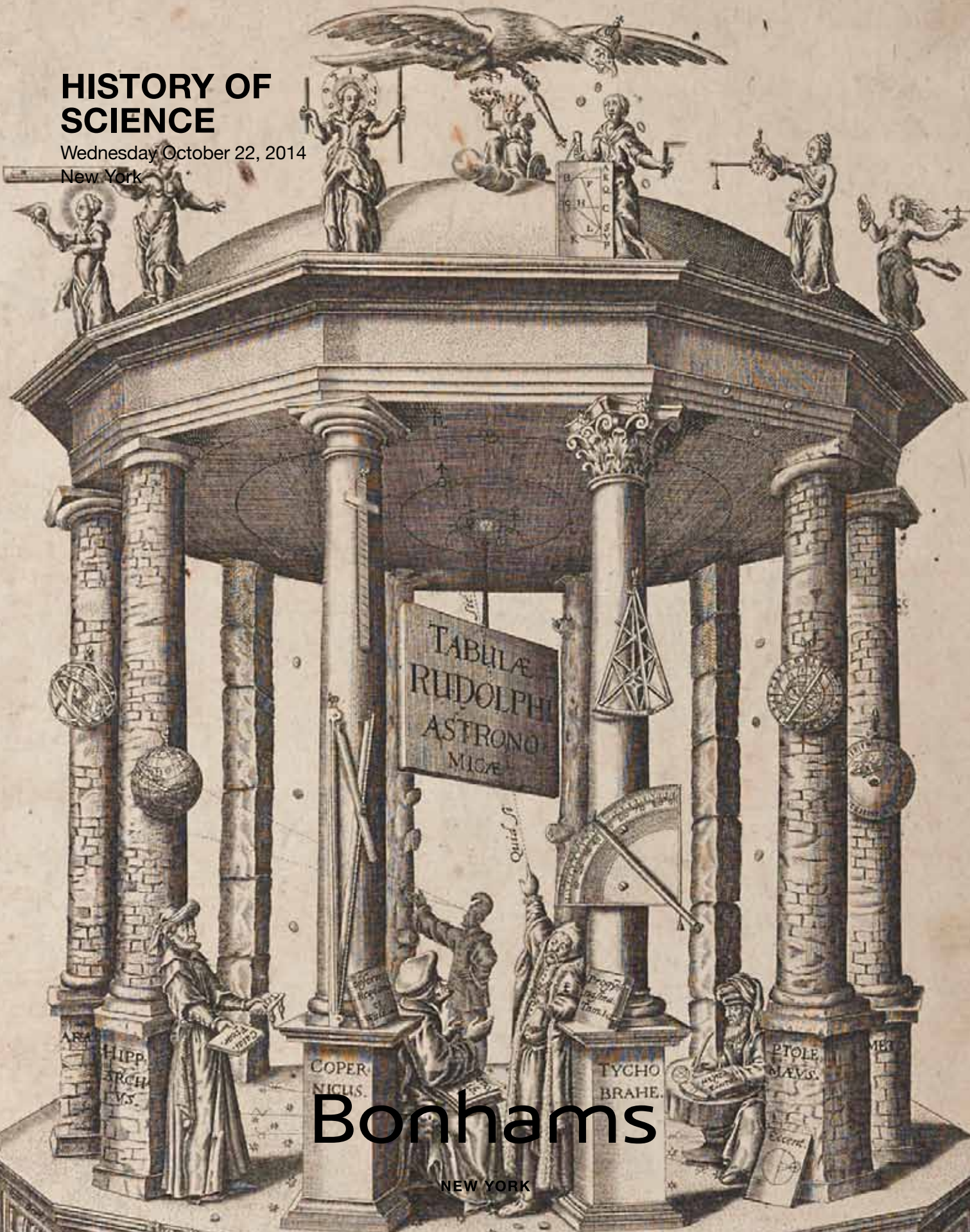


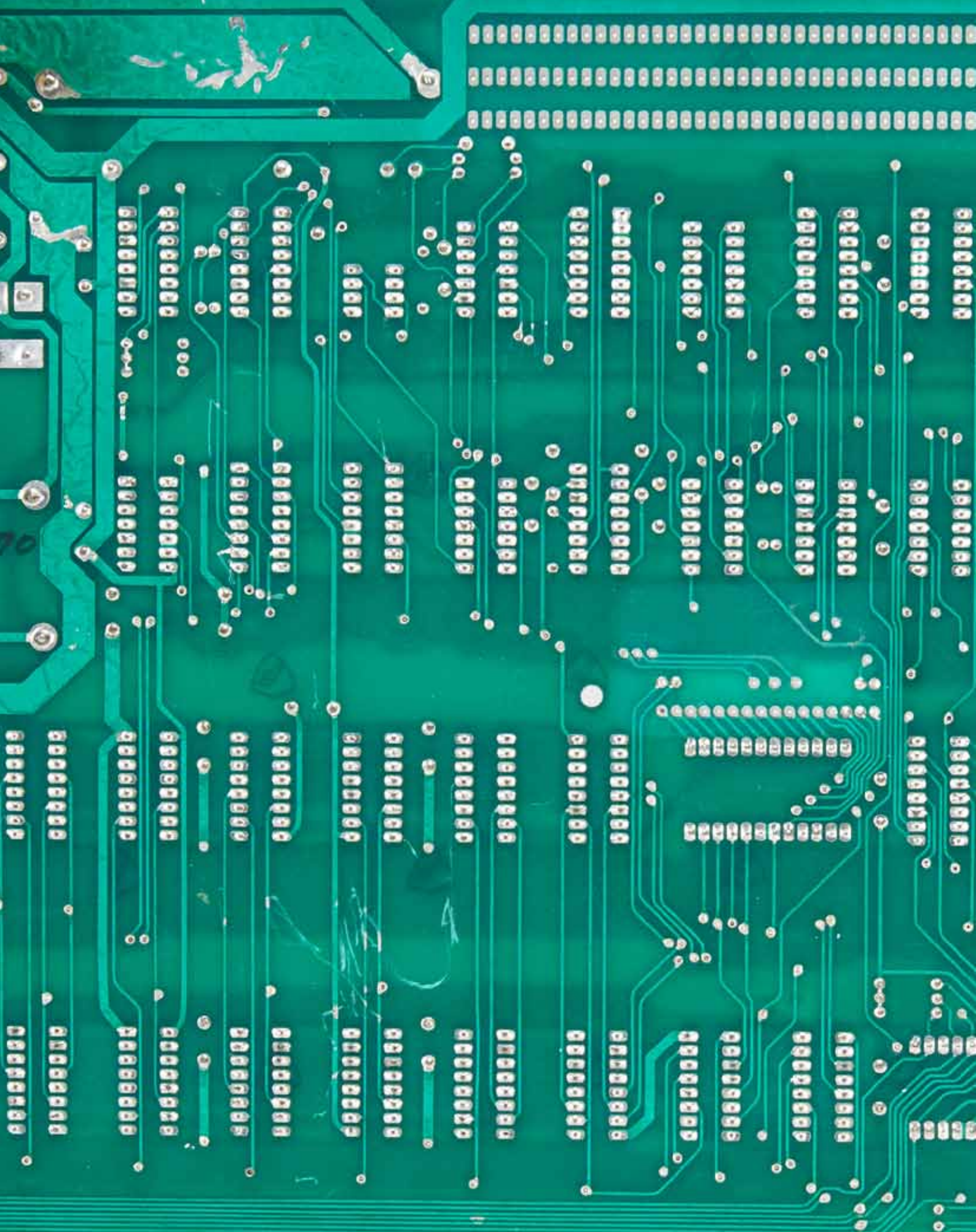
HISTORY OF SCIENCE

Wednesday October 22, 2014
New York



Bonhams

NEW YORK



HISTORY OF SCIENCE

Wednesday October 22, 2014 at 1pm

New York

BONHAMS

580 Madison Avenue
New York, New York 10022

bonhams.com

PREVIEW

Saturday, October 18, 12pm to 5pm
Sunday, October 19, 12pm to 5pm
Monday, October 20, 10am to 5pm
Tuesday, October 21, 10am to 5pm
Wednesday, October 22, 10am to 12pm

BIDS

+1 (212) 644 9001
+1 (212) 644 9009 fax

To bid via the internet please
visit www.bonhams.com

SALE NUMBER: 22247

Lots 1 - 288

CATALOG: \$35

INQUIRIES

New York

Cassandra Hatton, Senior Specialist
Specialist in charge of sale
+1 (212) 461 6531
cassandra.hatton@bonhams.com

Christina Geiger, Director, New York
+1 (212) 644 9094
christina.geiger@bonhams.com

Tom Lamb, Director
Business Development
+1 (917) 921 7342
tom.lamb@bonhams.com

Los Angeles

Dr. Catherine Williamson, Director
+1 (323) 436 5442
catherine.williamson@bonhams.com

Brian Kalkbrenner, Specialist
+1 (323) 436 5487
brian.kalkbrenner@bonhams.com

San Francisco

Adam Stackhouse, Senior Specialist
+1 (415) 503 3266
adam.stackhouse@bonhams.com

Automated Results Service
+1 (800) 223 2854

Online bidding will be available for
this auction. For further information
please visit:

www.bonhams.com/22247

Please see pages 2 to 6
for bidder information including
Conditions of Sale, after-sale
collection and shipment.

