Boas once summed up his approach to anthropology and folklore by saying: "In the course of time I became convinced that a materialistic point of view, for a physicist a very real one, was untenable. This gave me a new point of view and I recognized the importance of studying the interaction between the organic and inorganic, above all the relation between the life of a people and their physical environment."

### On the discovery of Ceres by Piazzi

## I2

**Bode, Johann Elert.**

Johann Elert Bode, ... von dem neuen, zwischen Mars und Jupiter entdeck-ten achten Hauptplaneten des Sonnensystems. Berlin : Himburg, 1802 8°. VI, 136 pp. incl. etched frontisp. [Observatorio Palermo], etched Vignette, one star-map. Contemporary green papercard boards, red edges, rubbed and soiled, title cut short, repaired by contemporary hand, map with little water spot. \$ 1300.-

Rare work on Ceres, discovered by Giuseppe Piazzi in Palermo in 1801. Ceres is the smallest identified dwarf planet in the Solar System and the only one in the asteroid belt. It was discovered on 1 January 1801 by Giuseppe Piazzi, and for half a century it was classified as the eighth planet. It is named after Ceres, the Roman goddess of growing plants, the harvest, and motherly love. While looking for a seventh-magnitude star in Taurus with Ramsden's circle, Piazzi (1746-1826) spotted a somewhat fainter object not previously cataloged. He continued to observe the moving point of light until 12 February, after which it became lost in twilight. He was criticized by astronomers all over Europe for not sharing news of his discovery sooner. Thereafter, the Göttingen mathematician Carl Gauss calculated the object's orbital elements by a new method that enabled it to be recovered at the end of the same year. He became famous for his discovery of the "missing planet" between Mars and Jupiter. Johann Elert Bode (January 19, 1747 - November 23, 1826) was a German astronomer known for his reformulation and popularization of the Titius-Bode law. Bode determined the orbit of Uranus and suggested the planet's name. A similar named treatise by Bode, published in 1784 ("Von dem neuentdeckten Planeten..."), is a work on the discovery of Uranus by William Herschel. [DSB II, 220 f.]- KVK: some copies; COPAC: BL London, Royal Society; OCLC: Library Congress, Houghton.

### With the Star Map, nearly always missing

## I3

**Bode, Johann Elert.**

Anleitung zur Kenntniß des gestirnten Himmels. Mit XV Kupfertafeln und einer allgemeinen Himmelskarte von Johann Elert Bode. Berlin: in der Fr. Nicolai'schen Buchhandl., 1806. 8° [200 x 120 mm] [2] Bl., XVI, 668 pp., [2], [2], mit [15] gefalt. Kupfertafeln, incl. Frontisp.-Porträt, 15 Kpf./ plates [incl. star charts for every month], Himmelskarte / a big star map nd transparentem Horizont (die zwecks Transparenz geölte letzte Tafel mittlerweile gebräunt) / clear polar stereographic grid, both of which are nearly always missing ! Mit einer gestoch. Titelvignette und drei Textvign. Halblederbd. d. Zt., R.vergold., schönes und sauberes Exemplar.

\$ 1000.-

Eight enlarged edition. The first of Johann Elert Bode's books appeared in 1768 and was entitled Anleitung zur Kenntniß des Gestirnten Himmels (Instruction for the knowledge of the starry heavens). Warner states that this was the most popular introductory book on astronomy of its time, and that by 1867 it had gone through 15 German editions, two unauthorised Austrian

prints, and translations into dutch and danish. Johann Elert Bode (1747-1826) became a prolific popularizer of astronomy and observer of the skies. For a time he was employed as a calculator at the Berlin Academy of Sciences. In 1786 he became director of the Academy's Berlin Observ-vatory, where he served for nearly 40 years. Kanas stated: "there was no celestial map" ("Tab. III"), which is wrong. This map is present with no name [35 cm diameter]. Beside the big celestial map, there are a series of 12 monthly star charts. In this book, Bode put forth an idea on planetary distances that was originally proposed in 1766 by Johann Titius (1729-1796) of Wittenberg, sometimes referred to as the "Titius-Bode-Law". This law consisted of a formula that described the relative distances of the then-known planets from the Sun.- BEA I, 140-42 [Kokott]; Houzeau/L. 9261; Kanas 6.5.2; not in Barchas Collection.

**I4****Boyle, Robert.**

Some considerations touching the usefulness of experimental Naturall Philosophy, propos'd in a familiar discourse to a friend, by way of invitation to the study of it. By the Honorable Robert Boyle, Esq.. A Second Edition [since the first published June 1663]. Oxford: Printed by Hen. Hall, printer to the University, for Ric[hard] Davis, Anno Dom. 1664. 4°. [8] Bl., 126 [i.e. 124] pp., [2] Bl., 416 [i.e. 398] pp., [9] Bl. Contemporary panelled calf worn at extremities, loss to head and tail of spine, joints cracked but cords holding, extensive underlining and marginalia in pencil, still not a bad copy. \$ 1200.-

Rare second edition, the edition Leibniz used and was in his library. The years that Boyle spent at Oxford, prior to his move to London in 1668, also saw an extraordinarily intense programme of writing on his part. It was at this time that he began or completed the numerous books on different aspects of natural philosophy which set the pattern for his subsequent intellectual career, and on which, when he began to publish on a sustained scale from 1660 onwards, his later fame was based. These included his *New Experiments Physico-Mechanical, Touching the Spring of Air and its Effects* (1660), *Certain Physiological Essays* (1661), *The Sceptical Chymist* (1661), *Some Considerations touching the Usefulness of Experimental Natural Philosophy* (1663, 1671), *Experiments and Considerations touching Colours* (1664), *New Experiments and Observations touching Cold* (1665), *Hydrostatical Paradoxes* (1666) and *The Origin of Forms and Qualities* (1666). These works were taken up and championed by the newly-founded Royal Society. Second edition, Fulton's issue A, though without the vertical half-title on 3d4 found in some copies. The work was first published the previous year. In 'Part 1' (written during the 1650s) Boyle sets out his corpuscular philosophy for the first time at length, arguing that it doesn't conflict with Christian doctrine but indeed supports it. In the first section of 'Part 2' he applies his new scientific method to many practical problems in 'Physick'. A long appendix (p. 303 onwards) gives recipes for medicines, cross-referenced back to the main text. 'There is no work from which one can gain a better idea of the state of medicine about the middle of the seventeenth century' (Osler). In 1671 an ostensible continuation of Part 2 (though on miscellaneous non-medical topics) was published as 'The Second Tome'.

**I5****Braun, Friedrich.**

Transparente Himmels-Karte (Himmelskarte) entworfen von Friedr. Braun. Stuttgart: Verlag von Wilhelm Nitzschke, [no date, ca. 1880] 4°. Eine gefaltete farbig lithographierte Tafel mit Text-heft. Orig.-Halbleinwandmappe mit chromolithographiertem Deckelbild, etwas bestoßen und gering, Rückdeckel stärker fleckig, Deckelbild mit schwachem hs. Namenszug, Rücken mit kleiner Fehlstelle am Kopf. Sauberes, wohlerhaltenes Exemplar. \$ 800.-

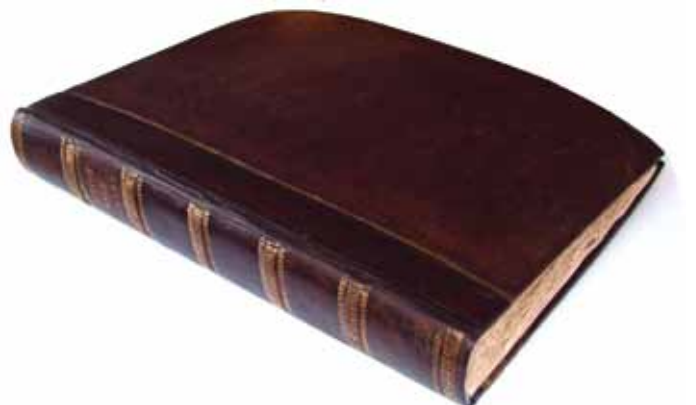
Großformatige Karte des nördlichen mit Teilen des südlichen Sternhimmels. Die Darstellung reicht von den Sternbildern Taube bis Südliche Krone und Bildhauer bis Zentaur. Auf dünnen Karton gedruckt, in 4 Segmente geteilt, die Falze original aus Leinenstreifen gebildet. Die Serne der Sternbilder und die der Milchstraße sind ausgestanzt und farbig hinterlegt, so daß die Karte auch gegen das Licht zu halten ist.

16

**[Manuscript] British Wild Flowers.**

[An album of 233 fine botanical watercolours, with manuscript captions and some with notes, many with place where recorded. Two pages of manuscript index at front. All images laid down, a few with tissue guards] [England, July 1845 to August 1847] Folio [400 x 280 mm] 233 watercolours on 179 pages [mainly each leaf with one plate], some browning and soiling, mostly at the edges where glued, a few with some foxing, some leaves loose or working loose. Original half calf, extensively rubbed, joints split, spine very worn, but professionally repaired. In modern paper box. \$ 14000.-

A high quality botanical manuscript with 233 fine coloured and executed watercolours. This manuscript seems to derive from a (semi)professional hand (not amateur). The majority of the plants painted are in the area of Thornton-le-Dale in Yorkshire; other places include Goathland, Hessele, Scarborough, Beverley/ Yorkshire, Kingthorpe/ Lincolnshire, Aylesbury, Chipping Norton and Brighton.



17

**Clavius [Clau, Schlüssel], Christoph.**

Algebra Christophori Clauui Barbengensis e Societate Iesu. Romae [Rom]: Apud Bartholomaeum Zannettum [Zanetti], MDCVIII [1608]. 4° [218 x 160 mm] [36], 383 pp., [1] pp. Some woodcut diagrams within the text. Later [late 18th cent.] Halfcalf, rubbed and soiled. Title with stamps of two institutions, and old ownership entry. In the first part heavy annotated by contemporary hand (Joh. Bapt. Besanae ?). \$ 4800.-

Uncommon first edition. Clavius was one of the first to use the mathematical notations which became standard today, and he was apparently the very first to use the decimal point. Clavius was one of the very first to use round parentheses to express aggregation. It was Clavius who, in his Algebra of 1608, introduced the notations + and - for addition and subtraction, already used in Germany by Michael Stifel, to Italy. [Cajori, Notations I, 151-154].- DSB III, 311; Smith, History I, 334: «Probably the man who did the most of all the German scholars of the 16th century to extend the knowledge of mathematics... was Christopher Clavius. His algebra appeared in 1608 and was one of the best textbooks on the subject that had been written up to that time... ». Christoph Clavius (1538-1612) was one of the most respected and widely published authors in the fields of mathematics and astronomy during the late 16th and early 17th centuries. His books were widely used, especially in the pervasive network of Jesuit colleges, and through them he was recognized as an authoritative interpreter and commentator on such fundamental ancient authors as Ptolemy and Euclid, as well as on contemporary authors and issues, including copernican cosmology.- KVK: Stabi Berlin [Ob 2080; Kriegsverlust ?]; München; Augsburg; Dillingen; Jena; Göttingen. COPAC: British Library; National Library Scotland; Oxford; Univ. London; OCLC: Burndby; Michigan State; Berkeley; Harvard; Denison; Bancroft; Illinois Univ. Note: The Oxford copy has 20 leaves at the beginning, the other collate as our copy. Some like the London University copy with 16 leaves and the Italian catalogue cite 17 leaves before. Christoph Clavius lehrte am Collegium Romanum Mathematik. Seine Algebra, die erstmals 1608 gedruckt wurde, wurde als Lehrbuch für die Ausbildung der Mathematik-Lehrer des Ordens konzipiert und führte seine Leser in die Algebra des 16. Jahrhunderts in der Tradition der Coß bis zur Lösung von quadratischen Gleichungen ein. Zu seinen Quellen zählen neben anderen die algebraischen Arbeiten von Stifel und Nunez, außerdem steht das Buch unter starkem Einfluß von Euklid. Im Gegensatz zu der wenige Jahre zuvor veröffentlichten Schrift von Stevin (1585; L'Arithmétique), die die gleichen Quellen gebraucht, verwendet Clavius wie Stifel cossische Zeichen für die verschiedenen Potenzen der Unbekannten, während Stevin eine neue Schreibweise, die des italienischen Mathematikers Bombelli (1526-1572) einführt. Anders als Clavius, der über die Behandlung von quadratischen Gleichungen nicht hinausgeht, geht Stevin auch auf Gleichungen höheren Grades ein. Trotzdem hat Clavius einen enormen Einfluß auf die weitere Geschichte der Algebra.

**First greek edition**

18

**[Cleomedes, Kleomedes]**

Kleomedous kyklike theoria eis biblia 2 : nunc primum typis excussa prodit. [= Elementary theory of the heavens; greek] Parisiis [Paris]: Per Conradum Neobarium, regium in Graecis typographum, 1539. [Colophon: Parisiis, vaeneunt partim Ioanni Lodoico, partim in cruce alba vici Diui Jacobi, 1539 Maij 30]. 4° [190 x 145 mm] [88] pp. Later blue Papercard boards, with label at covers. \$ 5400.-

Editio princeps. The only work by a professional Stoic teacher to survive intact from the first two centuries A.D. This treatise, Caelestia [The Heavens], includes polemical attacks against Peripatetics and Epicureans that are characteristic of debates between Stoics and other philosophers during the first two centuries and that cease by the early third century. The astronomy it presents is elementary and limited to the following topics: the celestial sphere, the division of the world into zones, seasonal and climatic differences, the sphericity and centrality of the earth, the absence of parallax in observations of the sun and beyond, the sizes of the heavenly bodies, the illumination and phases of the moon, and lunar eclipses. The Caelestia is important mainly for offering two geometrical arguments estimating the size of the Earth, one attributed to Eratosthenes, the other to Posidonius. [Alan C. Bowen].- BEA I, 240; DSB III, 318-20.- COPAC: Cambridge, Oxford, Edinburgh, BL London, UCL, Manchester; OCLC: Burndy, Columbia, NYPublic, Kenneth Spencer [listed are more, but not present if looking at the library catalogue]. Ref.: Index aureliensis, 141.630; Brunet, II, col. 100; Graesse, II, p. 200; BM STC French, 1470-1600, p. 117; Adams, C-2175; Houzeau & Lancaster. Astronomie (1964 ed.), 883.

## One of the Most Significant Books on the Education of Women in the 18. Century

19

**Darwin, Erasmus**

A Plan for the Conduct of Female Education in Boarding Schools. Derby: printed by J. Drewry for J. Johnson, St. Paul's Church-Yard, London, 1797. 4°. engraved frontispiece, 128 pp., near contemporary quarter sheep, covers lightly rubbed, a well-preserved copy. a plan for the conduct of female education \$ 2000.-

First edition of one of the scarcer books by Charles Darwin's grandfather, Erasmus (1731-1802), translator of Linnaeus, co-founder of the Lunar Society, and glutton: 'his love of food (particularly fruits, sugar, cream and butter) was matched by his dislike of exercise, and by the age of 46 he had grown so corpulent that a semi-circle had to be cut out of his dining table to accommodate his girth at meal times. Married twice, he sired twelve Darwin offspring and, in between marriages, a further two (known) illegitimate daughters by a Miss Parker. These girls were raised in his home with his other children, and later were the inspiration for a lengthy tract by Erasmus on female education' (Russell Grigg, [answersingenesis.org](http://answersingenesis.org)). 'one of the most significant books on the education of women published in the eighteenth century. Many of Darwin's views echo those of Mary Wollstonecraft. His outlook is soundly practical, and if the work often seems patronizing, girls are no more patronized than boys. He puts a great deal of emphasis on physical well-being and exercise, and while he wants young ladies to learn how to take shorthand, he also wants them to have the same education in the physical and biological sciences that young men have' (Dictionary of Eighteenth-Century British Philosophers).

20

**Dinnies, Anna Peyre [Mrs.].**

The floral year, embellished with Bouquets of flowers, drawn and coloured from nature. [Each flower illustrated with a poem] Boston: Benjamin B. Mussey and Co., 1848. 8°. Xi, [1], 12-256 pp. with chromolith. frontisp., chromolith. title & Giltprinted & decorat. cloth., rubbed and soiled, edges with gilt, Spine in upper and lower part with little damage, inside clean. Front-fly with missing part, because of removal of a dedication. \$ 360.-

A rare book.- Anna Peyre Dinnies, poet, born in Georgetown, South Carolina, in 1816. Her father, W. F. Shackelford, an eminent lawyer, removed to Charleston, where the Misses Ramsay educated her. At the age of fourteen she married John C. Dinnies, of St. Louis, Missouri, where she resided until 1846, when the family removed to New Orleans, La. Before her marriage she had written many of the poems that she published later under the pen name "Moina", among them the "Charnel Ship". In 1854 she contributed to the "Catholic Standard", a weekly edited by her husband, a series of didactic articles entitled "Rachel's What Not". She contributed also to the literary periodicals of the south. In 1847 she published a collection of one hundred poems, arranged in twelve groups, typifying bouquets of flowers, under the title of "The Floral Year" (Boston).

21

**Euclid; [Forcadel, Pierre; trad.]**

Le liure de la musique d' Euclide traduit par P[ierre] Forcadel, lecteur du Roy en Mathematiques. Paris: Charles Perier, 1566. 8° 24 Bll. / leaves. Kalbslederbd. d. 18. Jhdts. m. R.schild, u. R.filetenvergold.

\$ 8900.-

Rare first french edition, the third edition overall after the first edition of of Georgio Valla's translation in 1497 and Jean Pena's edition [Paris, 1557]. The euclidean "Division of the Canon" (Sectio regulae harmonicae) lays the foundation for acoustical science in the western world. It is an ancient pythagorean treatise on the relationship between mathematical principles and acoustical truths. It resembles the style of Euclid's Elements of Geometry and is often attributed to him. Although the treatise is short and imperfect, scientists have long recognized its importance. Porphyry and Boethius apparently quoted from it in their work of music. The harmonical books have a long influence also on Kepler in his *Mysterium Cosmographicum*. After an introduction it consists of a series of mathematical propositions, a series of acoustical propositions, a passage devoted to the enharmonic genus, and a division of the canon. Pierre Forcadel, né à Béziers, mathématicien français du 16 obtint en 1560 par la protection de Ramus une chaire de mathématiques au Collège de France, et mourut vers 1576. On lui doit des traductions françaises: de la Géométrie d'Euclide, 1564; des Livres de Proclus sur le mouvement, 1565; du Traité des poids d'Archimède, 1565, etc.- Hirsch I, 160; RISM B VI, 296 [nur 1 ex. in Deutschl.]; nicht bei Wolfsheim; Joseph Mogenet. Pierre Forcadel, traducteur d' Autolycus. in: Archives Intern. d' Histoire des sciences 10 (1950), pp. 114-128; André Barbera. The Euclidean Division of the canon: Greek and Latin sources. New critical ... (1991).

22

**[Euclid]**

Euclidis Opera omnia ediderunt I[ohann] L[udvig]. Heiberg et H. Menge. 1: Euclidis elementa; libros I - IV continens ed. et latine interpretatus est I. L. Heiberg; 2: Euclides elementa libros V - IX continens; ed. et latine interpretatus est I. L. Heiberg; 3: Euclides elementa librum X continens; ed. et latine interpretatus est I. L. Heiberg; 4: Euclides elementa libros XI - XIII continens; ed. et latine interpretatus est I. L. Heiberg; 5: Euclides elementa : continens elementorum qui feruntur libros XIV - XV et scholia in elementa cum prolegomenis criticis et appendicibus ed. I. L. Heiberg. 5 Vols. Lipsiae: B. G. Teubner, 1883-88. 8°. X, 333 pp.; XXII, 437 pp.; VI, 417 pp.; VI, 423 pp.; CXIII, 738 pp. Zeitgenössische braune Halblederbde. mit zwei Titelschildern, papierbedingt gebräunt, doch schönes Exemplar. (= Bibliotheca scriptorum Graecorum et Romanorum Teubneriana) \$ 800.-

First edition of the important edition, the complete Elementa [5 Vols.; other vols. published with related material]. Johann Ludvig Heiberg (27 November 1854 - 4 January 1928) was a Danish philologist and historian. He is best known for his discovery of previously unknown texts in the Archimedes Palimpsest, and for his edition of Euclid's Elements that T. L. Heath translated into English. Heiberg was Professor of Classical Philology at the University of Copenhagen from 1896 until 1924. Among his more than 200 publications were editions of the works of Archimedes (1880 and 1912), Euclid (with Heinrich Menge) (1883-1916), Apollonius of Perga (1891-93), Serenus of Antinoplis (1896), Ptolemy (1898/1903), and Hero of Alexandria (1899). Many of his editions are still in use today.

23

**[Euclid]**

Euclidis Elementorum libri XV. Graece' et Latine', quibus, cu'm ad omnem mathematicae scientiae partem, tu'm ad quamlibet geometriae tractationem, facilis comparatur aditus ... [= Elemente; Latin & Greek ] [= Euclidis Elementorum libri XV. Graece' et Latine'] Parisiis [Paris]: Apud Hieronymum de Marnef, & Gulielmum Cauellat, sub Pellicano, monte D. Hilarij, 1573. 8° [160 x 100 mm]. 350 pp., [2] with diagrams Contemporary calf, gilt spine in compartments, rubbed and soiled, ownership entry on title: Ex Bibliot. J.J.B. D'Herten. \$ 1200.-

An abridged version lacking the proofs, but a copy being in the library of Isaac Newton.- Adams, E 1001; Hoffmann II,44

24

**Euler, Leonhard.**

Leonhardi Euleri institutionum calculi integralis volumen primum in quo methodus integrandi a primis principiis usque ad integrationem aequationum differentialium primi gradus pertractatur. Editio altera et correctior. Petropoli [St. Petersburg]: impensis academiae imperialis scientiarum 1792-1845. 4° [240 x 195 mm]. [4], 466 pp.; [2], 434 pp.; [8], 639 pp., with one plate; [2], 620 pp., 3 plates. Contemporary calf, gilt spine in compartments, red edges, wide margin copy. The fourth volume bound in new brown half-leather to fit with the other volumes. In vol. I is an older antiquarian dealers description mounted inside covers. \$ 5600.-

Second corrected edition, with volume three in first edition, and volume four in first edition, second issue. The rare fourth volume, often missing, includes 28 supplementary essays by Euler published before in different journals. This volume was first published in 1794 and republished without foreword in 1845 [probably the same sheets as before]. "This series of works was completed by the publication in three volumes in 1768 to 1770 of the Institutiones Calculi Integralis, in which the results of several of Euler's earlier memoirs on the same subject and on differential equations are included. This, like the similar treatise on the differential calculus, summed up what was then known on the subject, but many of the theorems were recast and the proofs improved. The Beta and Gamma functions were invented by Euler and are discussed here, but only as illustrations of methods of reduction and integration. His treatment of elliptic integrals is superficial; it was suggested by a theorem, given by John Landen in the Philosophical Transactions for 1775, connecting the arcs of a hyperbola and an ellipse. Euler's works that form this trilogy have gone through numerous subsequent editions." [Ball, History].- Ene-ström 342(2); 366(2); 385 [First edition]; 660(2).

