

Kühn Rare Books & Art
Antiquariat Michael Kühn
Fasanenstrasse 29 - Innenhof
10719 Berlin
Tel.: +49 30 65943850
Mobil: +49 170 7744060
e-mail: mail@antiquariat-kuehn.de
Internet: www.antiquariat-kuehn.de

Alte Drucke - Naturwissenschaften - Technik - Photographie - Varia

Antiquariatsmesse Stuttgart
16.-18. Juni 2023
Forum am Schlosspark
71638 Ludwigsburg

Messekatalog
(can be sold at the Fair only)

(Astronomie) Warhafftes Nacht - Gesichte zweyer sonderbaren am Himmel gestandenen Wetter, Welche vorstellen: Römischen Reichs unvermutheten schnellen Kriegs - Schall, Und Franckreichs plötzlich darauf betreffenden Unfall. ... (ohne Ort u. Drucker), 8. Nov. 1688. 4to. 24 pp. Rückenbrosch. VD17 14:007853M; nicht bei Brüning. € 1.200.-

(Astronomie) Astronomische Beschreibung und Nachricht von dem Cometen, Welcher sich dieses jetzlauffenden Jahres tausend sieben hundert vier und viertzig (1744) seit dem Monath Januarii und Februarii am Himmel zeigt, ... Gedruckt nach dem Dreßdner Exemplar, (without place & printer, 1744) 4to. 8 Bll. mit einem Holzschnitt verso v. Titel und auf folio 7a. Umschl. im Stil der Zeit. € 1.800.-

noch nicht im VD18; WorldCat verzeichnet diese Ausgabe nicht, die zwei Seiten und einen Holzschnitt mehr hat als die Dresdner Ausgabe von 1744 (VD18 10745270); nicht in Brüning, Houzeau - L. et al.

Mylius, Christlob. Gedanken über die Atmosphäre des Mondes.- Hamburg, bey Johann Adolph Martini, 1746. 4to. (4), 56 pp. mit einer Kupfertafel. Halblederband im Stil der Zeit, zusätzlich mit eingebunden ist von Tobias Mayer: ‚Ein Theil der Oberfläche des Mondes abgezeichnet 1749‘ € 2.800.-

Seltene Kritik der Mondbeobachtungen von Tobias Mayer, der eine Mondatmosphäre auf Grund seiner zahlreichen teleskopischen Beobachtungen der Mondtopographie abtritt. Diese Meinung wurde von dem deutschen Wissenschaftsjournalisten und Naturforscher Christlob Mylius (1722 - 1754) kritisiert. Mylius führte die ersten drei von Mayers Phänomenen auf die extrem niedrige Dichte der Mondatmosphäre zurück, nicht aber auf das Fehlen einer solchen. In Leonhard Euler fand Mylius einen Mitstreiter.

Schickard, Wilhelm. Beschreibung Deß Wunder Zeichens, welches Montags den 25. Januarii eben am Loß Tag S. Pauli Bekehrung dieses eingehenden 1630. Jahrs (ohne Ort, aber Tübingen), Dieterich Werlin, 1630. 4to. 32 pp. mit Holzschnittdruckermarken am Titel (Armillarsphäre). Spätere Brosch. (vorgebunden:) Aygentliche Controfactur eines Wunderzeychens zweyer Sonnen / unnd vier Regenbogen / so am ersten Sontag Trinitatis den 28. Maii, dises jetzt lauffenden Jars, am Morgen nach Auffgang der Sonnen, zwischen fünff und vi. uhr / zu Heydelberg ist gesehen worden. Einblattdruck, an unteren Kante defekt. (ohne Datum, aber Heidelberg, 28. Mai 1581). € 3.800.-

Eine von zwei Druckvarianten aus demselben Jahr - ein Bericht über das Nordlicht am 25. Januar 1630 und die Venus bei Tag am 26. Januar 1630. Seltenes Werk des deutschen Professors für Hebräisch und Astronomie, Wilhelm Schickard (1592-1635), der in der zweiten Hälfte des 20. Jahrhunderts als Erfinder der mechanischen Rechenmaschine berühmt wurde.- Brüning 964; VD17 23: 250886 U. Zum Einblattdruck: Kein Exemplar bekannt (?). Der Text bezieht sich auf ein meteorologisches Ereignis in Heidelberg am 28. Mai 1581, wie es in drei kleinen Flugblättern beschrieben wird, alle ohne Bild (siehe VD16 ZV 11472, VD16 W 321, VD16 ZV 30056); nicht im KVK, nicht bei Hellmann. Meteorologie in Einblattgedrucken (S. 81); Weller Annalen II, 437 (Nr. 604)

Wagner, Rudolph Christian. Erzählung derer zu Helmstädt am Abgewichenen 17ten Martii von 7. biß nach 12. Uhren zu Nachts gesehenen Meteororum Igneorum ...- Helmstädt, bey Hermann Daniel Hamm, 1716. 4to. 44 pp. mit Holzschnitt-Frontispiz. Reste einer Rückenbrosch. € 1.800.-

Einzigste Ausgabe dieses seltenen Berichts über eine 1716 statt gefundene Aurora Borealis des deutschen Mathematikers und Physikers Rudolf Christian Wagner (1671-1741), der Gottfried Wilhelm Leibniz' Privatsekretär (1698 - 1700) war.- Brüning 1610; Jantz 2605; VD18 14757389; Tenner 127, Nr. 1443.

(OPITZ, Hieronymus) Von dem erschrecklichen vnd grossen fewrigen zeichen / welches am himel am tag der vnschuldigen Kindlein / im Jar nach der Geburt Christi MDLXI. an vielen orten vnd Stedten ist gesehen worden. Kurtze erklerunge. (colophon: gedruckt zu Nürnberg (Nuremberg), durch Valentin Newber, 1561). 4to. 4 Bll. Modern boards period style, new endpapers, lower part with heavy browning. € 2.800.-

Seltener Bericht und Beobachtung einer Himmelserscheinung am 28. Dezember 1560, wahrscheinlich ein Polarlicht, verfasst von dem deutschen lutherischen Theologen Hieronymus Opitz d. Ä. (auch Opitius d. Ä.) (1519 - 1591), der ab 1549 Hofprediger der Herzogin Katharina von Sachsen, der Mutter von Kurfürst August von Sachsen (1526-1586), wurde. Mit E. J. Lowe's "Natural Phenomena and Chronology of the Seasons" (30. Jan. 1560) gilt es als der erste Druck zur Aurora Borealis.- nicht in Brüning oder Rosenthal.

GERICKE, Lothar; Rotraut Schumitz; Otto Richter; Klaus Schöne (eds.) Farbenkatalog für die Gestaltung. (and) Farbenkatalog für die Gestaltung. Ergänzungsteil 1978. Gemeinschaftsarbeit des Zentralinstitut für Gestaltung (DAMW; Lothar Gericke und Rotraut Schumitz) und Institut für Industriebau (Otto Richter; Klaus Schöne).- Berlin, 1969 and Aue (Saxony), 1978. Quarto 40 pp.; 16 pp. with 25 plates with 485 colors and 9 plates with 167 colors. In Original black folder, stamped twice. Overall fine condition. € 1.000.-

Very rare color catalogue by an east german institution. The authors have written some books on color and the use of color in interior design for corporations or industrial complexes.- not in Osborne; José Luis Cai-vano (et al.) Chronological Bibliography on Color Theory 1969 (psychology); Kuehni / Schwarz. Color Ordered: A Survey of Color Systems from Antiquity to the Present pp. 315.

(Fotografie) ENKE, Alfred. Privates Fotoarchiv des Amateurfotografen und Verlegers Alfred Enke (1852 - 1937). Stuttgart, 1890 - 1910. 459 montierte Originalfotografien in zwei Größen. Die 212 größeren Bilder befinden sich in 3 Mappen mit Bindebändern, betitelt ‚Modellstudien I. und II.‘ sowie ‚Ober - Italien, Alpen und Venedig‘. Bildgröße: ca. 390 x 255 mm; alle auf dicken braunen, schwarzen, grünen oder grauen Karton aufgezogen. Die 247 kleineren Bilder befinden sich in 6 Leinenmappen mit verschiedenen Studien, die unter dem Foto betitelt sind. Die Fotografien variieren von 152 x 90 bis 172 x 120 mm. € 90.000.-

Alfred Enke (1852-1937) erbte 1874 den Verlag seines Vaters Ferdinand Enke und siedelte noch im selben Jahr mit seinem Unternehmen nach Stuttgart über. Er war einer der wenigen wohlhabenden Amateure, die um 1890 den neuen piktorialistischen Stil in der Fotografie aufgriffen. Obwohl er an keiner der großen zeitgenössischen Fotoausstellungen in Deutschland teilgenommen hat, scheint er in den ersten Jahren des 20. Jhdts in England

ausgestellt zu haben. Da er wohlhabend war, bestand für ihn keine Notwendigkeit, seine Arbeiten auszustellen und zu verbreiten. Es war ihm möglich, seine Arbeiten in zwei veröffentlichten Mappen zu zeigen: Lichtbild-Studien, [1899] (Heidtmann 13707) und Neue Lichtbild-Studien, 1902. (Heidtmann 13708).

Catalogue

from mole to mountain spirit

AGRICOLA, Georg.

Georgii Agricolae De animantibus subterraneis liber.- (Basileae apud Frobenium et Episcopium mense augusto = Basel, Hieronymus Froben d. Ältere and Nik. Episcopus d. Ältere), 1549. 8vo (168 x 115 mm) 79 pp., (1), 16 Bll./leaves with bookmark on title and last leaf. (Sign.: a8 - g8) Slightly later plain paper-card boards. Overall a very fine copy. Two institutional stamps and deaccession stamp on back inner cover, dated 2013. € 6.800.-

Very rare first edition of Georg Agricola's treatise on animals known to exist in the subsurface, a group that had been relatively neglected by earlier works, a book exceedingly rare on the market. This treatise changes the scientist Georg Agricola from a geologist to an earth scientist - a scholar who studied the animals as well as physical structure of the Earth.

The work is a compendium of what Greek, Latin, and medieval authorities wrote about these animals, but, unlike many of his contemporaries, Agricola supplemented those writings with his own observations, and he posed questions about the existence of some of the fanciful beasts described by his forbearers (like dragons, basilisks, footless birds, dwarfs or trolls) that were also common in other 16th cent. zoological works, such as those by Conrad Gesner and Ulysses Aldrovandi. Mystical beasts were not eliminated from zoological writings until those books came to include only animals that had been observed by the naturalist. Sometimes Agricola reports on beasts in such a way that the reader senses he is paraphrasing sources but not necessarily endorsing the idea. In other cases, he supplements with his own observations, even contradicting what his fore-bearers had said (Plinius, Nicander, Theophrastus). In Agricola's work, the reader encounters birds of paradise, ibises and bats as well as mountain spirits, which today are assigned to the world of legends. In various forms, stories about goblins and trolls from the depths of the mines live on in contemporary fantasy literature. For the author with his early modern worldview, however, their existence was vouched for by the evidence of the literature he consulted and probably seemed far less fantastic than it does in the present. Agricola combines humanistic and literary scholarship with scientific and observational study.

After he has dealt in his geological-mineralogical works with the subterranean inanimate substances, now, in the sense of completeness, it is also the turn of the living beings. Agricola counts not only living beings to his field of investigation, which live permanently under the earth (mole, worms), but also such, which retreat for example to the winter sleep into a cave (mice, weasels, land turtles) or go there at night or during the day (rabbit, fox and also humans). Presumably about the bird of paradise Agricola reports with a certain skepticism that the animals live permanently in the air and even hatch their eggs in flight, whereby the female lays them on the back of the male and sits on them. For this reason, the short feet of the animals, hidden in the plumage, would never touch the ground. It is known from birds of paradise that their hunters on New Guinea removed their feet and that the brats only came to Europe prepared in this way in the course of the 16th century. Here, therefore, the view spread that they flew until they fell to earth dead. Agricola also states about the magnificent animals that the Turkish sultan wears their feathers, shining in washed-out yellow, in his crown adorned with numerous precious stones. The Egyptian ibis, whose sighting in the Alps Agricola reports, is probably a bald ibis (*Geronticus eremita*). This species, which belongs to the ibises, was common in Europe until the 17th century. The bird was considered a delicacy, and it can be assumed that it was exterminated here for this reason. The last „bird“ to be mentioned is the bat. In fact, Agricola classified it among the birds, which is logical in view of its mode of locomotion. However, it did not escape him that it gives birth to live young and in this respect also has something in common with the mice. Today, the knowledge that bats are mammals is common knowledge. Together with other representatives of the order of bats, they belong to the only mammals that can fly. The dragon is counted by Agricola to the snakes. However, it has sharper eyes and would therefore have been used in earlier times to guard treasures, houses, temples and oracle sites. In addition, he is described as beautiful to look at, is completely black except for the green belly and has a beard of flesh under the chin. In other countries he can be seen fighting with eagles, in India and Africa even with elephants. In these areas it reaches a length of nine meters. One distinguishes between land and flying kites. The author claims to have owned a specimen of the latter. However, he gave away the animal with the color of a crocodile. In the case of the flying dragon, Agricola probably refers to the dried specimen of a lizard that may have come into his possession. The basilisk is also classified

as a snake, but it is as much more poisonous as a king surpasses his subjects. In addition to scholarly quotations about the basilisk, Agricola knows of the popular belief that it hatches from the egg laid by a rooster. In Zwickau, a specimen had killed several people with its poison. Even in the fire of smelting furnaces, according to Agricola, small animals are created, which were called „pyrigonoi“ by the Greeks. They are slightly larger than large flies, but do not have wings. In the fire they run and jump around. If they are removed from it, the little animals die instantly. Finally, the end of the scripture is about the demons or spirits. Two types are distinguished: evil spirits hostile to the miners, rumbling and terrible to look at, and goblins more mild to man. The latter are limited to minor jokes and teasing. On the other hand, one would not want to meet an evil demon underground, because he is said to be able to kill just by breathing on him. His appearance, in the shape of a horse with a slender neck and defiant eyes, does not inspire confidence either. The goblins, on the other hand, are only about 66 cm tall and dressed in the manner of miners. They prow around in the shafts and tunnels and seem to be doing a wide variety of work without actually creating anything: one minute they are simulating digging a tunnel, the next they are filling rock into jars or turning a winding reel. They may also tease the miners with small stones, but injuries only occur if they have been irritated beforehand.

In a preliminary consideration, he also inserts observations on the change of place at all and deals with the migratory movements of birds, fish and humans. In describing individual animals, Agricola remarks on their behavior: feeding, prey/predator relationships, hibernation, migration, habitat choices and changes, and some observations on reproduction. In dealing with morphology, he notes shape, size and color but adds little about physiology and/or internal organs. With its focus on one environment, the underground, and attention to the actions among animals, the work has the feel of an ecological approach. In an index at the end, Agricola groups animals by their form of locomotion (walking, crawling, swimming, flying, burrowing) as well as the occasional use of binomens, following the footsteps of several contemporary herbalists.

The work appeared again as an appendix to the 1556 edition of his masterpiece: *De re metallica*, which describes the state of the art of mining, refining, and smelting metals.- VD16 A906; Heitz, Basler Büchermarken, XXIV and XXIX; Adams, 338; not in Hoover, Schuh, Freilich, Wood. Only one copy at German auctions since 1980.

Provenance: Seminario Vescovile, Verona (deaccession in 2013).

Lit.: Michele Aldrich, Alan Leviton, Lindsay Sears. Georgius Agricola, *De Animantibus Subterraneis*, 1559 and 1556: A translation of a Renaissance essay in zoology and natural history; in: *Proceedings California Acad. Sciences* Vol. 60 (May 2009). Holdings: Stabi München & Berlin, Dresden, Freiburg, Halle, Jena, Kremsmünster, Leipzig, Weimar, Wien, HAB Wolfenbüttel; and outside Germany.

ANDERSEN, Jürgen; IVERSEN, Volquard.

Orientalische Reisebeschreibungen Jürgen Andersen aus Schließwig der An. Christi 1644. außgezogen und 1650. wieder kommen. Und Volquard Iversen aus Holstein so An. 1655 außgezogen und 1668. wieder angelanget. Seynd beyde respective durch Ost Indien, Sina, Tartarien, Persien, Türckeyen, Arabien und Palaestinam gezogen ... aus deren Bericht ... wie auch von ihren erlittenen erbärmlichen Schiffbrüchen. Herausgegeben durch Adam Olearius, ... Mit dessen Notis, und etlicher Orter Erklärungen... Schleswig: in der Fürstl. Druckerei, gedruckt durch Johan Holwein, im Jahr 1669. Folio (300 x 190 mm) 7 Bll., 223 pp., (1), 6 Bll. with engraved frontispiece by Andreas Rothgießer, full-page coat-of-arms, one double-page map incl. Corea and 20 text engravings incl. a map of Ceylon, as well as views, customs, flora, fauna, etc. Lohmeier version A with the dedication to Christoffer von Gabel. Contemporary plain vellum, green edges, rubbed and soiled, Engraved frontispiece with stamp of an old Gymnasium (Landsberg a. W.), two leaves (pp. 123-126) with tear in blank border, mainly fresh and clean with only minor spots.

€ 3.900.-

Rare first edition, first issue of these two travel reports that are considered the first documents of a German who had visited China and Inner Asia, written by Jürgen Andersen and Volquard Iversen, and edited by Adam Olearius. The rapid translation and strong reception of Iversen's and Andersen's accounts indicate not only a strong interest among contemporaries in the genre of travel literature. They also point to a widespread network of scholars in which travel reports were exchanged and the information they contained about foreign continents was evaluated.

Jürgen Andersen (ca. 1620-1679) from Schleswig traveled Southeast Asia on behalf of the Dutch East India Company (VOC) from 1644 - 1650. His adventurous journey - mostly fleeing slavery - took him to South Africa, Indonesia, Ceylon, Persia, Arabia, Formosa, Japan, China, Mongolia, Turkestan and the Near East. Volquard Iversen (fl. 1630-1669), a native of Holstein, traveled across the Cape to the Moluccas in 1655-1668 as a bodyguard for the Dutch East India Company, was shipwrecked off Mauritius on the return trip, and went back to India in Dutch service.

Both accounts were published by Adam Olearius and the copper engravings illustrating Iversen's report were made by Andreas Rothgießer and B. Knüttel, two engravers working at the Gottorf court.- VD17, 3:602350C. Dünnhaupt IV, 3001, 52. Landwehr VOC, 311. Vgl. Eutin 28 (second German edition of Hamburg 1696); Lohmeier version A.

„chemical atomism‘ against Robert Boyle

ANDRÉ, Francois.

Entretiens sur L'Acide et sur L'Alkali, ou sont examinées les objections de Mr Boyle contre ces principes. Avec une replique a la lettre de Mr. S..., touchant la nature de ces deux sels.- A Paris: chez Lambert Roulland, 1677. 12mo (145 x 85 mm) (2), (10), 3-205 pp., (1, blank) Contemporary calf, gilt spine in compartments, but faded, rubbed and soiled, upper spine repaired, front-fly renewed (?), else fine.

€ 2.400.-

Exceedingly rare first edition of Saint André's theory of acids and alkalis incl. a response to the concepts proposed by Robert Boyle in his „Reflections upon the Hypothesis of Alkali and Acidum“ (London, 1675).

Presented in dialogue form between Eubulus (a supporter of the acid - alkali theory) and his learned friend Pyrophilus, the text describes several experiments. The acid-alkali theory maintained that all matter is composed of the three spagyric principles (salt, sulphur and mercury), each of which is made up of acid and alkali „at liberty or intangled“. Saint-André was a corpuscularian who believed that all bodies in nature were composed of atoms or particles. Shape played a significant role in their differentiation. Thus, acid salts were evident by their taste, smell and the fermentation they produce with alkalis. Fire and light are acids and gold is almost entirely composed of sulphur. Vigorously opposed to Robert Boyle (1675), Boyles views are presented here within. Newton suggested that the two acids were ‚subtil‘ enough to ‚penetrate‘ either metal, and if they did not it was due to lack of ‚attractive force‘. The text was revised and enlarged three years later and also published by Lambert Roulland. The sheets of the 1680s edition were re-issued by Laurent d' Houry as ‚seconde edition‘ in 1687, and were often re-published.

Francois André (or Saint André; fl. 1670-1725) was an iatrochemist and physician who was on the faculty of medicine at the University of Caen.- Debus. Chemistry and Medical Debate: van Helmont to Boerhaave pp. 120 ff.; Ferchl 9; Gmelin II, 242; Fulton 178; Partington III, 33; Goldsmith's 456; Neville Historical Library (1687); Cole 1156 (1680)

Dispute over the Power of the Maternal Imagination

(BLONDEL, James Augustus; John Henry Mauclerc; Isaac Bellet) (KÖNIG, Armand; publ.)

Drey merkwürdige Physikalische Abhandlungen Von der Einbildungskraft der schwangern Weiber, und derselben Wirkung auf ihre Leibesfrucht davon die zwey ersten aus dem Englischen, die dritte aber aus dem Französischen übersetzt worden.- Straßburg: Armand König, 1756. 8vo (mm) (4), 488 pp., (4) Black paper-card boards (Kleisterpapier) with red morocco lettering piece, red edges, binding heavily rubbed, else fine. Inner front cover with Ex Libris: **Albert Moll**. Inside is fine and clean.

€ 1.200.-

Collection of three works on the question: if and how the mothers imagination could affect the fetus during pregnancy. Copy with the fine provenance of Albert Moll (1862 - 1939), who together with Iwan Bloch and Magnus Hirschfeld is considered the founder of medical psychology and sexology.

Three scientific works are brought together by the publisher Armand König, written firstly by James Augustus Blondel (1665-1734) on „The Power of the mothers Imagination over the Foetus“, secondly John Henry Mauclerc's „The Power of the Imagination in pregnant women discussed; with an address to the Ladies...“ and lastly a translation of an unknown French work on the same question, but probably Isaac Bellet's *Lettres sur Le Pouvoir de L' Imagination des Femmes enceintes où l'on combat le préjugé qui attribue à l'Imagination des Meres le pouvoir d'imprimer sur le Corps des Enfans renfermés dans leur sein la figure des objets qui les ont frappés* (1745).

In the late 1720s, James Blondel and Daniel Turner engaged in a pamphlet dispute over the power of the maternal imagination. Turner accepted the long-standing belief that a pregnant woman's imagination could be transferred to her unborn child, imprinting the foetus with various marks and deformities. Blondel sought to refute this view on rational and anatomical grounds. In their discussions of these issues, differences between the authors' acceptance of general medical theories and philosophies became apparent. Blondel invoked Newtonian matter theory, experimental philosophy, and iatro - mechanism, while Turner adhered more to the authority of the Ancients and advocated a more direct role for the Creator as an alternative to mechanism in explaining natural phenomena. Additionally, the authors

held differing views of what they regarded as experience. The widespread contemporary interest in their dispute suggests that Turner and Blondel raised the phenomenon of the maternal imagination from an issue of folk belief to a concern of eighteenth-century medicine.

As a starting point of the controversy acted the case of the English woman Mary Toft (1703-1763), who in 1726 became the subject of considerable controversy when she tricked doctors into believing that she had given birth to rabbits. In 1726, Toft became pregnant, but following her reported fascination with the sighting of a rabbit, she miscarried. Her claim to have given birth to various animal parts prompted the arrival of John Howard, a local surgeon, who investigated the matter. He delivered several pieces of animal flesh and duly notified other prominent physicians, which brought the case to the attention of Nathaniel St. André, surgeon to King George I. St. André concluded that Toft's case was genuine but the king also sent surgeon Cyriacus Ahlers, who remained skeptical. By then quite famous, Toft was brought to London where she was studied in detail; under intense scrutiny and producing no more rabbits she confessed to the hoax, and was subsequently imprisoned as a fraud. The resultant public mockery created panic within the medical profession and ruined the careers of several prominent surgeons. The affair was satirized on many occasions by Jonathan Swift, not least by the pictorial satirist and social critic William Hogarth, who was notably critical of the medical profession's gullibility. Toft was eventually released without charge and returned home.- Lit.: Philip K. Wilson. *Surgery, Skin and Syphilis: Daniel Turner's London (1667-1741)* (1999) pp. 113-147; Clifford A. Pickover. *The Girl Who Gave Birth to Rabbits: A True Medical Mystery*. NY, 2000; wikipedia: Mary Toft.