ILLUSTRATIONS

Front cover: Lot 48
Inside front cover: Lot 286
First session page: Lot 38
Second session page: Lot 58
Third session page: Lot 74
Fourth session page: Lot 129
Fifth session page: Lot 245
Sixth session page: Lot 286
Inside back cover: Lot 271
Back cover: Lot 262

CONDITIONS OF SALE

The following Conditions of Sale, as amended by any published or posted notices or verbal announcements during the sale, constitute the entire terms and conditions on which property listed in the catalog shall be offered for sale or sold by Bonhams & Butterfields Auctioneers Corp. and any consignor of such property for whom we act as agent. If live online bidding is available for the subject auction, additional terms and conditions of sale relating to online bidding will apply; see www.bonhams.com/WebTerms for the supplemental terms. As used herein, "Bonhams," "we" and "us" refer to Bonhams & Butterfields Auctioneers Corp.

1. As used herein, the term "bid price" means the price at which a lot is successfully knocked down to the purchaser. The term "purchase price" means the aggregate of (a) the bid price, (b) a PREMIUM retained by us and payable by the purchaser EQUAL TO 25% OF THE FIRST \$100,000 OF THE BID PRICE, 20% OF THE AMOUNT OF THE BID PRICE ABOVE \$100,000 UP TO AND INCLUDING \$2,000,000, AND 12% OF THE AMOUNT OF THE BID PRICE OVER \$2,000,000, and (c) unless the purchaser is exempt by law from the payment thereof, any California, Arizona, Colorado, Connecticut, Florida, Georgia, Illinois, Massachusetts, Nevada, New York, Pennsylvania, Texas, Washington, D.C., Washington state, or other state or local sales tax (or compensating use tax) and other applicable taxes.

2. On the fall of the auctioneer's hammer, the highest bidder shall have purchased the offered lot in accordance and subject to compliance with all of the conditions set forth herein and (a) assumes full risk and responsibility therefor, (b) if requested will sign a confirmation of purchase, and (c) will pay the purchase price in full or such part as we may require for all lots purchased. No lot may be transferred. Any person placing a bid as agent on behalf of another (whether or not such person has disclosed that fact or the identity of the principal) may be jointly and severally liable with the principal under any contract resulting from the acceptance of a bid.

Unless otherwise agreed, payment in good funds is due and payable within five (5) business days following the auction sale. Whenever the purchaser pays only a part of the total purchase price for one or more lots purchased, we may apply such payments, in our sole discretion, to the lot or lots we choose. Payment will not be deemed made in full until we have collected good funds for all amounts due.

Payment for purchases may be made in or by (a) cash, (b) cashier's check or money order, (c) personal check with approved credit drawn on a U.S. bank, (d) wire transfer or other immediate bank transfer, or (e) Visa, MasterCard, American Express or Discover credit, charge or debit card. A processing fee will be assessed on any returned checks. Please note that the amount of cash notes and cash equivalents that can be accepted from a given purchaser may be limited.

The purchaser grants us a security interest in the property, and we may retain as collateral security for the purchaser's obligations to us, any property and all monies held or received by us for the account of the purchaser, in our possession. We retain all rights of a secured party under the California Commercial Code. If the foregoing conditions or any other applicable conditions herein are not complied with, in addition to other remedies available to us and the consignor by law, including without limitation, the right to hold the purchaser liable for the purchase price, we at our option may either (a) cancel the sale, retaining as liquidated damages all payments made by the purchaser or (b) resell the property, either publicly or privately, and in such event the purchaser shall be liable for

the payment of any deficiency plus all costs and expenses of both sales, our commission at our standard rates, all other charges due hereunder, attorneys' fees, expenses and incidental damages. In addition, where two or more amounts are owed in respect of different transactions by the purchaser to us, to Bonhams 1793 Limited and/or to any of our other affiliates, subsidiaries or parent companies worldwide within the Bonhams Group, we reserve the right to apply any monies paid in respect of a transaction to discharge any amount owed by the purchaser. If all fees, commissions, premiums, bid price and other sums due to us from the purchaser are not paid promptly as provided in these Conditions of Sale, we reserve the right to impose a finance charge equal to 1.5% per month on all amounts due to us beginning on the 31st day following the sale until payment is received, in addition to other remedies available to us by law.

3. We reserve the right to withdraw any property and to divide and combine lots at any time before such property's auction. Unless otherwise announced by the auctioneer at the time of sale, all bids are per lot as numbered in the catalog and no lots shall be divided or combined for sale.

4. We reserve the right to reject a bid from any bidder, to split any bidding increment, and to advance the bidding in any manner the auctioneer may decide. In the event of any dispute between bidders, or in the event the auctioneer doubts the validity of any bid, the auctioneer shall have sole and final discretion either to determine the successful bidder or to re-offer and resell the article in dispute. If any dispute arises after the sale, our sales records shall be conclusive in all respects.

5. If we are prevented by fire, theft or any other reason whatsoever from delivering any property to the purchaser or a sale otherwise cannot be completed, our liability shall be limited to the sum actually paid therefor by the purchaser and shall in no event include any compensatory, incidental or consequential damages.

6. If a lot is offered subject to a reserve, we may implement such reserve by bidding on behalf of the consignor, whether by opening bidding or continuing bidding in response to other bidders until reaching the reserve. If we have an interest in an offered lot and the proceeds therefrom other than our commissions, we may bid therefor to protect such interest. **CONSIGNORS ARE NOT ALLOWED TO BID ON THEIR OWN ITEMS.**

7. All statements contained in the catalog or in any bill of sale, condition report, invoice or elsewhere as to authorship, period, culture, source, origin, measurement, quality, rarity, provenance, importance, exhibition and literature of historical relevance, or physical condition **ARE QUALIFIED STATEMENTS OF OPINION AND NOT REPRESENTATIONS OR WARRANTIES.** No employee or agent of Bonhams is authorized to make on our behalf or on that of the consignor any representation or warranty, oral or written, with respect to any property.

8. All purchased property shall be removed from the premises at which the sale is conducted by the date(s) and time(s) set forth in the "Buyer's Guide" portion of the catalog. If not so removed, daily storage fees will be payable to us by the purchaser as set forth therein. We reserve the right to transfer property not so removed to an offsite warehouse at the purchaser's risk and expense, as set forth in more detail in the "Buyer's Guide." Accounts must be settled in full before property will be released. Packing and handling of purchased lots are the responsibility of the purchaser. Bonhams can provide packing and shipping services for certain items as noted in the "Buyer's Guide" section of the catalog.

9. The copyright in the text of the catalog and the photographs, digital images and illustrations of lots in the catalog belong to Bonhams or its licensors. You will not reproduce or permit anyone else to reproduce such text, photographs, digital images or illustrations without our prior written consent.

10. These Conditions of Sale shall bind the successors and assigns of all bidders and purchasers and inure to the benefit of our successors and assigns. No waiver, amendment or modification of the terms hereof (other than posted notices or oral announcements during the sale) shall bind us unless specifically stated in writing and signed by us. If any part of these Conditions of Sale is for any reason invalid or unenforceable, the rest shall remain valid and enforceable.

11. These Conditions of Sale and the purchaser's and our respective rights and obligations hereunder are governed by the laws of the State of California. By bidding at an auction, each purchaser and bidder agrees to be bound by these Conditions of Sale. Any dispute, controversy or claim arising out of or relating to this agreement, or the breach, termination or validity thereof, brought by or against Bonhams (but not including claims brought against the consignor by the purchaser of lots consigned hereunder) shall be resolved by the procedures set forth below.

MEDIATION AND ARBITRATION PROCEDURES

(a) Within 30 days of written notice that there is a dispute, the parties or their authorized and empowered representatives shall meet by telephone and/or in person to mediate their differences. If the parties agree, a mutually acceptable mediator shall be selected and the parties will equally share such mediator's fees. The mediator shall be a retired judge or an attorney familiar with commercial law and trained in or qualified by experience in handling mediations. Any communications made during the mediation process shall not be admissible in any subsequent arbitration, mediation or judicial proceeding. All proceedings and any resolutions thereof shall be confidential, and the terms governing arbitration set forth in paragraph (c) below shall govern.

(b) If mediation does not resolve all disputes between the parties, or in any event no longer than 60 days after receipt of the written notice of dispute referred to above, the parties shall submit the dispute for binding arbitration before a single neutral arbitrator. Such arbitrator shall be a retired judge or an attorney familiar with commercial law and trained in or qualified by experience in handling arbitrations. Such arbitrator shall make all appropriate disclosures required by law. The arbitrator shall be drawn from a panel of a national arbitration service agreed to by the parties, and shall be selected as follows: (i) If the national arbitration service has specific rules or procedures, those rules or procedures shall be followed; (ii) If the national arbitration service does not have rules or procedures for the selection of an arbitrator, the arbitrator shall be an individual jointly agreed to by the parties. If the parties cannot agree on a national arbitration service, the arbitration shall be conducted by the American Arbitration Association, and the arbitrator shall be selected in accordance with the Rules of the American Arbitration Association. The arbitrator's award shall be in writing and shall set forth findings of fact and legal conclusions.