**Natural History of the devil**

24a

**Feyerabend, Sigmund [ed.]**

THEATRUM DIABOLORUM. Das ist: Ein Sehr Nutzliches verstenn-diges Buch, darauá ein jeder Christ, sonderlich fleissig zu lernen ... mit ... dem Teuffel zukempffen und zustreiten. Frankfurt, P. Schmid fr H. Feyerabend, 1569. Folio. Fol. Mit Titelholzschnitt und Druckermarke am Ende von Jost Amman. 6 nn., CCCCXLII num., 5 nn. Bl. Title with 2 backed marginal damages, ownership entry, somewhat soiled, otherwise only a little browned and hardly soiled. Front paste-down with 3 longer ms. annotations, among them an ownership entry dated 24. 9. 1726. Contemporary blind-pressed pigskin over wooden boards with 2 metal clasps, soiled, rubbed and scuffed. \$ 13000.-

Very rare first edition of the collective work compiled by Feyerabend on all sorts of devils. Feyerabend's *Theatrum Diabolorum*, "which," as the title says, "is a useful and sensible book," contains a great number of essays written by such prominent little authorities as Jodocus Hockerus Osnaburgensis, Hermannus Hamelmannus, Andreas Musculus, Andreas Fabricius Chemnicensis, Ludovicus Milichius, and others. The Reverend Hocker explains in forty-eight chapters almost all possible problems connected with devils whose number in Chapter VIII. is, according to Borrhau, calculated to be not less than 2,665,866,746,664. Others describe special kinds of devils, such as the devil of blasphemy, VI; the dance-devil, VII; the servant's devil, VIII; the hunting devil, IX; the drink-devil, X; the wedlock-devil, XI; the devil of unchastity, XII; the miser's devil, XIII; the devil of tyranny, XIV; the laziness devil, XV; the pride devil, XVI; the pantaloon devil, XVII; the gambling devil, XVIII; the courtier's devil (represented in a drama of five acts, the scene being at the court of Darius), XIX; and the pestilence devil, XX. The author of this last chapter, the Rev. Hermann Strack, concludes by saying: "When we can obtain medicine let us not have a contempt for God's valuable gifts, but withal let us always and all the time rest our confidence and main comfort upon the only God." Erste Ausgabe des von Feyerabend kompilierten Sammelwerkes.- STC 302. VD 16 F 904. Ebert 22706. Grimm 1750, 1. Osborn 35 ff. Hayn-G. VII, 616 f.: "Ausfhrliche Beschreibung dieses hchst seltenen Buches siehe Ebert. Eines der fr die Kulturgeschichte des 16. Jahrhunderts werthvollsten Bcher. Es enth.,lt (20 Teufelstraktate): der Teuffel selbst; Der heylige Teuffel; Bann-; Zauber-; Fluch-; Tantz-; Gesind-; Jag-; Sauff-; Ehe-; Hurn-; Geitz u. Wucher-; Schrap-; Faul-; Hoffarts-; Hosen-; Spiel-; Hof-; Pestilentz-Teuffel." Von allergräter Seltenheit: das letzte von uns nachweisbare Exemplar wurde im Jahr 1953 bei Rittershofer in Berlin versteigert. Ausfhrlich Roskoff. Geschichte des Teufels II, 378-437.



25

**Franck von Franckenau, Georg.**

Flora Francica aucta, oder vollständiges Kräuter-Lexicon: worinnen aller bekannten aus- und inländischen Kräuter, Bäume, Stauden, Blumen, Wurzeln [et]c. unterschiedene lateinisch- und deutsche Namen, Temperamente, Kräfte, Nutzen, Wirkungen und Präeparata gründlich beschrieben werden vormals von Herrn G. Frank von Franckenau lateinisch heraus gegeben, nachgehends ins Deutsche übersetzt und nunmehr bey dieser fünften Auflage um die Helfte mit mehr als zehen tausend Worten vermehrt, auch sonsten verbessert. [= Lexicon vegetabilium usualium; dt.] Leipzig: In der Großischen Handlung, 1753. 8°. 712 pp., 136 pp. with Frontisp. - Portr. within pagination. Lederbd. etwas späterer Zeit, mit R.schild, R.vergold., Deckel leicht aufgebo-gen, etwas beschabt, gering wurmst., doch schönes Exemplar, dekorativ gebunden.

\$ 900.-

Later edition of the flora of the Pfalz; first published in 1680. Georg Franck von Franckenau was a German physician and botanist. He was Teacher of Anatomy, Chemistry and Botany at Jena and became Professor of Medicine at the University of Heidelberg in 1679. He was Personal Physician to the Margrave of Baden, the Duke of Württemberg and the Archbishop of Trier. Spätere Ausgabe des alphabetischen Verzeichnisses von Apotheker- und Heilpflanzen, das zum Vademekum jedes Mediziners der Zeit seit der ersten Ausgabe von 1672 geworden war. Das Lexikon führt die Pflanzen mit ihrem lateinischen, dann deutschen und auch griechischen Namen auf und - besonders geschätzt - gibt Hinweise zur Wirkung und Anwendung. Francks Bächlein war eine wichtige Quelle für die Arbeiten Carl von Linnés. Georg Franck von Franckenau (1644 in Naumburg (Saale) - 1704 Kopenhagen) war ein deutscher Mediziner und Botaniker, der in Straßburg Medizin und Anatomie studierte. 1666 wurde ihm die Doktorwürde verliehen. 1671 folgte ein Ruf an die Universität Heidelberg, wo er als Professor und als Leibarzt der Kurfürsten Karl Ludwig (1617-1680) und Karl (1651-1675) tätig war. Aufgrund des Pfälzischen Erbfolgekrieges verließ er Heidelberg und siedelte nach Frankfurt über, von wo aus er an die damalige Universität in Wittenberg ging. 1692 wurde er von Kaiser Leopold I. geadelt; am 30. November 1693 wurde er als Mitglied ("Fellow") in die Royal Society aufgenommen. Seine letzte Stellung hatte er in Dänemark am Hofe Christian V. inne. In einer 1682 unter dem Namen seines aus Frankfurt am Main stammenden Doktoranden Johannes Richier veröffentlichten Abhandlung mit dem Titel "De ovis paschalibus" erwähnt Franck erstmals den in den protestantischen Gebieten des Elsass und der Pfalz sich ausbreitenden Volksglauben an den Osterhasen. - Pritzel 3015. Wellcome III, 59. Vgl. Ferchl 162.

26

**Goldfuß, Georg August.**

Ueber die Entwicklungsstufen des Thieres. Omne vivum ex ovo. Ein Sendschreiben an Herrn Dr. Nees v. Esenbeck. Mit einer Tabelle. Nürnberg: bey Leonhard Schrag, 1817. 8° [186 x 108 mm] 58 pp. with one plate Later cloth, title and first pages with blindstamp, some browning.

\$ 480.-

Rare first edition; an early attempt to find a classification system for vertebrates. Georg August Goldfuss was a German palaeontologist and zoologist. Aided by Count Georg zu Münster, he issued the important *Petrefacta Germaniae* (1826-44), a work which was intended to illustrate the invertebrate fossils of Germany, but it was left incomplete after the sponges, corals, crinoids, echinoderms and part of the mollusca had been figured.

Erste Ausgabe. „Die Darstellung von Tiersystemen in Form von Kreisdiagrammen oder anderen harmonischen geometrischen Figuren entsprach dem naturphilosophischen Streben nach Ableitung mathematischer Gesetzmäßigkeiten, das teilweise in „pythagoräischer Zahlenmystik“ gipfelte. ... Eine besonders originelle Form wählte Georg August Goldfuß (1817) mit dem Schema eines Eies, in das 12 Tierklassen harmonisch eingegliedert sind.“ [Jahn] Georg August Goldfuß [Goldfuss] (1782 - 1848 Bonn) war ein deutscher Paläontologe und Zoologe. Von 1800 bis 1804 studierte er am Collegium medico-chirurgicum in Berlin Chirurgie und Arzneikunde sowie Zoologie und Naturgeschichte bei Carl Ludwig Willdenow. Er wechselte an die Universität Erlangen und promovierte 1804 mit einer arzneikundlichen Arbeit über südafrikanische Käfer zum Doktor der Medizin. Danach unternahm er eine Forschungsreise an das Kap der guten Hoffnung in Südafrika. 1806 war er als Redakteur in Erlangen, 1807-1809 als Hauslehrer für die Freiherren von Winckler in Hemhofen bei Erlangen tätig. 1810 habilitierte er sich, worauf er 1811-1818 als Privatdozent und Lehrstuhlverwalter an der Erlanger Universität Zoologie lehrte. 1815 heiratete Goldfuß Eleonora Oelhafen von Schöllnbach (1789-1873), die Tochter des Assessors Christoph Carl Oelhafen von Schöllnbach aus einem bekannten Nürnber-

ger Patrizierge-schlecht, mit welcher er ab 1831 das am Kessenicher Venusberghang neuerbaute Schloss Rosenberg bezog. Zur Verlegung der naturwissenschaftlichen Sammlungen der Leopoldina an die neu gegründete Rheinische Friedrich-Wilhelms-Universität im preußischen Bonn ersann Goldfuß und der preußische Kulturminister Karl Freiherr vom Stein zum Altenstein einen trickreichen Plan: Goldfuß betrieb 1817 die Berufung von Christian Gottfried Daniel Nees von Esenbeck auf einen Lehrstuhl für Botanik nach Erlangen und 1818 auch entscheidend dessen Wahl zum Präsidenten der Leopoldina. Nees von Esenbeck war von vornherein dazu auserkoren, nur kurz in Erlangen zu bleiben und als Präsident die Sammlung und die Bibliothek der Leopoldina nach Bonn zu verlegen. Im Oktober 1818 wurde Goldfuß wie andere Erlanger Naturwissenschaftler tatsächlich nach Bonn berufen, unter ausdrücklicher Würdigung seiner Verdienste um die Berufung Nees von Esenbecks an die neue preußische Universität. Goldfuß war in Bonn ordentlicher Professor für Zoologie, Paläontologie und Mineralogie. Höhlenfunde weckten schon früh Goldfuß' Interesse an Fossilien. 1810 veröffentlichte er eine Beschreibung der Umgebung von Muggendorf, 1816 eine Beschreibung des Fichtelgebirges. Seine paläozoologischen Arbeiten über die Großsäuger des Pleistozäns, etwa über die Höhlenhyäne und den Höhlenlöwen, die permischen und mesozoischen Wirbeltiere und insbesondere die fossile Wirbellosenfauna stehen – abgesehen von vereinzelt Beschreibungen von Ernst Friedrich von Schlotheim - für den Beginn der wissenschaftlich begründeten Paläontologie im westlichen Deutschland. Er führte 1818 den Begriff der Protozoa in die Wissenschaft ein. - Jahn. Geschichte Biologie 834, 298 [Abb. d. Tafel]

27

### Gri[e]ndel von Ach, Johann Franz.

Micrographia Nova: Oder Neu-Curieuse Beschreibung Verschiedener kleiner Körper, Welche Vermittelst eines absonderlichen von dem Authore neuerfundenen Vergrößer-Glases Verwunderlich groß vorgestellt werden: Samt Beygefügtens derselben Abbildungen, in vierzehnen Kupfferplatten bestehend .... Nürnberg: Zieger, 1687. 4°. [4] Bll., 64 pp., [30] gef. Bl. [= mit 55 Figuren auf 30 meist gefalt. Kupfertafeln] New Halfleather contemporary style., 6 Tafeln (2 mit längeren) Randeinrissen, pp. 19/20 kl. Loch m. Buchstabenverlust. 3 Bll. mit Verstärkung d. Randes außerhalb d. Textes, einige Taf. am Oberrand leicht angeschnitten. Tafelzahl wechselt bei Vergleichsexplaren, weil sie tls. nicht auseinandergeschnitten wurden. \$ 4000.-

First german edition, paralleling the latin edition. The German counterpart to Hooke's *Micrographia* (1655), being probably the first German work to illustrate objects as seen through the microscope. The book is significant in the development of the microscope, and Clay and Court's *History of the Microscope* (1932) contains references on 7 pages to it. On p.84 they state that Griendel's work contains " on p.7 an account with illustrations of a Microscope of Griendel's own design, which is interesting chiefly as being the first instrument in which there was an attempt made to improve the objective; for in this microscope the objective consists of two plano-convex lenses mounted with their curved surfaces facing one another. This construction was not copied by any other make and for the next hundred years the objective was universally made of a single lens, usually bi-convex." It seems that Dollond first re-introduced Griendel's objective. Griendel's new Microscope was a decided improvement on Hooke's and Leeuwenhoek's instruments, as the object could be viewed at a greater distance from the lens, thereby greatly increasing the field of vision. The plates show various insects, including the earliest picture of the Scabies-parasite, plants and details of their construction, textile materials, etc. A Latin edition was published in the same year. Both editions are now among the rarest scientific books of the 17th century. Erste deutsche Ausgabe, parallel zur lateinischen Ausgabe erschienen. In Nürnberg betrieb Franz Griendl von Ach et Wanckhausen (1631-1687) seit 1670 eine werkstätte zur Herstellung optischer instrumente. Er schrieb sich 1650 zusammen mit seinem Bruder an der Universität in Ingolstadt ein. 1655 trat er auf Wunsch seiner Eltern in Braunau unter dem Namen Ladislaus in den Kapuzinerorden ein. Zwischen 1655 und 1670 lebte er in den Kapuzinerklöstern von Salzburg, München, Kitzingen und Würzburg. 1670 trat er aus unbekanntem Gründen aus dem Orden aus und soll von Regensburg nach Nürnberg gekommen sein. Hier eröffnete er eine Werkstatt, in der er eine Vielzahl von optischen Instrumenten anbot. 1677 verließ er Nürnberg und zog als kurfürstlicher Ingenieur nach Dresden. 1684 löste er seine Ehe auf und ging nach Wien als kaiserlicher Ingenieur. Hier starb er 1687. Er stand in Kontakt zu bedeutenden Persönlichkeiten, darunter mit Gottfried Wilhelm von Leibniz. In einem 1671 an diesen gerichteten Brief führte er sein umfangreiches Lieferprogramm an: dazu gehörten verschiedene Arten von Fernrohren, optische Laternen, "damit man allerhand Figuren, Schriften und zeichen über eine Gasse bei Nacht auf eine Wand werfen kann, daß man vermeint, es sei lauter Zauberei". In dem Buch, das er in Wien schrieb und in Dresden publizieren ließ, legte er die ergebnisse seiner mikroskopischen Untersuchungen dar und schrieb über Insekten, Schimmelpilze und Textilien. den Apothekern riet er, die Qualität von Samen mit dem Mikroskop zu prüfen. Griendl hatte ein Auflichtmikroskop aus Holz mit einem vierfach ausziehbaren Tubus konstruiert, das er in seinem buch zusammen mit dem optischen Aufbau darstellt. Danach enthielt das Gerät drei Paare von Plankonvexlinsen, deren gewölbte Flächen einander zugewandt waren, sich jedoch nicht berührten. Griendl erzielte eine Maximalvergrößerung von etwa 100x." [Gerlach. geschichte 55/56]; Doppelmayr pp. 111 ff.; Nissen, ZBI 1715; Krivatsy 4997; vgl. Wellcome III, 165, Eales 1038, Horn-Sch. 8583 (alle die latein. Ausgabe vom gleichen Jahr); Hubert de Martin. Griendel von Ach. Ein Mikroskopiker der Barockzeit. Wien: Höhere Graphische Bundes- Lehr und Versuchsanstalt 1970.

**Guidobaldo del Monte.**

Guidi Ubaldi e Marchionibus Montis problematum astronomicorum libri septem. Venetiis [Venice]: apud Bernardum Iuntam, 1609 Folio [295 x 200 mm]. [6], 128 leaves with engraved vignette on title, woodcut illustrations and diagrams in text. Lederbd. d. Zt., berieben u. be- stoßen, an oberen u. unteren R.kante beschädigt bzw. mit Sign.zettel, R.falz eingerissen, innen etwas abgegriffen, vereinzelt fleckig. Alter Besitzvermerk am Titel von " Verch, Paris 1738" [bound with:] In duos Archimedis Aequponderantium Libros Paraphrasis Scholiis illustrata.- Pesaro: Girolamo Concordia, 1588. 2 Bll., 202 pp., 1 Bl. with some geometrical diagrams throughout the text. sold

First editions. The first work includes a description of a Minutes Gauge, a Transmission instrument invented by Fabrizio Mordente (died 1608) to measure fractions of a degree. The instrument, described in a manuscript by Giacomo Contarini, consists of a square box with two indexes on the cover, one at the centre describing a 90° arc and one below it describing a 60° arc. Contarini showed this invention to Guidobaldo del Monte, who then devised a variant consisting of two wheels of 72 and 30 teeth, also equipped with six-toothed sprocket wheels, keeping only the 360° circle on the faces of the instrument. Guidobaldo's variant was published, still further perfected, in the *Problematum astronomicorum* (Venice 1609). The instrument, designed to measure fractions of a degree and parts of the hour circle, had 8 sprocket wheels and two wheels of 72 and 40 teeth, while the faces of the disk carried scales of 360°, 60° and 24 hours.- Houzeau/ L. 2912 II.) Roberts- Trent 13: "This is the first edition of Guidobaldo's paraphrase and commentary on Archimedes' book on plane equilibrium, the continuation of a major work on the establishing of the center of gravity. The work complements the *Mechanicarum liber*, and together they represent the greatest opus of 16th-century mechanics. A copy was sent to Galilei, and numerous letters were exchanged on the topics contained therein"

Marchese Guidobaldo del Monte (1545 - 1607) (var. Guido Baldi, Marquis del Monte), was an Italian mathematician, philosopher and astronomer of the 16th century. Guidobaldo studied mathematics at the University of Padua in 1564. While there he became a friend of the great Italian poet Torquato Tasso. In fact Guidobaldo may have known Tasso before they studied at Padua together, for Tasso was almost exactly the same age as Guidobaldo and had been educated at the court of the Duke of Urbino, with the duke's son, from 1556. Guidobaldo then served as a soldier in the ensuing conflict in Hungary between the Habsburg Empire and the Ottoman Empire. After serving in the army, Guidobaldo returned to his estate of Montebardino in the Marche, where he was able to spend his time doing research into mathematics, mechanics, astronomy and optics. He studied mathematics under Federico Commandino during this period and became one of his most staunch disciples. He also became a friend of Bernardino Baldi, who was also a student of Commandino around the same time. He corresponded with several mathematicians including Giacomo Contarini, Francesco Barozzi and Galileo Galilei. His invention of a drafting instrument for constructing regular polygons and dividing a line into any number of segments was incorporated as a feature of Galileo's geometric and military compass. Guidobaldo was also important in helping Galileo Galilei in his academic career. Galileo, then a promising, but unemployed 26-years old, had written an essay on hydrostatic balance, which struck Guidobaldo as being nothing short of genius. He then commended Galileo to his brother, the Cardinal Del Monte, who referred him to the powerful Duke of Tuscany, Ferdinando I de' Medici. Under his patronage, Galileo got an indication to a professorship of mathematics at the University of Pisa, in 1589. Guidobaldo became a staunch friend of Galileo and helped him again in 1592, when he had to apply to the chair of mathematics at the University of Padua, due to the hatred and machinations of Giovanni de' Medici, a son of Cosimo I de' Medici, against Galileo. Notwithstanding their friendship, Guidobaldo was a critic of Galileo's principle of the isochronicity of the pendulum, a major discovery which Guidobaldo thought it was impossible.- Adams, U 6; BM, Italian Books 37. Sotheran 12033. Riccardi I/2, 179. not in Barchas Coll.- Lit.: Gianni Micheli, "Guidobaldo del Monte e la meccanica" in Lino Conti [ed.] *La matematizzazione dell' universo: Momenti della cultura matematica tra '500 e '600*. Assisi, 1992. pp. 87-104.

29

**Hartmann, Karl Friedrich Alexander.**

Handwörterbuch der Mineralogie und Geognosie. Bearbeitet und herausgegeben von Karl Friedrich Alexander Hartmann. 2 Vols. Leipzig: F. A. Brockhaus, 1828. 8° [190 x 110 mm] CCVI [= 206], 1-274 pp.; 275-637 pp. mit 10 lithographierten Tafeln (jeweils ca. 184 x 310 mm). Marmorierete Orig. - Pappereinbände d. Zt. mit Rotschnitt. Das Papier ist leicht fleckig. Sonst guter Zustand. Die Tafeln zeigen geometrische Kristallformen. Nice copy in contemporary paperboards.

\$ 900.-

Very scarce [Schuh]. Carl Friederich Alexander Hartmann was a prolific writer translating some 40 English and French works on mining and mineralogy into German. Apart from the present work his 'Taschenbuch für reisende Mineralogen' and 'Handwörterbuch der Mineralogie und Geognosie' are his most important contributions. Carl Friedrich Alexander Hartmann (1796 - 1863), a German mineralogist, mining expert & metallurgist, who was the son of a foundry official in the Oberharz, a prolific mining/ mineral district in Germany. From these roots, he developed an early interest in mining and metallurgy, and through family connections secured a position as a student at the mining school in Clausthal. Although his studies were interrupted from 1813 to 1816 by a stretch in the German army fighting Napoleon, he resumed his education afterward, becoming an assistant to Christian Samuel Weiss at the University of Berlin. In 1821, while still a student, Hartmann entered into a marriage that he could not financially support; therefore, he was obligated to leave the University and accept a bookkeeping position in Brunswick to provide for his family. His discretion and conscientiousness often meant being entrusted with important assignments. However, all spare time away from work or family was devoted to private study in the areas of geology, mining and mineralogy. His publications and translations [e.g. Lyell] in these fields brought him recognition and opportunities to travel throughout Europe. They also brought an appointment as commissioner of mines for Brunswick in 1825. Hartmann held membership in many scientific and technical societies, including Societät für die Gesamte Mineralogie of Jena and the Society for Mineralogy in St. Petersburg.- DBA: I 479, 165-167; II 528, 201-202; DSB VI, 142-3 [by M. Koch]; Hamberger & Meusel, Gelehrte Teutschland, 1796-1834; Pogendorff I, 1025; Partsch, Katalog der Bibliothek, 1851: no. 137. KVK: some; COPAC: Cambridge, Leicester, NHM London; OCLC: Cleveland, Cornell, Oklahoma, Minnesota, Linda Hall, Field Museum, Norman [7 holdings].

**On the Measurement of Wine Barrels**

30

**Hasius [Hase], Johann Matthias.**

Doliorum dimensionis, sive pithometriae theoria et praxis nova, ex algebrae et matheseos recentioris principiis explicata et perfecta: quarum illa, post partes priores tres antehac separatim forma dissertationum academicarum aliquot propositas addita ultima parte suppletur, altera recens editur a Johanne Matthia Hasio, ... . Wittenberg: Gottfried Zimmermann's Erben [Haereses Godofredi Zimmermanni], 1728. 4° [205 x 160 mm]. [8], 105 pp., 207-237 pp., [1] mit zwei Kupfertafeln mit mehreren Figuren. Contemporary english smooth calf, red edges, somewhat browned, title printed in red & black, good copy. Zeitgenössischer englischer geglätteter Kalbslederbd., R.titel verblast, R.vergold., roter Schnitt, Stehkanten vergold., Ex Libris am Vorsatz, innen durchgehend etwas stärker gebräunt. Nice copy.

\$ 2200.-

First edition, a very rare work on measuring the contents of barrels, a work in the tradition of Kepler's classical paper of 1615: "Nova stereometria doliorum". Kepler's new integration techniques arose from his need to calculate how much wine was left in the barrels of his cellar in order not to run short in winter. Hase needed his techniques more for his cartographic skills. Johann Matthias Hase [Hasius] was a German mathematician, astronomer, and cartographer. Hase taught at Leipzig and his native Augsburg. In 1720, he became professor of mathematics at the University of Wittenberg. KVK cites only 3 copies in Germany at Dresden, München [eine col. Tafel, statt zwei], Göttingen; no copy in COPAC & OCLC.

31

**Holder, William.**

A Treatise of the Natural Grounds, and Principles of Harmony.- London: Printed by J. Hepinstall, for John Carr, at the Middle- Temple- Gate, in Fleet-Street, 1694. 8°. [X], 204 pp., without errata leaf, 2 engraved plates, one folding, illustrations in text. Contemporary lightly mottled calf with later rebacking and black morocco label; corner torn from blank front free end-paper, corners worn, joints rubbed. Wormholes at the covers, browning inside throughout.

\$ 3200.-

Rare first edition of this important mathematical treatise on sound & hearing. "Holder's originality in his Treatise lies in his explanation of the physics and acoustics of music, making a link with Galileo's isochronism theory of the pendulum. Its preoccupation with the physical basis of music is typical of the growing spirit of scientific enquiry of the period and of the Age of Reason that brought the arts as well as the sciences within the scope of such enquiry" (New Grove). "William Holder's treatise contains nine chapters, discussing Sound in general, Sound harmonick, Consonancy, Concord, Proportions, Discords and Degrees, Discords and Differences, with an Appendix to the second chapter on the Motions and Measures of a Pendulum and a digression after the sixth chapter concerning the ancient Greek music. The definitions are given with accuracy and intelligence, and the treatise was long regarded as an authoritative guide." (Deakin).

William Holder (1616 - 1696) distinguished himself as mathematician, phonologist, cleric, and musician. He had studied at Cambridge and was elected fellow of Pembroke Hall in 1640. Later he was a canon of St. Paul in London. Elected to the Royal Society in 1663 he contributed several papers to the Philosophical Transactions. He was famous for his teaching a deafmute to speak and did research on deafness for several years. His compositions are typical of those of the later 18th century, but what sets him well above his contemporaries is the above book. His technical discussion of sound, harmony, dissonance, proportion, discord, as well as ancient Greek music, were the most able and most thoughtful published by any music theorist living in Britain and probably elsewhere in the 17th century. According to New Grove, the work was "praised by Burnet and Hawkins for its clarity" adding that "its preoccupation with the physical basis of music is typical of the growing spirit of scientific inquiry of the period and of the Age of Reason that brought the arts as well as the sciences within the scope of such inquiry." Holder added further lustre to his reputation with his publication in 1694 with the publication of his A Discourse concerning Time, which is an account of various measures of time. There are three issues of this first edition, though no precedence has been established.- RISM, 420; Gregory and Bartlett, II, 125. Wing H2389. Deakin, Musical works, p. 23.