Photography & Ethnology: North African Berber

BONAPARTE, Prince Roland - Napoléon.

Collection (anthropologique) du Prince Roland Bonaparte (Afrique du Nord). 2 Vols. (Paris, ca. 1882 - 1889). Folio (410 x 340 mm). 50 and 50 leaves with 100 mounted albumen photographs. Remarkable series of 100 photographs (210 x 155 mm) portraying ca. 69 Algerian Berber men, women and children in their traditional costumes. Albumen prints mounted on stiff cardboard, each with printed line „Collection du Prince Roland Bonaparte“ at bottom. Some slight fading to prints as usual, only three photographs somewhat spotted. Some marginal foxing to cardboard, one with crease mark. Bound in contemporary plain black half-calf; minor abrasions to spine, corners little scuffed.

€ 9.800.-

Collection of 100 mounted albumen prints with Portrait photos of Kabyles and Tuaregs (?) from Algeria.

Exceptionally extensive collection of photos of persons from one or more of the pre-Islamic ethnic groups of North Africa in traditional costumes. Like many of the anthropological photographs taken by Roland Bonaparte himself or under his direction (incl. Felice Beato and Nadar), probably taken in Paris Studios. Two of the photographs show a rider in a large hall of iron construction with a glazed roof, presumably one of the halls at the 1889 World's Fair in Paris. In the background a group of similarly dressed people can be seen with erected tents and backdrops.

The volumes contains photos from 4 series: 50 photos of 25 seated men and boys in half-length, each frontal and in profile (numbered two times 1-25 in the plate; few numbers not recognizable). 34 photographs of standing men and boys in front of a painted backdrop (numbered 1-33, one without number). 13 photos of seated women and girls, six of them frontal and in profile (numbered 43-48) and one group picture, three men on horseback, two of them in the surrounding (Grand Palais ?) described above, one in front of a painted background.

The botanist, anthropologist and writer Roland - Napoléon Bonaparte (1858-1924), grand-nephew of Napoléon Bonaparte, published several photo series of anthropological portraits of different ethnic groups (Aborigines, North American Indians, Kalmyks etc), mostly comprising 22-31 images for each series. The BnF holds a series of 22 pictures on similar cardboard sheets with the calligraphic addition „Afrique du Nord“ under the printed line, twenty of which correspond to the ones here. They date the set 1875.

„Prince Roland Bonaparte took a gentleman's interest in the natural sciences. Between 1882-1889 he produced a photographic study of different ethnic groups, described as an 'anthropological collection of human diversity'. The collection consists of 165 albumen prints mounted on pasteboards and stored in portfolios organized by ethnicity, including 'Hindous,' 'Atchinois', 'Dahoméens', 'Hottentots', 'Bushmen', 'Néo Calédoniens', 'Australiens' and 'Peaux Rouges'. As was common during the period, Bonaparte used photography as a scientific tool for collecting data. Having received training from Paul Broca, his work reflects the anthropology of the time, which focused on the documentation of physical characteristics as a means of establishing relations between the human races. Accordingly, the subjects are represented in full-face and profile torso portraits, and frontal, profile and back full-length portraits. Group photographs and views of typical dwellings are also included.“- Hannavy 172 f.

BREUNING von Buchenbach, Hans Jacob

Orientalische Reyß deß Edlen unnd Vesten Hanß Jacob Breuning von und zu Buchenbach so er selb ander in der Türckey under deß Türckischen Sultans Jurisdiction und Gebiet, so wol in Europa als Asia unnd Africa ohn einig Cüchium oder FreyGleit benantlich in GriechenLand, Egypten, Arabien, Palestina, das Heylige Gelobte Land und Syrien nicht ohne sondere grosse Gefahr vor dieser zeit verrichtet. Alles in Fünff unterschiedliche Meerfahrten disponirt und abgetheylet ... Straßburg: bey Johann Carolo (Karolus), 1612. Folio (300 x 195 mm). 17 nn. Bl., 98 pp., 1 Bl., pp. 99 - 210, 1 Bl., pp. 211 - 262, 1 Bl., pp. 263 - 266, 1 Bl., pp. 267 - 299, (1), 7 Bll. with engraved title border, one fold. map of Jerusalem, two engraved coat-of-arms within text, one engraved portrait and 48 text engravings and 5 woodcut frames for the separate titles. Contemporary vellum, front endpapers renewed, covers somewhat stained and rubbed, ties missing. Traces of worming to vellum. Folding map of Jerusalem restored in lower part, little stained, partly with old handwritten annotations by unknown hand. € 6.800.-

Rare first edition of this travel account (1579-1585) with the French nobleman Jean Carlier de Pinon, which took him from Turkey and the Ottoman Empire via Palestine, Syria and the Holy Land to Egypt. He reports mainly from his own experience, but also borrows from the works of Rauwolf and Belon. His substantial and unprejudiced view is praised by later authors and his work is placed above the ordinary pilgrim writings. Breuning's *Orientalische Reyß*, published in Strasbourg, is both a travelogue and a cultural history.

Hans Jacob Breuning von und zu Buchenbach was born around 1552 as the son of the imperial councilor Wolfgang Breuning von Rommersheim. On April 30, 1579, he embarked on a journey accompanied by the French nobleman Jean Carlier de Pinon, which took him primarily to Egypt, Palestine, Syria, and the Ottoman Empire. On about 350 pages, five Mediterranean voyages are described, each with five chapters. A detailed title page is followed by a preface including a dedication to Duke Johann Friedrich zu Württemberg. A list of cited authors and a portrait copperplate of Breuning in medallion form follow. The detailed list of chapters prepares the actual travelogue, which is supplemented by a *Computatio*, a rough calculation of the distances covered in each case. The appendix consists mainly of a subject index for finding the respective passages in the text. The First Sea Voyage begins on April 30, 1579, when Hans Jakob Breuning sets sail on the Santa Croce from Malamocca, one of Venice's ports. Off Albania, the ship is intercepted by pirates and some travelers are taken prisoner. Breuning notices that the time is not indicated by ringing bells as in Central Europe, but is called out from the minaret. Then the ship reaches the heavily fortified Corfu, Breuning acquaints himself with the rite of Greek Orthodoxy. Then the Santa Croce calls at the island of Zakynthos in the Ionian Sea and reaches Athens a few days later. From Athens, the voyage continues via Troy to the Sea of Marmara and Istanbul. In Istanbul, Breuning studies Turkish customs and familiarizes himself with the Ottoman legal system. The seraglio, the Muslim rite and circumcision also arouse his interest. Some walking trips to Thrace and the Black Sea complete Breuning's picture. The Other Sea Journey begins: Breuning's destination is Egypt. Via Chios, Samos, Ikaria and Patmos, Breuning reaches Rhodes. From there, after the Jewish interpreter helps them out of an embarrassment, they go across the sea to Alexandria. Here, too, Breuning makes observations about nature and culture, observes giraffes and crocodiles. Breuning strolls through bazaars and admires the chameleon. On the Nile, he heads south to Cairo. Another walking tour leads to the „Mumii and Pyramidibus“ and to Memphis. After another stop in Cairo, Breuning is drawn to Suez, where the traveling party follows the Red Sea to the Sinai Peninsula. When it comes to Islam, Breuning becomes clear - he considers Mohammed a „blasphemous false prophet“, which could be due to the fact that he encounters the „vermaledyten reliquiis“ from his camel. From Damiata, where Breuning meets a meerman, the journey continues. The Third Sea Journey takes Breuning first to Jaffa in Palestine. Via Ramallah (Rama) the traveler reaches Jerusalem. Breuning gives a detailed account of the biblical sites he visits, many of which are part of the indispensable program of a pilgrimage to the Holy Land. After a detour via Bethlehem, Breuning and his companions travel back to Jaffa to embark. Here the Fourth Sea Journey begins: the ship first calls at Syria, where Breuning visits the Maronite monastery of Tripoli. Here the German says goodbye to his French traveling companion. The latter boards a Venetian ship, while the latter takes a ship from Marseille. The Fifth and Last Sea Journey describes a wide arc. The ship first reaches Cyprus, then Crete. A mutiny briefly causes unrest. Then the ship calls at Sicily. After a stopover, Breuning sees Malta, Corsica and Sardinia. Finally, Breuning reaches Marseille and disembarks.- VD17 23:233196U; Kainbacher 64; Lipperheide Lb 13; Graesse I, 532; ADB III, 321. Provenance: Engraved title in upper margin with handwritten ownership entry and date 1611 (!); in the lower margin ownership stamp v. Engelskirchen. 600: and on the reverse the stamp of the „Tetschen Library“ with coat of arms.

Brownian motion

BROWN, Robert.

Robert Brown's Vermischte botanische Schriften. In Verbindung mit einigen Freunden ins Deutsche übersetzt und mit Anmerkungen versehen von C(hristian) G(ottfried) Nees von Esenbeck. Vols. 1, 2, 3.I, 4, 5 in 5 Vols. (= all publ.).- Leipzig, bei Friedrich Fleischer, 1825 - 1826 and Nürnberg, Leonhard Schrag, 1827 - 1834. 8vo (215 x 135 mm). XVIII, 704 pp., (2) with one engraved fold. plate; (2), VIII, 791 pp., (1), (2, Errata); XIV, 460 pp.; VIII, 550 pp. with 5 lithogr. plates; X, 477 pp., (1) with 4 lith. plates. Contemporary half calf over marbled boards, gilt printed title on spine partly faded, paper label of Woronin's library on upper spine. Rubbed and soiled, partly browned, but better than usual copy.

€ 2.800.-

Rare German translation of the English botanist Robert Brown's collected papers, copy from the library of the eminent Russian botanist Michail Stepanowitsch Woronin, to include Brown's description of the molecular phenomenon later called „Brownian motion“ (translated by Franz Meyen with commentaries in Vol. IV) and his botany of Australia called „Prodomus florae Novae Hollandiae et Insulae van-Diemen“ (here vol. III.1 in the second separate edition: „this reprint has the original (145-590) as well as a new pagination starting with [1]; it is an almost word by word reprint. There are a few minor corrections.“ (Stafleu / Cowan).

The Scottish botanist Robert Brown (1773 - 1858) is best known for his descriptions of cell nuclei and of the continuous motion of minute particles in solution, which came to be called Brownian motion. In addition, he recognized the fundamental distinction between gymnosperms (conifers and their allies) and angiosperms (flowering plants), and he improved plant taxonomy by establishing and defining new families and genera. He contributed substantially to the knowledge of plant morphology, embryology, and biogeography, in particular by his original work on the flora of Australia. Banks recommended Brown to the Admiralty for the post of naturalist aboard a ship, the *Investigator*, for a surveying voyage along the northern and southern coasts of Australia under the command of Matthew Flinders. Brown sailed with the expedition in July 1801. The *Investigator* reached King Georg Sound, Western Australia, an area of great floral richness and diversity, in December 1801. Until June 1803, and while the ship circumnavigated Australia, Brown made extensive plant collections. Returning to England in October 1805, Brown devoted his time to classifying the approximately 3,900 species he had gathered, almost all of which were new to science.- Pritzel 1214; Junk, Rara 231; Stafleu - Cowan 825 (Prodomus); Ferguson 1106 (Prodomus); Dict. 19th cent. British Scient. I, 309-15; DSB II, 516-22. for Brown's English ed. of his „Brownian motion“ paper see: Dibner Heralds 156; PMM 290; Waller 11473 and Norman 353 (sale 961: \$ 90.500)

Provenance: all volumes with Russian Exlibris of M. S. Woronin, most probably the important Russian botanist Michail Stepanowitsch Woronin (1838-1903).

Coral reefs - Krusenstern's voyage

CHAMISSO, Adelbert von.

Latin manuscript on coral reefs in brown ink on 3 1/2 pages on paper (sheet-size: 210 x 118 mm) not signed, written around 1821, beginning: „Florulam insularum oceani magni coralligenarum Radack et Romanzoffi edituri, supervaccaneum putamus repetere, quae fusius in opello nosto: Bemerkungen und Ansichten. Entdeckungs-Reise von Otto von Kotzebue, III. Weimar 1821. 4°, de geographia geognosia et atmosphaerologia earum protulimus. Cave saltem ne pro nostra habeas dilectissimi consortis Eschscholtzii aliena contradictoriaque contententis dissertatiunculam, cui opello nostro appensae titulus est: *Ueber die Coralleninseln*. - Geographiam illustrent mappas itinerario suo adjecit navarchus: *Charte der Inselkette Radack et Plan der Inselgruppe Romanzoff (i. e. Otdia)* nec non quod insulam Romanzoffii attinet: *Charte vom 14° bis zum 16° S. B. und vom 137° bis zum 149° W. L. von Greenwich*. - Ipsi de geognosticis sub capite: *Ueberblick des grossen Oceans* p. 31 et fusius sub capite: *Radack* exposuimus, quae pie nos ac strenue interrogantes natura docuit ...“. Written in a legible hand, probably intended for a journal, at the end noted: „La suite au No. prochain.“

€ 6.000.-

Chamisso's work was first published in French in: *Nouvelles Annales des Voyages* no. 19 (1821) and then in German in Otto von Kotzebue's *Entdeckungs - Reise* (1821) Vol. III, 31-32, 187.

„He (Chamisso) hoped to have the work published as a separate volume, but found himself ordered - by Count Rumiantsev, Russian statesman and official sponsor of the voyage - to publish it in the Kotzebue account and submit to Kotzebue's editorial direction.“ (Liebersohn, 2003.; Maaß, Leuchtkäfer (2016) pp.)

In an account entitled: On the Coral Islands, included as an appendix to Kotzebue's narrative of the voyage of the Rurik, Chamisso made two important observations on coral reefs that were used later by Charles Darwin to write his theory of coral reefs. First, in contradistinction to Reinhold Forster, he pointed out that corals thrived best in turbulent reef fronts, stating that „the larger species of corals, which form blocks measuring several fathoms in thickness seem to prefer the more violent surf on the external edge of the reef“, a point amplified further on, that the windward „side of the reef, exposed to the unremitting fury of the ocean, should first rise above the element that created it“. His second observation attempted to explain why atolls appear in wide expanses of the oceans, almost out of nowhere. That, he reasoned, was because „the corals have founded their buildings on shoals in the sea or, to speak more correctly, on the top of mountains lying under the water“. Further, the variation in magnitude and distribution of atoll clusters „probably depends on the size of the submarine mountain tops, on which their basis is founded.“ (Bowen, The coral reef era (2015) pp. 35)

By the end of the 18th cent., investigations into the major problems of reef formations and the nature of coral (insect or plant) had advanced considerably. Significant were the investigations of Peysonnell and John Ellis which resulted in general agreement that reefs were created in some mysterious way by animals. Intensified speculation began to mount when the awesome destructive power of coral reefs received sensational publicity in James Cook's account of his successful discovery in 1770 of an uncharted coast of the mysterious and elusive Great South Land. The ship Endeavour crashed into one of the myriads of almost invisible reefs. Cook's description of the impact on 11 June 1770, the desperate efforts to beach the vessel for repairs, and the eventual discovery of a way out of the bewildering complexity of submerged reefs created a sensation, especially when it appeared in the heightened prose of Hawkesworth. Further investigation of coral reefs was checked for a time when the French Revolution of 1789 and the subsequent Napoleonic Wars pressed all fighting ships into military service. The Russians also became active once they gained control of the North Pacific with their warm water port of Vladivostok. Of early significance were the findings of Adelbert von Chamisso, the naturalist who sailed on the first voyage of the Russian ship Rurik from 1815 to 1818 under the command of Otto von Kotzebue around the Pacific from Kamchatka to Alaska, California, and then to the Hawaiian, Marshall and Mariana groups situated between the north tropics and the equator.- Schmid. Chamisso 29c.

Bees, Ants, Wasps

CHRIST, Johann Ludwig.

Naturgeschichte, Klassifikation und Nomenclatur der Insekten vom Bienen, Wespen und Ameisengeschlecht; als der fünften Klasse fünfte Ordnung des Linnéischen Natursystems von den Insekten: Hymenoptera. Mit häutigen Flügeln. 2 Vols. - Frankfurt am Main: Hermann 1791. sm.4to (215 x 160 mm). 535 pp., (1) with double spreading engraved & hand-colored title, designed by Johann L. Christ and engraved by Johann Müller, with atlas with the same double spread engraved & hand-colored title (often missing) and 60 engraved plates in fine contemporary hand-coloring. Contemporary Swedish brown half calf with red morocco label, marbled boards, binding faded and little rubbed, inside in mint condition, with red ribbon bookmarker, former owner inscription in the first volume deleted, fresh and clean, a near pristine copy in its first binding. € 14.000.-

First and only edition of this beautiful and famous book on bees, wasps and ants (hymenoptera), rarely seen on the market, especially in this pristine condition.

„(The scientific work on hymenoptera) is appreciated for its many magnificently colored plates and for the fact that it contains a number of new descriptions. The book was published in a small edition and has now become very rare. Its price is constantly rising“. (Junk, Rara)

The German naturalist, gardener and „Obstpfeffer“ Johann Ludwig Christ was born in Öhringen, Baden - Württemberg, in 1739. As his popular epithet suggests, he was actually a theologian by profession. In Rodheim vor der Höhe (Wetterau), he worked as a pastor from 1776, after intermediate stations in Bergen (Frankfurt a. M.) and Rüdighheim, then from 1786 as head pastor in Kronberg in the Electorate of Mainz.

His real passion, however, was gardening and writing about gardens. He was intensively engaged in theory and practice in various branches of agriculture, especially fruit growing and beekeeping. In Kronberg he established two nurseries of his own and in this way gathered a wealth of practical experience. The spread of the cultivation of sweet chestnuts and mirabelles can be traced back to him. He was particularly concerned with the systematic classification of

the various fruit varieties. His detailed works were both technically well-founded, so that they were considered standard works of pomology for many years, and practically written, which made them extremely popular and earned him the designation „fruit priest“. He was also a specialist in the Hymenoptera and described numerous new species, such as the Gallic wasp. This work was partly based for the first time on observations of living insects, which had previously been known to science only on the basis of collection specimens. Christ was not only one of the most important pomologists and bee scientists of his time, but saw himself above all as a teacher close to the people, not least to improve the meager income of small farmers,- as can be seen from the relevant titles: In 1784, for example, Christ published a Bee Catechism for the Country People, and three years later a Gldenes ABC Book for the Farmers. In 1813, Christ died in Kronberg of typhus, known as a famine disease. Condition: plate VI with brown spot in one edge.- Nissen 882; Horn- Schenkling 3575; Hagen I, 129, 4; Junk, Rara 214 (1913-39): „Der Verf., Pfarrer Johann Ludwig Christ (1739-1813), war Ende des 18. Jahrhunderts einer der angesehensten Fachleute auf dem Gebiete der Imkerei ... Sein einziges wissenschaftliches Werk ist das obige. Dieses wird wegen seiner vielen prchtig colorirten Tafeln und wegen des Umstandes geschtzt, dass es eine Zahl von Neu-Beschreibungen enthlt. Das Buch ist in einer geringen Auflage erschienen und jetzt sehr selten geworden. Sein Preis steigt dauernd.“

CHRISTEL, Detlef B. (1943 - 2018)

Auschwitz - Birkenau. Eine Bilddokumentation. 12 original vintage photographs (in size 190 - 235 x 180 mm) mounted on black boards (405 x 305 mm) with printed title-page (no date, no publisher) in card board folder with title: Auschwitz - Birkenau.

€ 1.800.-

Unique or produced in small numbers documentation of the remains of the Auschwitz Birkenau concentration camp in Poland in the 1990's, photographed by the Berlin photographer Detlef B. Christel.

„Berlin's return as a world city“

CHRISTO (and) JEAN - CLAUDE.

(Wrapped Reichstag) Untitled original documentation of the Wrapped Reichstag project of Christo and Jean-Claude in Berlin in 1995. Probably a presentation album signed by Christo and Jean Claude on the first page and with 130 original color photographs showing the technical side of the Wrapped Reichstag project. (Berlin, after 1995) Four pieces of of the original fabric on the first page incl. signature of both artists, and 130 untitled and unsigned original color photographs in size 180 x 130 to 300 x 215 mm, mounted recto and verso on 72 leaves of strong white Btten paper. The photographs could be by Wolfgang Volz, the only photographer who was allowed to publish official photos of the projects. He was thus part of the artistic project.

€ 2.800.-

Presentation album and documentation of the Christo and Jean-Claude project: Wrapped Reichstag, Project for Berlin which was a 1995 environmental art work in which artists Christo and Jean-Claude wrapped the Berlin Reichstag building in fabric. A German citizens' group unsuccessfully advocated for the project in 1978 but the building, which held deep German national identity symbolism prior to reunification, required unavailable political will. Rita Sssmuth, the newly-elected President of the Bundestag, expressed interest in the project in 1989, precipitating its approval. The project had been rejected three times across six Bundestag presidents and 24 years before its 1994 vote for approval.

Wrapped Reichstag mounted in 1995 for two weeks as 100,000 square meters of silver fabric draped the building and fastened with blue rope. The Reichstag, which had not been in use, was later reconstructed for parliamentary use in 1999. Christo described the Reichstag wrapping as autobiographical. It became symbolic of unified Germany and marked Berlin's return as a world city. The Guardian posthumously described the work as the pair's „most spectacular achievement.“

Christo Vladimirov Javacheff (1935–2020) and Jeanne-Claude Denat de Guillebon (1935–2009), known as Christo and Jeanne-Claude, were artists noted for their large-scale, site-specific environmental installations, often large landmarks and landscape elements wrapped in fabric, including the Wrapped Reichstag, The Pont Neuf Wrapped, Running Fence in California, and The Gates in New York City's Central Park. Their work was typically large, visually impressive, and controversial, often taking years and sometimes decades of careful preparation – including technical solutions, political negotiation, permitting and environmental approval, hearings and public persuasion. The pair

refused grants, scholarships, donations or public money, instead financing the work via the sale of their own artwork. Christo and Jeanne-Claude described the myriad elements that brought the projects to fruition as integral to the artwork itself, and said their projects contained no deeper meaning than their immediate aesthetic impact; their purpose being simply for joy, beauty, and new ways of seeing the familiar. (wikipedia)

photographs of the moon

DE LA RUE, Warren.

The Moon. 1862. Photographed by Smith, Beck & Beck from the original negative by Warren De La Rue. Accordion-bound album with twelve albumen prints mounted in carte - de - visite style. Leather bound accordion with gilt title on upper cover. Size: folded: 211 x 211 mm; unfolded: 211 x 1219 mm. Photographs partly faded and with small surface defects. € 4.600.-

Rarely seen small format photographs of the moon by Warren De La Rue from 1862. Inspired by John Adams Whipple's daguerreotypes at London's Great Exhibition of 1851, the astrophotographer and amateur astronomer Warren De La Rue began experimenting with lunar photography, using wet-collodion glass negatives and a telescope of his own design. Because his first telescope had no clockwork mechanism, his earliest trials required an assistant to carefully move it in sync with the moon's trajectory through the night sky. By 1856 he had upgraded his instruments, and he began producing prints of unprecedented clarity. Back in the 1850s he had to build his own "camera" to do this. It equates to a 3000mm f/9 camera to expose a wet glass plate so telescope, observatory and darkroom had to be combined. His exposure times were around 1-20 seconds for those materials but as coating, exposure and processing had to be done in short succession the exposure was still the shortest of the steps. With a wood burning stove to stoke to keep the darkroom temperature within range and even achieving focus was an art. A quote from Warren in 1859 is appropriate here „To photograph the moon continuously is a laborious undertaking and affords full occupation for one observer, who must not fail to pay unremitting attention to the condition of the various chemicals employed, so as to be always prepared for a fine night with such as will work.“

Between 1857 and 1862, De La Rue made a series of stereoscopic Moon images. - Lit.: Corey Keller (ed.) Brought to Light. Photography and the invisible, 1840-1900. no. 51 (dated 1862); <https://societyforthehistoryofastronomy.files.wordpress.com/2013/01/warren-de-la-rue-aa5-18feb2011p14-35.pdf>

Chinese butterflies

DONOVAN, Edward.