(c) Unless otherwise agreed to by the parties or provided by the published rules of the national arbitration service:

(i) the arbitration shall occur within 60 days following the selection of the arbitrator;

CONDITIONS OF SALE - CONTINUED

(ii) the arbitration shall be conducted in the designated location, as follows: (A) in any case in which the subject auction by Bonhams took place or was scheduled to take place in the State of New York or Connecticut or the Commonwealth of Massachusetts, the arbitration shall take place in New York City, New York; (B) in all other cases, the arbitration shall take place in the city of San Francisco, California; and

(iii) discovery and the procedure for the arbitration shall be as follows:

(A) All arbitration proceedings shall be confidential;

(B) The parties shall submit written briefs to the arbitrator no later than 15 days before the arbitration commences;

(C) Discovery, if any, shall be limited as follows: (I) Requests for no more than 10 categories of documents, to be provided to the requesting party within 14 days of written request therefor; (II) No more than two (2) depositions per party, provided however, the deposition(s) are to be completed within one (1) day; (III) Compliance with the above shall be enforced by the arbitrator in accordance with California law;

(D) Each party shall have no longer than eight (8) hours to present its position. The entire hearing before the arbitrator shall not take longer than three (3) consecutive days;

(E) The award shall be made in writing no more than 30 days following the end of the proceeding. Judgment upon the award rendered by the arbitrator may be entered by any court having jurisdiction thereof.

To the fullest extent permitted by law, and except as required by applicable arbitration rules, each party shall bear its own attorneys' fees and costs in connection with the proceedings and shall share equally the fees and expenses of the arbitrator.

LIMITED RIGHT OF RESCISSION

If within one (1) year from the date of sale, the original purchaser (a) gives written notice to us alleging that the identification of Authorship (as defined below) of such lot as set forth in the **BOLD TYPE** heading of the catalog description of such lot (as amended by any saleroom notices or verbal announcements during the sale) is not substantially correct based on a fair reading of the catalog (including the terms of any glossary contained therein), and (b) within 10 days after such notice returns the lot to us in the same condition as at the time of sale, and (c) establishes the allegation in the notice to our satisfaction (including by providing one or more written opinions by recognized experts in the field, as we may reasonably require), then the sale of such lot will be rescinded and, unless we have already paid to the consignor monies owed him in connection with the sale, the original purchase price will be refunded.

If, prior to receiving such notice from the original purchaser alleging such defect, we have paid the consignor monies owed him in connection with the sale, we shall pay the original purchaser the amount of our commissions, any other sale proceeds to which we are entitled and applicable taxes received from the purchaser on the sale and make demand on the consignor to pay the balance of the original purchase price to the original purchaser. Should the consignor fail to pay such amount promptly, we may disclose the identity of the consignor and assign to the original purchaser our rights against the consignor with respect to the lot the sale of which is sought to be rescinded. Upon such disclosure and assignment, any liability of Bonhams as consignor's agent with respect to said lot shall automatically terminate.

The foregoing limited right of rescission is available to the original purchaser only and may not be assigned to or relied upon by any subsequent transferee of the property sold. The purchaser hereby accepts the benefit of the consignor's warranty of title and other representations and warranties made by the consignor for the purchaser's benefit. Nothing in this section shall be construed as an admission by us of any representation of fact, express or implied, obligation or responsibility with respect to any lot. THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY AGAINST BONHAMS FOR ANY

REASON WHATSOEVER IS THE LIMITED RIGHT OF RESCISSION DESCRIBED IN THIS SECTION.

"Authorship" means only the identity of the creator, the period, culture and source or origin of the lot, as the case may be, as set forth in the **BOLD TYPE** heading of the print catalog entry. The right of rescission does not extend to: (a) works of art executed before 1870 (unless these works are determined to be counterfeits created since 1870), as this is a matter of current scholarly opinion which can change; (b) titles, descriptions, or other identification of offered lots, which information normally appears in lower case type below the **BOLD TYPE** heading identifying the Authorship; (c) Authorship of any lot where it was specifically mentioned that there exists a conflict of specialist or scholarly opinion regarding the Authorship of the lot at the time of sale; (d) Authorship of any lot which as of the date of sale was in accordance with the then generally-accepted opinion of scholars and specialists regarding the same; or (e) the identification of periods or dates of creation in catalog descriptions which may be proven inaccurate by means of scientific processes that are not generally accepted for use until after publication of the catalog in which the property is offered or that were unreasonably expensive or impractical to use at the time of such publication.

LIMITATION OF LIABILITY

EXCEPT AS EXPRESSLY PROVIDED ABOVE, ALL PROPERTY IS SOLD "AS IS." NEITHER BONHAMS NOR THE CONSIGNOR MAKES ANY REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, AS TO THE MERCHANTABILITY, FITNESS OR CONDITION OF THE PROPERTY OR AS TO THE CORRECTNESS OF DESCRIPTION, GENUINENESS, ATTRIBUTION, PROVENANCE OR PERIOD OF THE PROPERTY OR AS TO WHETHER THE PURCHASER ACQUIRES ANY COPYRIGHTS OR OTHER INTELLECTUAL PROPERTY RIGHTS IN LOTS SOLD OR AS TO WHETHER A WORK OF ART IS SUBJECT TO THE ARTIST'S MORAL RIGHTS OR OTHER RESIDUAL RIGHTS OF THE ARTIST. THE PURCHASER EXPRESSLY ACKNOWLEDGES AND AGREES THAT IN NO EVENT SHALL BONHAMS BE LIABLE FOR ANY DAMAGES INCLUDING, WITHOUT LIMITATION, ANY COMPENSATORY, INCIDENTAL OR CONSEQUENTIAL DAMAGES.

SELLER'S GUIDE

SELLING AT AUCTION

Bonhams can help you every step of the way when you are ready to sell art, antiques and collectible items at auction. Our regional offices and representatives throughout the US are available to service all of your needs. Should you have any further questions, please visit our website at www.bonhams.com/us for more information or call our Client Services Department at +1 (800) 223 2854 ext. 23550.

AUCTION ESTIMATES

The first step in the auction process is to determine the auction value of your property. Bonhams' world-renowned specialists will evaluate your special items at no charge and in complete confidence. You can obtain an auction estimate in many ways:

- Attend one of our Auction Appraisal Events held regularly at our galleries and in other major metropolitan areas. The updated schedule for Bonhams Auction Appraisal Events is available at www.bonhams.com/us.
- Call our Client Services Department to schedule a private appointment at one of our galleries. If you have a large collection, our specialists can travel, by appointment, to evaluate your property on site.
- Send clear photographs to us of each individual item, including item dimensions and other pertinent information with each picture. Photos should be sent to Bonhams' address in envelopes marked

as "photo auction estimate". Alternatively, you can submit your request using our online form at www.bonhams.com/us. Digital images may be attached to the form. Please limit your images to no more than five (5) per item.

CONSIGNING YOUR PROPERTY

After you receive an estimate, you may consign your property to us for sale in the next appropriate auction. Our staff assists you throughout the process, arranging transportation of your items to our galleries (at the consignor's expense), providing a detailed inventory of your consignment, and reporting the prices realized for each lot. We provide secure storage for your property in our warehouses and all items are insured throughout the auction process. You will receive payment for your property approximately 35 days after completion of sale.

Sales commissions vary with the potential auction value of the property and the particular auction in which the property is offered. Please call us for commission rates.

PROFESSIONAL APPRAISAL SERVICES

Bonhams' specialists conduct insurance and fair market value appraisals for private collectors, corporations, museums, fiduciaries and government entities on a daily basis. Insurance appraisals, used for insurance purposes, reflect the cost of replacing property in today's retail market. Fair market value appraisals are used for estate,

tax and family division purposes and reflect prices paid by a willing buyer to a willing seller.

When we conduct a private appraisal, our specialists will prepare a thorough inventory listing of all your appraised property by category. Valuations, complete descriptions and locations of items are included in the documentation.

Appraisal fees vary according to the nature of the collection, the amount of work involved, the travel distance, and whether the property is subsequently consigned for auction.

Our appraisers are available to help you anywhere and at any time. Please call our Client Services Department to schedule an appraisal.

ESTATE SERVICES

Since 1865, Bonhams has been serving the needs of fiduciaries – lawyers, trust officers, accountants and executors – in the disposition of large and small estates. Our services are specially designed to aid in the efficient appraisal and disposition of fine art, antiques, jewelry, and collectibles. We offer a full range of estate services, ranging from flexible financial terms to tailored accounting for heirs and their agents to world-class marketing and sales support.

For more information or to obtain a detailed Trust and Estates package, please visit our website at www.bonhams.com/us or contact our Client Services Department.

BUYER'S GUIDE

BIDDING & BUYING AT AUCTION

Whether you are an experienced bidder or an enthusiastic novice, auctions provide a stimulating atmosphere unlike any other. Bonhams previews and sales are free and open to the public. As you will find in these directions, bidding and buying at auction is easy and exciting. Should you have any further questions, please visit our website at www.bonhams.com or call our Client Services Department at +1 (800) 223 2854 ext. 3550.

Catalogs

Before each auction we publish illustrated catalogs. Our catalogs provide descriptions and estimated values for each "lot." A lot may refer to a single item or to a group of items auctioned together. The catalogs also include the dates and the times for the previews and auctions. We offer our catalogs by subscription or by single copy. For information on subscribing to our catalogs, you may refer to the subscription form in this catalog, call our Client Services Department, or visit our website at www.bonhams.com/us.

Previews

Auction previews are your chance to inspect each lot prior to the auction. We encourage you to look closely and examine each object on which you may want to bid so that you will know as much as possible about it. Except as expressly set forth in the Conditions of Sale, items are sold "as is" and with all faults; illustrations in our catalogs, website and other materials are provided for identification only. At the previews, our staff is always available to answer your questions and guide you through the auction process. Condition reports may be available upon request.