32

**[Hopp, Jean]**

Polygraph. Schnell-Zeichner für Architekten, Ingenieure und Techniker, Graphiker und Kunstgewerbler. Anerkanntes Lehrmittel für technische Lehranstalten. [Berlin- Charlottenburg, 1930's] [160 x 160 mm] One sheet of advertisement, the steel instrument [polygraph], and samples in a papercard-box.

\$ 1200.-

Instrument for technical use in graphic design, architecture, construction et al. Probably made in Germany in the 1930's.

## PMM 320 – Dedication Copy

33

**Humboldt, Alexander von.**

Kosmos. Entwurf einer physischen Weltbeschreibung. Stuttgart und Augsburg: J. G. Cotta, 1845 - 1858. gr.8°. XVI, 493, [I] pp.; Titel, 544 pp.; Titel, 644 pp.; Titel, 649, [I] pp. Halbleder-bände d. Zt. mit Rückentiteln in Goldprägung. Fine copy in contemporary half-leather with spine gilt [Romantikervergoldung]. \$ 5600.-

First edition, dedication copy. A stainless copy in contemporary half calf. After his return from his expedition to Asian part of russia in 1829 Humboldt started to plan his 'life work', in which he wanted to offer to an educated reader the latest scientific results and different facets of geography and the natural sciences. It took him finally thirty years of his long life and the scope of the 'Kosmos' can be, following Goethe, described as the representation of the unity amidst the complexity of nature. Humboldt's intention to add an atlas by Heinrich Berghaus could not be realised and therefor the Stuttgart publisher Hoffmann commissioned the geographer Traugott Brumme to write an Atlas with forty-two maps which appeared separately one year before the final text volume.- Fielder-Leitner 6.1; Löwenberg 199; PMM 320; Goedeke VI, 263; Borst 2163; Sabin 33726.

34

**Humboldt, Wilhelm von.**

Über das Entstehen der grammatischen Formen, und ihren Einfluß auf die Ideenentwicklung. (Gelesen in der Akademie der Wissenschaften am 17. Januar 1822). Extracted from Abhandlungen der kgl. Akademie der Wissenschaften, Berlin, 1823. [Berlin: Akademie, 1823] 4° pp. 401-430, [I], contemporary blue paper wrappers with hand-written labels, spotting mostly confined to the wide margins, a very good copy from the Hofbibliothek Donaueschingen. \$ 600.-

A rare work by Humboldt and a turning-point in the theory of language, published 14 years before Über die Verschiedenheit des menschlichen Sprachbaues und ihren Einfluss auf die geistige Entwicklung des Menschengeschlecht. It is here that Humboldt states the principle in ethno-linguistics that languages express the cultural identity of their speakers, and that changes in a language should be correlated with historical changes within its culture. See PMM 301.

## Rare early Computer Brochure

35

**[IBM]**

IBM Selective Sequence Electronic Calculator. (New York: International Business Machines Corporation, 1948). Large-format company brochure in original printed covers, 16 pp., one large fold-out photograph showing the SSEC installation room, various smaller photographs of equipment and personnel within the text, an excellent copy. \$ 1000.-

Rare early computer brochure.- The IBM Selective Sequence Electronic Calculator (SSEC), also called Poppa, was the first computer to combine electronic computation with stored instructions, and it was the last of the large electromechanical computers ever built. It was the first machine to run a stored program, although it was not fully electronic. It was placed on the ground floor of IBM's main office building in New York City, where it was visible to people on the sidewalk. The SSEC, a hybrid of vacuum tubes and electromechanical relays, combined the speed of electronic circuits with a storage capacity of 400,000 digits. Approximately 13,500 vacuum tubes were used in the arithmetic unit and its eight high-speed registers, which had an access time of under 1 millisecond. SSEC had 21,400 relays that were used for control and 150 slower-speed registers, with an access time of 20 milliseconds. Addition took 285 microseconds and multiplication took 20,000 microseconds, making it approximately 100 times faster than the Harvard Mark I. Data which had to be retrieved quickly were held in electronic circuits while the remainder were stored in relays and as holes in continuous card stock tapes. The SSEC was very reliable for its time, making about one error for every eight hours of operation. It was used for calculations by the U.S. Atomic Energy Commission and for calculating the positions of planets. It has sometimes been said that the SSEC produced the moon-position tables that were later used for plotting the course of the 1969 Apollo flight to the moon. 'The Selective Sequence Electronic Calculator was the first machine to combine electronic computation with a stored program, and the first machine capable of operating on its own instructions as data. When placed in operation in 1948, and for some time thereafter, it was the most flexible and powerful computer in existence. IBM published relatively little about it, and the SSEC has been largely overlooked by computer historians' - C.J. Bashe, 'The SSEC in Historical Perspective', IEEE Annals of the History of Computing, Vol. 4 No. 4, pp. 296-312 (1982).

36

**Jack, Richard.**

Mathematical Principles of Theology, or, the Existence of God geometrically demonstrated.

London: printed for G. Hawkins, 1747. 8°. xxvi, 328 pp., Contemporary gilt panelled calf, spine richly gilt, internally excellent - a fine copy from the Macclesfield Library. \$ 1200.

Richard Jack (approx. 1710/15 - 1759) was a mathematical teacher who taught in Newcastle upon Tyne (1737), Edinburgh (1739-45) and London, where he advertised lectures in 1751 and 1754. He called Scotland "my native country". This is one of three books he published in the 1740s and '50s. The first is entitled Elements of conic sections and was well regarded. Jack's second book (1747) was more ambitious, but despite its magniloquent claims, the book seems to have caused little stir. The third book being a restoration of Euclid's Data.- Lit.: W. Johnson. Richard Jack and Henry Baker, FRS in the late summer of 1746; in: Notes Rec.R.Soc.Lond. 47(2), 225-231 [1993]; W. Johnson. Richard Jack, minor mid-18th century mathematician: Writings and background in: International Journal of Impact Engineering, Volume 12, Issue 1, 1992, pp. 123-140.

36a

**Kaup, Johann Jacob.**

Classification der Säugethiere und Vögel. Darmstadt: C. W. Leske, 1844. 8°. X, 144 pp., [4]

with 2 fold. plates, with some corrections in ink on plates. Contemporary halfcloth., inside some browning and spotting. \$ 490.-

Rare first edition. Johann Jakob Kaup (1803 - 1873) was a German naturalist. After studying at Göttingen and Heidelberg he spent two years at Leiden, where his attention was specially devoted to the amphibians and fishes. He then returned to Darmstadt as an assistant in the grand ducal museum, of which in 1840 he became inspector. In 1829 he published Skizze zur Entwicklungsgeschichte der europäischen Thierwelt, in which he regarded the animal world as developed from lower to higher forms, from the amphibians through the birds to the beasts of prey; but subsequently he repudiated this work as a youthful indiscretion, and on the publication of Darwin's Origin of Species he declared himself against its doctrines. The extensive fossil deposits in the neighbourhood of Darmstadt gave him ample opportunities for palaeontological inquiries, and he gained considerable reputation by his Beiträge zur näheren Kenntniss der urweltlichen Säugethiere (1855-1862). He also wrote Classification der Säugethiere und Vögel (1844), and, with Heinrich Georg Bronn, Die Gavia-artigen Reste aus dem Lias (1842-1844).

### Created the new science of spectroscopy - PMM 278b

37

**Kirchhoff, Gustav.**

Untersuchungen über das Sonnenspectrum und die Spectren der chemischen Elemente.- Berlin:

Kgl. Akademie der Wissenschaften / F. Dümmler, 1862. 4°. pp. 63-95, [1, blank] with 3 plates.

Blue plain wrappers, uncut, fresh. \$ 1800.-

First edition, Journal-issue. "Kirchhoff's law was the key to the whole thermodynamics of radiation. In the hands of Planck, Kirchhoff's successor to the Berlin chair, it proved to be the key to the new world of the quanta, well beyond Kirchhoff's conceptual horizon" [Horblit, 100 books famous in science, 59] "Created the new science of spectroscopy" [PMM 278b] "A classic of exact science, which first contains the complete statement of the principle on which spectrum-analysis is based" [Sotheran, First Supplement 5370]; "Working with Robert Bunsen, Kirchhoff founded and developed the method of spectral analysis" [Norman Libr. 1219]. PMM 278 (b); Horblit, Science, 59; Honeyman V, 1835; Sparrow, Milestones of Science, S. 42 u. Nr. 117; Dibner 153 Anm.; Poggendorff III, 720. Seltene erste Ausgabe des ersten Teils von Gustav Kirchhoff's letzter grundlegender Arbeit über Spektralanalyse (1863 erschien ein zweiter Teil, der jedoch meist fehlt). Mit der hier vorliegenden Arbeit schuf Kirchhoff die neue Wissenschaft der Spektroskopie. "Mit genialem Einfühlungsvermögen wiederholte er das Experiment mit Sonnenlicht und erhielt das gleiche Resultat. Die Tatsache, daß die dunklen Linien erzeugt wurden, wenn Licht von einer glühenden Substanz durch die gleiche Substanz bei niedrigeren Temperaturen ging, ließ vermuten, daß Absorption stattfand. Beim Sonnenspectrum etwa wurden die dunklen Linien durch Absorption in den Gasen der Sonnenatmosphäre verursacht. Weitere Experimente zeigten, daß jede glühende Substanz ein Spektrum erzeugt, daß nur ihr selbst eigen ist. Dies ermöglichte eine chemische Analyse von solchem Umfang und mit solcher Genauigkeit, wie man sie bisher nicht gekannt hatte. Mehr noch: das ganze Weltall mit seinen Sternen wurde dadurch in das Labor 'gebracht', wo man nun feststellte, daß die Grund-substanzen überall im Weltall die gleichen waren" (PMM). - DSB 7, 379; PMM 278b; Sparrow 117; Norman 1219; Horblit 59

38

**Kirwan, Richard.**

Versuche und Beobachtungen über die spezifische Schwere und die Anziehungskraft verschiedener Salzarten und über die wahre neuentdeckte Natur des Phlogiston's von Richard Kirwan. Aus dem Engl. von [Lorenz] Crell. **[und]** Anfangsgründe der Mineralogie von Richard Kirwan. Aus dem Engl übers. von Lorenz Crell. 2 Bde. in 3 Teilen in 1. Berlin und Stettin, bey Friedrich Nicolai, 1783-1785 8°. [I1] Bl., 128 pp., [I]; 110 pp.; [I5] Bl., 462 pp., [18] Zeitgenössischer Halblederbd. d. Zt., gutes Exemplar. \$ 1200.-

The rare first german translation of Kirwan's *An Essay on Phlogiston* (London 1787) with a translation of his *Elements of Mineralogy* (1784). A famous book in the history of chemistry and the starting point of a controversy between the supporters of the phlogiston theory and those who opposed it. Kirwan supposed that "inflammable air" (hydrogen) was identical to phlogiston, a suggestion originally made by Henry Cavendish in 1766. He discusses the new theory of Lavoisier and his school (whom he first described as "antiphlogistians") and gives a list of chemists who still supported the phlogiston theory (e.g. Bergman, Chaptal, Crell, De La Metherie, Priestley, Wiegleb). The book was favourably received in Great Britain and by most european chemists. Lavoisier and his associates had the volume translated into french (by Madame Lavoisier) and published it in 1788 with critical notes that successfully refuted Kirwan's views.- Partington III, 662 [discusses this work in detail and considers it one of Kirwan's most interesting books"]; Blake 243; Bolton 576; Cole 719; DSB VII, 388-90; Roy G. Neville *Historical Chem. Library* I, 729; Duveen 324 [all mostly engl. edition]; II.) The first systematic mineralogy in English that classifies minerals by their chemical composition. In the preface, Kirwan deplores the insignificant position that mineralogy holds in British science. He contrasts this to the progress made in Europe, especially Sweden, Germany and France. He then presents his reasons for writing the work. Citing that until recent advances in chemistry, mineralogy had never had an adequate base on which a system of classification could be founded, Kirwan discusses other methods of classification. While describing these other arrangements, he questions the merits of systems such as Romé de l'Isle's based on crystal form and Werner's based on external characters. He concludes that mineralogy must be considered a branch of chemistry. In this regard, Kirwan follows Cronstedt and uses the later's basic classification, subjugating the mineral species into Earths and Stones, Salts, Inflammables and Metals, based upon the species' chemistry. Of particular historical interest to the properites of minerals is a section on pages 171-73 proposing a hardness scale for minerals. According to LKG, this work was translated by J.H. Wittekop from *Elements of Mineralogy* (London, 1784). It also contains a forward by Lorenz Crell.- Sinkankas, *Gemology Bibliography*, no. 3433; Meusel, *Gel. Teutschl.*, Aug. 5, Bd. 1; *Allg. dt. Bibl.* Bd. 59, 155; KVK: Berlin, Göttingen, Halle, Hamburg Wolfenbüttel; COPAC: BL London; OCLC: only Cornell.

39

**Konkoly [- Thege], Nicolaus von [= Miklós].**

Practische Anleitung zur Himmelsphotographie nebst einer kurzgefassten Anleitung zur modernen photographischen Operation und der Spectral-photographie im Cabinet. Mit 218 Textabbild. Halle a. S.: Wilhelm Knapp, 1887. 8°. XVI, 372 pp. Halb.-Lederbd. d. Zt., berieben u. bestoßen, Sign.reste a. R., innen etwas gebraucht, sonst recht ordentl. \$ 390.-

First edition. Miklos Konkoly Thege (1842-1916), hungarian astronomer, well respected as an early participant in the evolution of astrophysics. He founded an institute for the study of astronomy and astrophysics in Hungary using his own resources. He is rightly thought of as the founder of astronomy in Hungary. One of Konkoly Thege's lasting contributions to the development of astrophysics was through his publications of detailed instructions on technique. His books were richly detailed and extensively illustrated with woodcut drawings of equipment. Konkoly Thege's involvement in the invention and development of instrumentation for astronomy was significant and productive. Two of his inventions that deserve special mention in this regard were several types of a simple, direct vision solar flare telescope [marketed by Zeiss], and the blink comparator [marketed by G. heide in dresden].- Hockey 650-651 [Laszlo Szabados]

40

**Konkoly [- Thege], Nicolaus von [= Miklós].**

Praktische Anleitung zur Anstellung astronomischer Beobachtungen mit besonderer Rücksicht auf die Astrophysik. Nebst einer modernen Instrumentenkunde. Mit 345 Textabbild. Braunschweig: Friedrich Vieweg, 1883. 8°. XXII, 912 (+ 2) pp. Original- HLdbd. d. Zt., berieben u. bestoßen, innen durchgängig anfangs und gegen Ende, wie immer, etwas braunfleckig, sonst recht ordentl. Exemplar. \$ 460.-

First edition. General exposition of astronomical and astrophysical observational techniques and appropriate instrumentation in use during the late 19th cent., with over 300 woodcuts illustrating instruments, providing details of their construction and use.- DeVorkin 401. Seltenes Instrumentenbuch des ungarischen Astronomen Konkoly - Thege (1842-1916) mit Kapiteln über die Uhren (1-82), die Libelle (82-106), Instrumente die der Zeitbestimmung dienen, bzw. Meridiankreise (107 - 289), Aequatoreale (289 - 535), Mikrometer (536 - 611), Sonnenbeobachtungsinstrumente (612 - 767), Himmelsphotographen (768 - 845), Polariskope, Astrophotometer, Pyrheliometer, etc. Im Text sind 345 Abbildungen, tfs. ganzseitig, tfs. sehr detailreich. Miklós [Nikolaus] Konkoly - Thege (1842-1916) errichtete 1871 auf seinem Gut in Ogyalla [heute: Hurbanovo, Slovakia] ein astronomisches Observatorium, in welchem er zahlreiche Spektralanalysen der Himmelskörper vornahm. Besonders wertvoll waren seine Beobachtungen der Kometen, der Meteore und der Sonnenflecken. Er bereicherte die Astronomie mit mehreren neuen Instrumenten eigener Konstruktion unter denen besonders sein Spektralkolorimeter, seine Spektroskope und Spektrographen in weiten Kreisen bekannt wurde. Später war er Ministerialrat und Reichstagsabgeordneter. Er stattete sein Observatorium unter grossen materiellen Opfern mit modernsten Instrumenten aus und baute es zum Zentralobservatorium für Ungarn aus.- Hockey 650-651; Krücken / Parlagi II, 54; DSB VII, 461.

41

**Kronecker, Leopold.**

De unitatibus complexis. Dissertatio Inauguralis Arithmetica ... in Alma literarum Universitate Friderica Guilelma ... Leopoldus Kronecker, Ligniciensis. Berlin: Gustav Schade, 1845. 4°. [2] Bl., 35 pp., [I; Vita] Rückenbrosch. Ordentl. Exemplar. \$ 2400.-

Nearly untrouvable dissertation. In his dissertation, On Complex Units, submitted to the Faculty of Phil. on 30 July 1845, Kronecker dealt with the particular complex units that appear in cyclotomy. He there by arrived at results and methods closely related to the theory of "ideal numbers" that Eduard Kummer was to propound a short time later. In 1893 Frobenius, in a memorial address on Kronecker, compared this dissertation to a work of "chemistry without the atomic hypothesis". In evaluating this dissertation, Dirichlet said that in it Kronecker demonstrated "unusual penetration, great assiduity, and an exact knowledge of the present state of higher mathematics." DSB VII, 505ff. [Biermann] NUC cit. 3 copies [NNC, MH, CtY].

42

**Lauremberg, Peter.**

Horticultura Libris II. comprehensa; huic nostro coelo & solo accommodata... in qua quicquid ad hortum proficue colendum, et eleganter instruendum facit, explicatur. [and:] Apparatus Plantarius: tributus in duos libros. I. De plantis bulbosis. II. De plantis tuberosis ... 2 Vols. in 1. Frankfurt a. Main: Matthias Merian, 1654. 4° [205 x 162 mm] 196 pp. with engraved title, 29 full-page engraved plates, 6 of which are printed in the text; 168 pp. with engraved title and 36 engraved plates in the text. Dunkelbrauner Lederbd. d. Zt. über Holzdeckeln mit blingeprägt. Fileten u. Eckfleurons, kl. Mittelstück, goldgepägter Besitzvermerk: I.R.V.B. Bindebänder fehlen. Stellenweise gebräunt, wenig stockfl., Spiegel und Vorsatz angestaubt, die Tafel zu I. an den Schluß gebunden. Tafeln rückseitig mit Stempel der ULB Halle. Vorsatz mit Eintrag: Ermlitz. Aus der ehemals Apelschen Bibliothek in Ermlitz. Browning as is usual with this book. \$ 2400.-

First editions, secon issue, of one of the best of the early 17th-century gardening manuals, scientific in its detail and approach. It is known to have influenced John Evelyn who quotes it in his unpublished 'Elysium Britannicum'. Morton describes the work as 'typical of the experience and ideas that began to flow into botany from horticulture' and goes on to recount how

Lauremberg rejected the idea of the 'plant soul' having a specific location, because 'horticulturalists knew that plants could live and reproduce themselves from very small pieces cut from the roots (i.e. rhizomes, stolons, etc.) as well as from branches, stems, seeds, and even leaves (as in the case of the Indian fig). Therefore the soul or vital force (*vigor vitalis*) is not in one part more than another, but diffused through the whole plant body... Lauremberg describes his own experiment, lasting three years, in which two hundred vine cuttings were grown in close association with two varieties of cabbage in order to test an ancient belief, mentioned by Pliny, that vine and cabbage adversely affect each other. He found, however, that both species flourished and there was no evidence of mutual inhibition... In other experiments he found, contrary to tradition, that rue and fig did not benefit from inter-planting. There were many gardener's notions about how seeds were best oriented when sown; the wrong way was said to give dwarf or unthrifty plants. Again, Lauremberg made his own observations with seeds of pea, cucurbita, walnut, almond, date and others, finding that the stem grew upwards and the root downwards irrespective of the original orientation, and that the alleged effects of malplacement were "empty superstition" (Morton, History of botanical science p. 222-3). The work covers a variety of topics, including the layout of the orchard and flower and herb gardens, topiary, labyrinths, sundials, etc. Five plates illustrate gardening tools, 18 are of designs for parterres and labyrinths, and two are for topiary. The second title, 'Apparatus plantarum', the sequel to the 'Horticultura', is devoted to bulbous and tuberous plants, including the most popular garden flowers of the time. It 'deals not only with their medicinal and culinary uses, but their care and propagation, places in literature, etc.' (Johnston).- Hunt 219 u. 221; Wüthrich 34/35; Cobres 655,1; Nissen BBI 1147 & 1146. Peter Lauremberg (1585 Rostock - 1639) war ein vielseitiger Hochschullehrer, Rektor der Universität Rostock und Schriftsteller der Barockzeit. Er wurde als Sohn des Professors Wilhelm Lauremberg in Rostock geboren und den Fußstapfen des Vaters folgend, studierte er Medizin und Astronomie in Rostock und erwarb 1607 hier auch den Magistergrad. 1608 verfolgte er medizinische Studien in Leiden. Als Hofmeister bereiste er Belgien und Frankreich. 1611 promovierte Peter Lauremberg zum Doktor der Medizin in Paris und nahm an der Universität von Montauban seine erste Professur, die der Philosophie, an. Nach knapp drei Jahren verließ Peter Lauremberg Frankreich, kehrte 1614 in die Heimat zurück und akzeptierte eine Anstellung als Professor für Mathematik und Physik an der Hamburger Akademisches Gymnasium. 1624 folgte er einem Ruf als Professor für Poesie, Mathematik und Medizin an der Universität Rostock, zu deren Rektor er 1635 gewählt wurde. In Rostock verblieb Peter Lauremberg bis zu seinem Tode. Er verfasste eine große Zahl oft aufgelegter wissenschaftlicher Lehrbücher auf verschiedenen Wissenschaftsgebieten. Die 700 Artikel seiner riesigen Kuriositäten-Anthologie, der ersten ihrer Art in deutscher Sprache, zeugen von seinen umfassenden Kenntnissen. Die Blumenkupfer wurden wohl unter Merians Leitung in seiner Offizin von Gesellen gestochen.

## 43

**LEIBNIZ, Gottfried Wilhelm, MEIER, Georg Friedrich.**

Des Freyherrn von Leibnitz kleinere Philosophische Schriften mit einer Vorrede Herrn Christian Wolffs Jena: Mayer, 1740. [bound with] G. F. MEIER: Beweiss, dass keine Materie denken könne. Halle: Hemmerde, 1743 [bound with] G. F. MEIER: Beweis der vorherbestimmten Uebereinstimmung. Halle: Hemmerde, 1743. 3 works in one volume, 8°. [lxxviii], 464, [xii], 84, [xvi], 231, [1] pp., contemporary vellum with hand-lettered spine, without a front endpaper, early ownership inscription on first title-page, otherwise clean, very good copies. \$ 2800.-

Rare first Leibniz edition, bound with first editions of two related works by Georg Friedrich Meier (1718-77), one on materialism, the other on pre-established harmony. The Leibniz is rather misleadingly titled; what calls itself a collection of his minor writings in fact includes the *Monadologie* (in Huth's extended revision of K"hler's 1720 translation from the original French), Leibniz's replies to Bayle on pre-established harmony, and extracts from the correspondence with Samuel Clarke. Ravier 412. The two pieces by Meier are early, dating from his time as a student under A. G. Baumgarten, before he got his full professorship at Halle in 1748. 'While Baumgarten presents his views on Pre-established Harmony and Physical Influx within the context of his general meta-physics textbook, Meier, his student, devotes an entire treatise to the issue in 1743, namely *Beweis der vorherbestimmten Übereinstimmung*. Accordingly, although Meier follows Baumgarten's main view, he is able to develop it in more detail. Thus, he feels justified in advancing Pre-established Harmony as a theorem rather than as a probable hypothesis' (Eric Watkins, 'From Pre-established Harmony to Physical Influx', JHI, 1998).