An epitome of the natural history of the insects of China: comprising figures and descriptions of upwards of one hundred new, singular, and beautiful species; together with some that are of importance in medicine, domestic economy, etc. ... London, Printed for the Author by T. Bensley, 1798 [- 1799]. 4to (286 x 230 mm), [iv], [92] pp., (2, index) interleaved with [50] hand - colored engraved plates (dated 1798 and 1799), parley with gum arabicum, occasional foxing and spotting; overall very good copy in later strain grained red morocco, gilt edges. € 7.500.-

First edition of this splendid work devoted to the insects of China by the great natural historian and artist Edward Donovan, including some of the most beautiful of all his plates. The contents describe and illustrate various beetles, cicadas, butterflies and moths, dragonflies, spiders and centipedes, the plates being described as „accurately drawn, engraved, and colored, from specimens of the insects“, and the accompanying descriptions as arranged according to the system of Linnaeus.

Donovan's main interest was entomology and his published works included sixteen volumes of British Insects and three „magnificently illustrated“ (Dunbar) volumes on The Insects of China, India and New Holland, the last being dedicated to Sir Joseph Banks, and acknowledging use of his collections and library. Donovan's approach was to show species that had not been illustrated before, and many previously not described. The illustrations of tropical butterflies, moths, and other insects set against backgrounds of plants and flowers represent a significant advance in compositional style which seem likely to have influenced others in the ensuing Victorian era, in particular H. Noel Humphreys. One justly can point out the volume's interest to botanists: in addition to the plates of Chinese flowers there appears one of the first colored plates of a Camellia ... Other flowers include rose, fringed iris, tea blossoms, Chinese lemodoron & nodding renealmia.

Edward Donovan (1768–1837), as were many cultured gentlemen of his day, was a collector of natural history specimens - from personal excursions in the British Isles as well as purchases from notable natural history auctions that included items from voyages of exploration. With the connections he made as a Fellow of the Linnean Society and the Wernerian Natural History Society, he also was able to access the best collections. Donovan referenced all of these sources for his books about the insects, shells, fishes and quadrupeds of England and the insects of China, India and New Holland between 1789 and 1827. The specimens he studied had been brought to him by George Macartney from his famous embassy to China.

He not only wrote and illustrated these books but also prepared the copper plates. It was not uncommon for private collectors to open small public museums of exotica, and in 1807 Donovan founded the „London Museum and Institute of Natural History“ that included several hundred cases of birds, botanical specimens and other subjects. Donovan’s voracious appetite for collecting, his unfortunate experiences with unscrupulous book publishers, and the economic decline in England after the Napoleonic Wars most likely forced the closure of the museum in 1817 and the auction of his collection the following year. He continued to publish, but his finances worsened, and in 1833 he published a plea for funds from his supporters to bring suit against the publishers. This was to no avail, and he died penuriously in 1837 leaving a large family destitute.- Dunbar, *British Butterflies*, page 48; Nissen ZBI 1143; Hagen I, 177.

occult sciences

FINELLA (Finelli), Filippo.

Manuscript of miscellaneous esoteric and occult writings. Intriguing manuscript written at the beginning to the mid of the 17th cent., including ten writings on esoteric matters, alchemy, physiognomy, naturalistic and para naturalistic including a few drawings. Finely executed manuscript on paper in brown ink to include the following titles: *Finella. De quatuor signis* (30 leaves), *Trismegistus* (30 leaves) with a drawing of the „Forno segreto“, *Discorso dell’ alchimia* (32 leaves), *Finella’s Sali* (22 & 8 leaves), *Finella’s Nevi* (12 leaves text and 26 pages of images of the human physiognomies each with burn hole), *Discorso delle mutazioni de’ tempi* by an unknown author (8 leaves), *Il vero modo di miniare* (14 leaves), *Cabala numerica* (16 leaves), copies of letters (58 leaves), *Cabala intelletiva* (16 leaves) (Naples, Italy around 1670’s). Early to mid 20th century vellum, gilt title on spine. The last of the ten works is by slightly different early hand on different paper, stitched after the first nine works, all of the same paper. Uncut copy in folio.

€ 6.000.-

An interesting codex of ten manuscripts including works on esoteric matters, alchemy, physiognomy, naturalistic and para naturalistic science including a few drawings.

Three of these works are by Filippo Finella, whose portrait is drawn on verso of the first leaf. The second text: *Opera della Sapienza, delle generatione del lapide*“ is attributed to Hermes Trismegistus and corresponds to the contents of a 18th cent. manuscript at Univ. of Pennsylvania (UPenn Ms. Codex 504). Their copy bears the date of copying from the original held in the library of Emperor Frederick III. Our codex deal with alchemy, the sun’s influence on weather and winds, and on physiognomy (each image with a burn hole from a magnifying glass), the correct way to illuminate a book, as well as the Kabbalah. One can also find a collection of letters from the Council of Trent (1545-1563), having apparently little to do with the other material in the volume. But one is reminded that one of the consequences of the Council was: All books treating magic, superstition, astrology, or occult practices are prohibited (index of prohibited books). The titles of the four studies by Filippo Finella are: „*De quatuor signis quae apparent in unguibus manuum*“, a physiognomy treatise on the interpretation of lines appearing underneath nails of hands; „*Soliloquium Salium vegetabilium*“ and „*Tractatus salium mineralium*“, about salts deriving from plants and minerals; „*Facilissimo modo per giudicare dalli nevi che appariscono sulla faccia dell’ huomo e della dona, la sua natura et inclinazione et altri accidenti*“ which is probably a sectio of the *Primo libro de’ nevi*, another text on physiognomy especially on the influence of the stars on the character of people, illustrated by 100 drawings of men and women’s faces with a burn hole by a magnifying glass to illustrate the „impressing“ influence of the stars and sun.

We know very little about Filippo Finella’s (Naples fl. 1584-1650) life and nothing about his education, but his production suggests a mixture of literary interests and occult sciences, according to a typical taste of the Neapolitan culture of the tradition of della Porta. Extremely versatile, he must have enjoyed great fortune as a popularizer of astrology, alchemy, palmistry and physiognomy, so that his works are found in major European libraries. He first produced literary works, but from the period of 1625-27, he began to produce scientific and occult works, beginning with a book on Metoposcopy (i.e. the deciphering of the character and destiny of men through the interpretation of the wrinkles on the forehead), which Finella derives not only from the term *metopou* (forehead) but also from *metron*

(measure), to emphasize its normative value dedicated to Pope Urban VIII.. Elaborated inductively (Finella claims to have observed as many as one thousand three hundred human faces in thirty years of experience), this science could boast illustrious antecedents in the classical physiognomic corpus (Aristotle, Polemon and Adamantius), in the Islamic tradition, up to the Renaissance period with Cardano and Della Porta and with other physicians such as R. Goelenius (Göckel), L. Fuchs, J. Belot, I.A. Magini, C. Ghiradelli.

Finella invites caution in the use of physiognomy as a science of divination and judgment, because, although it is a discipline capable of identifying the external somatic features of the inner moral characters of each individual, to formulate a correct judgment must be observed carefully every specific body trait.

Finella gave proof of his expertise as a physiognomist in a treatise on the analysis of moles distributed on the body (especially on the face and neck) as signs of different character indications depending on their quantity and location. This *Libri tres nevorum* (ca. 1630) was accompanied by two hundred tables, with a meticulous typology of the distribution of moles, analyzed in relation to astral conjunctions, but once again emphasizing how the stars predispose, but not determine, the will, which remains free. In March 1632, as evidence of the widespread public interest in everything related to the science of character and temperaments, also appeared the Italian translation of the first part of the work with the title *Primo libro de nevi*. It should be noted that the treatise *De naevis* was also included in the *Thesaurus chiromantiae* of J. Praetorius (Ienae 1661, pp. 999-1026).

The alchemical works might be also by Finella: it deals with the ways of obtaining salts from animal, vegetable and mineral substances and their therapeutic use. With the term salt the paracelsian tradition did not indicate an element but a principle with ontological properties before chemical: the salts, however, were considered now concrete humors, now condensed or coagulated water, now parched earth intimately mixed with water, but especially spirits or essences from the action of stellar bodies and made concrete by the cold earth. Following the Paracelsian theories, Finella identifies in mercury, sulfur and salt the fundamental principles of each compound, in contrast to the ancient and established theory of the four elementa (earth, water, ana, fire).

Unknown are the date and place of the death of Finella, but, considering that his production continued almost uninterrupted for more than thirty years, it is reasonable to place it shortly after the extreme date (1650) of his publications.

just missed it: the „Chemical Revolution“

FONTANA, Felice.

Physische Untersuchungen über die Natur der Salpeterluft, der vom Brennbaren beraubten und der fixen Luft. Aus dem Französischen und Italienischen übersetzt von ...- Wien: in der Gräffer'schen Buchhandl., 1777. 8vo (190 x 125 mm) (4), 228 pp. Blue plain wrappers, rubbed and soiled, uncut copy, title stamped, deceased stamp, inner cover with Ex Libris: Berlin. Gesellschaft Naturforschender Freunde, also with their stamp. € 1.200.-

First German edition of Felice Fontana's *‚Ricerche fisiche sopra l'aria fissa‘* (1775) and *‚Recherches physiques sur la nature de l'air nitreux et de l'air déphlogistique‘* (1776), translated by the physician Franz August Xaver von Wasserberg (1748-1791).

A scarce work in which Felice Fontana, the foremost Italian researcher on the new gases, describes his experiments on dissolving mercury in nitric acid to produce mercuric nitrate and the evolution of oxygen on heating this salt. He showed that nitric oxide does not redden litmus and there is a quantitative relationship between mercuric oxide and the mercury and gaseous oxygen evolved on heating. Despite this very suggestive experiment, which could have correctly interpreted the phenomenon of combustion, Fontana remained a phlogistonist. This experiment is also described by Priestley in his *Experiments and observations on different kinds of air* (1777) and by Lavoisier, in a memoir of 1776, also describes an experiment, which, Priestley writes, is the same as Fontana's, but „which of them made it first does not appear.“

„In 1777 Fontana invented an instrument composed of a sort of upside-down test tube immersed in a tray containing mercury, and it was included by Jacques-Louis David in the famous 1788 portrait of Lavoisier and his wife. Using this instrument, Fontana found that extinguishing red-hot charcoal in mercury contained in a glass tube containing mercury and immersed in a bath caused the absorption of a great quantity of air. Subsequently, other European naturalists used this method to experiment with red-hot charcoal and various types of air, and in 1782 Fontana himself discovered that if one extinguished red-hot charcoal in a glass bell full of water, inflammable air (hydrogen) was liberated. This was a significant discovery because, if taken to its theoretical conclusion, it would have shown Fontana the compound nature of water. Lavoisier certainly knew of this experiment, because in 1783, in his famous *Mémoire dans lequel on a pour objet de prouver que l'eau n'est point une substance simple* (Report which seeks to

prove that water is a simple substance), he declared, "The Abbé Fontana, having extinguished the red-hot charcoal in water, under a bell filled with water, drew therefrom a significant quantity of inflammable air.... As Abbé Fontana had shown with charcoal, [this method] proved that red-hot iron extinguished with water, under a bell, also produced inflammable gas". Fontana's device was thus one of the fundamental instruments that led Lavoisier to the threshold of achieving his chemical revolution."

Felice Fontana (1730-1805), professor of physics at Pisa, was also famous for his discoveries in anatomy, biology, and chemistry.- DSB V, 57; Ferchl, 159; Partington III, 323; Pogg. I, 767; see: Neville Historical Library 462; Blake 150; Bolton 445; Edelstein 892; Neu 1457, Cole 453 Anm.

color printed Anatomy

GAUTIER D'AGOTY, Arnauld - Eloi.

Cours complet d'anatomie, peint et gravé en couleurs naturelles par A. E. Gautier D'Agoty, second fils; et expliqué par M. (Jean-Nicolas) Jadelot.- Nancy, Jean - B. H. Leclerc, 1773. Large folio (680 x 500 mm) [2] Bll., 25 pp., and 15 engraved, color - printed plates; the title-page with traces of an effaced stamp, leaving a stain, but a copy with a fine provenance even so (see below); a couple of small tears and a few spots; otherwise overall a very well preserved copy, bound in contemporary calf-backed boards; the binding with minor restorations, one corner creased. € 24.000.-

First edition of this superb anatomical work (,a major work of great merit and satisfaction'; Franklin), one of the younger d'Agoty's most important publications, beautifully illustrated with his famous color - printed engraved plates, and here preserved in its contemporary binding.

Arnauld - Eloi Gautier d'Agoty was the second son of the celebrated Jacques-Fabien Gautier d'Agoty (1717 - 86), who for thirty years held the royal privilege for color printing in France. J. F. Gautier d'Agoty was (or claimed to be) the inventor of the four-color method (red, blue, yellow and black) of printing mezzotints in color, an improvement on the three-color method devised in the early part of the 18th century by Jacques Christophe Le Blon (d. 1741). Gautier d'Agoty obtained the color printing privilege in 1742, and over the next three decades he and his associates, including his son Arnauld - Eloi, issued a series of illustrated works, primarily on human anatomy, that were as radically original and dramatic in their size and artistic composition as they were in their manner of production. "These fifteen plates follow a scheme of progress, from the classical figures at the start, to skeletal hands and feet; or we can see it as a strip performance, from fully clad nudes by stages to muscle and bone. The delightful Apollo and Venus starting the theme were of course prepared in four mezzotint plates by Arnauld - Eloi, but painted by a Nancy artist, Jean Girardet, who died five years later... They are certainly stunning examples from neo - classical France, reproduced with sophisticated art by the Gautier D'Agoty process." (Franklin, Early Colour Printing pp. 49-50). The plates illustrate a text by the physician and anatomist Nicolas Jadelot, professor at Nancy University. Jadelot originally envisioned a five-part work, but only the present part was ever completed and published. The copy offered here is rather special and particularly interesting for containing pasted-in slips with contemporary explanations to the plates in Latin. Provenance: from the library of Duke Tommaso de Vargas Machuca or Macciucca (1679-1775), with his bookplate to front paste-down. Macciucca was a descendant of an old, Spanish noble family resident in the Kingdom of Naples since the 16th century, and assembled one of the finest libraries there.- Choulant Frank, History and bibliography of anatomic illustration, p. 273; Wellcome III, p. 97 ; F. Rodari, Anatomie de la couleur. L'invention de l'estampe en couleurs, exposition Paris-Lausanne 1996; Singer, Arnauld - Eloi Gautier d'Agoty, 1-15

Flowers of the Sea

GMELIN, Samuel Gottlieb.

Historia Fucorum auctore Samuel Gottlieb Gmelin, ... Petropoli (St. Petersburg): ex typographia Academiae Scientiarum, 1768. 4to (270 x 210 mm). [18], 239 pp. with 35 folding copper plates engraved under the supervision of Jacobus de Stachlin - Storcksburg, plus three original samples laid down on loose paper slips, one of which dated Norwich, 1801. The 6 pp. Explicato Tabularum, normally found at the end, here bound with the prelims, the Natural History Museum London copy having the same arrangement. Title page & one leaf of preface with neat repair to upper margin, no loss to text. Neat, small circular and unidentified contemporary private ownership stamp to verso title. An excellent copy bound in slightly later diced russia, re-backed to style with label. € 3.900.-

First book dealing exclusively with algae in which binomial nomenclature was used and the first book published in Russia on marine biology in which he described 20 types of algae in the Russian seas. It includes elaborate illustrations of seaweed and marine algae on folded leaves.

Samuel Gottlieb Gmelin (1745-1774) was a member of a celebrated family of German naturalists with Russian connections. An uncle, Johann Georg Gmelin had been encouraged by Peter the Great to move to St. Petersburg, where in 1731 he was appointed professor of chemistry and natural history at the Academy of Sciences. Soon thereafter, he undertook an exploratory journey to eastern Siberia, getting as far as Yakutsk before turning back. His nephew, Samuel Gottlieb Gmelin, was born in Tübingen and obtained a medical degree at Leiden in 1763 at the age of 18. He lived for a few years by the sea in Holland, where he became intrigued by seaweeds and began making observations, collections, and drawings. In 1767 he moved to St. Petersburg, where the Academy of Sciences published his *Historia fucorum*. In 1770, he embarked on a journey on behalf of the Russian Academy of Sciences and in the service of Catherine the Great. The interesting fact is that he was accompanied not only by the other 9 soldiers, but also a flutist and drummer. He researched flora and fauna of the western part of the Caspian Sea and was also visiting the east coast (present day Kazakhstan), making interesting ethnographic observations there.

On February 5, 1774 in Dagestan, Gmelin was taken as a prisoner by the Kaitag Khan, and all attempts by the Russian authorities to influence the khan on the extradition of a scientist were not successful. Gmelin died from mistreatment (anxiety, unrest, malnutrition, exhaustion and dysentery) at the hands of a hostile tribe in the Caucasus at the age of 30. Research of Samuel Gmelin covers the broad spectre - from the Caspian birds, fish as well as mammoth remains described by him in 1769 with a flora and fauna of the Caspian Sea's region.

Like Linnaeus, Gmelin referred all cartilaginous algae to the genus *Fucus*. Unlike Linnaeus, he had a keen interest in these plants and numerous Dutch collections at hand, many of which he perceived to represent previously undescribed species. In his remarkably scholarly treatise, Gmelin synthesized all information on seaweeds. Of the 99 species of *Fucus* that he recognized, 57 were newly described, while 42 were adopted from Linnaeus. Although in some instances Gmelin gave fairly precise collecting information, for most species the collector must be inferred. He indicated the Indian Ocean as the provenance of four newly described species but gave no hint of the collector. For certain species, he cited Rumphius and Seba. Since Rumphius dealt with plants from Amboina in the Pacific Ocean part of Indonesia and many of Seba's algae came from the Cape of Good Hope in the Atlantic Ocean, we may infer that Gmelin was applying the term Indian Ocean broadly and incorrectly. However, algal specimens used by Gmelin in the *Historia fucorum* are thought to no longer exist (Dixon & Irvine, 1970).

Although reasonably well noted bibliographically & institutionally, very scarce in commerce, last time 1989 at German auctions.- Nissen BBI 722; Cleveland 487; Pritzel 3396; Stafleu & Cowan 2050; Brunet II, 1628; BM(NH) 685; Ebert 8613; Banks III, 344; Jackson 155.

Farbenlehre

GOETHE, Johann Wolfgang von.

Zur Farbenlehre. Erster Band. Nebst einem Hefte mit sechzehn Kupfertafeln. (and) Zweyter Band. 2 Vols.- Tübingen, in der J. G. Cotta'schen Buchhandlung, 1810. 8vo (210 x 130 mm) XXVIII, 757 pp., (1); XLVIII, 654 pp. (and:) Erklärung der zu Goethe's Farbenlehre gehörigen Tafeln (with) Anzeige und Uebersicht des Goethischen Werkes zur Farbenlehre. (Tübingen: J. G. Cotta, ca. 1820) 4to (260 x 215 mm) 24 pp., 12 pp. with 17 (12 col.) engraved plates. Contemporary reddish marbled boards, green morocco lettering piece, rubbed and soiled, partly edges a bit stronger, inside some browning, but overall a very fine copy; and period style marbled boards. Text of the plates with heavier browning, the plates mostly fine, one plate in white margins with repair. € 6.500.-

First edition of Goethe's *Theory of Colours* which includes the German poet's views on the nature of colors and how these are perceived by humans. The book contains detailed descriptions of phenomena such as coloured shadows, refraction, and chromatic aberration. The work originated in Goethe's occupation with painting and mainly exerted an influence on the arts (Philipp Otto Runge, J. M. W. Turner, the Pre-Raphaelites, Hilma af Klint, Wassily Kandinsky). The book is a successor to two short essays entitled 'Contributions to Optics'. Although Goethe's work was rejected by some physicists, a number of philosophers and physicists have concerned themselves with it, including Thomas Johann Seebeck, Artur Schopenhauer, Hermann von Helmholtz, Rudolf Steiner, Ludwig Wittgenstein, Werner Heisenberg, Kurt Gödel, and Mitchell Feigenbaum. Goethe's book provides a catalogue of how color is perceived in a wide variety of circumstances, and considers Issac Newton's observations to be special cases. Unlike Newton, Goethe's concern was not so much with the analytic treatment of color, as with the qualities of how phenomena are perceived. Philosophers have come to understand the distinction between the optical spectrum, as observed by

Newton, and the phenomenon of human color perception as presented by Goethe—a subject analyzed at length by Wittgenstein in his comments on Goethe's theory in *Remarks on Colour*.

As a catalogue of observations, Goethe's experiments probe the complexities of human colour perception. Whereas Newton sought to develop a mathematical model for the behaviour of light, Goethe focused on exploring how colour is perceived in a wide array of conditions. Developments in understanding how the brain interprets colours, such as colour constancy and Edwin H. Land's retinex theory bear striking similarities to Goethe's theory.

His „longest and, in his own view, best work, today known principally as a fierce and unsuccessful attack on Newton's demonstrations that white light is composite. Goethe supposed that the pure sensation of white can be caused only by a simple, uncompounded substance“ (DSB). Goethe's approach to science was one of sensuous experience and poetic intuition. He expected to be remembered as a scientist and thought his most important work was his ‚Theory of Colours‘ (here). He argued that colours are realities, phenomena of nature. In this sense, Goethe believed colours to be the result of the contrast between light and darkness, and that the intervention of a turbid medium produces colour. Since all bodies are to some extent turbid, they may appear coloured in daylight. The present work is divided into three parts: „Goethe's chapter on physiological colors (those which depend more on the condition of the eye than on the illumination) is the most successful and also typifies his psychological approach to color.“ (DSB).

The text is in first edition and the atlas in first edition, second issue (ca. 1820; the plates are not in various sizes and have not the corrections in ink. This edition has the plates in the same size and the corrections already printed.- Kippenberg I, 386 and 387; Goed. IV, 3, 583, 46; Hagen 347 and 347d (nach Hagen liegt der Tafelband im 2. Druck der EA vor, dem ein erster Druck im Morgenblatt für gebildete Stände vorausging. Alle Tafeln in gleicher Größe und mit den Änderungen an den Kupferplatten); DSB V, 445 f. Provenance: R. von Raumer 1870 (Rudolf von Raumer ?, 1815-1876).

fossils, minerals, botany & paper

GUETTARD, Jean Etienne.

Memoires sur differentes parties des sciences et arts. Par ... 5 Vols.- Paris, Laurent Prault, and Eugene Onfroy; Philippe-Denys Pierre (from Vol. IV), 1768 - 1783. Quarto (255 x 195 mm) [2], cxxvi, 439 pp., (1), (2; errata) and [18] fold. engraved plates; [4], lxxxv, (1, errata), 530 pp. with LXXI (71) fold. engraved plates by J. Robert; [4], 544 pp.; [2] Bll., (2, avert.), 687 pp., (1, blank); [2] Bll., 446 pp., (2, imprimatur by Condorcet) with [167] engraved plates for vol. IV and V. Contemporary calf, gilt spine in compartments, yellow edges. General a very fresh, fine and broad margined copy. € 16.000.-

First edition, rare in complete form: „un des plus grands livres de science du XVIIIe siecle“.