Estimates

Bonhams catalogs include low and high value estimates for each lot, exclusive of the buyer's premium and tax. The estimates are provided as an approximate guide to current market value based primarily on previous auction results for comparable pieces, and should not be interpreted as a representation or prediction of actual selling prices. They are determined well in advance of a sale and are subject to revision. Please contact us should you have any questions about value estimates.

Reserves

Unless indicated by the **▣** symbol next to the lot number, which denotes no reserve, all lots in the catalog are subject to a reserve. The reserve is the minimum auction price that the consignor is willing to accept for a lot. This amount is confidential and does not exceed the low estimate value.

Auction House's Interest in Property Offered at Auction

On occasion, Bonhams may offer a lot in which it has an ownership interest, in whole or in part. Such property, if any, is identified in the catalog with a **▲** symbol next to the lot number.

Similarly, Bonhams may have an economic interest in a lot beyond its commission as a result of making an advance against anticipated proceeds to the consignor which is secured by the consigned property or where it has guaranteed the consignor a minimum auction price for consigned property. Such property, if any, is identified in the catalog with a **◊** symbol next to the lot number.

Bidding at Auction

At Bonhams, you can bid in many ways: in person, via absentee bid, over the phone, or via Bonhams' live online bidding facility. Absentee bids can be submitted in person, online, via fax or via email.

Valid Bonhams client accounts are required to participate in bidding activity. You can obtain registration information online, at the reception desk or by calling our Client Services Department.

By bidding at auction, whether in person or by agent, by absentee bid, telephone, online or other means, the buyer or bidder agrees to be bound by the Conditions of Sale.

Lots are auctioned in consecutive numerical order as they appear in the catalog. Bidding normally begins below the low estimate. The auctioneer will accept bids from interested parties present in the saleroom, from telephone bidders, and from absentee bidders who have left written bids in advance of the sale. The auctioneer may also execute bids on behalf of the consignor by placing responsive or consecutive bids for a lot up to the amount of the reserve, but never above it.

We assume no responsibility for failure to execute bids for any reason whatsoever.

In Person

If you are planning to bid at auction for the first time, you will need to register at the reception desk in order to receive a numbered bid card. To place a bid, hold up your card so that the auctioneer can clearly see it. Decide on the maximum auction price that you wish to pay, exclusive of buyer's premium and tax, and continue bidding until your bid prevails or you reach your limit. If you are the successful bidder on a lot, the auctioneer will acknowledge your paddle number and bid amount.

Absentee Bids

As a service to those wishing to place bids, we may at our discretion accept bids without charge in advance of auction online or in writing on bidding forms available from us. "Buy" bids will not be accepted; all bids must state the highest bid price the bidder is willing to pay. Our auction staff will try to bid just as you would, with the goal of obtaining the item at the lowest bid price possible. In the event identical bids are submitted, the earliest bid submitted will take precedence. Absentee bids shall be executed in competition with other absentee bids, any applicable reserve, and bids from other auction participants. A friend or agent may place bids on your behalf, provided that we have received your written authorization prior to the sale. Absentee bid forms are available in our catalogs, online at www.bonhams.com/us, at offsite auction locations, and at our San Francisco, Los Angeles and New York galleries.

By Telephone

Under special circumstances, we can arrange for you to bid by telephone. To arrange for a telephone bid, please contact our Client Services Department a minimum of 24 hours prior to the sale.

Online

We offer live online bidding for most auctions and accept absentee bids online for all our auctions. Please visit www.bonhams.com/us for details.

Bid Increments

Bonhams generally uses the following increment multiples as bidding progresses:

\$50-200	by \$10s
\$200-500	by \$20/50/80s
\$500-1,000	by \$50s
\$1,000-2,000	by \$100s
\$2,000-5,000	by \$200/500/800s
\$5,000-10,000	by \$500s
\$10,000-20,000	by \$1,000s
\$20,000-50,000	by \$2,000/5,000/8,000s
\$50,000-100,000	by \$5,000s
\$100,000-200,000	by \$10,000s
above \$200,000	at auctioneer's discretion

The auctioneer may split or reject any bid at any time at his or her discretion as outlined in the Conditions of Sale.

Currency Converter

Solely for the convenience of bidders, a currency converter may be provided at Bonhams' auctions. The rates quoted for conversion of other currencies to U.S. Dollars are indications only and should not be relied upon by a bidder, and neither Bonhams nor its agents shall be responsible for any errors or omissions in the operation or accuracy of the currency converter.

Buyer's Premium

A buyer's premium is added to the winning bid price of each individual lot purchased, at the rates set forth in the Conditions of Sale. The winning bid price plus the premium constitute the purchase price for the lot. Applicable sales taxes are computed based on this figure, and the total becomes your final purchase price.

Unless specifically illustrated and noted, fine art frames are not included in the estimate or purchase price. Bonhams accepts no liability for damage or loss to frames during storage or shipment.

All sales are final and subject to the Conditions of Sale found in our catalogs, on our website, and available at the reception desk.

Payment

All buyers are asked to pay and pick up by 3pm on the business day following the auction. Payment may be made to Bonhams by cash, checks drawn on a U.S. bank, money order, wire transfer, or by Visa, MasterCard, American Express or Discover credit or charge card or debit card. All items must be paid for within 5 business days of the sale. Please note that payment by personal or business check may result in property not being released until purchase funds clear our bank. For payments sent by mail, please remit to Cashier Department, 220 San Bruno Avenue, San Francisco, CA 94103.

Sales Tax

California, Arizona, Colorado, Connecticut, Florida, Georgia, Illinois, Nevada, New York, Massachusetts, Pennsylvania, Texas, Washington state and Washington DC residents must pay applicable sales tax. Other state or local taxes (or compensating use taxes) may apply. Sales tax will be automatically added to the invoice unless a valid resale number has been furnished or the property is shipped via common carrier to destinations outside the states listed above.

Shipping & Removal

Bonhams can accommodate shipping for certain items. Please contact our Cashiers Department for more information or to obtain a quote. Carriers are not permitted to deliver to PO boxes.

International buyers are responsible for all import/export customs duties and taxes. An invoice stating the actual purchase price will accompany all international purchases.

Collection of Purchases

Please arrange for the packing and transport of your purchases prior to collection at our office. If you are sending a third party shipper, please request a release form from us and return it to +1 (212) 644 9009 prior to your scheduled pickup. To schedule collection of purchases, please call +1 (212) 644 9001.

Handling and Storage Charges

Please note that our offices have requirements for freight elevator usage. Please contact us to schedule an elevator appointment for pickup of any large or awkward items. Bonhams will hold all purchased lots in our gallery until Wednesday October 29 without penalty. After October 29 collection of lots will be by appointment only. Please call +1 (212) 644 9001 at least 24 hours in advance to make an appointment.

Storage charges of \$5 per lot, per day will begin accruing for any lots not collected by the 31st day after the auction.

Bonhams reserves the right to remove uncollected sold lots to the warehouse of our choice at the buyer's risk and expense. Handling and storage fees will apply.

Auction Results

To find out the final purchase price for any lot following the sale, please call our automated auction results line at +1 (800) 223 2854 ext. 3400. All you need is a touch-tone telephone and the lot number. Auction results are usually available on the next business day following the sale or online at www.bonhams.com/us.



IMPORTANT NOTICE TO BUYERS

COLLECTION & STORAGE AFTER SALE

Please note that all oversized lots listed below, that are not collected by **5PM ON WEDNESDAY, OCTOBER 29** will be removed to the warehouse of Cadogan Tate Fine Art Storage Limited. Lots not so listed will remain at Bonhams; provided, however, **THAT IF BUYERS OF LISTED LOTS ALSO BUY OTHER NON-LISTED ITEMS, THESE OTHER LOTS WILL ALSO BE REMOVED TO THE WAREHOUSE OF CADOGAN TATE**, so that all lots remain together and buyers can collect their entire purchases from one location. For any questions please refer to the Bonhams department.

LOTS WILL BE AVAILABLE FOR COLLECTION FROM CADOGAN TATE BEGINNING AT 9.30AM ET ON FRIDAY, OCTOBER 31.

Address
 Cadogan Tate Fine Art Storage Limited
 41-20 39th Street
 Sunnyside, New York, 11104

Lots will be available for collection 24hrs following transfer to Cadogan Tate every business day from 9.30am to 4.30pm ET.

Collections appointments must be booked 24 hours in advance (subject to full payment of all outstanding amounts due to Bonhams and Cadogan Tate) by contacting Cadogan Tate at (t) +1 (718) 707 2849.

HANDLING & STORAGE CHARGES

Please note: For sold lots removed to Cadogan Tate there will be transfer and insurance charges but no storage charge due for lots collected within 7 days of the transfer date. For sold lots that remain at Bonhams, there will be no storage charge for lots collected within 21 days of the sale date.

The per-lot charges levied by Cadogan Tate Fine Art Storage Ltd are as follows (plus any applicable sales tax):

FURNITURE/LARGE OBJECTS

Transfer \$75
 Daily storage..... \$10
 Insurance (on Hammer + Premium + tax) 0.3%

SMALL OBJECTS

Transfer \$37.50
 Daily storage..... \$5
 Insurance (on Hammer + Premium + tax) 0.3%

Please contact Catherine More at Cadogan Tate Fine Art Storage at
 (t) +1 (718) 247 2070
 (f) +1 (347) 468 9916 or
 c.more@cadogantatefineart.com

For more information and estimates on domestic and International shipping, please contact Michael Driver at
 (t) +1 (718) 247 2064 or
 m.driver@cadogantate.com

PAYMENT

All amounts due to Bonhams and all charges due to Cadogan Tate Fine Art Storage Ltd must be paid by the time of collection of the property from their warehouse.