44

**Leopold, Johann Friedrich.**

Relatio epistolica de itinere suo suecico anno. MDCCVII facta. Ad ... Johannem Woodward, etc. London: Timoth. Childe, [1720]. 8° [195 x 120 mm] VIII [= VI], [2], III pp. with fly-title, 8 numbered fold. engraved plates or maps, woodcut head- and tail-pieces. Con-temporary calf, gilt border on covers, spine gilt, edges gilt, rubbed and soiled, but a handsome copy. \$ 1600.-

First edition of this posthumously published work on Swedish geology with plates of minerals, descriptions of mountains, natural phenomena, geological specimens, etc. The work is addressed to John Woodward. Johann Friedrich Leopold (1676-1711), a doctor, came from Lübeck and as the title states made his journey through Sweden in 1708. He was a collector of minerals and plants, wrote later a work on garden design and corresponded with the Breyne brothers of Gdansk. John Woodward (1665 - 1728) was an English naturalist, antiquarian and geologist. In his works he showed that the stony surface of the earth was divided into strata, and that the enclosed shells were originally generated at sea; but his views of the method of formation of the rocks were entirely erroneous. Indeed, they were satirized very effectively by John Arbuthnot, who consistently ridiculed Woodward's heavily classicist method and what Arbuthnot saw as personal venality. In his elaborate Catalogue he described his rocks, minerals and fossils in a manner far in advance of the age.- ESTC records a 1722 edition (one copy only) and what may well be a reissue of this 1720 edition in 1727 with the names Bickerton and Joseph Pote in the imprint.- KVK: Berlin, Braunschweig, Greifswald, Jena, Rostock, Wolfen-büttel, Freiberg, Dresden, Leipzig, Mannheim, et al. COPAC & OCLC: some copies.

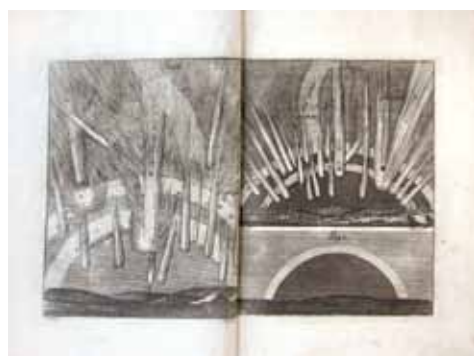
**Northern lights**

45

**Liebknecht, Johann Georg.**

Pharus, sive de prodigiis ignis coelestibus, ut vulgo vocantur, ex om-ni aevo collectis, dissertatio historico-mathematica, occasione coruscationum borealium, nuper visa-rum, una cum causis et praedictionibus istarum. Giessen: Müller, 1721. 4°. [6], 76 pp., [2] mit doppelblgr. gestochenen Frontispiz Brokatpapier-Umschlag d.Zt. mit einem Ausriss an einer Ecke d. Vorderumschlages. Stellenweise etwas braunfleckig. Ecken bestossen. Vorderdeckel des sehr schönen Brokatumschlages oben mit größerem Eckabriß \$2900.-

Rare early work on auroras, preceding the works of Weidler and Mairan. Astronomical interests concentrated in the 16th & 17th centuries on measurements of the motions of the sun and planets, while auroral phenomena aroused little interest; only sporadic auroral observations in central Europe took place. A descriptive treatise of Schickardt was published in 1630, observations were made by Liebknecht (1711, Acta eruditorum) and Wolff (1716). With the appearance of the works of Weidler [1739] and Mairan [1733] there was a notable increase in the knowledge of auroras. Sehr seltene und frühe Schrift des Giessener Mathematikers und Theologen über Nordlichter. Breitrandiges Exemplar. Johann Georg Liebknecht (1679 - 1749) war Professor der Mathematik (1707-1737) und Theologie (seit 1721) an der Ludoviciana und Superintendent in Gießen. Liebknecht war nicht zuletzt auf Empfehlung von Gottfried Wilhelm Leibniz an die kleine Landesuniversität in Gießen berufen worden, da er vielseitig begabt war und mehrere Fächer kompetent lehren konnte. So war er sowohl ein anerkannter evangelischer Theologe als auch ein führender Mathematiker. Weitere Schwerpunkte seiner Arbeiten lagen in der Anwendung der Mathematik im Militärwesen (Artillerie, Festungsbau), Geologie (Minerallagerstätten), Altertumskunde (Ausgrabungen von Grabhügeln bei Gießen), Fossilien und Astronomie. Er war in Verbindung mit berühmten Wissenschaftlern wie Gottfried Wilhelm Leibniz und Johann I. Bernoulli. Seit 1715 war er Mitglied der Leopoldina und seit 1716 gehörte er der Berlin-Brandenburgischen Akademie der Wissenschaften an. 1728 wurde er zum "Fellow of the Royal Society" gewählt.- Pogg. I, 1460.- COPAC: BL London, Oxford, ULRLS; OCLC: no copy.



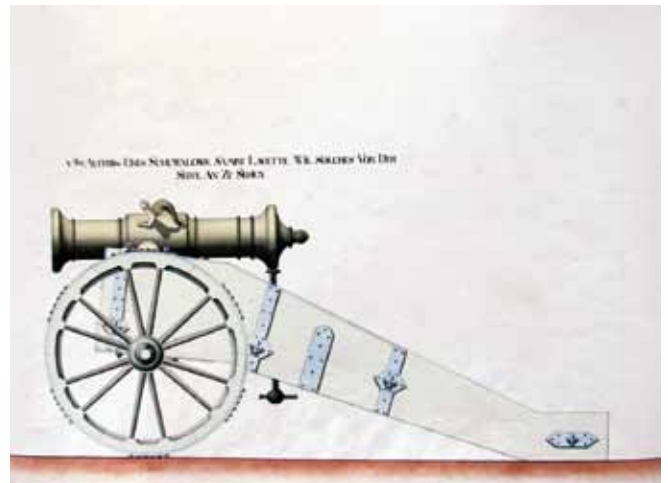
46

**[Lieutenant Laub; Russian Invention]**

Ein kaysersch russischer Schuwalow oder geheimer Haubitze. Entworfen gezeichnet und beschrieben durch Lieutenant Laub. A[nno] MDCCLXXVII [1777]. [German technical manuscript on paper. Pfalz-Bayern around 1777. Ink-drawing with aquarell colours. Paper with watermark C & I Honig] [1777] Folio. [420 x 272 mm] 5 leaves attached to each other, with one big cartouche in the middle and on each side two leaves of technical drawings in colour with 15 images. In new protecting folder. Very well preserved. Coming directly from the property of the bavarian kings stored in Tegernsee.

\$ 12500.-

Extremely precise manuscript illustration and description of the construction of the so-called "Schuwalow-Haubitze", a small canon. The soft water-colours show side-views and some sections demonstrating the assembly of the pipe and the loading device. The Cartouche in the middle [two sheets of illustrations right and left of it] in washed pen and ink with war trophies. A sort of early industry espionage [by Lieutenant Laub] and fine retrieval of the past. Peter Ivanovich Shuvalov (1711-1762) was a Russian statesman and Field Marshal who, together with his brother Aleksandr Shuvalov, paved the way for the elevation of the Shuvalov family to the highest offices of the Russian Empire. He is also remembered as the founder of Izhevsk, the capital of Udmurtia. Pyotr Shuvalov began his career as a page at the court of tsesarevna Elizabeth. He was brought to tsesarevna's attention when he married her close friend and in-law, Mavra Shepeleva. For his assistance in the enthronement of Elizabeth, he was promoted to the rank of Chamberlain, then appointed senator and became a count in 1746. Initially, he was in charge of an army division stationed near St.Petersburg and then the Observation Corps, formed by Shuvalov himself and designated to protect the rear of the regular army. He also held the post of a conference minister and managed the artillery and weapons chancelleries. Shuvalov improved the Russian artillery and built a few weapons factories. He enjoyed unlimited power throughout the reign of Elizabeth due to his wife's and cousin Ivan Ivanovich Shuvalov's influence on the empress. Almost no single affair of the state was to be taken care of without Shuvalov, especially those pertaining to national economy and military organization. [wikipedia]



47

**Linhart, J[oseph]. A[loysius].**

Grundzüge der Crystallographie von J. A. Linhart, Assistenten bei der Lehrkanzl der speciellen Naturgeschichte. Prag: Gedruckt in der Fürsterzbischöfl. Buch-druckerei, 1825. 8° [195 x 120 mm] [2, blank], [4], 62 pp., [2], [2, blank] Original-Umschlag. Frisch. [= Nebentitel: Crystallographiae primae lineae ...] \$ 580.-

No copy traceable. Nicht in den einschlägigen Nachschlagewerken nachweisbar. Wohl eine Dissertation unter der Leitung von Ignaz von Nadherny (1789-1867) an der Prager Universität zum Krystall-System des Jean-Baptiste Louis Romé de L'Isle (1736 - 1790). Angetrieben von der Klassifikation der Lebewesen durch Carl von Linné versuchte Romé de L'Isle dies auf die unbelebte Natur zu übertragen und schuf damit die erste Systematik von Kristallen indem er Salzkristalle, Steinkristalle, Kieskristalle und Erzkristalle unterschied. Basierend auf der Entdeckung des Gesetzes der Winkelkonstanz an Quarzkristallen durch Nicolaus Steno begann Romé de L'Isle, nach Konstruktion eines geeigneten Anlegegoniometers, mit systematischen Untersuchungen an weiteren Kristallen beziehungsweise Mineralen. Dabei beschrieb er zahlreiche bislang unbekannte oder nur schlecht bestimmte Minerale. Bei der Veröffentlichung seiner Ergebnisse verwendete er als erster den Begriff "Kristallo-graphie", der bis heute die Wissenschaft von den Kristallen beschreibt. Seine Arbeiten legten auch den Grundstein für die Arbeiten von René-Just Haüy, der das Symmetriegesetz und das Gesetz der rationalen Indizes in der Kristallographie entwickelte.- KVK, OCLC, COPAC: no copies [?]

48

**Mascagni, Paolo.**

Vasorum lymphaticorum corporis humani historia et ichnographia. Siena: Pazzini Carli, 1787. Imperial-Folio [594 x 435 mm] [4], 138 pp. with engraved title-vignette, etched dedication leaf, 41 etched plates, including 14 outline plates by Ciro Santi. Later half calf, unside clean and fresh, uncut, strong impressions.

\$ 9600.-

First edition of Mascagni's extremely detailed discoveries of naked-eye anatomical distribution of lymphatics could only be described through illustrations. For this purpose Mascagni hired Carlo Santi, a painter and engraver from Bologna who lived in Siena until about 1780. Santi prepared 27 drawings and engraved 27 spectacular copperplates and 16 key plates. These depict vessels in some of the finest detail present in anatomical illustration before the advent of photography. Mascagni discovered half of the lymphatic vessels now known. Using the mercury injection method, which he perfected, and a tubular needle bent at a right angle, he observed, named and described almost all the lymph glands and vessels in the human body, concluding that the lymphatic system originates from all internal and external cavities and surfaces of the body, and that it is related to the absorbing function. He demonstrated the connection between the lymphatics and serous vessels, and disproved Boerhaave's theory of arterial and venous lymphatics by showing that they do not exist.- Choulant-Frank 315-16; G/M. 1104; Heirs of Hippocrates 1099; Norman 1450; Waller 6295; Wellcome IV,73

## Unknown Work – Original Woodblocks

49

**Masjutin, Wassily Nikolajevitch.**

Collection of 62 original etchings on paper and of 18 original woodblocks to an unknown work. [Moscou ...[?], 1908 - 1920] [130 x 160 mm to 450 x 390 mm] 62 sheets, mainly 420 x 330 mm. Later folder. \$ 12000.-

A fine collection of 62 early etchings and 18 original woodcut plates to an unknown work of his time in Moscow (1919). From the property of the artist. Wassily Nikolajevitch Masjutin (1884 Chernihiv - 1955 Berlin), Ukrainian printmaker, sculptor, medallist and art historian, active in Germany. He studied at the Moscow School of painting, sculpture and architecture under Vasyl' Maté (1856-1917). After the 1917 revolution he taught briefly at Ukhtemas (higher art and technical studios), moving to Berlin in 1921. He frequently sent works back to the Ukraine to participate in the exhibitions of the association of independent Ukrainian Artists (anum), of which he became a member when it was formed in Lwów in 1931. His early graphic work includes etchings treated as symbolic fantasies bordering on the grotesque. He also produced a cycle of engravings, the seven deadly sins, and illustrations to Aesop's fables and to the works of Gogol and Balzac. He sculpted busts of Balzac and produced an entire series of commemorative medallions of the Cossack leadership, Medieval princes and Contemporary cultural figures, a total of 63 portraits rendered with historical accuracy. Examples of his work are in the Pushkin Museum of fine arts in Moscow. He also contributed to art pedagogy with his manual on engraving and lithography (1922), and contributed articles to the art journal, *mystetstvo* (art), published in Lwów.

50

**Mensing, Johann Gottlieb Wilhelm.**

Leichtfaßliche Anleitung zu stöchiometrischen Rechnungen besonders für angehende Chemiker und Pharmaceuten / von [Johann Gottlieb Wilhelm] Mensing. Mit einer Vorrede von J[ohann] B[artholomäus] Trommsdorff Erfurt: Verlag der Maring' schen Bhdl., 1824 8° [200 x 110 mm]. XII, 292 pp. Contemporary calf, gilt spine in compartments, upper spine broken, else fine copy. \$ 650.-

First edition. Johann Gottlieb Wilhelm Mensing (1792-1864) was son-in-law of Trommsdorff and published a biographical sketch of him. He was teacher at the Erfurt Gymnasium [higher school] and worked at the Institute of Trommsdorff. Johann Bartholomae Trommsdorff (1770-1837) was Professor of chemistry at Erfurt and a prolific author whose writings became very popular in Germany and appeared in several editions and translations [DSB XIII, 465/66; Partington III,588]. Stoichiometry is a branch of chemistry that deals with the quantitative relationships that exist between the reactants and products in chemical reactions. In a balanced chemical reaction, the relations among quantities of reactants and products typically form a ratio of whole numbers.- not in Cole, not in Neville Hist. Libr. KVK: Berlin, Bremen, Erfurt, Dresden, Halle, Jena, Greifswald, Wolfenbüttel, et al.; not in COPAC; OCLC: College of Physicians Philadelphia; Univ. Pennsylvania Library.

## Beginnings of Ecology

51

**Möbius, K[arl].; H[einrich]. A[dolf]. Meyer.**

Fauna der Kieler Bucht. Erster Band: Die Hinterkiemer oder Opisthobranchia; Zweiter Band: Die Prosobranchia und Lamellibranchia nebst einem Supplement zu den Opisthobranchia. Leipzig: Wilhelm Engelmann: 1865 - 1872. Folio. viii, xxx, 88 pp. with 2 maps + 18 handcoloured lithographs and 6 tinted lithographs.; viii, xxiv, 139 pp. with 22 handcoloured lithographs (plates clean) Orig. cloth backed printed boards, rubbed and soiled. \$ 2600.-

Dedication copy: "Dem Herrn Redacteur des 'Journal de Conchyliologie', Herrn Crosse hochachtungsvoll die Verfasser". First edition, very rare and hard to find complete. "In the introduction to this work he set forth a program and methodology for modern ecology. The topography and variations in depth, the plant and animal life of the Kieler Bucht were characterized. The concept of 'life community' (Biocönose) was introduced, although Möbius did not define it more precisely until 1877." [Querner; in: DSB IX, 431-32] Karl August Möbius (1825 Eilenburg - 1908 Berlin) was a German zoologist, former director of the Museum für Naturkunde in Berlin, and a pioneer in the field of ecology. In 1863 he opened the first German sea water aquarium, in Hamburg. In 1868, shortly after passing his doctoral examination at the University of Halle, he was appointed Professor of Zoology at the University of Kiel and the director of the Zoological Museum. Marine animals were among his main research interests and his first comprehensive work on the fauna of the Kieler Bucht already emphasized ecological aspects. He was first to describe in detail the interactions between the different organisms in the ecosystem of the oyster bank, coining the term "biocenose". This remains a key term in synecology (community ecology).

52

**Moretti, Tomaso.**

A General Treatise of Artillery: or, great ordonance writ in italian by Tomaso Moretti of Brescia, Ingenieur first to the emperour, and now to the most serene republick of Venice. [= Trattato dell' artiglieria; engl.] Translated into english, with notes thereupon, and some additions out of French for Sea-Gunners by Sir Jonas Moore, Kt. With an Appendix of Artificial fire-works for war and delight; by Sir Abraham Dager, Kt. Ingenier. Illustrated with divers cuts. London: printed by A.G. and J.P for Obadiah Blagrove at the Bear in St. Pauls- Church- Yard, 1683. 8° [196 x 124 mm] [1, Frontispiz woodcut], [2, title & blank], [4, dedication to George Wharton], [4; the author to the courteous reader], [4; definition of geometry], 124 pp., 7 folding plates, 1 folding table. 18th century calf. \$ 3800.-

Reissue of the first english edition, in any editions rare, large paper copy, with ownership inscription: "W[illiam] Jones". Translated by Jonas Moore. Jonas Moore (1627-1679) was an English man of science important for his support of mathematics and astronomy. He became clerk to the Chancellor of Durham. Moore was greatly influenced by Oughtred in his mathematical studies. In 1647 he became mathematics tutor to the Duke of York, brother of the future King Charles II, but he did not hold this job for very long since he was removed from the post by political intrigue. Indeed this was a time of political turmoil in England with battles and religious argument. After loosing his post as tutor to the Duke of York, Moore went to London where he hoped to make a living as a teacher of mathematics. However, he found it difficult to find sufficiently many pupils so Moore was happy to be appointed as a surveyor in 1649. His task was to work on the draining of the Fens, a natural region of about 40,100 sq km of reclaimed marshland in eastern England between Lincoln and Cambridge. Around the same time as he took up this post as a surveyor, he published a mathematical textbook Arithmetick (1650). Moore made a reputation for himself in this job and soon was appointed to other surveying jobs. Charles II returned to London and Moore republished his Arithmetick together with A New Contemplation General upon the Ellipsis and Conical Sections taken from Mydorge. The dedication of the republished work shows that Moore was working hard to find favour with the new regime. In 1663 Moore was sent to Tangier to conduct a survey and to report on its fortifications. Here he was involved in the ambitious project to build a massive harbour wall. He received a knighthood in 1669 and was appointed to high office as Surveyor-General of the Ordnance. However Moore is not particularly famous for the mathematics which he did: as a mathematician he is best known as the first to use the notation cot. Rather Moore is famous for his strong support of mathematics and astronomy which made many other mathematical and astronomical advances possible. Perhaps his most important contribution was in his efforts to set up the Royal Observatory at Greenwich and

his efforts to support Flamsteed. Moore, together with the famous diary writer Samuel Pepys, founded the Royal Mathematical School within Christ's Hospital. This School was set up with the specific aim of training boys in navigation techniques so that they could serve the King at sea. Moore became a governor of the school and together with Perkins, a master at the school, he wrote a major mathematical work intended for use at the Royal Mathematical School.- KVK: only BSB; COPAC: Cambridge, Oxford, BL; OCLC: Newberry Library; UCLA Library; US Military Academy. A reissue of the 1673 edition, with cancel title page, added quire I, A2-3 cancelled, and added "Definition of geometry". In this copy the cancelled title page is conjugate with a woodcut. There is some confusion in the ESTC as to what constitutes a perfect copy of this text; the copy catalogued appears to be the same as the Folger copy, and the pagination has been taken from this copy rather than the Cambridge copy mentioned in the ESTC.

53

**Moro, Antonio Lazaro.**

Neue Untersuchung der Veränderungen des Erdbodens. Nach Anleitung der Spuren von Meerthieren und Meergewächsen, die auf Bergen, und in trockener Erde gefunden werden. [= De 'crostacei ...; dt.] Leipzig: Verlegts Bernhard Christoph Breitkopf, 1751. 8°. [8] Bll., 464 pp. with 9 fold. plates Contemporary calf, spine gilt in compartements, morocco label, mamorated edges, rubbed and soiled, excellent copy. \$ 2200.-

Very scarce first german edition, the locus classicus of vulcanist geology. One of the most important books in the early history of geology. This is the author's best known and most controversial work. Moro was interested in the fossils he found in the mountains and how they came to be there. In the *De' Crostacei e degli altri Marini Corpi* Moro speculates on the organic nature of fossils. He affirmed the theory that mountains and most islands were formed by volcanoes and thought that stratified rock was igneous in origin. His most original thoughts in this area consisted of the idea that two kinds of mountains existed, Primitive and Secondary, each of different age and composition. This theory, elaborated on by others, later became the foundation for studies in historical geology. Moro rejected the theories of a universal flood to account for the location of fossils on mountains and instead postulated the elevation of mountains from seabeds through the action of volcanoes. He also gave 'a stratigraphic compilation of various fossilized marine flora and fauna, with sequential indications that preceded by almost a century the chronological intuitions of William Smith and his French contemporaries, G. Cuvier and Alexandre Brongniart' (DSB). Among other important achievements of this work is the distinction between primary and secondary mountains. 'The modernity of Moro's views, the broad scope of knowledge that he brought to his investigations, and the breadth of the scientific fields that he examined and illuminated place him at the center of the intense intellectual activity of Italy's "second Renaissance"' (ibid). DSB IX, 531; Brunet III, 1419; Pogg. I, 210; Ashworth jr., *Theories of the earth* 20; Ward and Carozzi 1611; Zittel 32. KVK: Aurich, Bremen, Göttingen, Halle, Hamburg, Schwerin, Stabi Berlin, et al.; COPAC: only Bristol; OCLC: Oklahoma State Univ., Linda Hall, Berkeley, Yale, Chicago, Durham.

## First Time together: »Principia« & »Analysis«

54

**Newton, Isaac.**

*Philosophiae naturalis principia mathematica. Editio ultima. Cui accessit Analysis per quantitatum series, fluxiones ac differentias cum enumeratione linearum tertii ordinis.* Amsterdam: Sumptibus Societatis, 1723. Quarto [250 x 196 mm]. [XXVIII], 484 pp., [8, last blank]; [XII], 107 pp., [1, blank] with title printed in red and black and with engraved vignette, and three engraved plates, two folding. Contemporary calf, spine richly gilt in compartments, faded lettering-piece, marbled endpapers, a little rubbed, little browning to title-page and a few other pages, else a fine & clean copy.

\$ 9600.-

Unauthorized Amsterdam Edition of the second edition [1713] of Newton's *Principia*, the first edition to include the important 'Analysis'. The *Principia* was published during Newton's lifetime in three authorized editions: London, 1687; Cambridge, 1713; and London, 1726. During this time there were also two unauthorized editions: Amsterdam, 1714; Amsterdam, 1723: only the Amsterdam edition of 1723 includes Newton's *Analysis* book. Edited by Roger Cotes, the second edition includes a substantial number of the number of changes including the propositions on the resistance of fluids, the lunar theory, the precession of the equinoxes, and the theory of comets. Cotes's Preface contains a strong attack against Cartesian physics in general and the vortex theory of planetary motion in particular. Newton's *Philosophiae Naturalis Principia Mathematica* is generally esteemed his masterpiece. This great work is often held to represent the culmination of the Scientific Revolution, in which science as we know it today was born. It is the founding treatise in the domain of rational mechanics, a term which was itself introduced into the discourse of science by Newton himself. Among the concepts originated by Newton and appearing in the *Principia*, the most important is no doubt "mass," introduced and named in Definition 1 of the *Principia*. In this work there are also set forth the three "Laws of Motion," generally known today as "Newton's laws." Here also is the first appearance in print of Newton's invention of the calculus, the universal tool of the exact natural and social sciences. What most attracted attention and admiration in the century after Newton's book was published, however, was not his magisterial contributions to the new science of dynamics or his presentation of the differential calculus, but rather his "System of the World," an explanation of the phenomena of our universe based on "scientific" principles—a gravitational cosmology. Here was a magnificent display of the power of the human mind strengthened and guided by science. Most people agreed with Sir Edmond Halley's judgment (in a poem he wrote as a kind of foreword to the *Principia*): "No mortal may approach nearer to the gods!"