A second enlarged edition was published in Paris with the publisher Costard from 1774 - 1786 in 7 vols. The „Memoires“ are mainly devoted to mineralogical, geological and paleontological subjects regarding the geography of rocks, rock formations, mines and minerals, and fossils, including reports concerning Guettard's discovery of the French kaolin deposits, weathering of mountains, fossil records, description and classification of several corals, sponges and especially tube-shaped bivalvia. 28 taxa are described here for the first time. There are also essays on paper-making. The 256 engraved plates are by Jean Robert and published here for the first time. With the financial support of his patrons and the Academy, Guettard accumulated not only specimens of rocks, crystals, fossils and mineral specimens, but a large archive of drawings and engravings of many of these objects which he witnessed in his own travels or collected in the field. The French geologist and mineralogist was also the first to survey and map the geologic features of France and to study the exposed bedrock of the Paris Basin. The keeper of the Duc d'Orléans' natural history collection, he was the first to identify several fossil species from and to suspect the volcanic origin of mountains in central France. When the duke died, he left Guettard a sum that allowed him to do pretty much what he wanted, which was traipse around France collecting plants and minerals, and observing the general lay of the land. Guettard has several claims to geological fame, or at least respect. In 1746, he compiled and printed in the *Memoires* of the Paris Academy of Sciences the first geological map anywhere. In fact, he printed two of them, one showing all of Europe, the second zeroing in on France and England. He calls it a mineralogical map, which is more accurate geological map, since Guettard does not claim to show the rocks on the surface (like the subsequent geological maps of, say, William Smith), but simply shows where you are likely for find various metals, minerals, and types of stone. In 1751, Guettard and a fellow traveler were visiting Clermont and the Auvergne region of France, part of what is called the Central Massif, where most of the mountains of France are located. Guettard wanted to see the Puy de Dôme, where Blaise Pascal's brother in law, Florin Perier, had carried a barometer, or Torricellian tube, up the mountain in 1648, which is why they were in the vicinity of Clermont. Guettard observed quite a few mileposts, and some houses, built of a black stone that looked to him like volcanic rock. He was told it came from a village named Volvic, north of

Clermont, and he sought it out, found the quarry, and traced the rock to cones in the mountains that looked just like old volcanoes. Nearly every account I have read of Guettard's visit to Volvic relates that Guettard, when he learned that the source of his mysterious building stone was Volvic, immediately exclaimed, "Volvic, *volcani vicus*". Guettard read and published a paper in the *Memoires* in 1752 in which he argued that the basalt of the Auvergne region was volcanic in origin and had cooled from a molten state, which was new to just about everyone. Credit for this observation is usually given to Nicolas Desmarest, who read a paper making the same claim in 1771, printed in 1774. Guettard spent much of his later life working on a mineralogical atlas of France, which was to have contained well over 200 maps; his colleague in compiling the atlas was the young Antoine Lavoisier, who would later acquire much more fame as a chemist. (Mary Terrall; in: Adiana Craciun (ed.) *The material cultures of Enlightenment Arts and Sciences*. 2016. pp. 25 ff.) Note in the first volume one find the paper (I, 227-253): *Recherches sur les matieres qui peuvent servir a faire du papier*, which reprints a landmark paper in paper making history. The use of wood as a material from which to make paper was first suggested in the West by Reaumur observing the habits of wasp. The investigations of Reaumur while not in actual papermaking, gave the hint to European scientists that paper might be made from other substances than rags. In 1741 Jean Etienne Guettard made his first observations regarding substitutes for rags in making paper and wrote several articles advocating the use of *coferva* (swamp moss) as a papermaking material (Hunter. *Papermaking*, pp. 316) According to the preface to the 4th vol., three already existing plates (doubles) should be left out by the binder (Mem. XIV, plate 11, 12 & 13). Some copies have this duplicates still present as presumably the copy, Pritzel used (stating 115 instead of 113 plates). Our copy collates as others with 113 plates (together 256 plates).- DSB V, 577-579; Schuh 2021 (only 3 vols.): "Very rare"; Oberlé 446 (3 vols. from the Duc d'Orleans library); not Schuh online; Ward & Carozzi 975; Roller/Goodman I, 491; Ferchl 204; not in Sinkankas; Pogg. I, 973; Pritzel 3631; Quérard III, 514; Hoefer XXII, 472-77; not in Honeyman & Norman; Brunet, II, 1796; France littéraire, I, 278.

GUYOT, Edmé - Gilles.

Neue physikalische und mathematische Belustigungen, oder Sammlung von neuen Kunststücken zum Vergnügen, mit dem Magnete, mit den Zahlen, aus der Optik sowohl, als aus der Chymie. Aus dem Französischen (von J. C. Thenn). 7 in 6 Vols.- Augsburg: Klett Witwe. (und Franck), 1772 - 1777. 8vo (190 x 125 mm). with 3 engraved title vign., 132 (2 hand-col.) fold. plates and 4 (3 engraved) fold. tables. Contemporary paper card boards with two morocco labels on spine, rubbed and soiled, corners bumped, old ink shelf-numb. on lower spine, somewhat browned and a bit stained or foxed in places;, otherwise a fine copy in its first binding. € 2.400.-

Rare complete first German edition of „Nouvelles récréations“, a popular collection of physical and mathematical tricks, including optical illusions, electricity, magnetic squares, magic lantern, chess games, cipher writing, etc., with corresponding plates, translated into German by the preacher Johann Christoph Thenn (1729 - 1784) who had studied philosophy in Halle and lived in Augsburg befriended with the instrument-maker Brander. Guyot's four part book *Nouvelles recreations physiques et mathematiques* featured descriptions of experiments and examples of how various innovative mathematical and magical tricks could be performed. The book was first published in 1769 and included an explanation of Hooper's paradox. It also includes detailed, illustrated techniques for the performance of the cups and balls trick that is regarded as being greatly influential. The book was adapted into English by William Hooper, under the title *Rational Recreations* being released in 1774 without credit to Guyot. The French physician, mail clerk, postmaster, cartographer, inventor Edmé - Gilles Guyot (1706-1786) was author on the subject of mathematics, physics and magic. He experimented with optical illusions and with the theory behind performance magic. His developments into the apparent appearance of ghosts, using the projection of a figure into smoke, helped to create the technology and techniques used in phantasmagoria. Manufacturer of conjuring apparatus and scientific instruments, Guyot was accused of exploiting and revealing the tricks used at the time by magicians and science populizers like Nicolas-Philippe Ledru and Francois Pelletier. He created „magic theatres“ for the aristocracy – small boxes that use lanterns and slides to create an animated story. Guyot's work was influential in the development of magic lanterns and their use in phantasmagoria. In 1770 he detailed a method of simultaneously using two different slides in this early projection device. His example was a sea that would become increasingly stormy, throwing around the ships that were sailing on it. He advised that the slides would need to be very carefully painted in order to create a realistic and beautiful animation. His writings on the subject were translated into English and German and were widely circulated around Europe. His experiments led to the technique of projecting images onto smoke to create the appearance of ghostly apparitions. In 1779 Guyot described the use of transformation slides in magic lanterns to create simple animations.- Van der Linde II, 104 f. (only Vol. 2); Caillet 4900; Wheeler 426 (french ed.); not in

Fromm. Collation: I.: (32), 236 pp., (6) with engr. title vign., table (loosely inserted), and 23 engraved fold. plates; II.: (16), 300 pp., (18), (2, blank) with 16 engraved plates; III.: (18), 242 pp., (10) with 23 engraved plates of which 2 are partly hand-colored; IV.: (32), 242 pp., (6) with 11 engraved plates and three engraved tables; V.: (28), 402 pp., (18) with engraved title vign., 35 engraved fold. plates; VI.: (16), 224 pp., (8) with engraved title vignette, 18 engraved fold. plates; VII.: (8), 108 pp., (4), with engraved title vign., 6 engraved fold. plates

GUYTON de MORVEAU, Louis Bernard.

Abhandlung über die Mittel, die Luft zu reinigen, der Ansteckung zuvorzukommen und die Fortschritte derselben zu hemmen. Aus dem Französischen mit einigen Anmerkungen von Franz Heinrich Martens.- Weimar: im Verlage des Industrie - Comptoirs, 1802. 8vo (200 x 115 mm) VIII, 216 pp. Contemporary Cream paper card boards, red edges, red morocco lettering piece on spine, Ex - Libris on inner front fly. € 1.200.-

Rare first German edition of a classic book in the history of chemistry and hygiene, in which the use of gaseous chlorine to fumigate churches and hospitals to destroy contagion and disease is first described. The „Traité des moyens redésinfecter l'air“ (1801) is here translated for the first time by German physician Franz Heinrich Martens (1778 - 1805) who was first a private lecturer in Leipzig, but then appointed associate professor of medicine at the university in 1804, as well as sub-director of Starke's clinical institutions in Jena. He received various awards during his short period of activity. In 1803, for example, he received the Great Golden Medal for Art and Science from the Duke of Mecklenburg-Schwerin. Martens is said to have described EEC syndrome for the first time in 1804. Although chlorine and hydrochloric acid vapor had been used as disinfectants before Guyton, this book was the most influential on the subject, and he is credited with the introduction of chlorine as an effective disinfectant. His book was translated directly into five languages, and he was made member of the Legion of Honor for the service to humanity by its publication. Guyton's portable bottle or „preservative phial“ for generating chlorine is here described. The gas was prepared by the reaction of common salt, manganese dioxide (pyrolusite), and sulphuric acid, or by the reaction of concentrated nitric acid, hydrochloric acid, and pyrolusite. The French chemist, politician and aeronaut Louis-Bernard Guyton - Morveau (1737 - 1816) is credited with producing the first systematic method of chemical nomenclature.- Provenance: Alexander Bibl. Eisenach (Ex Libris: Saxo - Isenacensis); Bücherkabinett, modern Ex Libris.- DSB V, 603; Partington III, 530; Ferchl 206; Pogg. I, 981; not in Neville Historical Library; Hirsch-H. II, 925.

Scientific Instrument „Sammelband“

HARTNACK, Daniel.

Perspectiva mechanica und Eigentliche Beschreibung derer vornehmsten Instrumenten, so von denen berühmtesten Opticis zum perspectivischen Reissen bißher erfunden worden. Unter andern aber, Eines besondern, dadurch ... auch die im Zeichnen noch Unerfahrne, allerley ihnen vorgelegte Geometrische und andere Corpora ... mit leichter Müh verzeichnen.- Lüneburg, Martin Vogel for Johann Kelp, 1683. 4to (200 x 155 mm) (4), 22 pp. with four engraved plates showing drawing instruments and one woodcut plate depicting three-dimensional geometric figures. Overall with wide margins. Uniformly lightly browned and sporadically slightly spotted, water-stained in the gutter. Contemporary calf, upper and lower spine a bit bumped, rubbed and soiled, else only minor browning. Fine copy. (bound with:)

BILER, Johann Matthias. Neu erfundenes Instrumentum mathematicum universale, vermittelst dessen alle proportiones in der Mathesi ohne Circul, Lineal und ohne Rechnung, bloß mit einen seidenen schwarzen Faden ... mit ungemeiner Geschwindigkeit ... können gesucht und gefunden werden. Jena, Henrich Christoph Cröker, 1696. 18 nn. Bll. with one fold. engraved plate showing the instrument and text woodcuts. (bound with:)

DALENCÉ (d'Alencé), Joachim. Abhandlung Dreyer so nothwendig- als nützlichen Instrumenten, nemlich deß Barometri, Thermometri, und Notiometri, oder Hygrometri. Der Lufft geringste Veränderungen in Schwere und Leichte, in Wärme und Kälte, in Feuchte und Truckne, auff das genaueste zu beobachten. Auß dem Frantzösischen ... vorgetragen.- Mainz, Ludwig Bourgeat for the translator, 1688. (8), 51 pp., (1, blank) with engraved frontispiece and 35 engraved plates. (bound with:)

DALENCÉ (d'Alencé), Joachim.

Magnetologia curiosa. Das ist gründtliche Abhandlung des Magneths, in zwey Abtheilungen enthalten. Der erste Theil begreiff die Erfahrnüß, oder Versuchungen, der zweyte aber die Ursachen, welche davon kennen gegeben werden. Auß dem Frantzösischen ... übersetzt. Mainz, Christoph Kuchler or the translator, 1690. (4), 50 pp., (2, register) with engraved frontispiece, and 33 engraved plates.

€ 4.500.-

First edition of a work on drawing instruments with engl. title: „Mechanical perspective and a proper description of the most refined instruments that until now have been invented for perspective drawings“, describing seven drawings instruments, though without bringing anything really new. Hartnack began a list of authors on perspective and included five non-Germans, incl. Serlio, Dubreuil, Marolois, Nicéron and Guidobaldo. By the mid- 1630's, the interest in perspective instruments seems to have declined in the German states - or at least the enthusiasm for writing about them (see before Brunn, Scheiner, Bramer, Faulhaber). Fifty years later the subject was taken up again by the ‚glamorous‘ Daniel Hartnack (1642-1708). He was often on the run, first because as a young teenager he got a woman pregnant, then from prison, to which he had been sentenced because of an unpaid debt, then from his position because he was found to lack the education he had claimed, and so forth. Despite his tumultuous life, Hartnack managed to work as a teacher and a headmaster for most of his life, and to get at least seventy titles published.- VD 17 3:016384L; Anderson, *Geometry as an Art*;

This short work on elementary surveying techniques, describes a half-circular sighting instrument and illustrates its use with a few simple problems involving triangles.- VD 17 3:600842E; Tomash Library B153.

First German editions of both works by Dalencé, the *Traité de l'aiman*, a general treatise on the magnet and its uses, incl. the invention of the compass and magnetic mountains of America and *Traitez des barometres*, ..., the earliest account dealing exclusively with the subject, and especially valuable as the first work laying down rules for the graduation of the thermometer. The physicist and astronomer Joachim Dalencé (1640 - 1707) was the son to the surgeon of the king, who purchased for him the office of royal secretary and counsellor on 15 September 1663. In 1668, during a trip to England, where he bought a telescope, Joachim formed a friendship with Henry Oldenburg, and in 1675 he is known to have served as an intermediary between Oldenburg and Huygens. He was also in communication with Leibniz and served as liaison between the French Academy and Huygens. Beginning in 1679 he published anonymously the first six collections of the *Connaisance des temps*, the first French ephemerides of a purely scientific nature. He gave up this project in 1684 and in 1685 moved to the Low Countries, where for three years he purchased books and art objects for the royal collections. During this time he published the *Traité de l'aiman* (1687), a well-written discussion of magnets, and the *Traitez des barometres, thermometres et notiomètres ou hygromètres* (1688). His detailed description of the principal meteorological instruments of the period is enriched with several new ideas, such as the calibration of the thermometric scale on the basis of two points of change of state; the point at which water freezes and—a much more contestable point—that at which butter melts.- VD 17 39:120078X; DSB III, 534, Roller-G. II, 26; Wheeler 200; VD 17 39:120069Y, Neu 73, Roller-G I, 26, Zeitlinger 929.

Color cercle

HENRY, Charles.

(Cercle chromatique; cover title). *Éléments d'une théorie générale de la dynamogénie autrement dit du contraste, du rythme et de la mesure avec applications spéciales aux sensations visuelle et auditive.*- Paris: Verdin, (1889). Imperial Folio (600 x mm) VI, 56 pp. and one chromolithogr. color plate. Publ. half cloth with ties, text and plate loosely inserted, rubbed and soiled, little spotted, else fine.

€ 7.500.-

Important instrument to color theory by the French „psycho-biophysicist“ Charles Henry (1859-1926) that influenced the Neoimpressionists, especially the divisionist style of painting of Georges Seurat and Paul Signac greatly. Henry developed a scientific aesthetic of both color and form; his continuous color circle based on the spectrum was related to Chevreul's basis plane. It can be interpreted as an infinite number of tint/shade scales with white in the center, the full colors in the middle ring and black at the periphery. Color circles for the primary purpose of demonstrating rules of color harmony have been developed by the German painter Matthias Klotz (1748-1821) in 1816, the English colorant producer and dealer George Field (1777 - 1854) in 1817, the French chemist Michel-Eugene Chevreul (1786-1889) in 1839 and Friedrich Wilhelm Unger and Ernst Brücke.

Charles Henry, a librarian, physiologist, mathematician, inventor, esthetician, and intimate friend of the Symbolist writers Felix Fénéon and Gustave Kahn, met Georges Seurat, Paul Signac and Camille Pissarro during the last

Impressionist exhibition in 1886. Henry would take the final step in bringing emotional associational theory into the world of artistic sensation: something that would influence greatly the Neo-Impressionists. Henry and Seurat were in agreement that the basic elements of art—the line, particle of color, like words—could be treated autonomously, each possessing an abstract value independent of one another, if so chose the artist. In 1889 Fénéon noted that Seurat knew that the line, independent of its topographical role, possesses an assessable abstract value, in addition, to the individual pieces of color, and the relation of both to the observer's emotion.

The Neo-Impressionists established what was accepted as an objective scientific basis for their painting in the domain of color. The underlying theory behind Neo-Impressionism would have a lasting effect on the works produced in the coming years by the likes of Robert Delaunay. The Cubists were to do so in both form and dynamics, and the Orphists would do so with color too. The decomposition of spectral light expressed in Neo-Impressionist color theory of Paul Signac and Charles Henry played an important role in the formulation of Orphism. Robert Delaunay, Albert Gleizes, and Gino Severini, all knew Henry personally. Henry is also credited with the invention of several ingenious devices and instruments used in psychophysiological laboratories.

KVK: TH Köln, BL London, Oxford, Yale, NY Public, Princeton, Bryn Mawr, National Gallery Art, Newberry, Virginia, Stanford.

Alexander v. Humboldt & modern intensive agriculture

(HUMBOLDT, Alexander von)

FOURCROY, Antoine Francois. Analyse de la terre du perou appelée Guano, et rapportée par monsieur (Alexandre de) Humboldt. Original manuscript in black ink on paper written by the French chemist of Antoine Francois Fourcroy of his and Louis - Nicolas Vauquelin's analyses of guano samples brought back to Europe by Alexander von Humboldt from his voyage to South America. (no date, no place, but Paris, 1806). small 4to (230 x 175 mm) 13 hand-written pages on 8 leaves loosely inserted in modern folder.

€ 7.500.-

Important manuscript in the history of chemistry, the public presentation of the chemical analysis of Guano by the French chemists Antoine François Fourcroy (1755 – 1809) and Louis-Nicolas Vauquelin (1763-1829) showing its fertilizing properties for agriculture which played then a pivotal role in the development of modern input-intensive farming. The report was published as: Antoine François Fourcroy and Nicolas Louis Vauquelin. Sur le guano, ou sur l'engrais naturel des îlots de la mer du sud, près des côtes du Pérou. Mémoires de l' Institut des Sciences, Lettres et Arts. Sciences mathématiques, no. 7, 1806, pp. 369–381.

Guano, the white gold of the seabirds, is the best natural fertilizer known to mankind. The term Guano applies to natural mineral deposits consisting of excrements, eggshells and carcasses of dead seabirds found in almost rainless, hot-dry climatic regions and corresponding fertilizers. The most significant nitrogen Guano is the Peru-Guano, which has been used over 2000 years as agricultural fertilizer in Peru. In Europe the application of Guano as fertilizer emerged in the 1840 as “Guano boom” and lasted until the early twentieth century when Guano was replaced by industrial manufactured fertilizers. Only a small quantity is still exported to Europe as additive to organic/mineral fertilizers, more for image boosting than for effect.

In November 1802, Prussian geographer and explorer Alexander von Humboldt first encountered guano and began investigating its fertilizing properties at Callao in Peru, and his subsequent writings on this topic made the subject well known in Europe. Although Europeans knew of its fertilizing properties, guano was not widely used before this time. During his stay in Lima Humboldt received samples of guano, a mixture of bird droppings from the Chincha Islands off the Peruvian coast, which he took to Europe and had analyzed by the most famous chemists.

After his return, Alexander von Humboldt gave the guano samples to the leading analysts of his time, Antoine François Fourcroy and Nicolas Louis Vauquelin in Paris and Martin Heinrich Klaproth in Berlin. Fourcroy and Vauquelin published the results of their analyses in 1806, Klaproth in 1807. The results showed outstanding fertilizing effects, in particular due to the high content of nitrogen and phosphorus. Although chemists recognized the importance of guano for crop production, it was decades before its use became common. On St. Helena Island in 1808/1809, guano far outperformed traditional fertilizers in early trials using pig manure, horse manure, and guano from offshore Egg Island on potatoes; experiments and trials in Great Britain were equally successful. The chemist Humphrey Davy delivered a series of lectures which he compiled into an 1813 bestselling book about the role of nitrogenous manure as a fertilizer, *Elements of Agricultural Chemistry*. It highlighted the special efficacy of Peruvian guano, noting that it made the „sterile plains“ of Peru fruitful. Justus Liebig's publication of his book „Die Chemie in ihrer Anwendung auf Agrikultur und Physiologie“ (Chemistry in its Application to Agriculture and Physiology) in

1840 had a decisive influence on the general acceptance of fertilization with guano in agriculture. The ensuing boom starting from the 1840s influenced seriously agriculture in Europe and the economy of Peru. Demand for guano rapidly declined after 1910 with the development of the Haber - Bosch process for manufacturing synthetic nitrogen and phosphorus. The chemist Fourcroy collaborated with Lavoisier, Guyton de Morveau, and Claude Berthollet, on the *Méthode de nomenclature chimique*, a work that helped standardize chemical nomenclature. One aspect of Humboldt's travel to South America (1799–1804) received little attention,- his contribution to modern agriculture remains almost unnoticed.

JACOBSON, Johann Karl Gottfried.

Technologisches Wörterbuch oder alphabetische Erklärung aller nützlichen mechanischen Künste, Manufacturen, Fabriken und Handwerker, wie auch aller dabey vorkommenden Arbeiten, Instrumente, Werkzeuge und Kunstwörter, nach ihrer Beschaffenheit und wahren Gebrauche, herausgegeben von Otto Ludwig Hartwig. Mit einer Vorrede von Johann Beckmann. (from Vol. VI: fortgesetzt von Gottfried Erich Rosenthal). 8 Vols.- Berlin und Stettin: bey Friedrich Nicolai, 1781 - 1795. 4to (mm) 816 pp.; (4), 652 pp.; (4), 636 pp.; (4), 736 pp.; VIII, 768 pp.; (2), 801 pp.; (1); (2), 558 pp.; (2), II, 300 pp.; (2), 420 pp. Contemporary half calf with two morocco lettering pieces, and gilt spine in compartments, red sprinkled edges, very nice copy in nearly mint condition.

€ 2.400.-

Very fine set of this rarely complete seen dictionary on all arts and crafts, with the last volume of 420 pages present which has a bibliography to each entry. An inexhaustible source on all crafts, arts, tools and engineering sciences during the Aufklärung and around 1800. Useful to understand technological texts of this time.

Jacobson studied law in Jena and Leipzig from 1743 and in 1747 obtained a position with the government in Dresden. After a duel he had to flee and became a soldier of the Electorate of Saxony. In 1755 he accompanied King August to Warsaw as a constable of the riding troopers. In 1760 he entered Prussian service and took part in the 7 Years War as a non-commissioned officer. During the years of peace in the Berlin garrison, he occupied himself with the new field of technology, inspired by Peter N. Sprengel, the principal of the School of Technology (Realschule). In Berlin factories, he studied tools, machines, and work processes, described them, and thus made significant contributions to the textbook "Handwerke und Künste in Tabellen" (Crafts and Arts in Tables), published by P. N. Sprengel and O. L. Hartwig (1767 ff.).

In 1773-1776 Jacobson's first work "Schauplatz und Beschreibung aller Zeugmanufakturen in Deutschland" was published, through which he became widely known. Friedrich Nicolai enlisted him to collaborate on the 2nd edition of the "Beschreibung der kgl. Residenzstädte Berlin und Potsdam" (1779), and he was commissioned by the Königsberg bookseller and publisher Kanter to translate „L'art du menuisier“ by Roubo. His „Technologisches Wörterbuch“ (vol. 1-4, 1781-84) met with great and lasting acclaim for a number of decades. Johann Beckmann had written the preface to it. Volumes 5-8 were published in 1793-95 with additions by J. F. Rosenthal. The trend-setting importance of this dictionary was shown, among other things, by the fact that Gottfried Erich Rosenthal's "Litteratur der Technologie. Verzeichnis der Bücher, Schriften und Abhandlungen, welche von den Künsten, den Manufakturen und Fabriken handeln" (1795) was arranged according to the alphabetical order of Jacobson's dictionary. In 1781, he received the post of factory inspector in Königsberg.

JOHN, Johann Friedrich.