TO MAKE PAYMENT IN ADVANCE

Telephone +1 (718) 707 2849 to ascertain the amount due, payable by cash, check, or credit card.

PAYMENT AT TIME OF COLLECTION

May be made by cash, check, or credit card.

Lots will only be released from Cadogan Tate's warehouse upon production of the "Collection Slip" obtained from the Cashier's office at Bonhams.

The removal and/or storage by Cadogan Tate of any lots will be subject to their standard Conditions of Business, copies of which are available at Bonhams.

PLEASE NOTE

Cadogan Tate does not accept liability for damage or loss, due to negligence or otherwise, exceeding the sale price of such goods, or at their option the cost of repairing or replacing the damaged or missing goods.

Cadogan Tate reserves a lien over all goods in their possession for payment of storage and all other charges due them.

OVERSIZED LOTS

51	245	284
54	253	285
58	255	
59	262	

FOREWORD

We are very pleased to present Bonhams' inaugural History of Science sale, which includes books, manuscripts, photographs, scientific & technological instruments, prints and more.

The mapping of the earth, as well as the earth's place within the universe, was one of the first subjects of man's scientific inquiry, so it is fitting that the sale should open with an excellent collection of globes, including fine examples of both terrestrial and celestial globes, as well as planetary models, in a range of sizes from 1½ inch miniatures, to pocket globes in the original fish-skin cases with celestial gores affixed to the interior, to large table-top globes. Two highlights of this section are lot 1, a very fine example of *A New Pocket Globe*, produced by Richard Cushee in 1731, as well as lot 38, a beautiful pair of terrestrial globe and armillary sphere, produced by the distinguished French globe-maker Félix Delamarche in 1834.

In tandem with the mapping of the earth, scientific inquiry was also directed to the heavens. Our next section consists of items relating to the field of astronomy. Included are landmark books in the history of science, such as our cover lot, a beautiful example of Johannes Kepler's seminal achievement, the *Tabulae Rudolphinae*, printed in 1627. Kepler's contributions to modern science cannot be understated, as he developed the three laws of planetary motion, including the first which identified the elliptical shapes of the planetary orbits. Without him, the work of his successors, such as Galileo and Newton, would have not been possible. This section also includes the outstanding and important archive of Willis Ritchey (lot 58), one of the greatest astronomical photographers as well as one of the most significant designers of telescopes. This section also includes a wonderful selection of telescopes, and planetary and deep-space photography.

The eighteenth and nineteenth centuries saw a surge in interest in the natural world, which carried over into the early twentieth century. Our Natural History section focuses on some of the different ways this interest manifested itself. Included are a selection of gorgeous large-format plate books, such as lot 74, Nathaniel Wallich's outstanding work on the botany of India. Replete with 295 hand-colored plates, it was the most extensive work on the subject. Another highlight of this section is a most fascinating letter by the great naturalist and founder of the theory of evolution, Charles Darwin. This letter (lot 80), which concerns the reproductive act among barnacles, is a fine example of Darwin's keenly inquisitive and original mind.

REGULATED SPECIES MATERIALS AND CITES PERMITS

The export of a lot from the United States or import into certain countries may be subject to export or import regulations, licensure and/or other restrictions; in particular, lots containing plant or animal materials such as ivory, rhinoceros horn, tortoiseshell, coral, whalebone or certain types of woods, irrespective of age or value, may require the granting of one or more export or import licenses or certificates, or may be banned from import altogether by some countries. Moreover, the ability to obtain an export license or certificate does not insure the ability to obtain an import license or certificate in another country. Lots that contain such regulated species materials may also not be eligible for exportation or for re-importation into the United States if they are not at least 100 years of age, and, under current law, lots containing African Elephant Ivory may no longer be re-imported into the United States regardless of age. In addition, resales of lots containing certain regulated species materials may be subject to restrictions in some jurisdictions.

Lots noted in the catalog with a Y next to the lot number contain one or more such regulated plant or animal materials. **It is the buyer's responsibility to investigate any such restrictions and to obtain any relevant export**

ORDER OF SALE

Globes.....	1-43
Astronomy.....	44-62
Natural History.....	63-91
Medicine & Physiology.....	92-207
Physics & Mathematics.....	208-266
Technology.....	267-288

While some scientific minds were focused on the world around them, others turned their inquiries within. Our largest section features an outstanding selection of works in the fields of medicine and physiology, including selections of anatomy, dentistry, urology, obstetrics and more. Two highlights include Withering's *Account of the Foxglove* (lot 134), being the discovery of the efficacy of digitalis in treating heart-disease, and a major break-through in modern medicine, as well as lot 171, a beautiful and highly detailed collection of manuscripts and original artwork on the anatomy and physiology of the lungs and respiratory system by the French physiologist Antoine-Pierre-Ernest Bazin .

One of man's noblest endeavors has been quest to gain a greater understanding of the laws of the universe. Our section of mathematics and physics contains items that exemplify this quest, such as lot 239, a manuscript by the French Nobel-prize winning physicist Henri Becquerel on the role of electrons in the theory of matter, lot 245, a beautifully crafted Helmholtz Sound synthesizer, being the first electric keyboard, and lot 262, an original viewing window from the Manhattan project, used to protect scientists as they oversaw plutonium production for the atom bomb. The glass for the window is a truly exotic material, at approximately 1500 pounds and 6 inches thick, it is constructed of numerous layers of 70% lead oxide glass, which reacts like a metal rather than like glass, crumbling when ground and melting like metal.

Our final section consists of technology, and includes books and technological instruments. The highlights of this section include a first edition of the most important paper on the history of digital computing, Ada Lovelace's "Sketch of the Analytical Engine invented by Charles Babbage" (lot 272); a silk portrait JM Jacquard, executed on an eponymous loom, the invention of which is regarded as the birth of the computer age; and lot 286, an Apple-1 computer in beautiful working condition, and with exceptional provenance.

The sale previews Saturday October 18th-Wednesday October 22nd. We look forward to seeing you here in our New York galleries for the preview, and are happy to answer any questions or prepare condition reports for any of the lots.

Cassandra Hatton
Senior Specialist, Fine Books & Manuscripts

or import licenses. Please note that this process is governed by local authorities and may take considerable time. Regardless of any delay in the obtaining of an export or import license or certificate or denial of a license's or certificate's issuance, purchased lots shall be paid for in accordance with the Conditions of Sale, and any such delay or denial shall not serve as the basis for cancellation of any sale. Prospective buyers are advised to obtain information from the relevant regulatory authorities regarding export and import restrictions, requirements, and costs prior to bidding. Finally, due to a recent change in New York State regulated species law, **New York State residents will require a permit to purchase any item containing ivory or rhinoceros horn.**

Upon request, Bonhams can refer the purchaser to a third party agent to assist the purchaser in attempting to obtain the appropriate licenses and/or certificates. However, there is no assurance that any necessary licenses or certificates can be obtained. Please contact the Specialist Department for a referral prior to placing a bid if you are uncertain as to whether a lot is subject to export/import license or certificate requirements or related restrictions.

GLOBES

Lots 1-43





1

GLOBES

1

POCKET GLOBE; CUSHEE, RICHARD.

A New Globe of the Earth. London: R. Cushee, 1731.

A 3 inch (7 cm) diameter pocket globe in fish skin covered wood case with two brass hook-and-eye clasps. 12 hand-colored copper-engraved gores with 2 polar callotes over papier maché and plaster, each pole with pivot hole, signed within decorative cartouche in North Pacific, inside of case with 12 engraved hand-colored celestial gores depicting the northern and southern hemispheres with 48 Ptolemaic constellations, and a handful on others, including those of Hevelius. Some light soiling to gores of globe and case, a few small spots of loss and scratches to varnish, $\frac{3}{4}$ dent off west coast of north America, 1-long crack to case, 2 small ink-stains to one half of case.

Provenance: Sotheby's, lot 41 or 447, February 16, 1998.

A very finely made early eighteenth century pocket globe depicting California as an island, north-western America labelled as "Unknown Parts," Australia labelled "New Holland," the Dominion of Muscovy as well as the Great Wall of China are both noted. "Richard Cushee (fl.1729-32) worked as a surveyor and globe maker in the *Globe and Sun* between St. Dunstan's Church and Chancery Lane in London ... The gores for the celestial globe are concave, drawn as seen from the inside. This can be clearly seen from the Great Bear, looking right. In the global view, the head of this constellation points leftwards. It is known that Cushee mirrored his figures: even on his concave celestial globe, the human figures are seen backwards. The constellations also include those introduced by Hevelius; next to the Great Bear, we can see Hevelius' sharp-eyed Lynx" (*Dekker Globes from the Western World* p 112). *Dekker Globes at Greenwich* GLB0044; *Van der Krogt Old Globes in the Netherlands* Cus 1. **\$8,000 - 12,000**



2

2
POCKET GLOBE; HILL, NATHANIEL. FL. 1746-1768.

A New Terrestrial Globe. [London: At the Sign of the Globe and the Sun], 1754.