The second part of this book marks only the fourth appearance of Newton's purely mathematical work in print. It is significant for both its content and for its role in the famous priority dispute between Newton and Leibniz over the invention of the calculus. As a compilation: "Analysis per quantitatum series, fluxiones, ac differentias" contains four mathematical treatises and a sampling of correspondence, all related to Newton's work on the calculus. Two of the treatises had already been published in Latin in the first edition of the *Opticks* (1704). These are the "Tractatus de quadrata curvarum" and the "Enumerationem linearum tertii ordinis". A third treatise is entitled "De methodis differentialis". It contains investigations of what are now known as the Newton-Bessel or Newton-Stirling formulas, which Newton had been working on as early as 1676, but which he had not published. The jewel of this book (1711, reprinted 1723), however, is the tract known as "De analysi per aequationes numero terminorum infinitas". It was written by Newton in 1669 in response to his reading of Nicholas Mercator's *Logarithmotechnia*. Mercator's book contained developments tending in the direction of mathematical discoveries Newton had already made. Anxious to preserve credit for priority, Newton composed "De analysi," which he gave to the great English mathematician Isaac Barrow. Barrow showed it to mathematician John Collins, who made a copy. This is important because Collins was at this time something of a clearing house for information about developments in English mathematics and he showed the "De analysi" to others. "De analysi" thereby became the first systematic discussion of the calculus by Newton to circulate in public, and is thus one of the founding documents in the history of modern mathematics. Containing the text of two of Newton's earliest work, as well his first two published treatises, the *Analysis* serves as a wonderful starting place for those studying the history of the calculus. [Babson Collection]

## Darwin's Stumbling Block

55

**Owen, Richard.**

Description of the Skeleton of an Extinct Gigantic Sloth, *Mylodon robustus*, Owen, with observations on the osteology, natural affinities, and probable habits of the Megatheroid Quadrumeds in general. London: Printed by R. and J.E. Taylor ...; Sold by John Van Voorst, 1842. 4° [312 x 244 mm] 176 pp. with 24 fine lithographed plates, including four folding. Plate one showing the whole skeleton, strengthened at folds. Errata slip inserted at end. Faded mauve original publisher cloth, text in spotless condition, spine skillfully repaired. \$ 900.-

Only edition. This uncommon and fascinating volume has been described as "a masterpiece both of anatomical description and of reasoning and influence." [DNB]. "Richard Owen (1804-92) was Hunterian professor of anatomy at the Royal College of Surgeons in London, with a primary interest in the anatomy of living and extinct vertebrates. He was allowed to dissect animals from the London Zoo that had died, to improve his knowledge of animal anatomy, which he then applied to understanding fossil vertebrates, in the manner developed by Cuvier. This is a study of a specimen brought back by Charles Darwin from South America. Darwin's experience with fossils began quite unexpectedly in 1833, when he stumbled on some bones eroding from a bank in Punta Alta, Argentina, south of Buenos Aires. This proved to be quite a cache, and he eventually recovered the partial remains of ten individual mammals. Several he recognized as Megatherium, since he was familiar with Cuvier's account of this extinct ground sloth. The others were unfamiliar, and so he turned them over to Richard Owen, who was an extremely competent young authority on comparative anatomy and fossils, and the apparent heir to Cuvier. Owen discovered that all Darwin's specimens were the remains of extinct animals, several of them new to science. Owen recognized that the *Mylodon* was a giant ground sloth, but only distantly related to the more familiar Megatherium. This is one of the best contemporary illustrations of any giant sloth, both for the robustness of the lithograph by George Scharf, and for the inclusion of the skeleton of a living tree sloth at lower right, to allow a comparison of size. Owen became the principal authority on anatomy and fossils in Darwin's day. To explain the variety of forms that one sees over time, Owen developed the concept of an archetype, which was an ideal form or design. One could construct an archetype of a vertebrate (Owen actually did so), and all vertebrates, living and fossil, could be understood as variations on that archetype. Owen's archetypes would prove incompatible with Darwin's theory of evolution by natural selection." [William B. Ashworth, jr.] - Linda Hall Library, The grandeur of life 43; Waller 11921; Cole. Catalogue II, 264.

## »held in high esteem by Leibniz«

56

**Ozanam, Jacques.**

Cursus mathematicus: or, a compleat course of the mathematicks. In five volumes. Vol. I. Contains a short treatise of algebra, and the Elements of Euclid. Vol. II. Arithmetic and trigonometry, with correct tables of logarithms, sines and tangents. Vol. III. Geometry and fortification. Vol. IV. Mechanics, and perspective. Vol. V. Geography and dialling. The whole illustrated with near 200 copper plates. Written in French by Monsieur Ozanam, Professor of the mathematicks at Paris. Now done into English, with additions and corrections by several hands [Done into English, and amended in several places, by J. T. Desaguliers]. [= Cours de mathématique, engl.] 5 Vols. London: printed for John Nicholson, and sold by John Morphew, 1712. 8°. [8], x, [80], 288 pp. with 21 plates; [xxiv], 156, [284] pp. with 7 plates; [xvi], 215 pp., [ix], 204 pp., [xvi] with 70 plates; [xxxii], 185 pp., [vii], 72 pp., [viii] with 64 engraved plates; .[xvi], 166 pp., [xviii], 131 pp., [xi] with 44 plates. Contemporary polish tan calf, spines panel-gilt, raised bands, head & foot identically decorative roll gilt, boards with double-rule bordered in blind with a further decorative ruled & roll inner border, fleurons at corners, plates little spotted, a little foxing elsewhere, slight cracking to a few points, but a nice & decorative copy. Armorial bookplate of Wm. Constable on all front paste-downs.

\$ 3800.-

First and only English edition of his "Cours de mathématique" which was held in high esteem by Leibniz. The translator added material of his own. Jean-Théophile Desaguliers (1683-1744) was taken to England before the age of three. He entered Christ Church, Oxford, in 1705 and stayed on after receiving his bachelor's degree in 1709 to deliver courses in experimental physics at Hart Hall. He moved to London in 1712 where he made a living giving public lectures on natural philosophy and translating several scientific works from the French. He was elected Fellow of the Royal Society and co-operated with Isaac Newton. By 1716 he was curator of experimental research for the Royal Society. A lifelong Newtonian, Desaguliers's major work was A course of experimental philosophy (1734, 1744) which took the reader through a large number of experiments confirming Newton's theories. [John Christian Laursen].

Jacques Ozanam (1640 - 1717) was a French mathematician. Upon the death of his father, he gave up theology after four years of study and began, at Lyon, to give free private instruction in mathematics. Later, as the family property passed entirely to his elder brother, he was reluctantly driven to accept fees for his lessons. He derived an ample income from teaching mathematics to private pupils at Paris. He worked hard, teaching mathematics to many foreign pupils who came to Paris to be educated. All his books sold well and ran to many editions, especially his famous works Dictionnaire mathématique (1691), the five volume work Cours de mathématiques (1693) and Récréations mathématiques et physiques (1694).

**Provenance:** William Constable (1721-1791) of Burton Constable Hall in East Yorkshire was an avid 18th Century collector, gathering a range of objects from dolls to works of art, and scientific instruments to natural history specimens. He showed much interest in the advancement of arts and sciences. He was interested in botany, geology, zoology, physics and science in a wide sense. His interests took him a great distance, as he used to travel abroad to keep abreast of the latest ideas in arts and sciences. He went on three grand tours, one of them taking him to Italy at the expense of about seven thousand pounds. It was thought he sought the sunshine for health reasons as much as for education. During his studies he set out to observe and collect the phenomenon of nature, both for knowledge and amusement, and even attempted to master the systems of classification that were current before Linnaeus. William stored his geology, zoology and botany specimens as encyclopaedic collections in purpose-built wooden cabinets, known as a Cabinet of Curiosities.- ESTC N015362, DSB X, 263-65 [Schaaf]; Andersen. Geometry as an Art. pp. 407 ff. KVK: only microfiches or internet resource; OCLC & Copac: some copies.

## Early Corals

57

**Picot de Lapeyrouse, Philippe.**

Philippi Picot De Lapeyrouse Baronis De Bazus Etc. ... De Novis Qyibvsdam Orthoceratitvm Et Ostracitvm Speciebvvs Dissertativncvla; Figvris Aeneis Illvstrata. [Pa-rallelt.: Description De Plusieurs Nouvelles Espèces d' Orthocératites et d'Ostracites; Avec Figures, Par Mr. Picot De Lapeyrouse Baron De Bazus Etc. Associé ordinaire de l'Academie Royale des Sciences, Inscriptions, & Belles Lettres de Toulouse, & Correspondant de l'Academie des Sciences de Paris [frz./lat.] Erlang[en]: Walther; Paris: Didot; Toulouse: Manavit, 1781. 2° [ [2] Bl., 45 pp., [3], with XIII Bl. Kupferst., koloriert [coloured plates]; Die Kupferst. sind signiert "Gourdet americ. pinx." [!] und "J. G. Sturm sc." bzw. "G. P. Nusbiegel sc." Halblederbd. d. Zt., stärker berieben u. bestoßen, R.decke am unteren Kapital mit Fehlstelle, mamorierter schnitt, die letzten drei Blätter mit kleiner Wurmspur im weißen Rand. Ordentl. und gutes Exemplar.

\$ 4900.-

Rare pioniering study on rudists. Philippe- Isidore Picot de Lapeyrouse (Lapeyrouse), Baron de Bazus (1744-1818), French botanist and mineralogist, professor of natural history at Toulouse University in the Age of Enlightenment. He was a pioneer of the rudists palaeontology. The rudists, singular colonial Bivalves fixed on the sea bottom, populated warm waters of the Mesozoic peri-tethyan platforms. The biologic significance of these fossils, known from the Renaissance, is essentially due to Picot de Lapeyrouse. He published in 1781 a remarkable description of the Montagne des Cornes' (eastern Pyrenees) rudists, named by him orthoceratites' and ostracites'. The definition by Lamarck in 1801 of the genera Hippurites and Radiolites, and then of the Hippuritidae and Radiolitidae families by Gray 1848, were linked with the Lapeyrouse's pioneer discoveries. Rudists are a group of box, tube or ring shaped marine heterodont bivalves that arose during the Jurassic, and became so diverse during the Cretaceous that they were major reef-building organisms in the Tethys Ocean.

"Philippe-Isidore Picot de Lapeyrouse passe la plupart de son temps à voyager et étudier. Il fait paraître en 1781 sa Description de plusieurs nouvelles espèces d'orthocératites et d'ostracites (Erlangen) qui est consacrée à des coquilles fossiles. Il fait paraître aussi dans les Mémoires de l'Académie de Toulouse diverses communications sur la faune, la flore et les minéraux des Pyrénées. Ses observations ornithologiques sont reprises dans le Dictionnaire des oiseaux, publiée dans le cadre de l'Encyclopédie méthodique. En 1786, il fait paraître un Traité des mines et forges à fer du comté de Foix. Philippe-Isidore Picot de Lapeyrouse est correspondant de l'Académie des sciences. Philippe-Isidore Picot de Lapeyrouse est à l'origine de la création du Muséum d'histoire naturelle de Toulouse. Une part importante de sa bibliothèque se trouve désormais dans les bibliothèques de Toulouse." [wikipedia.fr]

"Bey dem Dorfe Monferrand auf dem Weg nach Sougrange bey Rennes ... fand der Verfasser auf den Bergen unter unzehligen andern Versteinerungen, auch diejenigen, die er hier beschrieb und abgebildet hat. Es waren Körper die eine verschiedene Figur bald wie Orgelpfeiffen, bald wie Hörner hatten, und bald einzeln, bald in mehrerer Anzahl zusammen gewachsen gefunden wurden. Diese Körper die ihm ganz fremd waren, verglich er mit diesen und jenen Geschlechtern, fand aber, dass sie sonst nirgends wohin, als unter die Orthoceratiten gehören konnten. ... Der Druck und das Pappier sind schön, und ebenso schön sind die Tafeln illuminirt." [Für die Litteratur und Kenntniß der Naturgeschichte, sonderlich der Conchylien und der Steine, 1781 pp. 86-95]. Lit.: M. Durand-Delga, J. Philip. Le rôle précurseur de Philippe Picot de Lapeyrouse, naturaliste toulousain du Siècle des lumières, dans la paléontologie des rudistes. C. R. Palevol 2 (2003) 181-196.- KVK: Stabi Berlin; Heidelberg, Leipzig, Tübingen, Freiburg, Göttingen; COPAC: BL London, Edinburgh; OCLC: Univ. of Georgia, Yale Univ. [2 copies]; Berkeley, Richmond.

»One of the most important Documents of the twentieth Century«  
(Peter Medawar)

58

**POPPER, Karl.**

Logik der Forschung. Zur Erkenntnistheorie der modernen Naturwissenschaft. Wien: Julius Springer, 1935. 80. vi, 248 pp., [2] pp., advertisements, original printed wrappers, spine slightly darkened and with slight wear at foot, isolated pencil marginalia, a nice copy.

\$ 3200.-

First edition of one of the great works of twentieth-century philosophy, originally published here (actually in the Autumn of 1934) as Volume 9 of 'Schriften zur Wissenschaftlichen Weltauffassung' edited by Phillip Frank and Moritz Schlick. In 1959 Popper brought out a reformulated version of the work in English under the title *The Logic of Scientific Discovery*. 'One cannot help feeling that, if it had been originally translated as soon as it had been published, philosophy in this country might have been saved some detours. Professor Popper's thesis has that quality of greatness that, once seen, it appears simple and almost obvious' (Times Literary Supplement). Popper's central insight is the logical asymmetry between verification and falsification: while no number of positive outcomes of experimental tests can prove that a scientific theory is true, it takes only one counterexample to prove it false. Thus falsifiability is the criterion which demarcates true science from pseudoscience - a theory should be considered scientific if and only if it lays itself open to refutation, as for example astrology, Freudianism, and the Marxist theory of history do not.

59

**[Ptolemaeus]**

Omnia quae extant opera, praeter Geographiam, quam non dissimili forma nuper-rime aedidimus ... *Almagesti seu Magnae Compositione ...*, de Iudiciis ... , castigata ab E. O. Schreckenfuchsio. Basel: Henricus Petrus, Mars 1551. Folio. [88], 447 pp. with woodcut-mark on title, 2 fold. star maps, fold. tables, and geometrical woodcuts within text; mit wiederholt. Druckermarke, 2 gefalt. Holzschnitt-Tafeln, gefalt. Tabelle und einigen meist schematischen Textholzschnitten. Blindgeprägter Schweinslederbd. d. Zt. mit 2 Metallschließen, Kapital leicht lädiert, Hintergelenk unten angebrochen, etwas fleckig, berieben und bestoßen. Am Anfang und Ende in den unteren Ecken mit Wurmsspuren, tfs. auch am Rande, tfs. mit Spurflecken, doch gutes Exemplar aus Donaueschingen in prachtvollem Einband. Contemporary blind-pressed pigskin with 2 metal clasps, turn-in slightly damaged, rear joint with split at bottom, a little soiled, rubbed and scuffed. Slightly browned, hardly soiled, with small waterstains. Title stamped. At the beginning and end some worming to lower corner, partly with moulding. [bound with:] *Geographiae libri VIII*. Basel: Heinrich Petri, 1552. Mit Holzschnitt-Porträt auf dem Titel verso und 7 (2 ganzseit.) meist schematischen Textholzschnitten, jedoch ohne die 54 Doppelblatt-Karten. 108 Bl. (Bl. 8, 90 und 108 weiß), 195 pp. Titel gestempelt [Donaueschingen].

\$ 12000.-

First collected edition of his astronomical tracts with commentaries, and bound with the 1552 edition of his *Geographiae* [without maps].- STC 718. Adams P 2208. VD 16 P 5205. Lalande 1551. Houzeau-L. I, 881: "La version de l'Almageste est celle de Georgius Trapezuntius. Quelques traités manquent à ces éditions. Les astronomes n'y trouveront pas le 'Planisphaerium' ni le 'De analemmate'. En revanche on y a inséré les 'Hypotyposes astronomiae' de Proclus." Vierte von Sebastian Münster edierte Ptolemäusausgabe der *Geographiae*, jedoch ohne die Karten.- STC 719. Adams P 2230. VD 16 P 5218. Burmeister 169.

Star-Maps: While in Basel in 1532, Honter produced two important celestial hemispheres that were later bound and distributed in a book published by Heinrich Petri of the first collected works of Ptolemy. The hemispheres were labeled: *Imagines Constellationum Borealiū* or *Australiū*. They were centered on an ecliptic pole using a polar stereographic projection. Honter knew about Dürer's maps, and his hemispheres show the influence, but with three important changes. First, rather than an exter-

nal orientation, Honter was the first major cartographer to use a geocentric orientation in printed form for the stars in his constellations. Second, instead of using arabic or classical clothing, honter employed contemporary Renaissance clothing (e.g. heavy beards, bulky clothes and tunics, fancy hats) for five of his male constellation figures. Finally, like Dürer, radial lines extended outward allowing for the measurement of a circle, the tropic of cancer, and the celestial equator to give an approximate location of a star's latitude in the heavens. As Warner points out, there was a problem with his maps, in that he used an older, more classical radial coordinate system that did not take into account precession, so it was some 30 degrees off in longitude for the time it was printed. Nevertheless, his hemispheres were very influential (Gefugius, Maggi, Postel) especially since - unlike Dürer's rare single sheet - Honter's were bound in books that went through editions and were widely copied. His geocentric orientation was taken up by Piccolomini. Warner speculates that the woodblocks may have passed on to Paris where the maps were reissued with a new label: Arati Solensis Phaenomena, Postel's Signorum Coelestium, Bienne's 1626 edition of Phaenomena et Prognostica. [Kanas 5.4.2.] Johannes Honter was born in Brasov [Kronstadt], which is now Romania. He studied at the University of Vienna from 1520 to 1525, receiving a 'Magister Atrium' degree. With the threat of the Turks impending attack, he left Vienna in 1529 for regensburg. He then registered at the Jagiellonian University in Krakow in 1530, where he wrote a latin grammar and a manual on cosmography. From 1530 to 1532 he lived in Basel, where he became proficient in wood engraving and produced an influential map of his native Transylvania that was the first region and made famous in a later copy by Ortelius. He moved back to Brasov for good in 1533, where he became involved in introducing Lutheranism to the region. In 1539 he set up a printing press and began issuing a number of books, including many that he wrote: One of these was a new version in verse form of his cosmography manual entitled Rudimenta Cosmographica, published in 1542. It went through some 39 editions. Honter died in 1549.



## What is »Space« – Who is »God« ?

60

### Raphson, Joseph.

*Demonstratio de Deo sive methodus ad cognitionem Dei Naturalem brevis ac demonstrativa. Cui accedunt Epistolae quaedam Miscellanea: De animae Natura & Immortalitate, de veritate religionis christianae, de Universo.* Londini [London]: apud Guil. Taylor, 1710. 4° [235 x 180 mm] [Viii], 107 pp., [1] Contemporary gilt-panelled calf, small hole on upper cover, spine gilt acorn motif and red label. Uniformly browned with the Macclesfield Library bookplate and blindstamped crests. \$ 4200.-

Very rare first edition. Dedication copy to Thomas Parker, 1st Earl of Macclesfield PC, FRS (1666 - 1732), an English Whig politician, who was Lord Chief Justice from 1710 to 1718. He was a fabulously wealthy man and spent the later life at Shirburn Castle, where he held a big library [with the Newton Papers included]. Inscribed: Vero vere Venerabili / Thoma Parkero / Equiti Aurato / Summo Anglia in Banco Regina / Justiciano Vc / J Raphson.

Among the Newtonians the most fervent defender of the nature of space as a divine attribute was Joseph Raphson. In this work *Demonstratio de Deo* and his 'De spatio reali' he extensively treated the issue. Leibniz had a copy of these book and reviewed *Demonstratio deo* in the January-February 1712 issue of the *Acta eruditorum*, criticizing mainly Raphson's definition of infinity as circular, but Leibniz do not go to the metaphysical core of the problem in his review. Raphson's work was on the contrary fiercely attacked by Berkeley, who denied space ever to possess any strong ontological status. [Vincenzo De Risi. *Geometry and monadology: Leibniz's analysis situs and philosophy of space*; pp. 564] "Der einzige Newtonianer, der die mathematische Methode konsequent auch in der Metaphysik anwendete, war der auch von Spinoza stark beeinflusste Raphson in seiner *Demonstratio de Deo* [London 1710]." [Jürgen von Kempster]

## Divinization of Space

61

### Raphson, Joseph.

*De spatio reali, seu ente infinito conamen mathematico-metaphysicum.* London: T.B. prostant venales apud A. & I. Churchill, S. Smith & B. Walford, I. Taylor & T. Bennet, 1702. 4° [245 x 185 mm]. [8], 95 pp., [1] Contemporary vellum-backed grey paper boards, clean large paper copy. Bookplate inside front cover: Earl of Macclesfield and blindstamped at title. \$ 3900.-

Rare separate edition. First published in 1697 as an appendix to his edition of "Analysis aequationum", than as the *Analysis* was republished in 1702 this work here was published again as appendix and it was also sold separately [Copies at Leeds, Zurich & Berlin (Kriegsverlust ?) indicate this]. Large-Paper copy from the Macclesfield Library, Shirburn Castle, who hold once the Newton Papers.

Raphson's attempt to demonstrate the existence of absolute space. Raphson distinguishes between real and rational entities, considering the former as perceptible not to mathematical reasoning but to intuition, and space is one such "real entity". He followed the Spinozist position in taking God to be extended. Henry More had presented similar ideas against Descartes. Koyré presents an excellent description of Raphson's ideas in: *From the closed world*, ch. 8 [190-205]; *Grant. Much ado about nothing: theories of space and vacuum*, pp. 230-33.

Joseph Raphson was an English mathematician known best for the Newton-Raphson method. Little is known about his life, and even his exact years of birth and death are unknown, although the mathematical historian Florian Cajori provided the approximate dates 1648-1715. Raphson attended Jesus College at Cambridge, graduating with an M.A. in 1692. He was made a Fellow of the Royal Society on 30 November 1689, after being proposed for membership by Edmund Halley. Raphson's most notable work is *Analysis Aequationum Universalis*, which was published in 1690. It contains a method, now known as the Newton-Raphson method, for approximating the roots of an equation. Isaac Newton had developed a very similar formula in his *Method of Fluxions*, written in 1671, but this work would not be published until 1736, nearly 50 years after Raphson's *Analysis*. However, Raphson's version of the method is simpler than Newton's, and is therefore generally considered superior. For this reason, it is Raphson's version of the method, rather than Newton's, that is to be found in textbooks today. Raphson was a staunch supporter

of Newton's, as opposed to Gottfried Leibniz's, claim as the inventor of Calculus. In addition, Raphson translated Newton's *Arithmetica Universalis* into English. The two were not close friends, however, as is evidenced by Newton's inability to spell Raphson's name either correctly or consistently. Raphson seems to be the one, who coined the word pantheism, in his work *De spatio reali*, which was published in 1697, where it may have been found by John Toland.- Lit: Dict. 18th. cent. British Philosophers, II, 214; Copenhaver. Jewish Theologies of Space in the Scientific revolution: Henry More, Joseph Raphson; in: *Annals of Science* 37 (1980), 489-548. David J. Thomas, Judith M. Smith. Joseph Raphson, F.R.S.; in: *Notes and Records of the Royal Society of London*, Vol. 44, No. 2 (Jul., 1990), 151-167.

62

**Rantzau, Heinrich [Henrik]; Finck[e], Thomas.**

*Henrici Ranzovij ... Horoscopographia, continens fabricam cardinum coelestium ad quoduis datum tempus: et viam deductionis Ptolemaicam* [edited by Thomas Fincke] Argentorati: excudebat Antonius Bertramus, 1585. kl.4° [198 x 146 mm] 26 Bll. / Leaves Contemporary papercard boards, title stamped, with old sign. in upper part, DI shaved short. The vignette on the title-page has been restored. Else fine copy.