Chemisches Laboratorium. Oder Anweisung zur chemischen Analyse der Naturalien. Nebst Darstellung der nöthigsten Reagenzien. Mit einer Vorrede von Martin Heinrich Klaproth. Berlin: bei Friedrich Maurer, 1808. (with:) Chemische Untersuchungen mineralischer, vegetabilischer und animalischer Substanzen. Fortsetzung des chemischen Laboratoriums. (und Zweyte bis Fünfte Fortsetzung des chemischen Laboratoriums). 6 Vols. in 4. (complete).- Berlin: Friedrich Mauer, 1810; Berlin: bei J. E. Hitzig, 1811; Berlin: in der Maurerschen Buchhandlung, 1811 - 1821. 8vo (202 x 118 mm) XII, 522 pp., (2) with two fold. engr. plates; XXVI, 292 pp., (2); (6), IV, VIII, 318 pp., (2); XVI, 326 pp., (2); (2), XVI, 246 pp., (2), XX, 365 pp., (3, publ. adv.) with one fold. engraved plate. Fine copy in contemporary half calf, black morocco lettering piece on spine, yellow edges, marbled boards, title stamped (Acad. f. Handel u. Ind. Graz), spotted throughout, but a very fine set.

€ 2.400.-

Exceedingly rare complete set of the analytical memoirs of Johann Friedrich John (1782-1847), published between 1808 and 1821 with varying titles, each complete in itself, and rarely seen in complete form as here. These volumes contain the results of his analyses of a vast number of substances from the mineral, vegetable, and animal kingdom with numerous references to the researches of other European chemists, especially those of Germany, France and Britain. In 1817 John first discovered that a strontium sulphide phosphor he had made luminesced sky blue, whereas his barium sulphide phosphor luminesced reddish-violet. This and later discoveries led over a century later to the development of phosphors used in color television. (Harvey. Hist. of Luminescence 323, 346) He investigated Oriental bezoar and also described the red colouring matter of cochineal which was further investigated by Pelletier, Warren de la Rue and Schützenberger.

The German chemist & pharmacologist Johann Friedrich John was a professor at an economic institute in Moscow from 1804 and from 1806 until its closure in 1811, he was professor of chemistry and pharmacy at the Viadrina Univ. in Frankfurt (Oder). He then went to the University in Berlin. The nutrient table he published in 1814 is the oldest in book form. At about the same time and independently of Louis-Joseph Vicat (1786-1861), he discovered the optimum ratio between clay and lime content in the production of hydraulic limes. He was the first to investigate grape acid, which had been discovered by the manufacturer K. Kestner in 1819. He also conducted research on the oxides of manganese. He isolated metallic manganese in a purer state than was previously known, as well as carrying out researches on organic chromates, zinc ores, native silver, copper, arsenic, etc. He was also interested in pathological chemistry and biochemistry. Partington discusses John's numerous researches.- Neville Historical Libr. I, 691 (only two vols.); Ferchl 259; Bolton 556; Partington III, 601; Pogg. I, 1197; not in Duveen, Edelstein, Ferguson, Wellcome; not in Cole.

LANGELOTT, Joel.

Epistola ad Praecellentissimos Naturae Curiosos. De quibusdam in Chymia praetermissis, quorum occasione Secreta haud exigui momenti proque; non-Entibus hactenus habita, candide deteguntur & demonstrantur.- Hamburg: apud Gothofredum Schultzen, 1672. sm.8vo (155 x 90 mm) 32 pp. with fold. copperplate of the philosophical mill and engraving of a mortar in text. Old ownership inscript. on title in ink (Johann Georg von Clari und Altringen, 1696). Marbled boards, handwritten title on cover, browning throughout. € 2.400.-

Rare first edition of an „alchemical instrument“.

Langelott (1617-1680) studied medicine at Jena, Rostock, Copenhagen and Leiden and received a call to Gottorp as chemist. He traveled to England and became court physician in 1647 to Frederick IV., Duke of Holstein-Gottorp. The present work was addressed to the Leopoldina and it concerns „matters passed over in chemistry, including secrets of no slight moment hitherto regarded as non-entities“. It was praised by the members of the Royal Society and „included the treatment of gold by a „philosophical mill-stone“, the fermentation of tartar, the spirit of its volatile salt, essence of opium, eduction of mercury from antimony, and the analysis of coral into a rubicund mucilage.“ (Thorndike) Morhof was very impressed, and Langelott persuaded him to write a book on the means by which metals can be transmuted. Morhof did this in his well-known: *de metallorum transmutatione ad Joelem Langelottum epistola* (1673).- Caillet 6085; Duveen 337; Edelstein 1346; Neville Historical II, 11; Ferchl 295; Ferguson II, 8; Krivatsy 6663; Thorndike VIII, 370; Wellcome III, 444.

LAUBENHEIMER, Kurt (ed.)

Photographische Wandtafeln pathogener Protozoen. Mit kurzem erläuterndem Text. Herausgegeben von ... - Heidelberg: Carl Winter, 1910. Imperial-folio (620 x 620 mm) 10 original photographs (size: 400 x 400 mm) mounted on heavy card boards (600 x 600 mm) in original publishers half cloth portfolio with printed label on cover and ties. Text: 4 pp. text and one printed plate (overview of the photogr. plates) in original wrappers. Overall fine. € 6.900.-

Exceedingly rare portfolio of large-size photographs of pathological protozoa for educational purposes - to be used as wall maps for instruction and to identify. We could trace only one other copy in institutional holdings.

Protozoan infections are parasitic diseases caused by organisms formerly classified in the Kingdom Protozoa. They are usually contracted by either an insect vector or by contact with an infected substance or surface and include organisms that are now classified in the supergroups Excavata, Amoebozoa, SAR, and Archaeplastida. Protozoan infections are responsible for diseases that affect many different types of organisms, including men, plants, animals,

and some marine life. Many of the most prevalent and deadly human diseases are caused by a protozoan infection, including African Sleeping Sickness, amoebic dysentery, malaria.

The word „protozoa“ was coined in 1818 by the zoologist Georg August Goldfuss, as the Greek equivalent of the German Urthiere, meaning „primitive, or original animals“. Goldfuss created Protozoa as a class containing what he believed to be the simplest animals. In 1848, as a result of advancements in cell theory pioneered by Theodor Schwann and Matthias Schleiden, the anatomist and zoologist von Siebold proposed that the bodies of protozoans such as ciliates and amoebae consisted of single cells, similar to those from which the multicellular tissues of plants and animals were constructed. Von Siebold redefined Protozoa to include only such unicellular forms, to the exclusion of all metazoa (animals). At the same time, he raised the group to the level of a phylum containing two broad classes of microorganisms: Infusoria (mostly ciliates and flagellated algae), and Rhizopoda (amoeboid organisms). The definition of Protozoa as a phylum or sub-kingdom composed of „unicellular animals“ was adopted by the zoologist Otto Bütschli – celebrated at his centenary as the „architect of protozoology“ – and the term came into wide use. Kurt Laubenheimer (1877 - 1955) was Prof. of Bacteriology in Frankfurt / Main. As the son of a chemist who was a director of Hoechst AG, he had studied in Giessen where he obtained his master with a dissertation on Typhus. He worked at different posts in Giessen, Strasburg and Heidelberg. In the 1920 he wrote a text - book on microphotography being then extraordinary Professor for Hygiene and Bacteriology at Heidelberg University, and from 1922 to 1943 he worked at the Paul Ehrlich Institut in Frankfurt a. Main. He was also interested in cinematography for the medical purposes or sciences. This work is not mentioned in any bibliography.- not in Heidtmann (but see 05356); Drüll, Heidelberger Gelehrten 467.

KVK, OCLC, COPAC: no copy in Germany (?); not in Wellcome Collection, only one copy in libraries: NLM Bethesda.

LAUTENSACK, Heinrich.

Desz Circkelsz und Richtscheyts, auch Perspectiva, und Proportion der Menschen und Rosse, kurtze, doch gruendtlliche underweisung desz rechten gebrauchts.- Francfort: Egenolff Emmel for Simon Schamberger, 1618. Folio (303 x 192 mm) (8), 54 Bll., with title in black and red, 107 text woodcuts incl. 3 folding plates. Later red maroquin in style of Duseuil, gilt edges, carefully washed and newly bound copy (Devau-chelle). € 6.500.-

A famous manual on perspective and draughtsmanship, prominently including the symmetrical proportions of men, women, children and horses with translated title: Brief yet thorough introduction to the correct use of compass and ruler, and of perspective, and proportions in human and horses. First published in 1564 (Vagnetti mentions an edition of 1616 which we could not trace), this is a second edition in same size. A richly and beautifully illustrated, of a highly important drawing book: based on Albrecht Dürer's work on human anatomy, Vier Bücher von menschlicher Proportion, and his treatise on perspective, Vnderweysung der Messung dem Zirkel, with an added chapter on the anatomy of the horse with three woodcuts. The book is expressly composed for the use of goldsmiths, painters, sculptors, stonemasons, joiners, etc. The beautiful woodcuts are very original and forceful although based on those of Dürer and Beham. Heinrich Lautensack was a member of the celebrated Nuremberg family of artists and had settled in Frankfurt as a goldsmith, painter and engraver. The goldsmith and painter Heinrich Lautensack (1522-1590) followed Hirschvogel's style of making perspective images in his work and stressed the importance of knowing geometry and illustrated its use in, among other things, perspective constructions. He applied a simple method similar to Hirschvogel's. He also illustrated how the image of a pavement of square tiles can be used as (to apply a modern term) a coordinate system in the picture plane (Andersen. The Geometry of an Art, 222). The importance of this genre of books can be seen with similar books like: Sebald Beham's (1500-1550): Wahrhaftige Beschreibung aller fürneme Künsten (1552, with a sixth ed. in 1605) and Erhard Schön's Underweissung der proportzion unnd stellung der possen (1538 and 1540).- VD 16, L 728; Vagnetti, EIIb19; Kat. Berlin 4691 (1564 ed.); Adams, L-290; Rosenwald, 702; Choulant/Frank 358; not in Punkt, Punkt, Komma, Strich (2014).

LEUPOLD, Joseph.

Antlia pneumatica illustrata. Das ist, eine deutliche Beschreibung der so genannten Lufft - Pumpe, darinnen zwar kürztlich, doch ausführlich gezeigt wird, was solche sey, und wie sie nebst denen dazu gehörigen Maschinen zu gebrauchen. Leipzig (at the author), 1707. 4to (215 x 170 mm). 36 pp. with 6 folding engraved plates (**bound with:**) Joseph Leupold. Antliae pneumaticae illustratae continuato prima. Oder erste Fortsetzung und Vermehrung des Tractats von der Lufft - Pumpe. Leipzig (at the author), 1712. 4

Bll., 32 pp., 2 Bll. with 4 engraved fold. plates. Contemporary vellum, little rubbed and soiled, little stocked and browned, title with two deleted (blackened) ownership entries. € 1.800.-

First edition of Leupold's description of his vacuum pump with the first (of two) separately published supplement. With the success of the Musschenbroek workshop for scientific instruments, workshops in other continental countries began to compete with the Musschenbroek brothers.

The German physicist, instrument maker, mining commissioner and engineer Jacob Leupold (1674 – 1727) was one of them. He wrote the seminal book: *Theatrum Machinarum Generale* („The General Theory of Machines“) which was widely used and distributed. Jacob Leupold built many instruments that were needed for natural philosophy courses at Universities and at public experimental physics shows. In 1699 Leupold's interests had fully changed to mechanics and mathematics and he designed his first vacuum pump in 1705, which was published in 1707 in his book „*Antlia pneumatica illustrata*“. In 1711 following the advice of G. W. Leibniz, the Prussian Academy of Sciences acquired Leupold's pump. The van Musschenbroek vacuum pump is an instrument from the late 17th century constructed by the Dutch craftsman Johannes van Musschenbroek. A series of pumps were designed and produced over the years, with the 1698-model as one of the more prominent examples. It was based on an air pump design by Wolferdus Senguerdius, used to study fluids (gas or liquid) at the University of Groningen. The pump enabled physical, chemical and medical experiments to give a more illustrative explanation of the scientific theories that were presented to the students of the university. This use of experimental demonstrations during teaching was relatively new in Continental Europe at the time. Around 1675, the two craftsmen brothers Samuel and Johan van Musschenbroek switched from manufacturing oil lamps to specializing in scientific instrument making. They had their own workshop in Leiden, the Netherlands. The older brother Samuel was the main craftsman in the workshop, but following his death in 1681 at the age of 41, Johan took over the business. In the following years, the workshop became one of Europe's most important suppliers of air pumps, microscopes and other instruments. Their pumps were exported mainly to Germany, Italy, Scotland and Sweden. The design of vacuum pumps evolved over time in the van Musschenbroek workshop. The first produced vacuum pump in the workshop was a request by Burchard de Volder, a professor of physics at the Leiden University. The pump was constructed in 1675 and was based on a design by Robert Hooke. This instrument never became a bestseller in the workshop due to its cumbersomeness and its impracticality since it required two men to operate.

Johan van Musschenbroek used the design of Senguerd to construct the 1698 van Musschenbroek vacuum pump. This pump was amongst at least 40 others, where nine is still preserved today. It is estimated that three pumps were produced every two years when production was at its highest. The pump became a great success in most of Europe except for France. The vacuum pump was fairly expensive. It was sold with accessories for 500 guilders, equal to about half a professor's annual salary at the time. Over time a cheaper alternative was offered for less than 175 guilders; a horizontal version mentioned as poor man's pump, which sold well.- NDB XIV, 377; Poggendorff I, 1438; vgl. Engelmann, *Bibl. mech.- techn.* 223 f. (later edition)

LUCHINI, Domenico (fl. 1710 - died 1737).

‘*Practica compendiata, e facilissima per la costruzione degli orologi solari nelle aliezze del Polo Gr. 42. 43. 44. 45 colle Tavole delle Latitudini e Longitudini per le hore italiane, babiloniche, ed astronomiche all uso oltramontano et antiche ò Ineguali s’insegna ancora la fabrica, ed uso dell’ orologio universale portatile, detto equinoziale, come ancora ne i Quadranti, e Emisferi, e Riflessi. Di D. Domenico Luchini da Pesaro. 1730*’. Apparently authorial manuscript with frequent cancellations, emendations and insertions, some on inserted slips. [Rome], 1730. Small Folio. Title, introductory letter and explanatory text on 141 pages, catalogue of cities with their latitudes on 5 pages, and series of 16 extensive tables for the calibration of Italian sundials and lunar dials at the different degrees of latitude, of azimuths and other astronomical measurements, on 370 pages, index, and figures of sundials eight pages. Altogether approximately 535 pages, variable sizes, approx. 275 x 200 mm. Contemporary leather-backed boards, rubbed and soiled, else fine. € 4.900.-

Authorial manuscript, most probably an earlier version of his published „*Trattenimenti matematici i quali comprendono copiose tavole horarie per gli orologi a sole orizzontali, verticali, riflessi e portatili. Con le tavole de logarithmi di Don Domenico Luchini da Pesaro*“ published in Rome in 1730. The author, a native of Pesaro, was a beneficed clergyman at St John Lateran in Rome, where he died in 1737. He published the work on sundials, *Trattenimenti Matematici* at Rome in the same year as the present work, a *Tariffa overo pratica* (Tomash L138, L139)

and also contributed to the calendar of the *Thesaurus sacrorum rituum* (Rome, 1738). About the *Tariffa M. R.* Williams writes: „This small commercial arithmetic presupposes knowledge of addition and subtraction. It begins with multiplication and division and then treats elementary gauging and square and cube roots. Luchini then discusses some calendar problems. After a two page table of squares and cubes of all integers from 2 to 100, Luchini deals with the areas of rectangles, triangles and circles. At the end he recommends a set of logarithm tables as being very useful.“ The history of the sundial reaches far back into antiquity and the earliest descriptions and examples date from the Egyptian Period (around 1500 B.C.). Also from ancient Greece and Rome numerous examples, large as well as pocket-sized, are preserved. Especially in the Islamic world the need for observing the daily prayer times, a number of which are mathematically defined by proscribed altitudes of the sun above the horizon, further stimulated the development of instruments for observing the time from the Sun's altitude. In medieval and early modern Europe the sundial was by far the most commonly used instrument for determining the time. From the 16th to the 18th century the steady flow of books and manuals on sundials and their use produced by mathematicians, astronomers and instrument makers attests to the popularity of this instrument and the great variety in its design and construction. Even the development of the mechanical clock from the 14th century onwards by no means made the sundial obsolete, despite improvements in the second half of the 17th century with the introduction of the pendulum and the balance-spring. Until far into the 19th century, an accurate sundial was essential for regularly checking and adjusting the rate of mechanical timekeepers.– Severino: Bibliography pp. 179; Tomash Library L138 & L139.

MANTELL, Gideon.

Die Phänomene der Geologie leichtfasslich in Vorlesungen entwickelt von Dr. Gideon Mantell. Beim Vortrage nachgeschrieben von G. F. Richardson, Deutsch herausgegeben von Joseph Burkart. Mit einer Vorrede von Dr. Jakob Nöggerath. Erster (und) Zweiter Band.- Bonn: bei Henry und Cohen, 1839. 8vo (180 x 115 mm) XII, 371 pp., (1) with lithographed second title, frontispiece and 49 images on 26 sheets; 340 pp., (4) with lithographed second title image 50 to 80 on 18 sheets and six colored plates (incl. frontispiece). Original blue printed wrappers, uncut copy with only minor spottings, binding little weak, but a very fine copy in original state. € 800.-

Rare first german edition of Mantell's lectures: „The wonders of geology, or, A familiar exposition of geological phenomena: being the substance of a course of lectures delivered at Brighton“, in rare original wrappers, translated by the German mining councilor and explorer Hermann Joseph Burkart (1798 - 1874).

In 1833, Mantell relocated to Brighton but his medical practice suffered. He was almost rendered destitute, but for the town's council who promptly transformed his house into a museum. There he gave a series of lectures that were published in 1838. The museum in Brighton ultimately failed as a result of Mantell's habit of waiving the entrance fee. Financially destitute, Mantell offered to sell the entire collection to the British Museum in 1838 for GBP 5,000. He moved to Clapham Common in South London, where he continued his work as a doctor.

With the English obstetrician, geologist and paleontologist, Gideon Algernon Mantell (1790 – 1852) attempts to reconstruct the structure and life of *Iguanodon* began the scientific study of dinosaurs: in 1822 he was responsible for the discovery (and the eventual identification) of the first fossil teeth, and later much of the skeleton, of *Iguanodon*. Mantell's work on the Cretaceous of southern England was also important. Inspired by Mary Anning's sensational discovery of a fossilized animal resembling a huge crocodile (later identified as an ichthyosaur) at Lyme Regis in Dorset, Mantell became passionately interested in the study of the fossilized animals and plants found in his area. The fossils he had collected from the region, near The Weald in Sussex, were from the chalk downlands covering the county. The chalk is part of the Upper Cretaceous System and the fossils it contains are marine in origin. But by 1819, Mantell had begun acquiring fossils from a quarry, at Whiteman's Green, near Cuckfield. These included the remains of terrestrial and freshwater ecosystems, at a time when all the known fossil remains from Cretaceous England, hitherto, were marine in origin. He named the new strata the Strata of Tilgate Forest, after an historical wooded area and it was later shown to belong to the Lower Cretaceous. By 1820, he had started to find very large bones at Cuckfield, even larger than those discovered by William Buckland, at Stonesfield in Oxfordshire. Then, in 1822, shortly before finishing his first book (*The Fossils of South Downs*), his wife found several large teeth (although some historians contend that they were in fact discovered by himself), the origin of which he could not identify. In 1821 Mantell planned his next book on the geology of Sussex. It was an immediate success with two hundred subscribers including a letter from King George IV. which read „His majesty is pleased to command that his name should be placed at the head of the subscription list for four copies.“ How the king heard of Mantell is unknown, but Mantell's response is. Galvanized and encouraged, Mantell showed the teeth to other scientists but they were dismissed as belonging to a fish or mammal and from a more recent rock layer than the other Tilgate Forest fossils.

The eminent French anatomist, Georges Cuvier, identified the teeth as those of a rhinoceros. Although according to Charles Lyell, Cuvier made this statement after a late party and apparently had some doubts when reconsidering the matter when he awoke, fresh in the morning. „The next morning he told me that he was confident that it was something quite different.“ Strangely, this change of opinion did not make it back to Britain where Mantell was mocked for his error. Mantell was still convinced that the teeth had come from the Mesozoic strata and finally recognized that they resembled those of the iguana, but were twenty times larger. He surmised that the owner of the remains must have been at least 60 feet (18 m) in length.- not in Hoover, Schuh; Ward/ Carozzi 1484 (engl. ed.)

„the Bohemian Galileo“

MARCI de Kronland, Jan Marek (Johann Marcus).

De proportione motus figurarum rectilinearum et circuli quadratura ex motu.- Prag, Typographia Academica, 1648. 4to (190 x 150 mm) 74 nn. Bll./ ff. with engraved title, engraved portrait, one plate and 32 engraved diagrams within text. (Sign.: A4, B, wrongly A2-A4, C4-S4, Errata sheet, maybe one blank leaf at the end, plate after B) Text printed throughout in decorative border. Contemporary marbled boards, handwritten label on spine, rubbed, soiled and bumped. Paper somewhat browned and slightly spotted. Old repairs on upper part of the sheets due to short paper, partly covering head lines, but a fine copy in its first binding. € 9.000.-

Extremely rare first edition of his theory of the collision of bodies in which he gives an account of the experiments whereby he reached it; it is a continuation and elaboration of his earlier publication: *De Proportione Motus seu Regula Sphymice* (1639). In this work, Marci addresses the criticisms of his earlier book and puts forward new theories on the geometrical form of bodies in motion, the properties of free fall, the duration of the oscillation of a pendulum and its length, etc. He discusses various phenomena of perfectly elastic central and lateral percussion in a rather qualitative manner. Although he does not attempt to bring his results into an analytical form, they represent an important milestone towards the laws of percussion.

The Bohemian physician and scientist Jan Marek Marci de Kronland (1595-1667) was rector of the University of Prague and he achieved considerable renown as a physician, becoming physician to the Kingdom of Bohemia and personal attendant to two emperors, Ferdinand III and Leopold I. He had studied under the Jesuits and during a diplomatic trip in 1639, Marci met Paul Guldin and Athanasius Kircher, with whom he studied and corresponded for a long time, and also read Galileo's *Discorsi*, although he did not meet Galileo. There are a number of references to Galileo in the book. He spent most of his career as a professor in Prague, where he served for over thirty years as a professor of medicine, eight times as Dean of the medical school and once as Rector in 1662. As a scientist, Marci worked in considerable isolation and his knowledge of the researches of his contemporaries was at best random, and his own work shows evidences of the ideological pressures of his own Prague environment. Marci's studies covered the mechanics of colliding bodies, epilepsy, and the refraction of light, as well as other topics. Experimenting mainly with wooden balls, but also with billiard balls and canonballs, he classifies collisions into those between hard, soft and fragile bodies, thereby already recognizing that the velocity is an important quantity for characterizing the intensity of the impulse. Marci is the first to make the important observation that in the case of elastic percussion, a moving body colliding with a body at rest of the same mass abruptly ceases in motion and transfers it fully to the other body, thus giving a unique and surprising example of the conservation of momentum. Marci discovers that a ball, striking a plane obliquely, will be reflected at an angle which equals the angle of incidence, and applies the law of reflection to the game of billiards.

Although these experiments are described precisely, Marci was unable to formulate general quantitative laws from them, since his results were not drawn from exact measurements of either of the sizes and weights of the spheres that he employed or of the direction and velocity of their motion. Rather, he was content with simple comparisons of the properties that he investigated, characterizing them as being ‚smaller,‘ ‚bigger,‘ or ‚the same‘ as each other; his allegations of their proportionalities are thus unproven. His concept of impulse lack exact definition, but despite these shortcomings, his observations and conclusions are generally right. He was able to distinguish different qualities of spheres and to state the concepts of solid bodies and of quantity of motion. He also stated the correct relationship between the duration of the oscillation of a pendulum and its length and proposed using a pendulum for measuring short periods of time (for example, for taking the pulse of a patient). He further described the properties of free fall. Here the question of the influence on Marci of Galileo's *Discorsi* must arise. The *Discorsi* was published a year before *De proportione motus*, and Marci certainly read it before publishing his own book, but the exact extent to which he drew upon it remains unknown. Certainly Marci had less skill than Galileo in reducing mechanics to mathematical forms; but if, in later years, he chose to emphasize the divergence of his opinions from Galileo's he may well have been influenced by the attitude of the church toward the latter's writings.