A 3 inch (6.8 cm) diameter Nathaniel Hill pocket globe in fishskin covered wood case with two brass hook-and-eye clasps. 12 copper-engraved hand-colored gores over papier-maché and plaster sphere, case lined with celestial maps of the northern and southern skies. A few very small scratches to varnish, otherwise excellent.

Shows California as a peninsula, and the northwest coast of America as “unknown parts.” The track of Admiral Anson (1740) is drawn, and the tradewinds are indicated by red arrows. “Nathaniel Hill (fl. 1746-1768) had impeccable credentials. He was apprenticed to Richard Cushee who at that time was carrying out survey work for John Senex’s map of Surrey. Hill, too, initially worked as a surveyor, working in Yorkshire, the Fens, and around London. There obviously is a strong link between surveying, making maps and globes, and engraving. Hill was involved in all three. Remarkably few globes by Hill have survived” (*Globes and the Mechanical Universe* p 57). Dekker *Globes from the Western World* fig 56; Van Der Krogt *Old Globes in the Netherlands* Hil 1.

\$6,000 - 9,000



3

3
MINIATURE GLOBE.

[Terrestrial Globe]. English, ca. 1770.

An unsigned 1½ inch (3.9 cm) diameter miniature globe in modern turned rosewood case. 12 hand colored engraved full gores over plaster, metal pins at poles, paper label overlay in southern part of Eastern Ocean reading “Minshulls”. A few very small chips to varnish, lid of case with 1 inch crack.

A very attractive late eighteenth century English miniature pocket globe, with Australia marked as New Holland, and Captain cook’s tract noted.

\$1,500 - 2,500



4



5

4

POCKET GLOBE; MOLL, HERMANN, AFTER.

A Correct Globe with the New Discoveries. [London, c.1775].
A 3 inch (7 cm) diameter pocket globe in fishskin covered wood case with 3 brass hook and eye clasps. 12 hand colored copper-engraved gores with 2 polar calottes over papier maché and plaster, pivot holes at poles, titled within square cartouche in northern part of the "Great South Sea." Case with 2 sets of 12 hand colored copper-engraved celestial half gores with 2 polar calottes, signed "A Correct Globe with y^e New Constellations of Dr Halley &c." Some scratches and small chips to varnish, case gores with some light spots of rubbing, 2 repaired cracks to case.

A lovely pocket globe, where "California is drawn as a peninsula, and the north-west coast of America is extended up to Beering's L.^d; Australia and New Zealand are adapted according to Cook's discoveries and N. S Wales, Cooks Str are added. The track of Dampier is removed but traces of it are still visible and Cooks Track 1760 (!) is added..." (Dekker *Globes at Greenwich* p 529). Dekker notes on p 418 of *Globes at Greenwich* that this is in fact a later anonymous issue of Hermann Moll's 1719 *A Correct Globe with y^e Trade Winds*, one of the differences being the change of name in the celestial globe from Hevelius to Halley. Dekker *Globes at Greenwich* GLB0196.

\$5,000 - 8,000

5

POCKET GLOBE; LANE, NICOLAS.

A New Globe of the Earth. [London], 1776.
A 3 inch (7 cm) diameter pocket globe in fish skin covered wood case with 2 brass hook and eye clasps and red painted rim. 12 copper engraved hand colored full gores over papier maché and plaster, titled within decorative foliated cartouche in North Pacific, metal pivot at both poles, case with 2 sets of 12 hand colored copper engraved half gores and 2 polar calottes. Some small scattered chipping to varnish, varnish chipped around poles, some spotting to gores of case, 1 clasp broken.

A nice example of a late eighteenth century pocket globe, with continents outlined in green, monsoons marked in the Chinese Sea and the Indian Ocean, Tasmania still connected to Australia and labelled Dimens Land. Location of Cook's death noted "Owhyhee. Here C. Cook was Kill'd." "Very little is known about Nicolas Lane ... whose business is particularly associated with pocket globes ... The Lane pocket globes of 2.75 and 3 in. diameter derive from two traditions ... For the smaller one, the copper plated of the celestial counterpart of the Cushee ... pocket globes were used. These were perhaps acquired by Nicolas in the early 1770s when the Cushee firm was dissolved. How the other 3 inch pocket globe came into production is at present unknown" (Dekker *Globes at Greenwich* p 393, GLB0029).

\$3,000 - 5,000



6

6
POCKET GLOBE; CARY, JOHN.

Cary's Pocket Globe. Agreeable to the Latest Discoveries. London: J & W Cary Strand, April 1, 1791.

A 3 inch (7.7 cm) diameter pocket globe in fishskin-covered wood case with 2 brass hook-and-eye clasps. 12 Copper-engraved hand-colored gores applied to a papier maché and plaster sphere, circular cartouche to southern Indian Ocean. Metal axis pins to poles, case lined on one half with a map entitled *The World as it was known in Caesar's time agreeable to D'Anville*, on the other half with *A Table of Latitudes and Longitudes of Places not given on this Globe*. A few very small spots of wear to varnish, some slight spotting and wear to inside of case, case with small white smudge.

One of the earliest globes to be published by Cary. Of interest is the fact that Cary departed from the usual custom of displaying the celestial sphere on the inside of the case. "This little globe is very up-to-date; Mackenzie's explorations in Canada (in 1798) are already recorded. Various routes of the 18th century are recorded, such as James Cook's three voyages... those of his captains Gore and King, of Marshall and Shortland, and of Phipps (1773)" (Dekker *Old Globes in the Netherlands Car 1*). Dekker *Globes at Greenwich GLB0001*; Phipps 1773.

\$4,000 - 6,000



7

7
MINIATURE TABLETOP GLOBE; JACOB & HALSE.

[Terrestrial Globe]. London: 1809.

A 2¾ inch (7 cm) diameter terrestrial pocket globe on modern stand. 12 hand-colored engraved paper gores, title within circular cartouche in Pacific, prime meridian through London marked with the tracks of Anson and Cook's first voyage, metal pinions with small discs at each pole. Original varnish, some small spots where varnish is flaking, small cracks in varnish at poles.

The World in Your Hands. An Exhibition of Globes and Planetaria 5.17.
\$1,500 - 2,000



8



9

8
MINIATURE GLOBE; BAUER, CARL.

[*Terrestrial Globe.*] [Nuremberg: Carl Bauer, c.1825].
 1.5 inch (4.3 cm) diameter miniature terrestrial globe in card box, with accordion book attached to inside of box, consisting of 28 hand colored engraved figures of people from around the world. A few small dents, and chips, some brown spots and wear to varnish, box wanting lid.

Provenance: Contemporary manuscript note to bottom of box, possibly in a child's hand, noting the name change of New Holland to Australia.

"Various globes from Nuremberg were engraved by members of the Bauer family ... This tiny terrestrial globe ... is signed 'C.B.' and is almost certainly by Carl Bauer. The globe sits in a small box made of board, containing a great number of coloured engravings of costumes of human races" (Dekker *Globes of the Western World* p 98).

\$1,000 - 1,500

9
POCKET GLOBE; NEWTON, SON & BERRY.

Newton's New and Improved Terrestrial Globe. London: Newton Son & Berry, 66 Chancery Lane, c.1830.

A 3 inch (7 cm) diameter pocket globe in original fishskin covered wood case with two brass hook-and-eye clasps. 12 hand-colored engraved gores, signed in northern portion of Pacific Ocean, inside of case with 12 engraved hand-colored celestial gores depicting the northern and southern hemispheres signed *Newton's Improved Pocket Celestial Globe.*

Provenance: Christie's South Kensington, lot 79, October 26, 2006. Globe with *Meridian of London* and graduated equatorial and ecliptic, the oceans showing various explorers tracks with notes and dates. Case with graduated equatorial, ecliptic and colures, as well as the constellations depicted as mythical beast and scientific instruments. "The Newton family were one of the most important globe making firms in England in the early 19th century. The founder, John Newton (1759-1844), was apprenticed to Thomas Bateman (fl. 1754-1781), who in turn, had been a pupil of Nathaniel Hill ... The firm changed to Newton, Son & Berry when they were joined by Miles Berry, a civil engineer and patent agent..." (*Globes and the Mechanical Universe* p 56).

\$5,000 - 8,000



10

10

MINIATURE GLOBE; NEWTON & BERRY.

Newton & Berry's New Terrestrial Globe. [London]; Newton & Berry, 1831. A 1.5 inch (3.9 cm) diameter miniature globe in 2½ tall turned walnut case, domed lid with raised knob. 12 full hand-colored copper engraved gores over papier maché and plaster, metal pivot at each pole, pivots fitting into notches in case. Signed in North Pacific, continents outlined in green or red. Some spots of browning mostly concentrated around equator.

Provenance: Christie's, lot 9, June 24, 1998.

A very nice example of a miniature pocket globe, with Australia marked as New Holland, Captain Cook's voyage of 1776 marked, and no appearance of Antarctica. Not in Dekker.

\$2,000 - 3,000



11

11

POCKET GLOBE; NEWTON, SON & BERRY.

Newton's New & Improved Terrestrial Globe. London: Newton Son & Berry, 66 Chancery Lane, c.1833.

A 3 inch (7.6 cm) diameter pocket globe in turned wood case, domed lid with raised knob. 12 hand-colored copper-engraved full gores over papier mâché and plaster, iron pivots at poles fitting into case notches, signed in North Pacific. Several spots of loss to varnish, several brown spots, repaired crack to lid of case.