\$ 3200.-

First or second edition [?] of his astrological work by Henrik Rantzau, friend of Tycho Brahe, edited by Thomas Finck[e]. The first edition, cited from the foreword of this edition [Basiliae, 1583] is maybe a ghost. I could only locate at Cambridge an edition without date, called „Horoscopographia Ranzoviana“ “Im Auftrag des Grafen Rantzau gab Thomas Finck ein astromedizinisches “Calendarium Ranzovianum” und eine Horoscopographia (1585) heraus, die neben verschiedenen Tabellen [u.a. von Joachim Rhaeticus] auch die verschiedenen Methoden der Horoskopertechnik und der Häuserkonstruktion enthält. Finck war Arzt und später Professor der Mathematik an der Universität Kopenhagen und starb hochbetagt 1656.” [Knappich. Geschichte der Astrologie. 2008. 258] Thomas Finck [Finkius] (1561-1656 in Kopenhagen) war ein deutscher Mathematiker und Mediziner. Vorgebildet durch seinen Vater Jacob Finck, der schon bei Philipp Melanchthon gelernt hatte, besuchte er die Schule in Flensburg und bezog 16-jährig die Universität Straßburg. Dort studierte er unter anderem bei Johannes Sturm und Conrad Dasypodius. Im Anschluss besuchte er die Universität Heidelberg, die Universität Jena, die Universität Wittenberg und die Universität Leipzig. An der Universität Basel veröffentlichte er 1583 das Werk “Geometriae rotundi libri XIV”, welches ein weit verbreitetes und anerkanntes Werk werden sollte. Medizinischen Studien folgend, begibt er sich nach Italien wo er in Padua, Pisa, Florenz und anderen Orten, seiner Ausbildung nachgeht. 1587 geht er in das Schloss Gottorf, wo er als Leibarzt von Philipp von Schleswig-Holstein-Gottorf berufen wurde. Nach dessen Tode begibt er sich 1591 an die Universität Kopenhagen als Professor der Mathematik. Dort übernimmt er 1602 die Professur für Rhetorik, die er 1603 mit einer Professur für Medizin vertauscht und die er bis zu seinem Lebensende innehatte. Heinrich Rantzau (1526 - 1598) war von 1556 bis 1598 Statthalter des dänischen Königs für den königlichen Anteil von Schleswig-Holstein. Er war ein bedeutender Vertreter der Renaissance und des Humanismus im deutsch-dänischen Bereich und trat als Finanzier und politischer Berater unter drei dänischen Königen hervor, außerdem als Ökonom und Bauherr, als Verbesserer der Gutswirtschaft, als Geograf, Autor und als Korrespondent bedeutender Zeitgenossen. Auf Grund seines Reichtums konnte Rantzau sich vielseitig als Auftraggeber, Helfer und Mäzen betätigen, wobei er dafür sorgte, dass dies auch immer seinen Interessen diene. Um mit dem Büchermachen den durch und durch soldatischen Vater nicht zu verstören, veröffentlichte Rantzau sein erstes Druckwerk, *Vita et res gestae Johannis Ranzovii* nach dessen Tod und ließ als nächstes die Beschreibung der Eroberung Dithmarschens folgen (*Belli Dithmarsici descriptio*). Er förderte das umfangreiche Werk der Stadtansichten von Georg Braun und Frans Hogenberg *Civitates orbis terrarum* nachhaltig, sorgte aber auch dafür, dass die Städte Schleswig-Holsteins und Jütlands darin nicht zu kurz kamen und dass auch eine Dänemark-Karte seines Freundes Marcus Jordanus eingearbeitet wurde. Mit dem königlich dänischen Hofastronomen Tycho Brahe verband Rantzau eine enge Freundschaft; als Brahe bei demselben König Christian IV. in Ugnade fiel, mit dem auch Rantzau uneins war, beherbergte Rantzau ihn über ein Jahr lang in seinem Haus in Wandsbek, der Wandesburg, nahe der Grenze von Hamburg. Auch die Karriere des späteren Gegners von Brahe, Nicolaus Reimers, der sich Raimarus Ursus nannte, beruhte auf der Förderung durch Rantzau. Thomas Fincke (1561-1656) was one of the very most important and significant scientists in Denmark during the seventeenth century, a mathematician and astrologer and physician in the beginning of modern science, a representative of humanism and an influential academic organizer. He studied in Strasbourg (since 1577) and Padua (since 1583) and received his M.D. in Basel (1587), he practised as a physician throughout his life (since 1587 or 1590) and became a professor at Copenhagen (1591). But he was best known because of his *Geometriae rotundi libri XIII* (1583), a famous book on plane and spherical trigonometry, based not on Euclid but on Petrus Ramus. In this influential work, in which Fincke introduced the terms tangent and secant and probably first noticed the Law of Tangents and the so-called Newton-Oppel-Maudivit-Simpson-Mollweide-Gauss-formula, he showed himself to be “abreast of the mathematics of his time”. He was in contact with Brahe, Magini, Peder Soerensen, Caspar Bauhin, his son-in-law Caspar Bartholin and Ole Worm, and his grandsons Thomas and Erasmus Bartholin, and no doubt with others during a long life.- Rosenthal 3507 “Opusculum très rare”. Not in Caillet and Dorbon-Ainé. Lit.: Günther Oestmann. Heinrich Rantzau und die Astrologie; ein Beitrag zur Kulturgeschichte des 16. Jahrhunderts (2004).

63

**Riccati, Vincenzo.**

Dialogo di Vincenzo Riccati Delle Forze Vive e dell'Azioni delle Forze Morte: Si tien discorso.  
In Bologna: Nella Stamperia di Lelio dalle Volpe, 1749. 4°. 428 pp. with 11 fold. plates. Halble-  
derbd. d. Zt., ordentl. Exemplar.

\$ 2500.-

Rare first edition. Vincenzo Riccati (1707 - 1775) was an Italian mathematician and physicist. He was the brother of Giordano Riccati, and the second son of Jacopo Riccati. Riccati's main research continued the work of his father in mathematical analysis, especially in the fields of the differential equations and physics. Like his father, Riccati was also skilled in hydraulic engineering and, under government commissions, carried out flood control projects along the Reno, Po, Adige, and Brenta rivers. He was much honored for this work, which saved the Venetian and Bolognan regions from disastrous flooding, and was made one of the first members of the Società dei Quarante. Riccati further followed his father's example in studying the integration of differential equations, including some derived from geometrical problems. He, too, was well informed concerning pre-Eulerian mathematical analysis, and took his topics from other eminent mathematicians. Thus, a memoir by Johann I Bernoulli led him to consider the relationship between the lengths of two curves and a treatise by Jakob Hermann prompted him to suggest some methods whereby the conic equations of Cartesian coordinates might be discussed. He was also concerned with the rectification of conic sections and studied elliptic integrals as an introduction to the theory of elliptic functions. He participated in the vis viva controversy, as a Leibnizian. OPAC: 4 copies; OCLC: 14 copies in USA.

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**Röhl, Lampert Heinrich.**

Kleine mathematische Abhandlungen von Lamb. Henr. Röhl Greifswald: gedruckt und verlegt  
von A. F. Röse, 1790. gr.8°. 126 pp. with nice vignettes and geometrical woodcut-illustrations  
Neuer Halblederbd im Stil der Zeit, unbeschnitten, schönes Exemplar.

\$ 900.-

Very rare collected papers by the Prof. of Astronomy at the Greifswald University. The topics of the essays are: Methodus generalis investigandi omnes numeros integros positivos,...; Erläuterungen einer vortheilhaften Rechnungs-Methode aus der Distanz des Mondes die Meereslänge zu finden, Über die geographische Lage von Greifswald, Ueber des Herrn Professor Fuß Rechnungsformel aus den gemessenen Höhen und Abstände..., Ueber dem greifswaldischen astronomischen Gnomon, Berichtigung der Lage des Mittagsrohrs oder Transit-instruments (Instrument des Passages),... Ueber die Abmessung der Abstände vermittelt des Schalls. Lampert Hinrich Röhl (1724 - 1790), deutscher Mathematiker und Astronom. Im Jahr 1753 erwarb er die Erlaubnis, akademische Vorlesungen zu halten. Später begleitete Röhl seinen akademischen Lehrer Andreas Mayer bei dessen Reisen zur kartographischen Aufnahme von Schwedisch-Pommern. 1762 wurde Röhl astronomischer Observator und außerordentlicher Professor an der Universität Greifswald. 1775 wurde er der erste ordentliche Professor der Astronomie in Greifswald. 1788 war Röhl Rektor der Universität. Ein besonderes Verdienst erwarb Röhl sich 1773-75 durch die Einrichtung der Greifswalder Sternwarte in einem noch heute vorhandenen Befestigungsturm. Die Gründung der Sternwarte ging auf einen Vorschlag seines Lehrers Andreas Mayer zurück. Röhl war ab 1775 auch der erste Direktor der Sternwarte. Aufgrund seiner astronomischen Beobachtungen ernannte ihn die Stockholmer Akademie der Wissenschaften zu ihrem Mitglied. Die 1775 eingerichtete Astronomie-Professur war eine der ersten Fachprofessuren modernen Zuschnitts an der Greifswalder Hochschule. Er übersetzte Torbern Olof Bergman und Frédéric Mallet ins Deutsche.- Meusel XI, 376-79; DBE VIII, 475; ADB XXIX, 56.- KVK: Göttingen, Berlin, Greifswald, Jena, Leipzig; COPAC: Cambridge; OCLC: no copy in USA.

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**Rösler, Gottlieb Friedrich.**

Handbuch der praktischen Astronomie für Anfänger und Liebhaber. Zu Benuzung und Beobachtung der vornehmsten himmlischen Erscheinungen, ohne allzukostbaren Instrumenten=Vorrath, und zur Kenntniß des Gebrauchs der vornehmsten astronomischen Werkzeuge. 2 Vols. Tübingen: bei Jakob Friedrich Heerbrandt, 1788 8°. [4] Bl., 504 pp., [12] Bl., XIII gef. Kupfertaf.; [4] Bl., 453 pp., [17] Bl. Mit XXIX. Kupfertafeln, von Taf. XIV. bis Taf. XLII. [with 42 plates] Halblederbde. d. Zt. mit R.schild und R.vergold., Kapital gering beschädigt ). Dekorativ gebunden. \$ 1900.-

First edition. Erste Ausgabe. G. F. Rösler war Professor der Mathematik und lebte als Privatgelehrter in Stuttgart. Das Werk wurde als gute Ergänzung zu Rost' Handbuch rezensiert. "Das erste Kapitel handelt von den Gradmessern, besonders von den Quadranten, ihrer Eintheilung, Verification, etc. Das zweite von den Mikrometern aller Art, sowohl mit beweglichen als unbeweglichen Theilen. Das dritte weitere verschiedene Arten von Gradmessern, nemlich Scheitelmesser, Passageinstrumente, Mauerquadranten, Azimuthalinstrumente, parallaktische Maschinen, Sectores, Hadleysche Octanten und Sextanten, usw. Das vierte von den nöthigen Correctionen bey dem Messen, Parallaxe, Refraction, Nutation; Das fünfte von der Eintheilung der Zeit und von den Uhren; ... Von der Beobachtungen der sonne und den dazu gehörigen optischen instrumenten; Vom Mond und dessen Beobachtungen ..." [Allgemeine Literatur-Zeitung] Rare first edition, a popular handbook on simple astronomical instrumentation.- Poggendorff II, 676; Ferchl 450; Meusel, 1811. 388; not Kenney, not Barchas Collection, not Hockey.- KVK: Stabi Berlin, Weimar HAAB, Jena, Hamburg, Göttingen, Eutin, Erfurt, Bremen, et al.; COPAC: no copy; OCLC: Texas Tech Univ., Iowa Law Library [?], NY Public, San Diego State [Zinner Collection].

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**Ruffini, Paolo.**

Teoria Generale delle Equazioni, in cui si dimostra impossibile la soluzione algebrica dell'equazioni generali di grado superiore al quarto. Bologna: Stamperia di S. Tommaso d' Aquino, 1799. 4° [205 x 145 mm] VIII, 206 pp., [4; errata]; [2], 207-509 pp., [7; errata] and two large folding tables Contemporary calf with gilt lettering on spine. Title-Page stamped, else fine and very good copy.

\$ 3900.-

First edition. The first statement and proof of the Abel-Ruffini theorem, that the general equation of degree higher than four cannot be solved algebraically. Although Ruffini's proof was not in general accepted he developed, in this lengthy treatise, many new fundamental methods and the concept of permutation groups, which was essential to the later work of Abel and Galois. It thus marks the transition from classical to abstract algebra. "The first person to claim that equations of degree 5 could not be solved algebraically was Ruffini. In 1799 he published a work whose purpose was to demonstrate the insolubility of the general quintic equation. Ruffini's work is based on that of Lagrange but Ruffini introduces groups of permutations. These he calls "permutazione" and explicitly uses the closure property (the associative law always holds for permutations). Ruffini divides his permutazione into types, namely "permutazione semplice" which are cyclic groups in modern notation, and "permutazione composta" which are non-cyclic groups. The "permutazione composta" Ruffini divides into three types which in today's notation are intransitive groups, transitive imprimitive groups and transitive primitive groups." (MacTutor History of Mathematics).- NUC: ICU, CU, CtY, PU, MH, IU, RPB.

67

**Scheiner, Christoph.**

Oculus, hoc est: Fundamentum opticum in quo ex accurata oculi anatome, abstrusarum experientiarum sedula pervestigatione, ex invisis specierum visibilium tam everso quam erecto situ spectaculis, nec non solidis rationum momentis, radius visualis eruitur; sua visioni in oculo sedes decernitur; anguli visiorii ingenium aperitur; difficultates veteres, novae, innumerae expediuntur, abstrusa, obscura, curiosa plurima in medium proferuntur; plura depromendi occasio harum rerum studiosis datur: opus multorum votis diu expetitur; philosophis omnibus, praesertim qui naturæ vim in medicina, physica aut mathesi addiscenda rimantur, neque inutile neque ingratum, imo necessarium futurum auctore Christophoro Scheiner ... Londini [London]: Excudebat J. Flesher, & prostant apud Cornelium Bee, M. DC. LII. [1652]. 4°. [12], 254 pp. with woodcut diags. within text. Contemporary vellum, clean & fine copy.

\$ 5000.-

Third edition of one of the most famous and important works in the history of optics, the first outside the continent after the editions in 1619 [Innsbruck] and 1621 [Freiburg]; only the first edition includes the etched frontispiz. In this book, Scheiner demonstrated for the first time that the retina is the actual organ of sight and explained the pupil changes known as "accommodation." He also devised the pin-hole test ("Scheiner's test") to illustrate accommodation and refraction." Christoph Scheiner S.J. (1573-1650) was a Jesuit priest, physicist and astronomer in Ingolstadt. Scheiner's "Oculus hoc est: Fundamentum opticum", containing many new insights into the physiological nature of the eye, was published in Innsbruck in 1619. The book had been written earlier in Ingolstadt. Oculus is subdivided into three parts: the first part treats the anatomy of the eye, the second part the refraction of the light ray inside the eye, and the third part deals with the retina and the visual angle. Scheiner once again chooses the way of observation and experiment. Like Kepler before him, he found that the retina is the seat of vision and that the optic nerve transmits the images from the retina to the brain. Scheiner's talents lay in the mathematical sciences and instruments. Early in his career he became an expert on the mathematics of sundials and also invented a pantograph (a device for copying and enlarging drawings). Upon hearing about Galileo's discoveries with the telescope, in 1610, Scheiner immediately set out to obtain good telescopes with which to scrutinize the heavens. After verifying Galileo's discoveries for himself, he turned his attention to the Sun, where, in March or April 1611, he discovered sunspots. He was neither the first to observe sunspots nor the first to publish on the subject, but his publication was the start of a controversy with Galileo over the nature of sunspots. Because of the conservative stand of the Jesuit order on cosmological issues, Scheiner attempted to rescue the perfection of the Sun, and by implication the heavens generally, from imperfection. He therefore postulated that sunspots were caused by satellites of the Sun whose shadows are projected on to Sun's disk as they cross in front of it. His tract, *Tres Epistolae de Maculis Solaribus* ("Three Letters on Solar Spots") appeared in Augsburg early in 1612, under the pseudonym "Apelles latens post tabulam," or "Apelles hiding behind the painting." - Lit.: Franz Daxecker. Christoph Scheiner's eye studies, in: *Documenta Ophthalmologica* 81, 1992, 27-35; Shea, William R. (1970). "Galileo, Scheiner, and the Interpretation of Sunspots." *Isis*, 61, 498-519; Linda Hall Library, *Jesuit Science in the Age of Galileo*, 9; DSB XII, 151-52 [Shea]; Garrison-Morton 1480 [1619 ed.]; Krivatsy 10365.

68

**Schröter, Johann Hieronymus.**

Beiträge zu den neuesten astronomischen Entdeckungen. Herausgegeben von Johann Elert Bode. [with/ and] Neuere Beyträge zur Erweiterung der Sternkunde. [= Zweiter Band der Beyträge zu den neuesten astronomischen Entdeckungen] 2 Bde. Berlin: bey August Gottlieb Lange, 1788 [and] Göttingen: in Commission der Vandenhoeck- Ruprechtischen Bhdl., 1798. 8°. XIV, 288 pp., [2], 8 tls. gefaltete Kupfertafeln; [2], XXII, 424 pp., [2], 3-77 pp., [5], 7 mehrfach gefalt. Kupfertafeln. Dekorative Halblederbde. d. Zt., doppeltes R.schild, auf 5 Bündeln, eingestanztes Monogramm "Z" [= Zach] am Rücken, mamoriertes Deckpapier, gering berieben, etwas am Vorsatz leimschattig. Neuerer Besitzvermerk a. V., Besitzerstempel "Zach" am Titel. Kaum fleckig. Sehr schönes Exemplar aus bedeutender Provinenz.

\$ 2900.-

First edition of the first book of the great astronomer Schröter (1745 - 1816); with the first supplement. It is in this work that he first outlined his plans for preparing a topography of the moon. Schröter established in Lilienthal one of the finest observatories in Europe, equipping it with the best instruments, all of which were paid for by George III. "For thirty years the

observatory at Lilienthal was a center of astronomical research and was visited by foreign astronomers. Schröter was the first to observe the surface of the moon and the planets systematically over a long period. He made hundreds of drawings of lunar mountains and other features, and discovered and named the lunar rills." [DSB, XII, 226]. This work consists of several treatises, the most important of which are Schröter's observations and conclusions on the rotation and atmosphere of Jupiter (1-137), his description of Herschel's telescope (154-209), and his plan for a topography of the moon (221-247). A very fine and pretty copy from the library of the astronomer Zach. [King, History of the Telescope, 135; Lalande, 606; Poggendorff, II, 846-47.

Erste Ausgabe von Aufsätzen des Astronomen J. H. Schröter (1745 - 1816), wie zumeist ohne den in zwei Abteilungen erschienenen 3. Suppl.-Band unter dem Titel: Neueste Beyträge zur Erweiterung der Sternkunde (1800).- Johann Hieronymus Schröter hatte in Lilienthal bei Bremen eine Privatsternwarte errichtet, deren Leistungsfähigkeit damals wohl nur von dem Observatorium William Herschels übertroffen wurde. Für etwa drei Jahrzehnte wurde Lilienthal ein internationales Zentrum der beobachtenden Astronomie. Schröters eigene Arbeiten betreffen fast ausschließlich die topographische Astronomie sowie die Beschreibung und Verbesserung der astronomischen Instrumente. "Er wollte die Oberflächengestalt und Oberflächenbeschaffenheit der Mit-glieder unseres Sonnensystems studieren, deren Rotationselemente bestimmen usw. Die Fixsterne, denen gegenüber selbst seine gigantischen Fernrohre versagten, interessierten ihn weniger ... Am meisten Wert (von seinen zahlreichen Entdeckungen) dürften heutigen Tages noch die Beobachtungen über das Streifen- und Trabantensystem des Jupiter besitzen" (ADB 32, 570 f). Band 1 enthält als Hauptbeitrag Schröters Beobachtungen über die "Rotation, Atmosphäre und Naturanlage" des Jupiter, ferner kleinere Abhandlungen über das Herschelsche 7-füßige Teleskop, ein neues Lampenmikrometer, einen Entwurf zu einer Mond-Topographie (als Vorläufer zu seinem großen Selenographischen Atlas) u. a. Band 2 mit den o.g. Beobachtungen "über die Rotation, wahren Größenverhältnisse, Naturanlagen und Atmosphären" der Jupiter-Trabanten. Exemplar aus der Bibliothek des Astronomen Zach, mit dessen Besitzstempel.- Poggendorff I, 846 f; Houzeau/Lanc. II, Sp. 1543 f; DSB XII, 226.

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### Sella, Vittorio [Photographer]

[Matterhorn] Silver gelatine print, 296 x 397 mm, from a 30 x 40 plate. Mounted on card.

\$ 3200.-

Large Albumin Print. Vittorio Sella (1859 - 1943) was an Italian photographer and mountaineer, who took photographs of mountains which are regarded as some of the finest ever made. Sella was born in Biella in the foothills of the Alps and acquired his interest in Alpinism from his uncle, Quintino Sella. He made a number of significant climbs in the Alps, including the first winter ascents of the Matterhorn and Monte Rosa, and the first winter traverse of Mont Blanc. He took part in several expeditions further afield, including three to the Caucasus (where a peak now bears his name), to Mount Saint Elias in Alaska, to the Rwenzori in Africa, and the 1909 expedition to K2 and the Karakoram. The latter three expeditions were in the company of Luigi Amedeo, Duke of the Abruzzi. Sella continued to climb into his old age, and made his last attempt on the Matterhorn at seventy six. The attempt failed when one of his guides was injured in an accident. The high quality of Sella's photography was in part due to his use of 30x40 cm photographic plates, in spite of the difficulty of carrying bulky and fragile equipment into remote places. He had to invent equipment, including modified pack saddles and rucksacks, to allow these particularly large glass plates to be transported safely. His photographs were widely published and exhibited, and highly praised; Ansel Adams, who saw thirty-one that Sella had presented to the US Sierra Club, said they inspired "a definitely religious awe".



## »Bibel der Veilchen- Züchter«

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**Simkins, James.**

The Pansy and how to Grow and show it; with the best methods of Hybridization with a view to improvement, etc., etc. With coloured plates and numerous woodcuts. Birmingham: Cornish Brothers; London: Simpkin, 1889. 8° [186 x 130 mm]. [8], 112 pp., 8 pp. advert. [partly blank leaves] with 8 coloured Chromolithographs. Blue Publisher printed cloth, little rubbed, else good copy, inside clean. The coloured plates partly mounted [original state]. \$ 290.-

Seltenes Werk zur Stiefmütterchenzucht. Unser heutiges Garten- Stiefmütterchen, allbekannt und in vielen Sorten und Farben eine unserer häufigsten Rabattenpflanzen des Frühjahrs, wurde in einem bis heute andauernden Prozeß als Hybride verschiedener Wildarten entwickelt. Wurden verschiedene Wildformen in diversen Renaissance- u Barockgärten bereits gepflanzt, so setzte etwa um 1810 in England die züchterische Entwicklung unseres heutigen Garten- Stiefmütterchens ein. In den 1820 und 1830er Jahren nahm die Züchtung in England mehr und mehr zu, und die Stiefmütterchen gehörten alsbald zu den beliebtesten Gartenblumen. Sowohl Amateure als auch erfahrene Gärtner widmeten sich ihrer Kultur. Nach Charles Darwin waren 1835 in England 400 Namenssorten im Angebot. Gute neue Sorten kosteten 5 Schillinge je Pflanze, herausragende Neuheiten erbrachten aber weit höhere Preise: so wurde ein Sämling der Sorte "Metropolitan" für 10 Pfund angeboten. Bald schlossen sich in England Liebhaber zu speziellen Stiefmütterchen- Gesellschaften zusammen, welche auch Ausstellungen veranstalteten und welche bis heute überlebt haben. Auch in Deutschland wandte man sich an verschiedenen Orten der Stiefmütterchen- Zucht zu, insbesondere in Erfurt, in Oschersleben (Carl Schwanecke seit 1852) und in und um Pirna [Heinz- Dieter Krausch].- No copies in KVK, NUC cit 3 copies [NNBG, OCIGC, MBH], one copy given by J. Pierpont Morgan in 1901. Not in Nissen, Stafleu/Cowan, Desmond, et al.

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**Spinoza, Benedictus de.**

Opera posthuma, quorum series post Praefationem exhibetur. [Amsterdam: Jan Rieuwertsz], 1677. 4° [xl], 614, [32], [ii], 112, [8] pp., with some illustrations and diagrams in the text. Contemporary tree calf with triple gilt fillet, spine gilt in compartments with red morocco label, covers a little scraped, joints repaired in places some time ago, marbled endpapers with old French armorial bookplate, about 20 pages with an almost invisible waterstain at top, isolated pencil markings, overall a very good copy.

\$ 8000.-

First edition of Spinoza's posthumous works, including the first edition of the *Ethica*, the publication of which Spinoza contemplated in 1675, but which was postponed because of rumours of his atheism. The book was edited by Jarig Jelles, one of Spinoza's closest friends. 'The Opera posthuma contain at their core the *Ethica*, Spinoza's systematization of pantheism, along with a preliminary work in this vein, the *De intellectus emendatione*. The *Tractatus politicus*, a late work which was never completed, is also included. The letters printed in the Opera posthuma represent a selection which is limited due to the dangers inherent in the publication of letters which were potentially incriminating on theological grounds. Finally, there is the incomplete Compendium of Hebrew Grammar, which is paginated separately' (Baruch de Spinoza 1677-1977, p. 37). 'The Opera Posthuma have served, with the *Tractatus Theologico-Politicus*, to immortalize his name' (PMM).- Van der Linde 22; Wolf collection 378.