Marci also carried out research in optics, setting down most of his results in *Thaumantias liber de arcu coelesti* (1648). Prior to Marci, the prevailing theory of color assumed that light was modified by the action of a medium to produce color. Most theories were based upon the assumption that color was simply a modification of light varying between whiteness and blackness. Marci preceded Isaac Newton in his belief that „Light is not changed into colors except by a certain refraction in a dense medium; and the diverse species of colors are the products of refraction.“ Although he thought that different colors were caused by varying angles of incidence across the 1/2 degree apparent diameter of the sun, he stated that each color was condensed or disentangled

from the others after refraction into homogeneous or elementary colors of red, green, blue and purple, and that no further change in color was obtained by additional refraction of elementary colors. Marci at some time came into possession of the Voynich Manuscript, apparently upon the death of its former owner, the alchemist Georg Baresch.- Lit.:

Provenance: Friderich (handwritten on front-fly), Königl. katholisches Gymnasium Golgau (ink inscript. & stamp on title); R. D. Godefredi Schönborn, (?) Glogoviensis (on title). Other German Libraries also have books from this provenance, like Freiburg. KVK: Stabi Berlin (two copies; one with a last leaf with with three engravings, also in the book on: B1 verso, C2 recto and D2 recto); Bamberg, Nürnberg, Stabi München; Dt. Museum; BNF; ETHZ (without the plate); Cambridge, BLL, Manchester, UCL; Cornell.

MAYOW, John.

Johann Mayow's chemisch physiologische Schriften. Aus dem Englischen übersetzt von D. Joh. Koellner, Pfarrer zu Tüngeda im Gothaischen. Nebst einer Vorrede von Alex(ander) Nicol(aus) Scherer. 2 parts in two vols.- Jena: bey Johann Christian Gottfried Göpferdt, 1799. 8vo (210 x 128 mm) XXII, 252 pp., (4), (2), 259-456 pp., (12), (2) with six fold. engraved plates. Modern half calf period style with marbled boards, printed on strong paper, probably a large paper copy, but cut down. Inside is fresh and like new.

€ 2.400.-

Exceedingly rare German edition of the ‚great classics of chemistry and medicine‘, here translated into German by the cleric and „bee-father“ Johann Koellner, and introduced by the chemist Alexander Nicolaus Scherer (1771-1824), counsellor of mines to the Duke of Saxe-Weimar and an early supporter of the antiphlogistic doctrine of Lavoisier. This translation was made to deepen discussions about priority claims regarding Lavoisier's discovery of the role oxygen plays in combustion. John Mayow (1643-1679), who took a degree in law at Oxford but became a physician at Bath, was a brilliant chemist and physiologist. Most of his chemical research was carried out in Oxford, and in his Tractatus quinque (1674) „he puts forward a theory of combustion similar to Hooke's but supported by beautiful and ingenious experiments. He concluded that air consists of at least two constituents, one of which is identical with Hooke's nitre air, which Mayow calls the nitro-aerial spirit, which supports combustion and respiration, whilst the other constituent, left as a diminished volume after combustion or respiration, is inert. His experiments are described in great detail, and his careful investigations foreshadowed the discovery of oxygen a century later. The book is also a classic of physiology and has been described as ‚one of the world's great masterpieces‘.

With the passage of time, Mayow's special originality faded, even in the minds of his supporters; and he became generally but vaguely identified with Boyle, Hooke, Tower, and those other seventeenth-century virtuosi who speculated on the role of the air in respiration and combustion. With the discovery of oxygen (Priestley, Lavoisier) the ground shifted considerably. Lavoisier himself had a copy of Mayow's book in his library, and several of his ideas and experiments seem to show important traces of Mayow's techniques and perhaps even his theories. Lavoisier's contemporary Fourcroy discussed Mayow explicitly and remarked that his experiments had been more ingenious than those of his much noted countrymen Boyle and Hales. In England, no doubt due in part to the hunger for national priority, a small Mayow revival began. Participating with various degrees of enthusiasm were Thomas Thomson, Thomas Beddoes, and G. D. Yeats. Among the claims made for Mayow were that in 1674 he already knew the true cause of increased weight in metallic calcination (fixation of nitro-aerial particles = oxygen) and clearly recognized that certain bases are made acid by the addition of nitro - aerial particles (= oxygen, the acidifying principle).- not in Neville Historical Library, not in Cole; Partington II, 582; Ferchl 348; DSB IX, 244; Thorndike VIII, 424; Heirs of Hippocrates 411; Duveen 397; Notable Medical books 83; G/M 578 (all for other eds.)

MECHLENBURG, Ezechias Gustav von.

„Rapport der auf Königlichen allerhöchstem Befehl nach Deutschland gethanen Reise.“ (Copenhagen, 17ten October 1769) German **manuscript** in brown ink in a fine legible gothic hand on heavy paper. The manuscript contains a few text-illustrations and 13 finely executed manuscript plates, numbered I to XII showing all sorts of German artillery (Canons, howitzers, gun-carriages, et al.) in fine details often with measuring scales. Imp.- Folio (510 x 350 mm) 97 unnumbered pages, signed and dated after the foreword by Mechlenburg. Contemporary marbled boards, rubbed and soiled, wear to extremities, corners bumped. Clean and fine inside, only little finger soiled, edges partly wrinkled.

€ 8.000.-

Finely executed unpublished (authorial ?) manuscript (or early transcript) by the Danish Artillery officer Ezechias Gustav von Mechlenburg (1742 - 1804) of a three month travel to Germany to study the artillery of different German states in order to reform and improve the Danish-Norwegian artillery and fortification. On his travel he

visited Leipzig, Braunschweig, Wittenberg, Dresden, Magdeburg, Zorgau, Potsdam and Berlin and became friend to Gerhard von Scharnhorst. The manuscript is divided in four parts: 1. Von der Einrichtung des Chursächsischen Artillerie- Wesens; 2. Nachrichten von der Oesterreichischen Artillerie; 3. Nachrichten von der Preussischen Artillerie; 4. Nachrichten von der Braunschweigischen Artillerie.

The author, Ezechias Gustav von Mechlenburg entered the Danish artillery in 1754. In 1776 he became the Adjutant General of King Christian VII, and in 1778 he accompanied the Prussian campaign against Austria. In 1788 he commanded the artillery in the war against Sweden as Lieutenant Colonel, in 1792 he received command of the entire artillery corps. He taught at the Artillery Cadet Institute, made experiments with different artillery and corresponded with Scharnhorst on technical questions of artillery. In 1801 he led a command in the war against Britain, after which he became major general and commander of Frederikstad Fortress. He was probably involved in an offer to Scharnhorst made in 1795, but rejected by him, to take up Danish service. A manuscript on ballistic experiments by Mechlenburg is in the Preussische Staatsarchiv (GStA PK VI. HA NI Scharnhorst, Nr. 193 fol. 2-38).

The mid-18th Century saw the development of mobile field artillery. Ballistics engineers and metallurgy technicians introduced reforms that lowered the weight of gun tubes while other experts built lighter gun carriages. Gun calibers were standardized, easing the logistical headache caused by a multitude of calibers.

Benjamin Robins put artillery on a scientific basis in 1742. Bronze - an alloy of 10 parts copper to one part tin - was preferred for cannons because it was lighter than iron and more durable. At that time, cannons were cast hollow around a core and the core often moved within the mold, producing an imperfect bore. This problem was solved at The Hague foundry in 1747. Maritz began casting guns as a single, solid block, and then drilling the bore on a large machine. The Dutch tried to maintain the secret, but the new process soon became widely known in Europe. After Maritz's invention, a cannon could be manufactured with a better-aligned bore and tighter tolerances. This resulted in less windage - the gap between the cannon ball and the bore - which meant less gas pressure escaped, so that smaller gunpowder charges could hurl the projectile farther and more accurately. When less gunpowder could be used to achieve the same power and range, the ballistics experts found that cannon barrels could be made thinner, shorter, and lighter. The army of the Habsburg Monarchy discovered that its artillery was outmatched by Prussian cannons during the War of the Austrian Succession. In 1744, the new Director General Joseph Wezel I., Prince of Liechtenstein began a series of reforms to improve the design of Austria's field artillery and provide training to its gunners. By the start of the Seven Years' War the Austrians upgraded their artillery with lighter cannons and introduced a very good howitzer. These were so successful that other nations rushed to manufacture similar weapons. In France Gribeauval, who served in the Austrian artillery in 1756-1762, got a first-hand look at the new field guns. Upon his return to France, Gribeauval was requested to reorganize the artillery. Gribeauval's reforms encompassed not only the cannons, but the gun carriages, limbers, ammunition chests, and the accompanying tools. The system's field guns included 4-, 8-, and 12-pounder cannons and 6- and 8-inch howitzers. The gun barrels were cast shorter and thinner, while gun carriages were built lighter and narrower. These improvements dramatically reduced the weight of an artillery piece. The carriages were standardized and built with interchangeable parts. The new system incorporated other innovations that were widely shared in Europe. Mechlenburg's travel report must be seen against these background of artillery reform all over Europe.- DBL XI, 204; Hamberger, Gelehrte Teutschland X, 263; Kordes, Lexicon 216.

mineral classification

MOHS, Friedrich.

Grund - Riß der Mineralogie. 2 Vols.- Dresden, Arnoldischen Buchhandl., 1822 - 1824. 8vo (215 x 135 mm). LXII, 604 pp., 1 Bl.; XXXVI, 730 pp., 30 pp., 1 Bl. with 15 fold. engraved plates. Contemporary black paper-card boards, red morocco lettering label on spine, rubbed and soiled, corners bumped. Slightly browned, occasional minor foxing. Vol. one with occasional pencil annotations. Fine and untrimmed copy. € 1.800.-

First edition, very scarce (Schuh), of this rare work in which Friedrich Mohs explains his ideas concerning crystallography and sets down the basis for a new mineral classification system, which he expanded in 1832. The first volume of this work, centering on crystallography reached essentially the same conclusions as did Christian Samuel Weiss (although Mohs does not credit Weiss with the discovery, thus spawning a mutual dislike). Mohs extends, however, the four crystal systems proposed by Weiss, namely: rhombohedral (hexagonal), pyramidal (tetragonal), prismatic (orthorhombic), and tessular (cubic), with the addition of two new systems whose crystallographic axes were not mutually perpendicular. These new crystal systems were later named the monoclinic and triclinic, and fully described by Karl Friedrich Naumann in 1824. The second volume of the *Grundriss* contains a

systematic description of minerals, founded on a natural history method with classes, orders, genera, and species. The principal addition to the mineral descriptions not seen in previous authors is the explicit mention of the crystal system to which a given mineral belongs. William Haidinger translated the work into English in 1825.

The German mineralogist Carl Friedrich Christian Mohs (1773 – 1839) was educated at the University of Halle, graduating in 1797. Afterwards, he attended the Bergakademie in Freiberg and studied under Abraham G. Werner. On the invitation of his fellow students, George Mitchell and Robert Jameson, Mohs traveled to Great Britain in 1802. In 1811, he was appointed curator of the mineral collection at the Johanneum in Graz, Austria. Upon the death of Werner in 1817, Mohs succeeded his former teacher as professor of mineralogy at the Freiberg Bergakademie. Then in 1826, he accepted a position as professor of mineralogy and superintendent of the Royal Imperial mineral collections in Vienna.- Pogg. II, 172; DSB IX, 448; Schuh 2175; Sinkankas 4522; Freilich sale 399; Provenance: G. W. Schulenburg, 1827 (name on endpapers)

Moon invented

NASMYTH, James Hall; CARPENTER, James.

The Moon: Considered as a Planet, a World, and a Satellite.- London: John Murray, Albemarle Street, 1874. 4to (275 x 210 mm). XVI, 189 pp., (1, blank) including half-title, without advertising leaf dated December 1873 at end. With 46 text illustrations, and 25 plates on 24 leaves, comprising 12 mounted Woodburytype of lunar models, 6 photogravures, 4 autotypes, 2 lithographs, and one chromolithograph. Contemporary red morocco binding, gilt spine in compartments, fine gilt printed covers, gilt edges, minor soiling. Text little age-toned, some spotting and foxing to plates, marbled endpaper at back removed, one page of the introduction restored before binding (shorter leaf), but a very fine copy.

€ 4.000.-

First edition of James Nasmyth (1808–1890) and James Carpenter classic & influential text on lunar geology. It was due to Nasmyth's superior talent in visual communication, that this book unfortunately perpetuated a misconception – that lunar craters were volcanic – for almost 100 years. It was not until 1969, when the Apollo 11 space mission brought back geologic samples from the moon, that the impact theory gained credibility and the volcanic hypothesis was finally abandoned.

At the time of their publication, Nasmyth's illustrations were held in the highest regard by both the public and the scientific community: „perfectly enchanting photographs, which one could never be tired of looking at.“ (Isabella Herschel)

Nasmyth's first drawings of the moon were made as early as 1842, and were first exhibited in Edinburgh in 1850. The first public presentation of photographs of Nasmyth's models took place in 1856 at Manchester Photographic Society Exhibition, entitled: „Portions of the moon's surface, from models by James Nasmyth, Esq.“; the photographs are attributed to Joseph Sidebotham (1824-1885), known for his mastery of the waxed paper negative process. Two years later, in 1858, Nasmyth learnt the wet-collodion process and began making his own salted paper prints from glass plate negatives. In 1864, John Herschel and his daughter Isabella visited Nasmyth, where Nasmyth entertained them with his many demonstrations that aimed to explain the formation of the lunar surface. The tedious tasks of photographing the models and sending the glass plate negatives to the various printmakers were all done by Nasmyth, the writing of the book was completed with the help of the astronomer James Carpenter.

This edition includes seven different printmaking processes from six print companies, incl. two different variants of the Woodburytype. The first edition sold out quickly at a price of GBP 1.10s (approx. 1300 \$ today), resulting in a second edition published within a month (1874).

The book was among the first to be illustrated with photo-mechanical prints, which were lauded by a contemporary reviewer as among the most 'truthful and striking representations of natural objects' ever encountered by a student of science. However 'truthful' they may appear, though, the illustrations are not real photographs of the moon – they are curious, hybrid objects in which manual, mechanical and indexical processes are densely layered. The book was the culmination of decades Nasmyth had spent studying the moon through a large telescope of his own design. During that time Nasmyth, a retired industrial engineer and amateur astronomer, produced numerous studies and maps of the moon, which recorded its topographical features with extraordinary lucidity and precision. In order to reproduce the variegated textures and luminous dimensionality captured by his drawings, Nasmyth and Carpenter looked not to expensive steel engraving but rather to photography. And they aimed the camera not at the lunar surface itself but, instead, at a series of hand-made plaster models based on Nasmyth's drawings. Technical limitations meant that, while it was already possible to photograph the moon, the kind of closely framed, intensely magnified views Nasmyth and Carpenter sought could only be achieved from a model. The finished plaster models were photographed outdoors in

raking light, which served to both recreate the oblique angle of the sun's rays on the lunar surface and reveal the subtle topographical variations of the model's surface.

„Photographers sometimes adopted realism over naturalism in order to render motifs more literally. On occasion, however, the reverse was true: photographers attempted to deceive through extremely literal treatment. The artist Les Levine once claimed iconoclastically that the folksaying ‚the camera never lies‘ is a lie. Nasmyth and Carpenter's *The Moon* presents an elaborately devised model photographed with the clarity of a subject at an arm's distance. The deception was necessary because successful astronomical photographs of sharp definition and good contrast were not possible until the twentieth century with the advent of sensitive films and efficient lenses. The Woodburytype proved to be exceptionally effective illustrations and, doubtless, many readers were misled to think that they were seeing the face of the moon itself.“ (Truthful Lens, pp. 38). „The Woodburytype has no grain whatsoever, because it does not use cracks or dots to reproduce tone. Instead, a relief mold is made of the image in lead, so that the areas of dark tone are deep and light tone shallow. Ink suspended in gelatin is cast in the mold, and the resulting print produces contrast by the thickness or thinness of the ink.“ (Ashworth, 20) The first three editions reveal the aesthetic variations in the illustrative plates due to reproduction and print processes used. These processes include: engraving, photogravure, heliotype, lithograph, chromolithograph, and four different variations of the Woodburytype. In the third edition of the book, printed in 1885, many of the heliotypes from the first edition were reproduced as woodburytypes, and some were noticeably altered. The resulting images offered greater tonal contrast and were able to capture even more of the models' textural details. It is perhaps fitting that these woodburytypes took on a kind of topography of their own - the dark expanses and inky lines that play across their surface are subtly but noticeably raised up from its more muted passages.- *The Photobook*, p.51; Ashworth, *The face of the moon*, Linda Hall, 20; Laura Margaret Ramsey. *Phases of the Moon. ... Theses*, 2009.

a key document

whether Newton or Leibniz had priority in discovering differential calculus (Norman)

NEWTON, Isaac.

The Method of fluxions and infinite series with its application to the Geometry of curve-lines to which is subjoin'd a perpetual comment upon the whole work.- London: Henry Woodfall, 1736. Quarto (264 x 209 mm). Contemporary paneled calf, re-backed and re-cornered with orange morocco label, red speckled edges. Engraved plate (facing p. 273), errata, woodcut diagrams throughout. Light toning to title, contents clean; a very good copy, complete with the sometimes - wanting plate. One page with repair.

€ 28.000.-

First edition of Isaac Newton's work on fluxions, one of his greatest Mathematical works, an interesting copy with some early corrections or notes in ink and pencil. This is Newton's fullest exposition of the calculus; though the last of his works on calculus to be published, it was the work which he himself intended to publish first, in Latin, in 1671. The first page of the manuscript (preserved in Cambridge University Library) is lost and the title *De Methodus Fluxionum* was supplied by John Colson when he first published it in this translation, with his own extensive commentary. Written in 1671, Newton's Fluxions is a key document in the controversy over whether Newton or Leibniz had priority in discovering differential calculus. Newton did not publish anything on the calculus until after 1700, whereas Leibniz began publishing papers on the subject in 1684; however, Leibniz's manuscript notes on the calculus date back only to 1673, eight years after Newton began investigating the subject. By 1671, Newton was in a position to give his clearest statement to date of the fundamental problem of the calculus, and to present a successful general method (Norman Catalogue). In the Method, Newton gives the solution of a series of problems in illustration of this analytical art, mainly problems of maxima and minima, tangents, curvatures, areas, surfaces, volumes and arc lengths. With qualities represented as generated by continuous flow, all of these problems can be reduced to the following two (one the inverse of the other). 1. Given the length of the space at every time, to find the speed of motion at any proposed time. 2. Given the speed of motion at every time, to find the length of the space described in the proposed time. This is among the greatest generalizations in the history of mathematics, reducing the great majority of problems faced by mathematicians of the time to two basic problems (Cambridge Companion to Newton). It was often lamented that the world had had to wait for so many years to see Newton's masterpiece on fluxions. It is astonishing to realize that publication sixty years beforehand would have changed the history of the calculus and would have avoided for Newton any controversy over priority. In 1736 all the results contained in Newton's treatise were well known to mathematicians. However, it was too concise for a beginner, and Colson added almost 200 pages

of commentary. His commentary contributed to the establishment of a kinematical approach to the problem of foundations (N. Guicciardini, *The Development of Newtonian Calculus in Britain 1700-1800* pp. 56-57).

Provenance: contemporary corrections and a few side notes by an unidentified reader to several equations or text on pages 50, 53, 60, 68, 79, 87, 93, 94, 95, 96, 107, 108, 110, 111, 112, 113, 114, 119, 120, 132, 135, 138, 157, 275; twentieth-century bookplate of the physicist and writer Edward Neville da Costa Andrade (1887-1971) on front paste-down.- Babson/Newton 171; ESTC T18629; Gray p. 46; Lowndes p. 1674; Norman 1595 (misdated 1734); Wallis 232.

Collecting minerals in Italy for Abraham G. Werner

ODELEBEN, Ernst Gottfried Freiherr von.

Beiträge zur Kenntniß von Italien, vorzüglich in Hinsicht auf die mineralogischen Verhältnisse dieses Landes, gesammelt auf einer im Jahr 1817 unternommenen Reise nach Neapel und Sizilien. 2 parts in two vols.- Freiberg, Craz und Gerlach, 1819. 8vo (180 x 103 mm) VI, 1 Bl., 320 pp.; 4 Bl., 343 pp. with two lithographed maps of the Euganean fields and of Elba and 4 fold. plates. Brown papercard boards with green title label and gilt spine, little rubbed and soiled, partly spotted, else fine copy.

€ 1.600.-

Rare work on a mineralogical travel account to Italy to study geological structures and mineralogical deposits in Southern Italy undertaken by the military man, mineralogist and mineral collector Ernst Gottfried von Odeleben (1773-1828) on advice of the geologist Abraham Gottlob Werner who provided him with instructions what to collect and look for (precise information about the real and supposed volcanoes of Italy; collect sample fossils and minerals where possible). In the first part, he reports on his journey via Vienna to Trieste, Venice, Verona, Parma, Bologna, Florence, the island of Elba and until his arrival in Rome. In the second part of his work, von Odeleben reports on his stay in Rome, the journey to Naples and observations about Vesuvius. An intended third part on Sicily was never published due to the death of the publisher. Odeleben was from 1789 - 1805 and 1812 - 1815 in Saxon military service, discharged as cavalry captain, later living on his estate in Kleinwaltersdorf near Freiberg. At the age of 35, he took part in the college on geognosy and oryctognosy at the Royal Saxon Mining Academy with Abraham Gottlob Werner (1749 - 1817), who became a friend, and since 1814 Odeleben was in contact with Goethe whom he supplied with minerals. After his travel to Italy he established himself as mineral dealer at his estate and sold minerals to other geologists incl. Johann Wolfgang von Goethe via the chief miner Friedrich Wilhelm Heinrich von Trebra. His Mineral-Collection was sold in 1828: „Verzeichniß der im Nachlasse des Baron von Odeleben zu Freyberg vorgefundenen Mineralien, welche den 6. Octobr. 1828 u. folgende Tage, von Nachmittags 2 Uhr an, im Teuchertschen Hause am Erbischen Thore allhier zu Freyberg gegen sofortige baare Bezahlung öffentlich versteigert werden sollen.“ - Hamberger/Meusel XIX, 7; Tresoldi II, 117; Kraemer/Gendolla 168; Oswald. *Italienbilder*. pp. 198; Karhof/Köhne pp. 184; Schmid. *Goethe und die Naturwissenschaften*. pp. 556; not in Schuh.

Dream of a perfect Exotic World

ORLOWSKI, Hans.

Der blaue König. (The blue king, an Exotic Fairy tale). Series of eight original watercolors from the estate of the artist, some heightened with gold paint and with mounted transparencies paper in different colors. Each sheet with handwritten titles and text. (Berlin, around 1922/23). Sheet sizes from 190 x 135 mm to 285 x 185 mm. Mounted under passe-partout, within modern cloth folder. Well preserved in strong colors.

€ 12.000.-

Immensely charming original watercolors in expressionism style of an unknown fairy tale cycle (Der blaue König) from the expressionist phase of the then young Berlin artist Hans Orłowski (1894-1967), who later turned away from expressionism during a trip to Paris in 1924.

The images might have been intended to illustrate a version of „Bluebeard“ (*Barbe bleue*), a French folktale, the most famous surviving version of which was written by Charles Perrault in 1697. The tale tells the story of a wealthy man in the habit of murdering his wives and the attempts of one wife to avoid the fate of her predecessors. This version of the fairy tale is located within the black community in Germany (or German Southwest Africa), speaking of „Negern“ and one image with text: „Made in Germany“.