The tracks of Captain Cook's 2nd and 3rd voyages are marked, as well as the location of Cook's death. Tasmania is depicted as an island, and the location of the antipodes of London is marked. Dekker *Globes at Greenwich* GLB0015.

\$2,500 - 3,500



13

12

TEACHING GLOBE; HOLBROOK & CO.

[*American Teaching Globe*]. Berea, Ohio: Holbrook & Co., c.1840. A 5 inch (12.6 cm) diameter, 8 inch tall early American terrestrial globe on metal axis mounted on turned wood stand with circular base. 12 lithographed and varnished paper gores with original outline coloring over solid wood, signed above Sandwich Islands. Some browning and a few small spots of foxing to gores, as well as some repaired tears at poles.

A wonderful early American teaching globe, showing Texas labelled as a separate entity, Alaska marked as Russian America, and Canada labelled as British America, Canada, and Labrador. The brothers Dwight and Charles Holbrook, and later their brother Charles, specialized in making scientific instruments, globes, and educational equipment. This globe was later used in Holbrook's *Teaching Apparatus*. Rumsey 2511; Warner 95.

\$600 - 800

13

MINIATURE GLOBE; MALBY & CO.

[*Terrestrial Globe*]. Houghton Street, Newcastle Street, Strand: Malby & Co., 1842.

A 2 inch (5.25 cm) diameter miniature globe in 3¼ inch tall turned walnut case, domed lid with raised knob. 12 hand-colored printed full gores over plaster, steel pivots at both poles, pivots fitted into notches in case, signed in north Pacific. Some rusting to pivots, a few repairs and spots of browning, some edge-wear to case.

Provenance: Sotheby's, lot 85, October 28, 1998.

A late nineteenth century miniature pocket globe, the continents outlined in green or red, Texas marked as separate entity, parts of Antarctica noted.

\$2,000 - 3,000



14

14

MINIATURE GLOBE; DELAMARCHE.

[Globe Terrestre.] Paris: Delamarche, c.1850.

2.5 inch (6.5 cm) diameter French pocket globe in turned fruit wood case, lid and bottom domed, lid with raised knob. 12 hand colored engraved gores, metal pivots at poles, pivots fitted to notches in case, signed in southern Indian Ocean. A handful of repairs to gores with some loss of text (primarily to Africa), some browning at poles, a few small brown spots.

Provenance: Christie's, lot 10, June 24, 1998.

A late nineteenth century French pocket globe, with Canada noted as "Nouvelle Bretagne," Alaska as "Amérique Russe."

\$3,000 - 4,000



15

15

MINIATURE GLOBE; KLINGER, J.G.

The Earth. Nuremberg: J.G. Klinger, c.1850.

A 2 inch (5.7 cm) diameter miniature globe in wood box. 12 hand colored copper engraved full gores over wood, brass pivots at poles, fitting into notches in a horizon ring serving as a shelf in box, box with engraved paper cover depicting 2 children and an adult around a table studying globes titled "Die Erde. The Earth," eye and hook clasp. Some wear to varnish, cover of box soiled, some repairs to box, evidence of tape removal along one side of box.

Provenance: Christie's, lot 103, sale 9734.

A late nineteenth German pocket globe published in English. Shows Tasmania is an island, and an area in the south polar region labelled as Wilkes Land, Texas labeled as a separate entity, and Africa spelled "Afrika." Dekker *Globes at Greenwich* GLB0239.

\$1,500 - 2,500



16

16

MINIATURE GLOBE; KLINGER, J.G.

KLINGER. *Die Erde nach den neuest Entdeck.* Nuremberg A 2 inch (5.8 cm) diameter miniature globe in wood box. 12 hand colored copper engraved full gores over wood, brass pivots at poles, fitting into notches in a wooden box, box with engraved paper cover depicting 2 children and an adult around a table studying globes titled "Die Erde. The Earth", eye and hook clasp. Some manuscript notations to inside of box, paper cover soiled and chipped

A very good example of a German pocket globe. Signed in South Pacific, continents outlined in green and red, portions of Antarctica shown, including Wilkes' Land, Texas shown as a separate entity. **\$800 - 1,200**



17

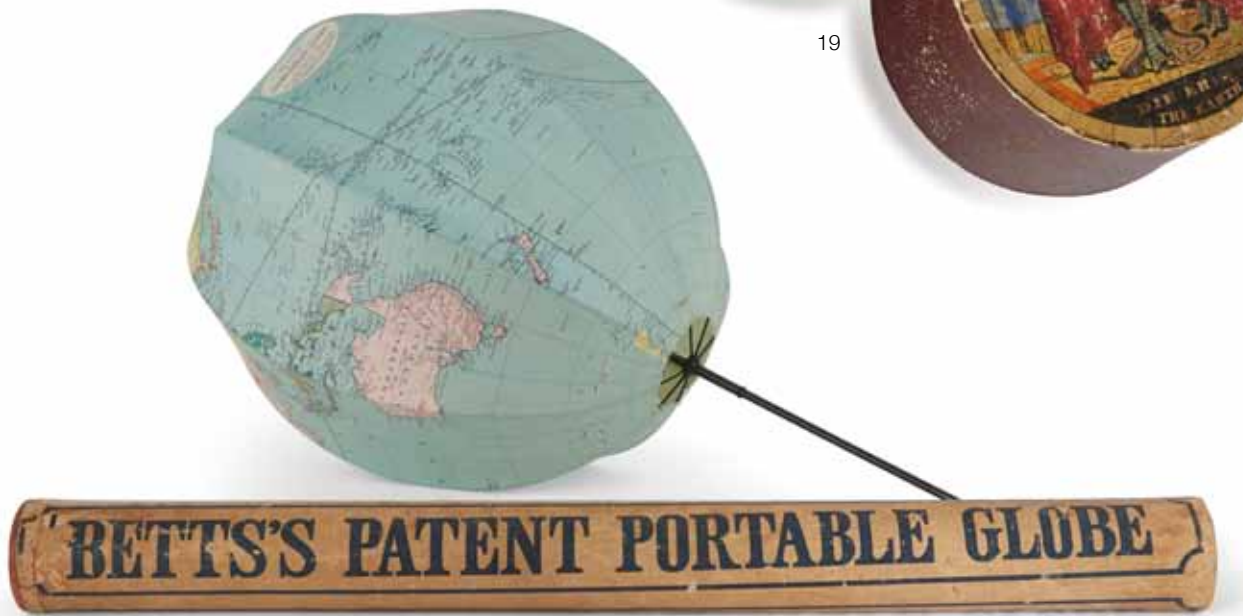
17

SEMI-SPHERICAL EDUCATIONAL GLOBE; HOLBROOK.

[*Terrestrial globe.*] Wethersfield, Ct: Holbrook's Apparatus Mfg. Co., c.1855.

A 3 inch (7.7 cm) diameter semi-spherical miniature globe. 12 hand colored engraved paper gores over two solid wood hemispheres, hemispheres attached together with brass hinges, faces of hemispheres with hand colored engraved maps of the eastern and Western hemispheres. Gores spotted and browned with some scratched and small dents, some chipping to edges of maps.

A most unusual early American educational globe, which allowed students to see the sphere of the map and to relate it to flat maps. **\$1,000 - 1,500**



18

18

COLLAPSIBLE GLOBE; BETT, JOHN.

Bett's Patent Portable Globe Compiled from the Latest and Best Authorities. London: George Philip & Son Ltd, c.1860.

A 15 inch (37.5 cm) diameter collapsible umbrella globe. 8 printed colored lithograph gores printed on linen and sewn, stretched over 8 flexible umbrella ribs, mounted on central metal pole. Housed in printed paper tube. Some spots of faint toning to gores, tube rubbed.

An excellent example of a classic umbrella globe. "The nineteenth century saw the appearance in various places of folding or collapsible globes that were cheaper and easier to store away. One of these globes was Bett's Patent Portable Globe from around 1860. It operates in the same manner as an umbrella. A cloth sphere is mounted on flexible metal struts set around a central metal spindle. When expanded, the globe is 40 centimetres in diameter. The globe was designed by John Betts (fl. 1844-63) in the Strand, London, of whom little is known except the fact that he produced educational material for children" (Dekker *Globes from the Western World* p 127).
\$1,500 - 2,000

19

MINIATURE GLOBE; KLINGER, J.G.

The Earth. Nuremberg: J.G. Klinger, c.1860.

A 2 inch (5.7 cm) diameter miniature pocket globe in original 2¾ inch tall board box. 12 hand-colored engraved full gores, iron pivots at poles, fitting into notches in box, box covered in pebbled paper, lid with hand-colored engraved cover depicting 2 children and 1 adult around a table studying globes, cover titles "Die Erde. The Earth." Some light soiling a wear to varnish and box.

Klinger (1764-1806) was an engraver and art dealer in Nuremberg who published numerous globes in varying sizes. This globe shows Tasmania is an island, and an area in the south polar region labelled as Wilkes Land. Dekker points out that "Although the globe has Dekker's name on it, it must have been published after his death, since it shows Wilkes' Land, which was discovered in 1840-42" (*Globes at Greenwich* GLB0017).

\$2,000 - 3,000



20

20

MINIATURE GLOBE; ABEL-KLINGER, C.

La Terre d'après les plus nouvelles découvertes. Nuremberg: Institut Artistique de C. Abel-Klinger, Editeurs, c.1860.