72

**Stepling, Joseph.**

Differentiarum minimarum, quantitatum variantium calculus directus, vulgo differentialis  
 Auctore Josepho Stepling. Pragae: Tiskárna Jezuitská, s.a. [1764 ?] 4° [232 x 180 mm] [36],  
 3-196 pp., [2] with one etched plate. Contemporary calf, rubbed and soiled, gilt spine in com-  
 partments, red label, inside some spotting else good copy. \$ 2900.-

Very rare mathematical work by the prominent Prague Jesuit and "astronomus regius". Joseph Stepling (1716-1778), the first Bohemian mathematician to make substantial contributions to mathematical analysis, was born in Regensburg in Germany but built his career in Prague. Already in his early youth, Stepling displayed extraordinary mathematical skills, and at the age of merely 17, he calculated very accurately the lunar eclipse of 28 May 1733. Due to his obvious abilities, he was now admitted into the Jesuit order, in spite of his weak physique. He studied philosophy as well as mathematics, and "[h]is pupil, and later biographer, Stanislaus Wydra, states that Stepling, even in his early studies, transposed Aristotelian logic into mathematical formulas, thus becoming an early precursor of modern logic." (DSB XIII, 39). During the years 1741-43 Stepling devoted himself entirely to the special studies of mathematics, physics, and astronomy, and from 1743-47 he studied theology. The year 1741 marks a turning point in the educational system of the Austrian Age of Reason. Prague University was chosen as an experimental centre, where new directors were appointed to reform the teachings of the university. One of the most important of these was Stepling, who became the director of the philosophical faculty, which was also to include the exact sciences. He was engaged to modernize the study of philosophy and to introduce into this the modern branches of physics as well as the new theories of mathematics and the natural sciences. Stepling revolutionized the study and introduced lectures on elementary algebra and geometry, analytical geometry, trigonometry, and also on differential and integral calculus. Stepling is also famous as the author of the first Czech textbook of mathematic analysis (written in latin and printed in 1765, whereas Euler's "Institutiones calculi integralis" did not appear until 1768). Stepling corresponded with many of the most outstanding mathematicians of his time (Wolff, Euler, Boskovich, La Caille, et al.), and unlike almost all of his Czech predecessors, he used the results of the greatest mathematicians in his own experiments and research. During Stepling's long tenure at Prague, he set up a laboratory for experimental physics and in 1751 built an observatory, the instruments and fittings of which he brought up to the latest scientific standard. After his death, Maria Theresia ordered a monument erected in the library of the University of Prague.- ADB XXXIX, 102-03 [Günther], KVK: München, Würzburg, Augsburg, Göttingen, COPAC: no copy; OCLC: maybe Urbana- Illinois [?].

73

**Thurneysser zum Thurm, Leonhard.**

Historia siue Descriptio Plantarvm Omnium, Tam Domesticarvm Qvam Exoticarvm: Earundem cum virtutes Influentiales, Elementares, & Naturales, tum Subtilitates, necnon Icones etiam veras, ad viuum artificiosè expressas proponens ... A Leonhardo Thurneyssero zum Thurn, Medico ordinario Electoris Brandenburgici conscripta. Berlin: excudebat Michael Hentzke, 1578. Folio [327 x 210 mm]. [6] Bll., CLVI pp., 10 nn. Bll. Mit breiter Holzschnitt-Titelbordüre, 1 Porträt, 1 fast ganzseitigem Holzschnitt, 35 Pflanzenholzschnitten mit Bordüre, zahlr. kleineren Holzschnitten und Diagrammen im Text und Druckermarken. Pappbd. d. Zt. mit altem handschriftl. Rücken-Titel, etwas beschabt u. wasserfleckig.

\$ 6900.-

First latin edition. Seltene erste lateinische Ausgabe, gleichzeitig mit der ersten deutschen erschienen; seltener Druck der nur 5 Jahre tätigen 3. Berliner Offizin, die Thurneyssers eigene Druckerei erworben hatte (Benzing, Buchdrucker 47).- VD 16, T 1174; Adams T 690; Nissen, BBI 1963. Thurneysser plante ein großes botanisches Werk in zehn Büchern, von dem nur dieses erste Buch fertiggestellt wurde. Das seltene Pflanzenwerk beschreibt die Doldengewächse aus botanischer, medizinisch-pharmazeutischer und okkultur Sicht, wobei Thurneysser den Einfluß der Gestirne auf Wachstum und Wirkungsweise von Pflanzen nachweisen und sie nach dieser Wirkweise ordnen wollte. Es ist eines der ersten Kräuterbücher mit Beschreibung der Heilwirkung der Pflanzen nach astrologischen Gesichtspunkten, Pflanzenbenennungen auch in hebräischer, syrischer und griechischer Sprache. Die Holzschnitte stammen von P. Hille nach Franz Friedrich aus Frankfurt/ Oder. Die großen Holzschnitte zeigen Pflanzen, die kleinen Destilliergeräte, Öfen, Karaffen, Kolben, aber auch Tierabbildungen. The work (a German edition appeared the same year) is a great eccentricity in botanical literature. The woodcuts of plants are enclosed within borders which give the Hebrew (occasionally Syriac) and Greek names of the plants. In the corners of the border are the constellations governing the plant, its alchemical

complexion, and its virtues. Smaller figures of skeletons or internal organs indicate the parts of the body the plant affects. Other woodcuts of distillation apparatus illustrate the preparation of medicinal extracts. The work combines alchemy, astrology, the doctrine of signatures, and medical botany. 'The works that Thurneisser published at this time were impressive examples of the printer's art, illustrated with woodcuts and etchings, and incorporating Greek, Arabic, Syrian, Hebrew and Chaldean typefaces. Since his books often contain words in languages that he did not know, he was publicly accused of harbouring in his inkpot a devil who dictated to him' (DSB XIII, 397). Thurneisser 'began life by learning the trade of his father, who was a goldsmith, but he also picked up some knowledge of botany, medicine, and, possibly, anatomy under Vesalius. In 1548 he left Basel, and went to England, France, and Germany, where he became a soldier. Afterwards he worked as a metallurgist, and again as a goldsmith... From 1560 to 1570 he was in the service of the Archduke Ferdinand, and travelled far and near, from the Orkney islands down to Africa, and to the East, everywhere learning medicine and metallurgy... From 1570 to 1584 he was physician to John Georg, Churfürst of Brandenburg, and had a laboratory and printing press in the so-called "Grey monastery" at Berlin. By various means he amassed a large fortune, and at one time employed between two and three hundred people. He collected a library, a museum, and a herbarium, kept a menagerie, and encouraged the fine and practical arts, such as the manufacture of saltpetre, alum, glass, paper, and also coloured glass... In 1584 he finally left Berlin, went to Italy, where he tried to practice medicine and alchemy; he was at Rome in 1591, and died in a monastery at Cologne 9 July, 1596, and was buried beside Albertus Magnus, according to his own request' (Ferguson). The outstanding woodcut title design [not present here] is signed, left-of-centre, 'P F H' and is by Peter Hille, who also was responsible for the portraits and probably the coat-of-arms on the colophon leaf. Hille died in 1574, so the work must have been sometime in preparation.- Nissen, BBI 1963; MNE II, 293; Brüning 516; Partington II, 152/53; ADB XXXVII, 226; Ferguson II, 450-455; Ferchl 536; Moehsen XI.- KVK: Dresden, Leipzig, Stuttgart [with only 5 leaves in front and 9 at the end ?]; COPAC: only BL London; OCLC: no copy [?]

## »Die Krusenstern-Expedition war die glücklichste Zeit meines Lebens«

74

**Tilesius von Tilenau, Wilhelm Gottlieb.**

Theorie der flechtenartigen Ausschläge, ein Versuch zur nähern Bestimmung der chronischen Hautkrankheiten. Von Dr. W. G. Tilesius mit Kupfern. Leipzig: bei F. C. Hinrichs, 1802. 8°. [2], 64 pp. with one coloured fold. plate. Contemporary papercard boards, used & rubbed, stamped verso & recto title. \$ 1000.-

Rare first edition of his early dermatology work. Erste Ausgabe seines Buches über die Theorie der flächenartigen Ausschläge: in dem Buch erwähnt er eine umfangreiche Sammlung von Illustrationen und Wachsmoulagen über Hautkrankheiten, die jedoch nie erschien. Wilhelm Gottlieb Tilesius von Tilenau (1769 - 1857) war Naturforscher und Arzt, Zeichner und Kupferstecher. Er studierte ab 1790 Naturwissenschaften und Medizin an der Universität Leipzig und nahm gleichzeitig Zeichenunterricht bei Adam Friedrich Oeser an der Kunstakademie in der Pleißenburg. Er absolvierte die Magisterprüfung der Künste 1795, promovierte 1797 zum Doktor der Philosophie, und 1801 zum Doktor der Medizin. 1795/96 begleitete er den Grafen und Naturforscher Johann Centurius von Hoffmannsegg auf eine Schiffsreise nach Portugal. Auf der Portugalreise beschäftigte er sich insbesondere mit Meerestieren. Die Ergebnisse veröffentlichte er in mehreren Abhandlungen. Sie dienten ihm später als Referenz für die Teilnahme an der Weltumsegelung. Nach vergeblichen Bewerbungen in Leipzig wurde er 1803 zum Professor an die Moskauer Universität berufen. Er nahm als Schiffsarzt, Meereszoologe und Expeditionszeichner auf der Fregatte Nadeschda an der ersten russischen Weltumsegelung 1803-1806 unter Adam Johann von Krusenstern teil. Sein Bildband zum Expeditionsbericht erschien 1814. Im Gegensatz zu seinem Zeitgenossen Alexander von Humboldt errang Tilesius nur wenig öffentliche Anerkennung. Nach ihm sind jedoch mehrere, von ihm beschriebene Tier- und Pflanzenarten benannt, u.a. drei Arten von Panzergruppen, die Rote Königskrabbe, eine Meduse, sowie ein Bergkegel an der Nordküste von Honshu. Bis 1814 blieb er in den Diensten des Zaren in Sankt Petersburg und erbrachte die Druckvorlage von Krusenstern's Reisebericht. In der Zeit kümmerte er sich insbesondere auch um die Umsetzung seiner Zeichnungen in Stiche.- COPAC: only Univ. of Edinburgh; OCLC: only NLM, Bethesda.

75

**Ufano, Diego.**

Tratado Dela [sic] Artilleria Yuso [sic] Della Platicado por el Capitan diego ufano en las Guerras de flandes. En Brusselas: en casa de Iuan Momarte impresor ..., 1613. 4° [245 x 190 mm] [18], 423, [8] pp., with [54] etched plates Mamorierter Pappbd. d. 18. Jahrhunderts mit rotem R.schild, Rotschnitt, berieben u. bestoßen, R. gering restauriert. Innen vereinzelt fleckig, Tafeln tls. gebräunt, doch gutes Exemplar. ein handschriftl. Blatt beige bunden.

\$ 8000.-

Very rare first edition (with variant title-page) of Diego Ufano's influential treatise on artillery, which was quickly translated into other languages and much copied and plagiarised (Norton's Gunner of 1628 for instance). According to Peeters-Fontainas, the engraved title has the date "161z" which should be read as 1612 (not 1613 or 1617), but the last digit in this copy is definitely a 3 (as given in Cockle), implying that the engraved title was altered for later issues. Ufano was a captain of artillery and wrote from a practical standpoint, having been involved in engagements using cannons in northern France and the Low Countries. He describes the different sizes and manufacture of cannons and gives details of trajectory, although his calculations were later criticised by Blondel in his *Art de jeter les bombes* of 1683.- Cockle 684; Peeters-Fontainas 1328; Riling 78; Palau 342943. [Copies are rare on the market; a copy was sold at Christies in 1977 and a copy was in Richard Ramer's catalogue 6-171 of 1992. The copy in the Macclesfield sale, Nr. 3824 was incomplete; estimated with 4500-6000 EUR] COPAC: BL London [1612]; National library Scotland [1613]; OCLC: no copy?

76

**Volta, Giovanni Serafino.**

Elementi Di Mineralogia Analitica, E Sistemica Dell' Abate D. Serafino Volta In Pavia Appresso Pietro Galeazzi, MDCCLXXXVII [1787]. 8°. [1] - 296 pp., [2] Lederbd. d. Zt., ein Deckel etwas fleckig, sonst gutes und schönes Exemplar.

\$ 1400.-

Very scarce. In this descriptive mineralogy, the first 20 pages provide an introduction to the science of mineralogy, while the remainder of the text describes the species. References are provided to the works of Kirwan, Bergman, Lehmann, Cronstedt, Wallerius, etc. A Translation in German was made by Karl Freyherrn von Meidinger in 1793. Giovanni Serafino Volta (1764 - 1842), Italian theologian, geologist & mineralogist. He was an Abate and respected theologian. He was canon of the Imperial Basilica in Mantova and custodian of the natural history cabinet at the University of Pavia. There are two issues, the first in Pavia, the corrected in Cremona in 1787, both rare.- Lambrecht & Quenstedt, *Catalogus*, 1938: no. 447; LKG: XII 119.- KVK: Jena [Pavia]; Göttingen, Halle [Cremona]; COPAC: Imperial College, Bristol, NHM London; OCLC: Cornell, Bizzell Memorial [both Cremona edition]

77

**Waldner, Heinrich.**

Deutschlands Farne. mit Berücksichtigung der angrenzenden Gebiete Oesterreichs, Frankreichs und der Schweiz. Heidelberg: C. Winter's Universitäts-Buchhandlung, 1883. Folio [325 x 240 mm] [4], 52 photo-litho plates with letterpress descriptions in Germ., Fr., Eng. & Lat. as overlays. Green publ. cloth, gilt-printed covers, little rubbed and used, else fine.

\$ 1800.-

First published in 13 parts in "Wasselheim im Verl. d. Botanischen Vereins" (1880-1883), then complete in 1883 with Winter as publisher; in any form rare. Heinrich Waldner (fl. 1880) was a German botanist; teacher at the high school of Wasselheim, Elsass. Zuerst in Lieferungen in Waselheim/ Elsaß erschienen, dann von Winter übernommen.- Stafleu/ Cowan 16.557; KVK: Stabi Berlin, Dresden, Tübingen, Wiesbaden; COPAC; OCLC: Chicago Botanic Gardens, Univ. of Maryland Libraries, Harvard Univ., New York Botanical Garden.

78

**Whiston, William.**

*Praelectiones Physico-Mathematicae Cantabrigiae in Scholis Publicis Habitaе. Quibus Philosophia Illustrissimi Newtoni Mathematica explicatius traditur, & facilius demonstratur: Comographia etiam Halleiana Commentariolo illustratur. Cui accedunt, in hac Secunda Editione, XI. Praelectiones De eclipsibus antiquis. Londini [London]: impensis Benj. Motte, 1726. 8°. [2], 435 pp., [1]. with mathematical diagrams in woodcut throughout the text. Missing a half-title. Contemporary german calf, gilt in compartments, with raised bands gilt lettering on two. Contemporary ownership entry on blank frontpaper: "Abraham Gotthilf Kaestner, 1780".*

\$ 1800.-

Second enlarged latin edition, an association copy. In his *Praelectiones Physico-Mathematicae* (EA 1710) Whiston collected the lectures he gave as successor of Newton in the Lucasian Chair, being also one of the first works to include longer citations out of Newton's *Principia*. The importance of a mathematical treatment of planetary motions and geodesy (the shape of the earth) is particularly stressed. However, Whiston did not attempt to employ the calculus and strictly adhered to the *Principia*-produced the main propositions of Newton's masterpiece (and of the *Opticks*) and added his explanations. So the required mathematics is premised in the first three lectures and consists in the basic properties of the conic sections. In fact the *Praelectiones* are the first published extensive commentary of the *Principia*. [Guicciardini, 22] William Whiston (1667 - 1752) was an English theologian, historian, and mathematician. He is probably best known for his *A New Theory of the Earth*, and his *Arianism*. His *A New Theory of the Earth from its Original to the Consummation of All Things* (1696), an articulation of creationism and flood geology which held that the global flood of Noah had been caused by a comet, obtained the praise of both Newton and Locke, the latter of whom classed the author among those who, if not adding much to our knowledge, "At least bring some new things to our thoughts." He was an early advocate, along with Edmond Halley, of the periodicity of comets; he also held that comets were responsible for past catastrophes in earth's history. In 1701 he resigned his Rectorship to become Isaac Newton's substitute as Lucasian lecturer at Cambridge, whom he succeeded in 1702. Here he engaged in joint research with his junior colleague Roger Cotes, appointed with Whiston's patronage to the Plumian professorship in 1706. In 1707 he was Boyle lecturer. For several years Whiston continued to write and preach both on mathematical and theological subjects with considerable success.- Lit.: Niccolo Guicciardini. *The Development of Newtonian Calculus in Britain, 1700-1800*. pp. 22-23; Wallis 167 [1710 ed.]

**Provenance:** Abraham Gotthelf Kästner (1719 - 1800) was a German mathematician. He was known in his professional life for writing textbooks and compiling encyclopedias rather than for original research. Georg Christoph Lichtenberg was one of his doctoral students, and admired the man greatly. Kästner studied law, philosophy, physics, mathematics and metaphysics in Leipzig from 1731, and was appointed a Notary in 1733. He gained his Habilitation from the University of Leipzig in 1739, and lectured there in mathematics, philosophy, logic and law, becoming an associate professor in 1746. In 1751 he was elected a member of the Royal Swedish Academy of Sciences. In 1756 he took up a position as full professor of natural philosophy and geometry at the University of Göttingen. In 1763, succeeding Tobias Mayer, he became director of the observatory as well. One of his doctoral students was the physicist and aphorist Georg Christoph Lichtenberg, who became a colleague of his at Göttingen. Other notable doctoral students were Johann Christian Polycarp Erxleben, Johann Pfaff (doctoral adviser of Carl Friedrich Gauss), Johann Tobias Mayer, Heinrich Wilhelm Brandes, Farkas Bolyai (father of János Bolyai), and Georg Klügel. Kästner died in 1800 in Göttingen.

79

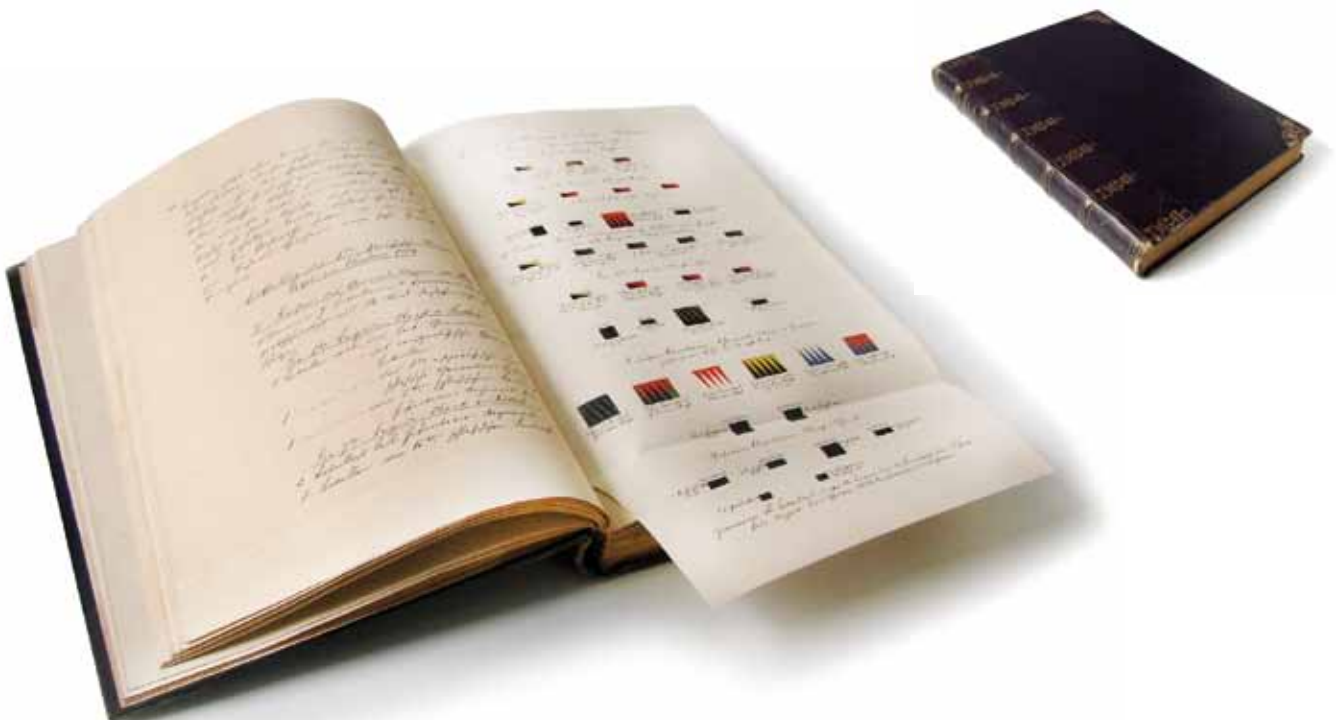
**Wied [- Neuwied], Maximilian Prinz zu.**

Das Königlich Preußische dritte "Brandenburgische" Husaren-Regiment in dem Feldzuge von 1814. [Handwritten Manuscript by unknown hand in fine, black ink on woven paper, [after 1828] Folio [360 x 255 mm] [2], 325 pp. with etched plans, charts within the text, II partly coloured plates. Brown Halfleather vol. with gilt edges, cover with gilt ornamental printing, inside clean and fresh. From the library of Ernst August von Hannover, with his stamp verso title.



\$ 29000.-

A fine manuscript by unknown hand (scribe or author ?) on the military actions in the wars of liberation seen through the eyes of the famous traveller & ethnographer Prince Max. of Wied [- Neuwied]. It seems not published up to this date. Maximilian zu Wied was a major in the Third Brandenburg Hussar regiment, from which he later transferred to the cavalry. During his active military service he participated in twelve battles: for distinction in the battles of La Chaussée and Chateau Thierry he was awarded the Order of the Iron Cross. On 31 March 1814 he entered Paris with the victorious allies. He resigned and became traveller, first to Brazil & then to explore the indians of North America. Prince Alexander Philipp Maximilian zu Wied - Neuwied (1782 - 1867) was a German explorer, ethnologist and naturalist. Wied was born in Neuwied, the grandson of the ruling count (after 1784 prince) Johann Friedrich Alexander of Wied-Neuwied. Born at the end of the European Enlightenment, Maximilian became friends with two of its major figures: Johann Friedrich Blumenbach, a major comparative anthropologist under whom he studied biological sciences, and Alexander von Humboldt, who served as Maximilian's mentor. He joined the Prussian army in 1800 during the Napoleonic Wars, rising to the rank of major. He was given a leave of absence from the army in 1815 (prior to Napoleon's escape from Elba). Wied led an expedition to southeast Brazil from 1815 to 1817. In 1816 he found the tribe of the Botocudos, about which he gave exact details for the first time. On account of the war among the different tribes of the country he was obliged to abandon his original route and remained for some time near some ruins that he had discovered. North of the Belmonte river he made his way through the woods, and after many difficulties arrived in the province of Minas Gerais. His delicate health forced him to abandon his expedition, and he was detained on unfounded suspicions for three days, and robbed of a large part of his collection of insects and plants. After this he resolved to leave the country, and embarked for Germany on 10 May 1817. On his return, he wrote *Reise nach Brasilien* (1820-21) and *Beiträge zur Naturgeschichte von Brasilien* (1825-33). In 1832 he travelled to the Great Plains region of North America, accompanied by the Swiss painter Karl Bodmer on a journey up the Missouri River, and wrote *Reise in das Innere Nord-Amerikas* (1840) on his return. During his travels, he studied the cultures of tribes such as the Mandan and the Hidatsa and collected many specimens of flora and fauna of the area.



80

**Zepeda y Adrada [Cepeda y Andrade], Alonso.**

Epitome de la fortificacion moderna, assi en lo regular, como en lo irregular, reducida a la regla, y al compas, por diversos modos, y los mas faciles para mover la tierra; y otros diversos tratados de la perspectiva, geometria practica, y del mundo de sitiarse, y defender las plazas, y de la construccion de las baterias y minas, y artificios de fuego, para arrojar al enemigo, compuesto por el teniente de maestro de campo general D. Alonso de Zepeda y Adrada ... 2 parts in 1. En Brusselas [Bruxelles]: por Francisco Foppens, mercader de libros, 1669. 4° [192 x 138 mm] [24], 83 pp., [1]; 390 pp., [2] with 34 fold. engraved plates. Eighteenth-century marbled calf, flat spine gilt, red edges. Nice copy.