In one version of the story, Bluebeard, is a wealthy and powerful nobleman who has been married several times to beautiful women who have all mysteriously vanished. When Bluebeard visits his neighbor and asks to marry one of his daughters, the girls are terrified. After hosting a wonderful banquet, the youngest daughter decides to be his wife and she goes to live with him in his rich and luxurious palace in the countryside, away from her family. Bluebeard announces that he must leave for the country and gives the keys of the château to his wife. She is able to open any door in the house with them, each of which contain some of his riches, except for an underground chamber that he strictly forbids her to enter lest she suffer his wrath. He then goes away and leaves the house and the keys in her hands. She invites her sister, Anne, and her friends and cousins over for a party. However, she is eventually overcome with the desire to see what the forbidden room holds, and she sneaks away from the party and ventures into the room. She immediately discovers the room is flooded with blood and the murdered corpses of Bluebeard's former wives hanging on hooks from the walls. Horrified, she drops the key in the blood and flees the room. She tries to wash the blood from the key, but the key is magical and the blood cannot be removed. Bluebeard unexpectedly returns and finds the bloody key. In a blind rage, he threatens to kill his wife on the spot, but she asks for one last prayer with her sister Anne. Then, as Bluebeard is about to deliver the fatal blow, Anne and the wife's brothers arrive and kill Bluebeard. The wife inherits his fortune and castle, and has the dead wives buried. She uses the fortune to have her other siblings married then remarries herself, finally moving on from her horrible experience with Bluebeard.

With Hannah Höch, Rudolf Bredow and Nikolaus Sagrekov, the German artist Hans Orlowski (1894- 1967) was trained before the First World War by Harold Bengen at the Arts and Crafts Academy in Berlin-Charlottenburg. Together with Georg Tappert and Max Pechstein, Harold Bengen was a co-founder of the New Secession artists' group. Orlowski's studies were interrupted by the First World War where he served as a soldier in Serbia and was wounded early on. He was employed, from 1915, as a draftsman in the War Ministry and produced his first lino- and woodcuts then. He returned to art school in 1918, now studying under Philipp Franck, and obtaining his degree in 1919. In 1918 he was part of the Berlin Secession of „alternative“ artists. Between 1921 and 1945 Orlowski taught at the Decorative Arts Academy at the Charlottenburg. During these years he also created numerous woodcut images and illustrations. In 1924 he undertook a trip to Paris and turned away from Expressionism, to the point of personally destroying more than sixty of the paintings he had produced between 1920 and 1924. In 1934 Orlowski's first solo exhibition was presented at the Gallery of Fritz Gurlitt.- Provenance: From the estate of Hans Orlowski.

Natural history of elephants

PETRI von Hartenfels, Georg Christoph.

Elephantographia curiosa, seu elephanti descriptio, multisque selectis observationibus.- Erfurt, Johann Heinrich Grosch for the author, 1715. 4to (200 x 160 mm). 15 Bll., 284 (recte 286) pp., (2) With engr. frontispiece, 26 (1 fold.) engraved plates and one text engraving. Browning throughout, engr. plates shaved to borders, and partly to the edge of the image. Bound in contemp. calf, spine richly gilt in compartments, some rubbing, edges and corners neatly restored in places, red edges, underlinings to one page. Fine copy. € 4.500.-

First edition of the first special monograph on elephants, with beautiful illustrations after designs by Tobias J. Hildebrandt. The copperplates show various methods of capturing and domesticating elephants, as well as their use in commerce, war, sport, and entertainment. The text also covers fossil remains of elephants, and the differences between the Indian and African elephant. The folding plate shows an elephant skeleton with anatomical details. The relevant zoological and travel works were used, from which the engraver, Jakob Petrus from Erfurt, also took his models. He succeeded in creating a uniform sequence of the best Baroque book illustrations from the heterogeneous and in part completely misrepresented original depictions (see Aubry's herd of elephants in Ludolf's work on Ethiopia. The German physician, natural scientist, university professor Georg Christoph Petri von Hartenfels (1633 - 1718) was the son of a merchant. After serving Count Heinrich V von Reuss zu Greiz (1655 as courtier, 1657 as personal physician), he became garrison medical officer in Erfurt and from 1666 on he made a career in the electoral and municipal medical service and in the Erfurt council. His last position was chief mayor, councilor and private physician to the Elector. He was a member of the German Academy of Sciences (Acad. Curios.).- Nissen, ZBI 3149; Eales I, 1256; Wellcome IV, 347; Schwerdt II, 68; Wood 518.

The Art & Theory of Travel

(POSSELT, Franz).

Apodemik, oder die Kunst zu reisen. Ein systematischer Versuch zum Gebrauch junger Reisenden aus den gebildeten Ständen überhaupt und angehender Gelehrter und Künstler insbesondere. 2 Vols.- Leipzig:

Breitkopf, 1795. 8vo (165 x 105 mm) XXXVI, 740 pp.; VI, 598 pp. Contemporary plain paper-card boards with handwritten title on spine, rubbed and soiled, partly spotted, but good copy.

€ 1.600.-

Rare „How-to-do“ hand-book on the theory & art of travel by the later librarian of the Prague University Franz Posselt (1753 - 1825) who worked first as an educator for Duke Joseph and Duke Johann von Wallis. With both he traveled extensively through Germany, France and England and learnt at least 15 languages. His only published work is this manual for the preparation of the „Grand Tour“: „Das bloße Reisen in verschiedene Länder, und das bloße gedankenlose Anschauen von Merkwürdigkeiten lehrt an und für sich nichts.“ The first volume is devoted to fundamental questions, of which the detailed notes for travelers from different scientific disciplines are particularly informative, and ends with a chapter on „whether and how women should travel?“ The second volume then deals with mundane practical questions, such as travel planning and preparation, travel clothing, passports, money and the importance of letters of recommendation. It gives hints and advice for mathematicians (astronomy and naval, hydraulic and mechanical engineering), natural historians incl. geologists, linguists, archaeologists and artists. In it, he recommends visiting public salons, making acquaintances with famous scientists, and visiting libraries while traveling to study unknown works, learn about new instruments and machines, examine them, and obtain models and construction drawings. Finally, he points out that he is not aware of any travel descriptions from a mathematical point of view, but he recommends Johann (III) Bernoulli's ‚Lettres astronomiques‘ (1781). Posselt names England, France and Switzerland as worthwhile destinations, since the most important collections are to be found in these countries. Posselt advises, entirely in the bibliophilic sense, to look for opportunities to acquire old and important manuscripts for oneself while traveling. If this is not possible, handwritten copies also represent a benefit of the trip. He also points out that traveling is even more dangerous for women than for men, and in this respect travel is not advisable. But if women travel, this should be done solely with a view to their destiny, because ‚their profession is the married state‘. Travel is meaningful for women if it serves the improvement of education and moral perfection. A projected philosophy of languages for which he stayed at least one year at Göttingen library, was never published.- Erman/Horn I, 7845; Holzmann/Bohatta I, 2786.

RANTZAU, Heinrich.

Diarium sive Calendarium romanum, oeconomicum, ecclesiasticum, astronomicum, et fere perpetuum, ad dies veteris Iuliani & novi Gregoriani anni accommodatum. Ex Quo Festa Sanctorum, Nonae, Idus Ac Calendae Romanorum, mensium singulorum labores & actiones, ortus & occasus Solis, cum vero illius loco, quantitas dierum ac noctium, figurae domorum coelestium ad aliquot Poli Elevationes, & pleraque vulgata opinione & observatione celebria quorundam rei Medicae ac Rusticae documenta, abque operosa aliqua computatione desumi possunt; Opus Astronomis, Medicis, Patribusfamilias, Militibus, Viatoribus utilissimum.- Witebergae (Wittenberg): excudebat Christoph Axinus (Axin), 1593. 4to (195 x 160 mm) 8 Blk., 313 (i.e. 413) pp., (1), 1 Bl. with printers woodcut mark. Contemporary vellum, rubbed and soiled, ink spots on cover. Browning, spotted, dust-soiled, a few pages dog-eared, ink spots, a used copy in its first binding. € 3.800.-

First edition of this heterodox work, one of two or three variant prints of the same year, this one probably the first, at least with the catalogue of Fairs at the end, often missing. The other variant with Paul Hellwig as second printer. To include a work published by Rantzau in Hamburg (1590) under the title Ranzovianum Calendarium.

„Heinrich Rantzau (1526-1598), governor of Holstein, a wealthy bibliophile and conspicuous producer of humanistic books, is best known as the friend who lent one of his many castles to Tycho Brahe when the Danish astronomer was fleeing from his Uraniborg observatory to the court of Rudolf II. It was in Rantzau's Wandenburg Castle that Tycho wrote and printed his *Astronomiae instauratae mechanica* (1598) that served as his calling card for his arrival in Prague. According to his 16th cent. chronicler, Rantzau's library and treasure room contained 6300 books, graphics, globes, clocks, and astronomical instruments - a truly fabulous collection by any standard Rantzau produced six books related to astrology ... a wealthy nobleman as Rantzau employed various scholars to help him and to ghost write his books.“ (Owen Gingerich).

Even more than the „*Catalogus Imperatorum*“ this work is of heterogeneous character. After discussing the calendar division and general health rules, the economic activities and medical advice are treated month by month in the course of the year (pp. 1-204). This is followed by detailed explanations of the basics of calendar calculation (beginning of the year, seasons, computus) according to the Julian and Gregorian calendars (pp. 205-300). On pp. 334-434

instructions for the use of ephemerides, treatment of important astronomical quantities (length of the tropical and sidereal year, equinoxes and solstices, precession, equation of time) are treated; furthermore a house table for the polar heights 46, 48, 50 to 60° according to the rational manner of Regiomontanus, taken from the *Horoscopographia* of Thomas Finck (pp. 368–421) and a star directory for the epoch 1600 are added. The latter includes ecliptic longitudes, latitudes, magnitude, declination, right ascension and mediation secundum (Copernici observationem). This is followed by numerous astrological chapters (pp. 435–530), which first deal with the general, basic topics (division of the zodiac, houses, five methods of house division, nature and properties of the seven planets and lunar nodes, zodiacal dignities of the planets). One chapter (pp. 468–483) describes the effects of the planets in the twelve houses and their significance according to the late antique author Paulus Alexandrinus, of whose introduction to astrology Heinrich Rantzau possessed a manuscript. This is followed by extensive discussions of the eclipses for various activities as well as forecasts based on eclipses and comets (pp. 531–621). The horoscope of Heinrich Rantzau is discussed in detail in two versions: Conrad Dasypodius based the calculation of the planetary positions on the Alfonsine tables, while Thomas Finck used the Prutenian tables. The book concludes with a paragraph on the garden of Rantzau's Breitenburg. - VD16 R 234

Provenance: Johan Henri Gotman 1668; Georg Hanaeus, 1681. The German-Danish physician Georg Hanaeus (1647 - 1699) was a philosopher & professor of ethics in Odense. He also became provincial physician for Funen. On March 24, 1684, Georg Hanaeus was admitted as a member (matriculation number 119) of the Leopoldina.

„Türkengerät“

REGIOMONTANUS (Johannes Schöner, ed.)

Scripta de torqueto, astrolabio armillari, regula magna Ptolemaica, baculo(ue) astronomico, & observationibus cometarum, aucta necessariis, Ioannis Schoner Carolostadii additionibus.- Nuremberg, J. Montanus (Johann Berg) and Ulrich Neuber, 1544. 4to (190 x 142 mm) [4], 84, [5] Bll. / leaves incl. full-page woodcuts and geometrical diagrams (bound with:)

PLINIUS Secundus. (Jacob Millich, comm.) *Liber secundus de mundi historia, cum commentariis Iacobi Milichii diligenter conscriptis & recognitis.*- Schwäbisch Hall: Peter Braubach, March (colophon: September) 1538. 210 num., 7 nn. Bll./leaves with Italic, roman and greek types, woodcut initials and headpiece, 20 woodcut diagrams of celestial orbits, of which six are full-page. Missing the last blank. Fly-leaves removed; both works with slight water staining in the upper margin and small worming (six perpendicular worm tracks), slightly soiled and minimally browned. Wooden boards with a wide blind-tooled pigskin spine (clasps missing, back wooden board with damaged corner, slightly soiled and scuffed.

€ 7.000.-

First edition of unpublished smaller works written by the German mathematician & astronomer Johannes Regiomontanus (1436 - 1476), edited from manuscripts by the mathematician Johannes Schöner (1477-1547) who at the same time was concerned with the publication of Copernicus' *De revolutionibus orbium coelestium* (Nuremberg, 1543) and who also adds his own contributions. Bound with Jacob Milich's astronomical commentary on Plinius second book of the *Natural History* based on Regiomontanus' astronomy.

The subject of the first two papers by Regiomontanus and Schöner is the „Torquetum“, a medieval (Turkish or Arabian ?) complex and sophisticated astronomical instrument designed to take and convert measurements made in three sets of coordinates: Horizon, equatorial, and ecliptic. It is said to be a combination of Ptolemy's astrolabon and the plane astrolabe; in a sense it is an analog computer and was already depicted in print by Peter Apian. Then follows Regiomontanus' paper on the armillary sphere, Schöner's on the large Ptolemaic rule, Regiomontanus' tables of solar observations, and Schöner's short piece on the astronomical radii. Peurbach's *Quadratum geometricum* forms a significant part of the long final section on eclipses, comets and planetary observations by Regiomontanus and Bernhard Walther. Regiomontanus is known for his *Epitoma in Almagestum Ptolemaei* (1496), the first appearance in print of Ptolemy's *Almagest* in any form (Dibner Heralds 1; Grolier/Horblit 89; PMM 40) and his contributions were instrumental in the development of Copernican Heliocentrism in the decades following his death. A student and heir to Peurbach's efforts, who developed applications of solving problems by triangulation. Accurate charting of the stars would benefit from both mathematical method and improved sighting instruments (sextants, quadrants, and compass-like tools) and their use. Regiomontanus established a workshop for the construction of astronomical instruments and wrote detailed descriptions of these. Johannes Regiomontanus died in 1475, leaving behind a printing press, instruments and a library containing printed books and his and others manuscripts. Most of the library was bought by his friend Bernhard Walther (1430 - 1504), the merchant-astronomer at Nuremberg and then ended

up in the possession of Willibald Pirckheimer (1470 - 1530), the patrician friend of Albrecht Dürer. Pirckheimer sold on several of Regiomontanus' works to Johannes Schoener, who taught mathematics at the Gymnasium in Nuremberg. Regiomontanus' work on comets, which was listed in his own printing advertisement, was first edited and published by Schoener in 1531 as in English: *Sixteen Problems on the Magnitude, Longitude and True Position of Comets*. It was printed again, with several other works of Regiomontanus in 1544 but then with new improved diagrams to the text which were faulty before. One of the foremost scholars in mathematics and astronomy during this period, Regiomontanus was professor of astronomy at the University of Vienna before being appointed astronomer to King Matthias Corvinus of Hungary. With funds from his patron and fellow scientist Bernard Walther, he built an observatory in Nuremberg in 1471, and in 1472 erected his own private press in order to publish his discoveries satisfactorily. One of the first to realize the impact printing would have in disseminating scientific knowledge. His press was maintained until 1475 when he was summoned to Rome by Pope Sixtus IV to assist in the reform of the Calendar; his death at the age of 40 a year later brought his work to a premature end, a great loss to the developing science of astronomy.- Lit.: Steele, J. M. & Stephenson, F. R. Eclipse observations made by Regiomontanus and Walther; in: *Journal for the History of Astronomy*, Vol. 29, Part 4, p. 331 - 344 (incl. an English translation & commentary of the eclipse observations by Walther and Regiomontanus printed in the book); Richard L. Kremer. *How Did the Turquetum (or Torquetum) Get Its Name ?* in: *Scientific Instruments between East and West* (2019), pp. 70-105; Dekker, Elly; Kristen Lippincott. *The Scientific Instruments in Holbein's Ambassadors: A Re-Examination*. *Journal of the Warburg and Courtauld Institutes*. The Warburg Institute. 62 (1999) pp. 93-125. Reference: Adams R-279; Houzeau / Lancaster I, 2266; Lalande 62; Zinner 1857; VD 16 M 6569; STC 632 (see Mueller).

II.) Second edition (after the Hagenau 1534 edition) of the German mathematician, physician and astronomer Jacob Milich's most extensive and important commentary on the second book of Pliny the Elder devoted to the structure of the cosmos. Pliny starts with the known universe, roundly criticizing attempts at cosmology as madness, including the view that there are countless other worlds than the Earth. He concurs with the four (Aristotelian) elements, fire, earth, air and water, and records the seven „planets“ including the sun and moon. The earth is a sphere, suspended in the middle of space. He considers it a weakness to try to find the shape and form of God, or to suppose that such a being would care about human affairs. He mentions eclipses, but considers Hipparchus' s almanac grandiose for seeming to know how Nature works. He cites Poseidonius' estimate that the moon is 230,000 miles away and he describes comets, noting that only Aristotle has recorded seeing more than one at once. Book II continues with natural meteorological events lower in the sky, including the winds, weather, whirlwinds, lightning, and rainbows. He returns to astronomical facts such as the effect of longitude on time of sunrise and sunset, the variation of the sun's elevation with latitude (affecting time-telling by sundials), and the variation of day length with latitude. The author of this commentary, Jacob Milich (1501-1559), was a learned scholar and humanist, professor of mathematics and astrology at Wittenberg, friend and collaborator of Melanchthon. During his stay in Vienna, he devoted himself with zeal to the mathematical disciplines under the followers of Johann Peurbach and Johann Regiomontanus, which he introduced as the first, together with H. Volmar, at Wittenberg, where he settled permanently in 1524. Best known as the teacher and mentor of the mathematician Michael Stifel, the greatest German algebraist of the 16th century, and the astronomer Erasmus Reinhold, Jacob Milich became Dean of the Wittenberg university's philosophical and medical branches. „The author regards the second book of Pliny's Natural History as an admirable brief compendium, comprising the elements of astronomy and meteorology, to prepare students for more advanced studies in physics and astronomy.“ (Thorndike V, 387/88).- VD 16 P 3539. Adams P 1565. Thorndike V, 385-390. Zinner 1691; not in STC.

ROCHEFORT, Charles de.

Historische Beschreibung der Antillen Inseln in America gelegen. In sich begreifend deroselben Gelegenheit, darinnen befindlichen natürlichen Sachen, sampt deren Einwohner Sitten und Gebräuchen... von dem Herrn de Rochefort, zum zweiten mahl in Französischer Sprach an den Tag gegeben... Frankfurt a. Main: in Verlegung Wilhelm Serlin 1668. 12mo (139 x 80 mm) 10 Bll., 430 pp., 6 Bll., (2); 6 Bll., 514 pp., (2) with engraved title and 45 engraved plates. Contemporary vellum with handwritten title on spine, green edges, cover a little stained and with little missing piece at upper corner. Inside only slight signs of age. In the second part part some off-setting due to poor printing, clean and fine copy.

€ 3.200.-

First German edition, translated after the second French edition of 1665, of this important work on the islands of the Caribbean, the Antilles and their inhabitants and their natural history. Considered a Huguenot emigration guide to America, Rochefort also provides interesting details on Florida and Georgia, as well as contemporary information on

the European settlements developing on the Caribbean islands, particularly the French and British sugar plantations and a dictionary of Caribbean terms (Nahmens-Buch).

First published anonymously at Rotterdam in 1658, the book was often misattributed to the French lexicographer César de Rochefort (1630-90). Little is known of de Rochefort's (1605 - 1683) life, but it appears he travelled to the Caribbean to serve as a chaplain to French-speaking Protestants in the region. This work was based on de Rochefort's own research but also the writings of others such as Jean-Baptiste du Tertre. The Histoire is divided into two parts, the first dealing with the geography and natural history of the Caribbean with the second looking at its people and the use of enslaved labour in the colonies there. De Rochefort was also interested in Indigenous peoples and included a chapter on the Apalachee people of north-western Florida and present-day Georgia and a vocabulary of the Kalinago language, compiled by the Dominican missionary Raymond Breton and there is also a brief account of Greenland Eskimos, and one of the illustrations provides perhaps the best contemporary graphic image of both Eskimos and their garb. Its main purpose being the encouragement of Huguenot emigration to America. Its greatest contribution was the impressive marshaling of contemporary information on the Caribbean islands, especially the French and British colonies developing as sugar plantations. Besides its excursion, it is the Caribbean section, however, which is most significant, and therein are found detailed descriptions of the European settlement of the islands and their natural history, in perhaps the most useful single source of the century. Everett Wilkie has published a detailed article concerning this book, which supplies a wealth of discussion of the book, its authors and text. The engravings in the German translation are much simpler, but interesting from the point of cultural transmission. (William Ashworth; <https://www.lindahall.org/about/news/scientist-of-the-day/charles-de-rochefort>).- Cox II, 205; Landis III, 668/145; Brunet III, 206; Sabin 72314; VD17 3:301923C; VD17 3:301925T; Wilkie, The authorship and purpose of the Histoire Naturelle et Moral de Iles Antilles, an early Huguenot emigration guide; in Harvard Library Bulletin, New Series Vol. 2, No. 3, Fall 1991, pp.26-84; Barbier II, 819-820; Nissen ZBI 3448; sabin 72314; Chadenat)63; Palau y Dulcet 271895; Echeverria & Wilkie. French image 681.3; Cundall, Bib. of the West Indies, p. 99.

SCHEEL, Heinrich Otto von.

Rapport und Journal einer Minir Uebung auf Amack 1780. Abgefaßt und eingegeben von J. H. Scheel. German manuscript on paper in brown ink in a fine legible hand. About 25 lines each page. (Kopenhagen, ca. 1780). Folio (360 x 255 mm). Title (verso blank), 18 unnumb. leaves (last leaf verso blank), 5 numbered plates with hand-colored pen- and ink drawings, two plates (III and V) each with 2 movable elements (pop-up's). Contemporary half calf, covers lined with sprinkled paper.

€ 4.800.-

A first-hand account of detonation and blasting experiments of the Danish engineering corps on the island of Amack (Amager), nowadays part of the city of Copenhagen, by order of the general Heinrich Wilhelm von Huth (1717 - 1806) and written by the **first director of the military engineering academy in Potsdam**. The east coast of Amager originally consisted of a swamp area, through which the Danish military built a road in 1780, today's Amager Strandvej. The detonation experiments were done in connection with the road construction works, as the first book on explosives engineering was not published before 1793 by Gerstenbergck.

Von Huth was a Danish artillery general and politician, he studied mathematics in Leipzig and served in the Hessian army during the Seven Years War, as a military engineer and fortress builder. In 1763 von Huth became governor of Hanau and in 1766 he entered Danish service, where he was promoted to the position of lieutenant general and chief of the artillery and engineering corps. In 1772 he advanced to the position of general of the infantry, and of chief of the general staff in 1781. After Ove Høegh - Guldberg was toppled he was appointed to minister of state in 1784. Heinrich Otto von Scheel (1745-1808) was a Danish lieutenant colonel in high esteem by Friedrich II. (the Great) and later a Prussian major general and first director of the military engineering academy in Potsdam, a position he held until 1804. Our manuscript written by Scheel himself, authenticated by his signature on title starts with a list of all officers and sappers who were involved in the experiment, followed by a detailed list of tools and materials shown on plates I and II, then the report of the daily progress of the blasting experiment, which lasted from 26.8. 1780 to 9.9.1780, in full detail and accompanied by theoretical considerations regarding different size ratios of the length and depth of the tunnel in relation to the size of the explosive device, among others. Plate III shows the test arrangement with the position, length and depth of the tunnel in top view by means of two movable elements. Plate IV shows the blasting effect with an exact representation of the crater and the nearby surroundings. Plate V depicts different cross-sectional views of the tunnel and the representation of two different explosive devices by means of movable elements. A fine manuscript, the plates with detailed and finely executed drawings.

Provenance: From a Danish military library with stamp on front paste-down and fly-leaf. This library holding is referred to in the article on Scheel in the Dansk biografisk Lexikon, edited by Bricka. Bought at auction in Kiel in 1836 at d' Aubert sale.- ADB L, 520-522 (von Huth); Bricka. Dansk biografisk Lexikon. XV, p. 90-92; Anker. Norske Generalspersoner p. 222 (both for Scheel); cf. Jähns. Geschichte der Kriegswissenschaften p. 2374 for Scheel's first book „Mémoires d'artillerie, contenant l'artillerie nouvelle ...“, published in 1777.

Lavoisier's new chemistry in Weimar

SCHERER, Alexander Nicolaus.