\$ 3900.-

A rare work on fortification by a Spanish General. He was responsible for the ancient Castle of Tolhuis (now Nijmegen) in Brabant (known through pictures like *Passage du Rhin par Louis XIV devant Tolhuis*). The author is known for editing some work by and on Ramon Lullus. Lit.: Alicia Cámara Muñoz. *Los ingenieros militares de la monarquía hispánica en los siglos XVII y XVIII*. pp. 86.- Palau 380276; Peeters-Fontainas 1396; Jordan 4209; Almirante 924; Marini 112; Rumpf 4967; Ligne 122.- KVK: only Stabi München; COPAC: only BL London; Ital. VB: only Biblioteca Trivulziana Milano; OCLC: no copy in U.S.A.

## Varia

A

**Camerarius, Rudolf Jakob.**

Rud. Jac. Camerarii Opuscula Botanici Argumenti. Collegit, Edidit Joann. Christian Mikan ... Cum Effigie Authoris. Pragae [Prague]: apud Carolum Barth [Karl Barth], 1797. 8°. [2], VI, 224 mit Porträt-Frontispiz. Pappe d. Zt., etwas stockfleckig, aber gutes Ex. \$ 1000.-

Only edition of his collected papers. Camerarius most important scientific achievement was the experimental demonstration of the sexuality of plants. Many botanists continued to deny the sexuality of plants until the beginning of the nineteenth century. Finally the works of Karl Friedrich von Gaertner (1844, 1849), who carried out over nine thousand hybridization experiments, overcame the last doubts on the matter [Mägdefrau]. Rudolf Jakob Camerarius or Camerer (1665 - 1721) was a German botanist and physician, who was born at Tübingen, and became professor of medicine and director of the botanical gardens at Tübingen in 1687. He is chiefly known for his investigations on the reproductive organs of plants: *De sexu plantarum epistola* (1694). While other botanists, such as John Ray and Nehemiah Grew, had observed that plants seemed to have sex in some form, and guessed that pollen was the male fertilizing agent, it was Camerarius who did experimental work. In studying the mulberry, he determined that female plants not near to male (staminate) plants produced fruit but with no seeds. Mercurialis and spinach plants fared likewise. With the castor oil plant (*Ricinus*) and with maize he cut off the staminate flowers (the "tassels" of maize), and likewise observed that no seeds formed. His results were reported in the form of a letter (epistola), and attracted immediate attention, subsequent workers extending his results from the monoecious plants he had studied to dioecious ones as well. [Duane Isely, *One hundred and one botanists*, 1994. pp. 74-76; DSB XV, 67-68] Camerarius had shown that ripe seeds form only if the stigma has been covered with pollen. The fact that the pollen also plays a role in the structure of the subsequent generation was demonstrated by Koelreuter (1761) through the creation of numerous hybrids, among which could be detected various combinations of characteristics derived from the male or from the female parent. That is why the editor included here also the papers by Koelreuter. The editor of his works was Johann Christian Mikan (1769 - 1844), an Austrian-Czech botanist, zoologist and entomologist. He was a professor of natural history at the University of Prague and one of three leading naturalists on the Austrian Brazil Expedition. Mikan described many new species, including the Black Lion Tamarin. [ÖBL 1815-1950, Bd. 6 (Lfg. 28), pp. 280]

**B****Chambers, George Frederick.**

A handbook of descriptive and practical astronomy by George F. Chambers. London: John Murray, 1861. 8° [200 mm] XLVI, 514 pp., [2; adv.] with 52 leaves of plates incl. Front. & Errata slip after XLVI. Frontispiece is an engraved picture of the "Appearance of a portion of the sun's surface according to Nasmyth, July 29, 1860". Blue decorated cloth, rubbed & soiled, else good copy. Ex Libris: Henry Wentworth Foley. \$ 650.-

First edition of his most significant contribution to astronomy, uncommon in this condition. George F. Chambers (1841-1915), a barrister by profession, was for half a century one of Britain's most influential amateur astronomers. He published his first book in 1861 when aged only 19, while student of civil engineering. His uncle, Frederick Brodie was an enthusiastic amateur astronomer, having a private observatory equipped with a 160mm Merz refractor. At that period, astronomy books were either purely elementary or advanced treatises, with little or nothing occupying the middle ground. Chambers conceived the idea of writing a detailed account of astronomical knowledge as existed then, to fill the gap in the literature, to be attractive to the general reader, useful to the amateur, and also a handy reference work to the professional. Amongst the scientists who helped him were John Hind, E.J. Stone, John Nasmyth and Warren de la Rue. The book mirrors the outlook of the author: the sections on comets and history are very detailed, but the section on variable stars have only six pages, and clusters and galaxies only eight. The Handbook met with complete success, obviously filling the gap the author noticed, and was soon sold out. Over the years, several revised editions, gradually expanding in size, were published, in 1867, in 1876, and in 1889-1890. By the last edition it had increased to 1000 pages and was divided into three volumes. [Peter Johnson].- Barchas Collection 381; not in BEA; KVK: only Stabi Berlin for Germany.

**C****Fabricius, Johann Christian.**

*Genera insectorum eorumque characteres naturales secundum numerum, figuram, situm et proportionem omnium partium oris adiecta mantissa specierum nuper detectarum.* Chilonii [Kiel]: litteris Mich. Friedr. Bartsch, [o. J.; 26 Dec. 1776]. 8° [180 mm] [16], 310 pp. Halbd. d. Zt. mit Rsch., Rotschnitt, vereinzelt minimal braunfleckig, Ecken ganz leicht bestoßen, ansonsten schönes Exemplar ! \$ 720.-

Rare first edition, as always dating is given after the forword.- Grundlegende, an linné anschließende Veröffentlichung zur Systematik der Insektenordnung, die erste selbständige naturwissenschaftliche Publikation von Fabricius. er führt darin die Mundwerkzeuge als Kennzeichen der Klassen (= Ordnungen) u. Geschlechter (= Gattungen) der Insekten ein. Der Naturforscher und Kameralwissenschaftler Fabricius (1745-1808), geboren in Tondern, war Professor in Kiel und vermachte seine Sammlung der dortigen Universität. "Seine umfassende Formenkenntnis in Verbindung mit seinen hervorragenden Fähigkeit der zusammenfassenden Darstellung verschafften ihm mit Recht den Ruf des größten entomologischen Systematikers seiner Zeit." [NDB IV, 736; Horn-Sch. I, 16196; Hagen I, 220; ADB VI, 521 [gibt 1776 als Erscheinungsjahr an, da das Vorwort vom Verfasser mit Dezember 1776 datiert ist].

**D****Fabricius, Johann Christian.**

*Philosophia entomologica sistens scientiae fundamenta adiectis definitionibus, exemplis, observationibus, adumbrationibus.* Hamburg und Kiel, Carol. Ernest. Bohn, 1778. 8° [230 mm] [12], 178 pp. Mit Titelvignette und einigen Anfangs- und Schlußvignetten in Holzschnitt. Halblederbd. d. Zt. mit 2 Rsch., durchgehend etwas stock- oder braunfleckig, die letzten 5 Blätter mit kleiner Wurmspur im Bug, Einbanddeckel minimal berieben, ansonsten ordentliches Exemplar. \$ 800.-

First edition of one of his more theoretical works, uncommon. Johann Christian Fabricius (1743 - 1808) was undoubtedly one of the most distinguished entomologists and rank with Carl de Geer, P.A. Latreille, A.G. Oliver and other prominent specialists of earlier times. In many respects he surpassed them, especially as a theoretical natural scientist. Linnaeus, whose most important contribution hardly lay in the field of entomology, was full

of admiration for him - a rather unusual attitude for the nestor of Swedish science - and his colleagues throughout the world expressed great respect for his work. Quantitatively speaking, the most important part of Fabricius' work was concentrated in the field of descriptive systematics (taxonomy); qualitatively speaking, a very important section of his work fell into the advanced theoretical area of natural history as shown in *Philosophia entomologica*, etc. ... It was Fabricius' greatest ambition to build a system based on the naturally defined genera, without doubt a definite and new contribution to insect systematics [Bengt- Olof Landin]. Fabricius was professor of natural science and economics, first at the university of Copenhagen, then at Kiel. He did much traveling, both on the continent and in Great Britain. On these trips he came in close contact with the best-known scientists of his time and visited the greatest museums. - ADB VI, 521; DSB IV, 512/13 [Landin] KVK: Stabi Berlin [Kriegsverlust]; Halle, Hildesheim, Bremen, Göttingen, Kiel, Rostock, Hamburg et al.; COPAC: Oxford, Manchester, BL London, Glasgow, Natural History Mus., Newcastle, Cambridge, Wellcome; OCLC: some copies.

**E****Gemma Frisius, Reiner.**

*Arithmeticae practicae methodus facilis per Gemmam Frisium, medicum ac mathematicum, iam recens ab ipso auctore emendata, & multis in locis insigniter aucta. Huc accesserunt Iacobi Peletarii Coenomani annotationes: eiusdem item de fractionibus astronomicis compendium: et de cognoscendis per memoriam Calendis, Idibus, Nonis, festis mobilibus, & loco solis & lunae in Zodiaco. Quibus domum ab eodem Peletario additae sunt radices vtriusque demonstrationes. Parisiis: Apud Hieronymum de Marnef, & viduam Guliel. Cauellat, sub Pelicano monte D. Hilarii., 1578. 8° [172 x 109 mm] [1], 2-93, [2] leaves with woodcuts within the text. Leaf 85 misnumbered 83. Contemporary wrinkled vellum. used and little unfresh. \$ 1200.-*

Reiner Gemma Frisius (1508-1555) was born in Friesland, a coastal province of the Netherlands, which explains the adoption of Frisius as part of his name. He was a professor and physician in Louvain (now in Belgium) and taught medicine at the university there most of his life. Today, he is best remembered for his broad interest in mathematics, geography and astronomy. He also made highly regarded globes, maps and mathematical instruments. Gerardus Mercator attended lectures that Gemma Frisius gave at his home and later completed some of Gemma's globes. Gemma Frisius was the first to suggest that triangulation be used by map makers to improve accuracy. He also suggested the use of a clock to determine longitude - a suggestion that was to wait centuries for the development of sufficiently accurate marine clocks before it could be put into practice. This work was the most popular arithmetic textbook of the sixteenth century and was used widely in church schools. Smith, *Rara* lists 59 editions in the sixteenth century alone but cautions that his list is probably incomplete. The first edition appeared in 1540 in Antwerp. This edition generally contains the same material as the earlier ones. It begins with numeration and basic arithmetic and moves on to deal with fractions and methods such as the rule of three, ending with more advanced topics such as roots, proportions, and astronomy. [Michael R. Williams in Tomash G36].- *BM STC French, 1470-1600, 200; BN, v. 58, column 977; Smith, Rara arithmetica (4th ed.), 207*

**F****Haller, Albrecht von.**

*Opuscula sua Botanica prius edita recensuit retractavit auxit coniuncta edidit Albertus Hallerus. Göttingae [Göttingen] apud Io. Wilh. Schmid 8°. [8], 396 pp. mit gestoch. Titelvignette und 5 gefalt. Kupfertafeln. Pergamentbd. d. Zt., m. R.schild, Fuß leicht angerändert, gebräunt, leicht fleckig. \$ 720.-*

First edition. The quantity of work achieved by Haller in the seventeen years during which he occupied his Göttingen professorship was immense. Apart from the ordinary work of his classes, which entailed the task of newly organizing a botanical garden (the Alte Botanische Garten der Universität Göttingen), an anatomical theatre and museum, an obstetrical school, and similar institutions, he carried on without interruption those original investigations in botany and physiology, the results of which are preserved in the numerous works associated with his name; he continued also to persevere in his youthful habit of poetical composition, while at the same time he conducted a monthly journal (the *Göttingische gelehrte Anzeigen*), to which he is said

to have contributed twelve thousand articles relating to almost every branch of human knowledge. He also warmly interested himself in most of the religious questions, both ephemeral and permanent, of his day; and the erection of the Reformed church in Göttingen was mainly due to his unwearied energy. Erste Ausgabe dieser Sammlung von teilweise überarbeiteten kleineren Schriften. Albrecht von Haller (1708 - 1777) war ein Schweizer Mediziner, Botaniker und Wissenschaftspublizist. Seine frühen Arbeiten waren der Botanik gewidmet. Wegen des breiten Spektrums seiner Fähigkeiten galt Haller als Universalgelehrter. Seine Leistungen auf anatomo-mischem und bibliographischem Gebiet waren für die Medizin von nachhaltiger Bedeutung. Daneben trat Haller als Dichter und Literaturkritiker der Aufklärungsepoche hervor, bekannt vor allem als Schöpfer der monumentalen Dichtung Die Alpen.- Lundsgaard 462; Nissen BBI 775; Pritzel 3722; Stafleu-C. 2308, Waller 11530.

**G**

**Hirschfeld, Christian Cay Lorenz.**

Anmerkungen über die Landhäuser und die Gartenkunst. Frankfurth und Leipzig, [o. D.], 1779. 8°. 127 pp., [1] Mit gestoch. Frontisp. und gestoch. Titelvign. Lederbd. d. Zt. mit R.sch. und Rvergold., Deckel mit Wurmfraß. Sauberes Exemplar. \$ 480.-

Nachdruck der Ausgabe 1773. Christian Cay Lorenz Hirschfeld Professor der Philosophie und schönen Wissenschaften, mit dem Titel als dänischer Justizrath wurde geboren zu Nüschel, einem Dorfe bei Eutin den 16. Februar 1742, studierte zu Halle u. hat mehreres über die Landhäuser, Gartenkunst u. Fruchtbaumkunst geschrieben. Er starb 1792 zu Kiel. Nach dem Wunsche seiner Verwandten studierte er Theologie, nach seiner Neigung aber Philosophie, Geschichte, Aesthetik u. Alterthümer. Er wurde Lehrer einer Prinzessin u. zweier Prinzen von Holstein=Gottopp ging 1765 mit den letzteren auf Reisen gab aber nach 2 Jahren diese Stelle auf u. lebte einige Jahre privatisierend in Leipzig, wurde 1770 Sekretair des akademischen Curatel=Collegiums u. außerordentlicher Professor zu Kiel, 1773 aber ordentlicher Profess. der Philosophie u. schönen Wissenschaften daselbst.- Ornamentstichslg. Berlin 3351. Goed. IV/1, 104, 4 (andere Ausgaben).

**H**

**Klein, Michael.**

Sammlung merkwürdiger Naturseltenheiten des Königreichs Ungarn. Preßburg und Leipzig: im Verlage bey Anton Löwe, 1778. 8° [175 x 115 mm] [7] Bll., 126 pp., [18, last blank] incl. etched Frontispice by L. Assner [Pressburg and nice vignettes. [Colophon: gedruckt bey Johann Michael Landerer in Preßburg]. Brown papercard boards, rubbed and soiled, spine papercovered. Inside some browning. \$ 690.-

Rare description of natural curiosities in Hungary (minerals, plants, animals). Michael Klein (1712-1782) war Sohn eines Organisten in Wagendrüssel in der Zips. Er studierte in Jena und folgte 1742 einem Ruf als Prediger in der evangelischen Gemeinde zu Bartfeld. Ab 1762 war er Prediger in Pressburg und war seit 1774 auswärtiges Ehrenmitglied der Gesellschaft Naturforschender Freunde in Berlin; er trat mehrfach durch die Zusendung von Naturalien und Mineralien hervor. Einige Schriften finden sich in den Abhandlungen der Gesellschaft.- Wurzbach XII, 55 [nennt fälschlich 1758]; nicht in Pogg.; not in Freilich; not in Mineral Record. KVK: Darmstadt, Köln, Freiberg, Leipzig, Berlin, Göttingen, Jena; COPAC: BL London; OCLC: Harvard, Ernst Mayr; Univ. Chicago; Univ. of California; Berkeley.

**I****Koelreuter, Joseph Gottlieb.**

Das entdeckte Geheimniß der Cryptogamie. Eine der Chur=pfälz. Academie der Wissenschaften zugeordnet gewesene Preißschrift. Karlsruhe: druckt und verlegt Michael Maklot, 1777. 8°. [4], 155, [1] Plain Papercovered Boards, red edges, handwritten label, rubbed & soiled, else good copy.

\$ 900.-

First edition of his late work on the sexuality of cryptogams. First person to make careful observations of pollination of plants by insects and to investigate the heredity of plants. Joseph Gottlieb Koelreuter (1733-1806), a plant hybridizer, carried out more than 500 hybridizations of plants, and described more than 1000 species. Between 1760 and 1766 he carried out the first series of systematic experiments in plant hybridization ever undertaken (*Nicotiana paniculata* x *N. rustica*). He found that the hybrid offspring generally resembled the pollen parent as closely as the parent upon which the seed was borne. Thus for the first time it was found that the pollen grain has an important part in determining the characters of the offspring. This was a novel idea and disbelieved by his contemporaries. He also observed accurately the different ways in which the pollen can be naturally conveyed to the stigma of the flower. He discovered the function of nectar and the part played by insects and by wind in flower pollination. He also observed that hybrid plants often exceed their parents in vigor of growth. Als Kryptogame bezeichnet man Pflanzen, deren sexuelle Vermehrung ohne Blüte (also unauffällig) stattfindet. Der Name dieser Pflanzengruppe geht auf die 1735 erarbeitete Systematik Linnés zurück und bedeutet so viel wie "die sich im Versteckten Paarenden". Sie wurden den Phanerogamen, also den sich "sichtbar paarenden" Blütenpflanzen gegenübergestellt.- DSB VII, 440-442; Olby [ed.] Late 18th century European Scientists.- Oxford, 1966. 33-65; Olby. Origins of Mendelism, 1966. 20-36; Pritzel 4792; COPAC: Cambridge, Natural History Museum, BLL; OCLC: Brooklyn Botanical Gardens; Harvard Botanic Lib.; Penn State; Chicago; Washington State.

**K****Marsham, Thomas.**

[Entomologia Britannica] Coleoptera Britannica, sistens insecta coleoptera Britanniae indigena, secundum methodum linnaeanam disposita. Auctore Thomä Marsham, ... . Vol. I. In two volumes [the second vol. being the plates]. [= all published] 2 Vols. [incl. plate vol. without any title] London: apud J. White, Fleet-Street, 1802. 8° [210 x 130 mm] III-XXXI, [1], 547 pp., [1, Errata], with 30 partly handcolored engraved plates. Without the half-title calling: Entomologia Britannica, Vol. I, which was never bound in. Contemporary polished calf, two black labels, gilt spine in compartments, rubbed and soiled, one hinges little cracked, else a fine copy. Lederbd. d. Zt., sauberes Exemplar.

\$ 1400.-

Rare edition with Atlas. It is Marsham's magnum opus, a rare book with the plates. A collaborative work listing 1,307 species. Further volumes on other orders were intended but never published: a common fate of early works. A duplicate of the "Entomologia Britannica" with a different titlepage. Thomas Marsham (died 1819) was an English entomologist, specializing on beetles, a well educated man. He was Secretary to the West India Dock Company for many years and during the Napoleonic Wars became an officer in the volunteer corps of the Home Guard in 1802. He was a founder member of the Linnean Society and its Secretary from 1788-98 and Treasurer from 1798-1816. He was a friend of James Francis Stephens, William Kirby and Alexander MacCleay. His collection of Coleoptera was purchased by J. F. Stephens (1792-1852) and was incorporated into his own collection, which is now in the Natural History Museum (London) along with some manuscripts.- KVK: only Leipzig, Munich [both without plates]; COPAC: Natinal Library Scotland, BL London, Manchester [without plates], Oxford [probably with plates]; OCLC: AMNH, Harvard, North Carolina [2 vols, the second being the plate volume], Berkeley, Minneapolis, et al. [most of the libraries have the variant without the plates; with the plates it is rare !]

**L****Rathke, Martin Heinrich.**

Abhandlungen zur Bildungs- und Entwicklungs-Geschichte des Menschen und der Thiere. Erster [und] Zweiter Theil. Leipzig: bei Friedrich Christian Wilhelm Vogel, 1832 - 1833. 4° [269 x 220 mm]. [8], 114 pp. with 7 (partly coloured); [VI], 102 pp., with 7 partly coloured plates. Halbleinwandbd. d. Zt., mamorierter Deckel, Sign.reste am R., oberes Kapitel gering beschädigt, Vorsatz beschrieben, mehrfach gestempelt.

\$ 1600.-

First edition, rare work by this famous zoologist, who is regarded with von Baer and Pander as the founders of modern embryology. Martin Heinrich Rathke (1793-1860), German anatomist. From 1814 he studied natural history and medicine at the University of Göttingen. Three years later he moved to Berlin, where he received his M.D. degree in 1818. He then returned to Danzig to practise medicine. In 1825 he became chief physician at the municipal hospital and in 1826 he was named district physician - Kreisphysicus. In 1829 Rathke he was appointed professor of physiology and pathology at the University of Dorpat, remaining in that position until 1835. While at Dorpat Rathke established contact with Karl Ernst von Baer (1792-1876), who was then professor at Königsberg. Baer had been a student at Göttingen with Heinrich Christian von Pander (1794-1865), and these three men are recognized as the founders of modern embryology. When Baer left Königsberg for St. Petersburg in 1834, Rathke succeeded him as professor of zoology and anatomy. He joined the faculty at Königsberg in 1835 and remained there until his death. Rathke travelled extensively. While at Dorpat he visited the Baltic states and Finland, as well as St. Petersburg and Moscow. In 1833, accompanied by two students, he went to the Crimean peninsula to conduct scientific investigations. In 1839, while at Königsberg; he visited Norway and Sweden. Rathke's research produced significant contributions to a variety of topics. In his early researches he discovered embryonic precursors of gills in the embryos of higher animals that lack gills as adults. He is best known for his discovery of branchial clefts and branchial arches in the embryos of birds and land animals. He followed the embryological history of these structures and found that the branchial clefts disappear eventually and that the blood vessels adapt themselves to the lungs. He also described and compared the development of the air sacs in birds and the larynx in birds and mammals. In 1838 he published an important study of the pituitary gland and in the following year discovered a diverticulum arising from the embryonic buccal cavity. This embryonic structure is now known as Rathke's pouch. Rathke was also the first to describe the lancet fish, which previously had been considered the larvae of a mollusk. He also wrote several monographs on crustaceans (both independent and parasitic), mollusks and worms, as well as on a number of vertebrates, including the lemming and various reptiles.- Garrison/ Morton 480; DSB XI, 307/308; ADB XXVII, 352-55; Jahn. Gesch. Biologie 338-340: "Als Nachfolger v. Baers in Königsberg verfaßte Rathke eine größere Gesamtdarstellung zur Bildungs- und Entwicklungsgeschichte der Tiere (1832-1833), worin er die Beziehung der Urniere zu den Geschlechtsorganen behandelte und die Funktion des Wolffschen Körpers als embryonales Exkretionsorgan aufklärte; dessen Ausführungsvorgang und seine Verwandlung zum Samenleiter hatte J. Müller bereits 1830 beschrieben. Außerdem erläuterte er das Auftreten embryonaler Schlundspalten bei Säugtieren und anderer höherer Vertebraten. Viel bewundert wurde seine Abhandlung."

**M****Schmiedlein, Gottfried Benedikt:**

Vollständiger Lehrbegriff der Entomologie, nach Anleitung der neuesten Ausgabe des Linne'schen Natursystems. I. Band. Leipzig: in der Schäfer'schen Bhdl., 1795. 8° [200 mm] XXII, 402 pp. mit 4 mehrfach gefalt. Kupferstichen. Halblederbd. d. Zt., umlaufender Rot-schnitt, vereinzelt minimal braunfleckig, Einbanddeckel leicht berieben, ansonsten gutes Exemplar!

\$ 690.-

First edition, all published. Schmiedlein (1739 - 1808) war Mitglied der Churfürstl. Sächs. oekonomischen Societät zu Leipzig. - Engelmann (Bibl. hist.-nat.) 509; Hagen II, 133, Pogg. II, 822; Soulsby 1231a; Kayser, Bücher-Lexikon und verschiedene Bibliotheksstandorte (KVK) verzeichnen nur den 1. Band. KVK: Stabi München, Dresden, Leipzig; COPAC: only BL London; OCLC: only Smithsonian; Madison, Wisc.

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