Grundzüge der neuern chemischen Theorie. Mit dem Bildnisse Lavoisiers. (and) Nachträge zu den Grundzügen der neuern chemischen Theorie. 2 Vols.- Jena: Joh. Christ. Gottfr. Göpferdt, 1795 - 1796. 8vo (210 x 130 mm) XX, 400 pp.; (48), 574 pp. with engraved frontispiece portrait of Lavoisier by Bolt in vol. one and one large folding table with the new chemical signs in the second vol. Contemporary half calf with two morocco lettering pieces, rubbed and soiled, browning due to paper quality, in the last part of the first vol. some worming in upper part touching some letters in the register, but overall an attractive copy in first binding.

€ 1.900.-

First edition of his „very clear account“ of Lavoisier's theory showing him as an early supporter of the „new chemistry“ and the antiphlogistic doctrine. The book was well received and attracted young students to his lectures which caused trouble within Jena University because his old teachers found themselves outstripped. Alexander Nicolaus Scherer (1771-1824, St. Petersburg) was a Russian-German chemist and pharmacologist, who in 1794 graduated from the University of Jena, serving as a lecturer in Weimar (on recommendation of Voigt and Goethe), and from 1800 as a professor of physics at the University of Halle. Beside this he was also a counsellor of mines (Bergrath) to the duke of Saxe - Weimar and a manager at a stoneware factory in Potsdam. In 1804 he relocated to St. Petersburg as a professor of chemistry and pharmacy at the Medico - Surgical Academy. In 1815 he became a full member of the St. Petersburg Academy of Sciences. Scherer was instrumental in the creation of the „Pharmaceutical Society of St. Petersburg“, an institution in which he served as its first president.- not in Neville Historical; not in Cole; Partington III, 598; Pogg. II, 789; Ferchl 476; Hufbauer 220-21; ADB XXXI, 99-102; Ferguson II, 303 (for another work but with full biography) Henry Leicester. The Spread of the Theory of Lavoisier in Russia; in: Chymia, V (1959), pp. 138-144; Jan Frercks. Die Lehre an der Universität Jena als Beitrag zur deutschen Debatte um Lavoisiers Chemie; in: Gesnerus 63 (2006) 209-239.

local fish fauna

SCHONEFELD (Schönfeld), Stephan von.

Ichthyologia et nomenclaturae animalium marinorum, fluviatilium, lacustrium, quae in florentissimis duca-tibus Slesvici et Holsatiae et celeberrimo emporio Hamburgo occurrunt triviales.- Hamburg, Bibliopolio Hering, 1624. 4to (240 x 180 mm). 87 pp., (1, blank) with seven engraved plates depicting fishes from the North and Baltic Seas. Slightly later vellum with handwritten title on spine, some browning and foxing due to paper quality, sprinkled edges, reminiscing paper labels on inner covers, faint waterstain and tiny lesion to lower outer corner of plates. Fine copy.

€ 5.000.-

Extremely rare book on ichthyology, a significant contribution to the taxonomy of fishes and the local fauna of Northern Germany. The German physician and naturalist Stephan von Schönfeld (- 1632) partly worked with already existing sources, but also used the Hamburg fish market to study extensively offered species there. Von Schönfeld made several first descriptions of species and provided a first systematic German naming system for fishes. The author assigned the whales to the mammals. He may not have been the first, but certainly one of the first researchers to do so. He described a total of 425 species of aquatic life and thus created an important early document of northern German eco system. Some images were copied by Willughby and Ray.

He was the son of a physician and surgeon of the same name who died on 19 January 1600 in Hamburg, where he had previously practized. His matriculation entry as Stephanus Schoonuelt at the University of Rostock dates from June 1581. He studied under Pieter Paaw and took the position of responder at one of his disputations on the origin of milk in 1588, his dissertation (1589) under Heinrich Brucaeus dealt with scurvy. Von Schönfeld then had a practice in Hamburg. Due to his good healing results, he was soon regarded as a renowned physician. In the 1590s, he

travelled for a long time with his friend Hieronymus Vogeler, who later became mayor of Hamburg. Both visited Italy, Austria and France. Johann Adolf of Schleswig - Holstein - Gottorf appointed him one of two personal physicians in 1603. In 1603 he was appointed again with a considerably higher salary. Since he sold most of his father's property in Hamburg in 1610 and 1614, he probably expected to live permanently at the Gottorf court. The Duke asked von Schönefeld to research the fish world of the region. Von Schönefeld worked intensively on this, but was unable to complete the studies before the Duke's death in 1616. His son and successor Friedrich III judged von Schönefeld to be a faithful personal physician to his father and granted him several exemptions. However, he himself chose other personal physicians and allowed von Schönefeld to leave the duchy. The physician went to Hamburg again in 1616 or a short time later. He became a partner in five major dyke construction projects on the North Sea coast of Schleswig-Holstein between 1612 and 1623.- VD 17 23:289167Z; Nissen, ZBI 3741; Hirsch-H. V, 127 f; Nissen. Fishes no 116.

history of chemical instruments

SCHREGER, Christian Heinrich Theodor (with Friedrich Hildebrandt).

Kurze Beschreibung der chemischen Geräthschaften älterer und neuerer Zeit als Beitrag zur Geschichte der Erfindungen in der Chemie, nebst einer Vorrede des Herrn Hofrath Hildebrandt in Erlangen von ... Erster Band: Pharmaceutische und übrige technisch - chemische Geräthschaften, Zweiter Band: Pneumatische Geräthschaften, Dritter Band: Physikalisch - chemische Geräthschaften. 3 vols. (= all publ.)- Fürth: im Bureau für Literatur, 1802. 8vo. (195 x 120 mm) (4), X, (2), 333 pp., (1) with one folding engraved plate; (4), 266 pp., (2, content) with two engraved fold. plates; (6), 393 pp., (1, Errata) with three fold. engraved plates by Volkart. Contemporary paper card boards (Kleisterpapier) with red morocco lettering piece on spine, red edges, fine and clean copy. Modern Ex - Libris on inner front cover. Each vol. with second separate title. Very fine copy.

€ 2.400.-

Exceedingly rare history of chemical laboratory equipment, with the description of numerous scientific instruments. The present work describes equipment for mechanical operations (distillation apparatus, various furnaces, tubes, etc.), in vol. two various pneumatic - chemical devices (air improvement apparatus, gas purification devices, hydrogen, sulfur, phosphorus audiometers, etc.) and aerometric devices (baroscopes, barometers). The plates each with numerous figures. The German physician and chemist Christian Heinrich Theodor Schreger (1768 - 1833) was since 1810 full professor of chemistry and pharmacy at the University of Wittenberg. After studying law in Leipzig in 1785 he took a position as a tutor and took part in the management of a noble manor near Wittenberg as an economic administrator. He began studying medicine in Wittenberg in 1794 and continued in Altdorf and later in Erlangen. He was awarded a doctorate in medicine in Erlangen in 1800 and settled there as a general practitioner. After his appointment as prof. at the Univ. of Wittenberg, he became a full professor of medicine at the Univ. of Halle after the Napoleonian War. He was a prolific writer in various fields, such as anatomy, chemistry, pharmacology, dietetics, agriculture, and veterinary medicine.- not in Cole, not in Neville Hist. Library; Bolton 156, Hirsch-H. V, 137, Callisen XVII, 321 u. XXXII, 207, Poggendorff II, 842, ADB XXXII, 470.

Holdings: Leiden, Museum Boerhaave; Cornell, Penn Libraries, Library Congress, Langsam Library; ZB Zürich.

Stunning Photographic Panorama of Istanbul

SÉBAH Jean Pascal & JOAILLIER Policarpe (c.1895].)

Panorama de Constantinople pris de la Tour de Galata. 10 original albumen photographs (247 by 355mm) mounted on card, leporello-style, several pencil captions above the prints. Original quarter dark red roan with scarlet grained cloth boards, covers decorated in gilt; head of spine split and worn with some loss, part of upper cover sunned and water-stained, otherwise good. The photographs attached to the inside of front cover and folding into the binding (last photograph appears to have once adhered to the back cover, now freed in order to fully open). Photographs largely in excellent crisp condition, with only minor instances of bubbling, fading and marginal darkening. Sébah & Joaillier, (Istanbul, ca. 1895)

€ 2.800.-

A magnificent panorama of nearly 360 degrees, taken from the Galata Tower at the turn of the twentieth-century. The photographer takes the viewer on a journey across Istanbul from the centre of Pera down to the Bosphorous as far as the Sea of Marmara, and then up the Golden Horn to the shipyards at Kasimpasa and Taskizak, and back to Pera. As

one would expect from an image primarily produced for the wealthy tourist the majority of the city's famous sites are visible: the Topkapi Palace, the Blue Mosque, Hagia Sophia, the Aquaduct of Valens, and both the Beyazit and Maiden's Towers, with the fine Admiralty building by the dockyards. The Golden Horn provides a very evocative scene with a mix of steam ships, coastal sailing vessels and small boats all gathered together on the shores.

It is possible to date this panorama from a number of structures, including the Ottoman Bank which appears in the foreground of the panorama, and the Galata bridge connecting Eminönü and Galata, just to the left. The former, which still appears fresh and new in this panorama, was completed in 1892, whilst the latter was replaced by the fourth Galata bridge in 1912. Sébah & Joaillier were one of the foremost photographic studios in Istanbul at the end of the nineteenth-century. Formed following the death of Pascal Sébah in 1886, the business was re-invigorated by the energy that Policarpe Joaillier brought to the business and he produced several panoramas such as the one described here in the following years. Although they failed in their efforts to become photographers to the Ottoman Court, they were recognised by the Sultan and awarded the Mecidi Order (3rd Class), and were appointed official photographers to Kaiser Wilhelm II in 1889 during his visit to Istanbul: „Photographes de la Court Royale de Prusse.“ cf. Öztuncay, *The Photographers of Constantinople*, I, p.281.

„a Genteel pastime“

Miss SMITH of Adwick - Hall (fl. 1818).

Studies of Flowers from Nature, dedicated by permission to Her Royal Highness, the Princess Elizabeth, this work will consist chiefly of a selection of subjects from the choicest exotics, painted after nature, with a correct outline of each, and instructions for producing a facsimile of the finished drawing by Miss Smith.- Adwick Hall near Doncaster (and London: printed by W. & S. Graves): sold by the author [no date, ca. 1818; plates watermarked 1817 - 1820] Sm. folio (360 x 255 mm), Hand-colored engraved aquatint title, text leaf and plates in 2 states, comprising: 20 text leaves, 20 hand-colored aquatint plates, 19 (of 20) uncolored aquatint plates, list of subscribers at end (amended in manuscript), without the errata slip sometimes present. Blank leaves bound in. Contemporary red morocco-edged boards, spine with raised bands in seven compartments, gilt edges, lacking uncolored duplicate plate of „Rosa mundi“, light scattered spotting and browning. Fine copy in good coloring on strong paper.

€ 6.500.-

„A rare work with finely colored plates [and] most interesting examples of the use of aquatint of the finest possible grain“ (Dunthorne). The work, „illustrated with excellent fine-grain aquatints“ (Blunt, 256), is typically of the genre of botanical coloring books, which sprung up in the very late 18th and early 19th century, frequently written and drawn by female artists and drawing teachers, such as Clara Maria Pope, Mrs Withers or Mary Lawrence. The format of these books was similar to that of *Studies of Flowers from Nature*, which was aimed at „young Ladies and private Governesses“. Fashionable though these floral copybooks were, perhaps due in part to the royal patronage that they received, as Blunt notes, „many of them, to judge by their rarity today, were either published in small editions (subscriber list indicate less than 100 copies) or thrown away when they had been duly ‚tinted in‘ (Blunt, 255-256).

Containing uncolored duplicate plates intended for amateurs to practice on, this is one of the finest instruction manuals supporting the contemporary fashion of flower painting. In our copy only the „Rosa mundi“ had probably been used and never bound with. There are Images of the following flowers: Gentianella, Fuschia Coccinea, Rosa Sinensis, Chrysanthemus, Pelargonium Cardatum, Pelargonium Zonale, Poenia, Var., Ixia tricolor, Mimosa paradoxa, Gardinia florida, Camelia japonica, Begonia Evansiana, Erica Cerinthoides, Erica coccinea, Roses, Rosa mundi, Passiflora alata, Dahlias, Crassula coccinea, Strelitza regina,

Miss Smith, who did the coloring for the aquatint engravings, is known to us only by her last name and place of residence. The subscriber list includes mainly female subscribers incl. the Princess of Hesse Homburg, Duchess of Rutland, Duchess Dowager, Duchess of Leinster, Countess Manvers, The name Smith might be a pseudonym. Adwick Hall near Doncaster was the family home of the Washington family (related to George Washington also). The hall was built in 1673 for Richard Washington and was a vernacular building in an old fashioned style, even for the time. The hall was demolished ca. 1866 after falling into ruin. There is a description of Adwick Hall's grounds from 1802 when the 'core' part of the estate was advertised as to let. At that time it was described as having '80 acres or thereabouts of corn, meadow and pasture land and convenient gardens walled round with greenhouses etc., stables for 23 horses, coach houses, barn, cow house, brew house, farm yard, poultry yard etc.' The parkland had clumps and some exotic tree planting within it. To the south of the hall there was a small walled kitchen garden with stove-house, sited very close to the hall, which may have been the site of earlier formal gardens. Estimates for the size of the

parkland are in the region of 12 ha (30 acres). The work is dedicated in print to Princess Elizabeth of England and Landgravine of Hesse-Homburg (1770-1840) who was the seventh child of George III and Queen Charlotte, and an enthusiastic amateur artist, whose patronage of this work is entirely apt: she and her mother had both taken lessons in nature drawing and coloring from Franz Bauer (1758-1840), and the worth of this work would have been evident to her eye.- Dunthorne 283; Great Flower Books (1990) p.140; Nissen BBI 1855; KVK: Cambridge, Yale, Morgan Library, Dumbarton Oaks; Univ. Wisconsin; Morton Arboretum.

„Phlogiston“

STAHL, Georg Ernst.

Herrn Georg Ernst Stahls,... Zymotechnia Fundamentalis oder allgemeine Grund - Erkenntniss der Gährungs=Kunst, Vermittelst welcher Die Ursachen und Würckungen dieser alleredelsten Kunst, welche den nutzbarsten und subtilsten Theil der gantzen Chymie ausmacht, aus den wesentlichen Mechanisch=Physischen Haupt=Gründen überhaupt ... Wegen ihres unbeschreiblichen Nutzens aus dem Lateinischen ins Teutsche übersetzt.- Franckfurth und Leipzig: verlegts Johann Leopold Montag, 1734. 8vo (163 x 98 mm) (20), 304 pp. with title in red and black and fold., the pagination not yet corrected. The title is shortcut and has a small paperflow outside text. Contemporary calf, gilt spine in compartments faded as well as morocco label, upper and lower spine defective. Red sprinkled edges, browning, light water-staining and spotting throughout, but a good copy.

€ 1.600.-

„An important milestone book.“ (Neville Chem. Hist. Libr.)

First German edition of Stahl's fundamental work, in which he develops the theory of the phlogiston, „which retained general validity until Lavoisier.“ (Hirsch V, 503). One of the earliest of Stahl's works to discuss phlogiston, the substance supposedly contained in matter that makes it burn. Primarily on chemical and biological fermentation processes, the book first appeared in Latin in 1697 is here translated into German. The translator has added a preface and some notes. Some of Stahl's earliest experiments relating to phlogiston appear in this work, and he refers to the experiments of Robert Boyle: e.g. the violent reaction of oil of vitriol with turpentine. The formulation of the phlogiston theory, first conceived by Johann Becher, was due to his pupil, Stahl, who believed „That combustible substances contain an ignitable matter, the terra pinguis of Becher. To this Stahl gave the name phlogiston. Although erroneous, the phlogiston theory was the first unifying chemical hypothesis and dominated chemistry for 100 years until overthrown by the quantitative experiments of Lavoisier later in the 18th century.- Ferchl 513; Ferguson Coll 669; Partington II, 662-678; Neville Historical Library (1746 ed.); Cole 1249; Bolton 847-48; Leicester & Klickstein 59; Duveen 560; not in Norman (but others).

STROMEYER, Friedrich.

Grundriss der theoretischen Chemie. Zum Behuf seiner Vorlesungen entworfen. Erster (und) Zweyter Theil. 2 Vols.- Göttingen: bey Johann Friedrich Röwer, 1808. 8vo (195 x 115 mm) (2), 478 pp.; VI, 648 pp., (2, Errata) Contemporary marbled boards with green edges and black morocco label on spine, inside clean. Fine copy.

€ 1.400.-

Rare first edition of a handbook on theoretical chemistry for the use of his lectures at Göttingen University. During his studies, Stromeyer noticed the lack of a regular chemistry course, so he first offered a course in practical chemistry as a privatissimum, and since 1810 a general course in analytical chemistry. The course was primarily aimed at medical students, who carried out quantitative inorganic analyses in a laboratory and also qualitatively analyzed substances given out by Stromeyer. Stromeyer himself also worked primarily inorganic-analytical and often dealt with mineral analyses. In 1817, he was promoted to court councilor and entrusted with the supervision of pharmacies in the entire district of Hanover. The German chemist & mineralogist Friedrich Stromeyer (1776 – 1835) first studied botany and pharmacy at the University of Göttingen, before conducting post graduate work under Lewis Nicolaus Vauquelin, and also Thenard and Gay-Lussac at Paris. He received a Ph.D. from Göttingen in 1800. From 1802 to 1805 he worked as a privatdocent, and in 1805 he succeeded J. F. Gmelin at the University of Göttingen. Stromeyer was ordinary professor of chemistry and pharmacy from 1810 to 1835, during which period he set up the first teaching laboratory at a German University. He was an excellent quantitative worker and like Klaproth, he is also known for his collection of investigations of the composition of various minerals including aragonite, aluminite,

magnesite, strontianite, boracite, apophyllite and spodumene from various locations in Europe and North America published in 1821. In the forward, Stromeyer writes that the influence of Berzelius' researches has helped motivate him to prepare this book. In several cases Stromeyer presents analyses from multiple localities to show that the composition of a mineral species does not vary much deposit to deposit. Thomson (1831-32) called the analyses „models of analytical sagacity and accuracy.“ - not in Neville. Historical Libr.; not in Cole; Partington III, 659/660; Pogg. II, 1031; Weeks, pp. 502-507; see Bolton 857. Holdings: in Germany the holdings are strong, but outside Germany quite rare; COPAC: Manchester, not BLL; no copy in the US.

Christian Frederik Hansen' Palladian-style villas

WESSELMANN, Ludwig.

Pittoresken aus Niedersachsen. Gezeichnet und gestochen von Rege et Steineck, mit begleitendem Text von Ludwig Wesselmann. Erstes Heft, vier Darstellungen aus der Gegend um Hamburg enthaltend. (all publ.)- Hamburg, bei Johann Friederich Wettach, (1806). square folio (225 x 395 mm) 2 Bl., IV, 39 columns (two pages each sheet) With four hand-colored aquatints. Contemporary marbled boards.

€ 2.400.-

Exceedingly rare, first edition of this delightfully illustrated description of four famous villas and their park in Hamburg (St. George, Harvestehude, Altona and Nienstedten).

„The book is of importance as it shows two important early houses designed and built by the leading Danish architect at the time, Christian Frederik Hansen (1756-1854). Both country houses were built for wealthy Hamburg merchants who wished to have houses to the west of Hamburg, in Altona, near the river Elbe, an area which was then under Danish control. Hansen's country house for Caesar Godeffroy was built between 1789 and 1792; and it is said that the painter Max Lieberman was inspired by its designs, copying the central bay for his villa in Wannsee near Berlin in 1910. Hansen's house for Johann Daniel Lawaetz, merchant and well known social reformer, was built in 1798-1801; it was destroyed by bombs in 1943. The other two plates show a popular inn and adjoining wood, Harvestehude, outside Hamburg, as well as a village on the river Elbe. All the four fine plates were drawn and etched by two artists who are not known by any other work. The two views of the Hansen country houses are the earliest known of the buildings.“

The engravings show: the villa of Caesar Godeffoy on the Elbchaussee; Harvstehude with the villa of „Herrn Etatsrahts Lawaetz bey Ottensen“, St. Georg, Vorstadt von Hamburg with the baroque church St. Georg seen from the Alster, which is still almost unchanged today, as well as the Landhaus des Herrn Cäsar Godeffoy bey Doggenhusen. The publication was to appear in several fascicles, but was discontinued after the first delivery.- KVK show four copies world-wide, of which two are in Hamburg; Hamburg Bibliographie 3550. not in Engelmann.

First complete history of early microscopes, camera obscura & optical instruments incl. the moon map not present in the first edition

ZAHN, Johannes.

Oculus artificialis Telediotricus sive Telescopium. Editio secunda, auctior. Nuremberg, Johannes Ernst Adelbulner for Johann Christoph Lochner, 1702. In-folio (320 x 192 mm) 20 leaves, 1-414, 399-402, 419-420, 405-778, 796, 770-797 pp., (1), 8 Bll. with additional engraved title, title printed title in red and black, 6 folding or double-page engravings, 7 double-page letterpress tables, many full-page and half-page engravings and woodcuts. A complete copy, with printing errors as in other copies. The portrait of the dedicatee by Fleischmann is in as many copies as not, and is not present here. The number of folding resp. double - page engravings varies among copies, with our the most possible. Contemporary German blind tooled pigskin, sides paneled with rolls, episcopal armorial with IPSN gilt on front cover, title lettered on spine, blue edges, clasps gone missing, but stubs present. Minor marginal worm track in blank margins of first several leaves. Exceedingly fine copy, with only trace of browned leaves (better than normal), otherwise a very clean copy in its first binding.

€ 12.500.-

Second revised edition of Johann Zahn's (1641-1707) treatise on the microscope and the telescope. The work is particularly valuable for its illustrations of both simple and compound microscopes of the period, including the type of

compound instrument used by Robert Hooke. It contains many descriptions and diagrams, illustrations and sketches of both the camera obscura and magic lantern, along with various other lanterns, slides, projection types, peepshow boxes, microscopes, telescopes, reflectors, and lenses. In his important Appendix, pages 779-797, Zahn describes and illustrates the microscopes of Hooke and Bonanni which had already appeared in the books of these two authors but for the very first time the two microscopes, simple and compound, of Johann van Musschenbroek and the very rare simple microscopes of Conrad Cuno. Johann Zahn (1631-1707) was a canon of the Premonstratensian monastery in Oberzell (Bavaria) and taught mathematics at the University of Würzburg. A great specialist in optics and astronomy, he substantially improved the rectifying telescope developed in 1676 by Johann Sturm by equipping it with an achromatic eyepiece using doublets of convex and concave lenses. He concentrated the radiation by painting the walls of the reflection chamber black, which is now considered the first step towards the camera.

His *Oculus artificialis* is divided into three large books, or *Syntagma*. The first is devoted to astronomy in general, giving a historical overview and discussing the perception of color, the different qualities of convex and concave lenses, their refraction, their qualities, etc. The second part deals with the production of lenses, their use, optical devices and instruments. The third and last part contains the results of his research and their various applications. The first chapter is preceded by a bibliography of the cited authors (Leeuwenhoek, Maignan, Galilei, Hevelius, Kepler, Camerarius, Hooke, and others)

„Zahn’s treatise contains the first complete history of early microscopes. The work is particularly valuable for its illustrations of both simple and compound microscopes of the period, including the type of compound instrument used by Robert Hooke.“ (Norman). Zahn’s *Oculus artificialis* is „valuable a complete account of optics as known at the time, and especially for describing telescopes and microscopes, with full constructional details, and the machinery for grinding lenses and make the metal parts used in their manufacture. The author also describes a portable camera obscura having fixed lenses in a tube and an adjustable mirror.“ (Zeitlinger). Richly illustrated with 6 double plates (3 of them folding twice), 17 full-page copper engravings, 9 full-page woodcuts, 7 double letterpress tables out of the text, and numerous copper and woodcuts in the text. Among the beautiful plates one can notice the terrestrial map, the celestial map, and a map of the moon inspired by Hevelius. The numerous engravings (on wood and copper) reproduce experiments, lenses and their refractions, magic lanterns, telescopes, perspective instruments, etc. The engraved portrait by Fleischmann is not present in this copy. The number of folding resp. double-page engravings varies among copies, with our the most possible.- Blake, 498; Poggendorff, II, 1390; Garrison-Morton, 263 & Norman 2278 (for the first edition of 1685/86); NLM/Krivatsy 13208.