A 4 inch (9.8 cm) diameter, 7½ inch tall terrestrial globe in an uncalibrated iron half meridian on turned wood stand with circular base, small compass affixed to base. 12 printed paper gores, continents outlined in color, equator and Grand Meridian delineated in checkered black and red, signed in the southern *Mer des Indes*. Some wear to half meridian, A few scratches and spots of wear to varnish, repaired tear to gore off California coast.

"Klinger was an art dealer and engraver in Nuremberg, who published globes of various sizes. After his death, the firm was continued by his widow under the name 'J. Klinger's Kunsthandlung.' This name remained in use when Johann Paul Dreykorn (1805-75) bought the firm in 1831. When the merchant Carl Abel joined it in 1852, the name was changed to 'C. Abel Klinger'" (Dekker *Globes at Greenwich* p 384).

\$2,500 - 3,500



21

21

MINIATURE GLOBE; WRENCH.

[Terrestrial Globe.] London: Wrench's, c.1860.

A 2.5 inch (6.6 cm) diameter miniature globe in turned wood case, domed lid with raised knob. 12 hand-colored engraved full gores over plaster, iron pivots at poles, pivots fitted into notches in case, signed with overlabel in North Pacific. Cracked at south pole, some brown spots and wear to varnish, lid with repaired crack and ill-fitting the case.

A late nineteenth century English miniature globe, with the central portion of Now-Vietnam designated as Annam, Baja California marked as "Old California" and Alaska marked as "To United States."

\$2,500 - 3,500



22

22

TABLETOP GLOBE; SCHEDLER, JOSEPH.

J. Schedler's Terrestrial Globe. [Jersey City]: J. Schedler, November 24, 1868.

A 6" (15.4 cm) diameter, 12¾ tall terrestrial globe in full iron meridian circle on cast iron stand, with central baluster turned post on round base with three foliate feet. 12 chromolithographed paper gores with polar calottes, the equatorial graduated in degrees, the ecliptic graduated in days clockwise and anticlockwise, the antarctic with partial coastline, Central Africa marked as "unexplored," the oceans showing the currents, shipping routes and telegraph cables. Spotting and browning to gores, heavier over Asia and the Pacific.

"The German immigrant Joseph Schedler (fl.1850-80) started producing maps and globes in the 1850s. He carried off three medals with his globes: at the Paris International Exhibition of 1867, the American Institute fair of 1869 and the Vienna International Exhibition on 1873 ... In 1875, he published *An Illustrated Manual for the use of the Terrestrial and Celestial Globes* ... Schedler was one of the first to draw in shipping lines telegraph lines, ocean currents, depth figures and lines of the same magnetic variation" (Dekker *Globes from the Western World* pp 142-143).

\$800 - 1,200



23

23

MINIATURE TABLETOP GLOBE; ANDREWS, A.H.

Andrews' Three Inch Globe. Chicago: A.H. Andrew's & Co., c.1870.

A 3 inch (7.7 cm) diameter, 7 inch tall terrestrial globe on iron axis with turned wood stand on circular base. 12 printed paper gores, circular cartouche in North Pacific. Restored crack at equator, smaller restored cracks to Pacific and Asia, some spots of slight whitening to varnish.

An excellent miniature globe. Before moving to Chicago to begin his own globe making business, A.H. Andrews worked as a clerk for the Holbrook family of globe makers on the East Coast.

\$1,000 - 1,500



24

24

MINIATURE TABLETOP GLOBE; BELOT FILS, L.E.

Sphère de 0,08 de Diam.º par L.E. Belot Fils. Brussels: L.E. Belot, Fils, Fab. 'Rue des Minimes 89 Bruxelles Ameubleme.' d'écôle, c.1870.

A 3 inch (8.4 cm) diameter, 5½ tall terrestrial globe, steel axis pin on gold painted tripod iron stand, 12 printed color paper gores, the continents shaded green, yellow or tan, the oceans marked with major currents, some major cities, rivers and mountains defined, a few boundaries oddly shaped (tip of Italy not depicted, Baja California not depicted).

\$1,200 - 1,800



25

25

SEMI-SPHERICAL EDUCATIONAL GLOBE; MALBY.

Malby's Semi Terrestrial Globe Manufactured for the Commissioners of Irish National Education in accordance with Professor Sullivan's Method of Teaching Geography. [London: Malby & Co.], 1872.

A 3½ inch (9 cm) diameter semi-spherical educational globe. 12 hand colored engraved full gores over two wood and plaster hemispheres, each hemisphere with suspension loop at top, hemispheres attached together with brass hinge, faces of hemispheres lined with green paper. Wanting the eye and hook clasp, a few very small spots of chipping to gores, lining paper stained, three small wormholes to flat plane of one sphere (not touching outer surface), some light scratches.

An very good example of a late nineteenth century semi-spherical educational globe.

\$2,000 - 3,000



26



27

THE FIRST GLOBE TO BE DESIGNED BY A WOMAN

26

TABLETOP GLOBE; FITZ, ELLEN ELIZA.

Fitz Globe. [Boston]: Ginn & Heath, c.1879.

A 6 inch (15.3 cm) in diameter, 9 inch tall tabletop globe on round cast iron base on four tiered feet, Greek key design around lower edge of stand, gold leaf design on base of stand, stand with removable vertical solar pointer, as well as a removable cast iron mounting fitted with two perpendicular vertical brass rings. 12 hand-colored engraved paper gores and 2 polar calottes over wood, signed in overlabel in North Pacific, Analemma in South Pacific, Texas depicted as a separate entity. Some general light soiling to varnish, a few repaired cracks and tears, still a very attractive and unusual globe.

“The special feature of Fitz’s globe is the mounting. This globe can be used to illustrate the course of the sun, the length of the day and night and the length of twilight over the whole year. The globe is mounted at an angle of 66.5° on a rotatable disc, with a calendar. The sphere with the indicator shows the position of the sun, whilst the two meridians indicate the twilight zone. This mounting was designed by Ellen Eliza Fitz (b. 1836), an American governess from New Brunswick, who obtained a patent for it in 1875. The following year, she published *A Handbook of the Terrestrial Globe; or, Guide to Fitz’s New Method of Mounting and Operating Globes* (Dekker *Globes from the Western World* p 129).

\$2,000 - 3,000

27

TABLETOP GLOBE; RAND, MCNALLY & CO.

Rand, McNally & Co.’s New Six Inch Terrestrial Globe. [Chicago]: Rand McNally & Co., 1892.

A 6 inch (15.27 cm) diameter, 10¼ inch tall terrestrial globe on iron axis capped with rounded pyramid point, mounted on turned wood stand with circular base. 12 lithographed color gores over wood, signed in circular cartouche over Pacific as well as along 50° line in Southern Hemisphere, Analemma scale off coast of Baja California, isothermal lines for January indicated in blue, those for July delineated in red. Some general light spotting, some soiling along edges of gores, wear to gores at poles.

A good example of an American educational globe. Rand McNally was, and continues to be a prominent American publisher of maps, atlases and globes. Warner p 23, 121.

\$1,000 - 1,500



28

28

JIG-SAW GLOBE.

Terrestrial Globe. New York: Geographic Educator, 1927.
A 6 inch (15.11 cm) diameter, 9¼ inch high educational jig-saw terrestrial globe on cast iron tripod stand. 12 color lithographic gores laid onto a die-cast metal sphere, the sphere divided into five circular sections, each section with a puzzle of a different continent with the countries titles in relief. A few spots of wear, with some minor chips and closed tears to gores.

\$800 - 1,200



29

29

POCKET GLOBE; [SEUTTER, MATTHAEUS].

Globus Terrestris juxta recentissimas observationes et navigationes peritissimor. Geograph. accuratissime delineata et sumitibus. [N.p.: c.1930].

A 3 inch (7.7 cm) diameter pocket globe in leather covered wood case. 12 color printed paper gores with 2 polar calottes, metal pins at poles, case with 2 sets of 12 printed celestial half gores.

A twentieth century facsimile of an eighteenth century pocket globe.

\$1,000 - 1,500



30

30

POCKET GLOBE; FOREST, J.

[Globe Terrestre.] Paris: Forest, Géographe-Éditeur, 17 Rue de Buci, c.1930.

A 3 inch (7.7 cm) diameter pocket globe offered with an 18th century fishskin over wood case with 3 brass hook and eye clasps (a bit too small for globe). 12 chromolithograph paper gores with 2 polar calottes over wood wighted at South pole with metal, signed in south Pacific, legend in Indian Ocean, case with 2 sets of 12 engraved celestial half gores varnished in green. Globe gores worn with some small areas of paper loss, 1 inch crack running up from south pole, one hook clasp lacking.

A French 20th century pocket globe.

\$800 - 1,200



31

31

TABLETOP GLOBE; CRAM.

Cram's Universal Terrestrial Globe. Indianapolis, Indiana: The George F. Cram Co., c.1934.

A 9 inch (22.9 cm) in diameter, 12 inch tall terrestrial globe on iron axis mounted to turned wood stand on rectangular base. 2 sets of 12 coated-paper gores over pasteboard, signed within circular cartouche at south-east Indian Ocean, Analemma in the South Pacific. Some chipping to varnish on stand, some general light crackling to coating on gores, a few paint smudges as well as a couple of small areas of surface wear.

A fascinating interbellum globe, with French Indochina and French West Africa indicated, as well as the Mongolian People's Republic, Italian Somaliland, the puppet state of Manchuria, and the Ukraine noted as part of the USSR.

\$500 - 800



32



34



33



35



36

32

TABLETOP GLOBE; REPLOGLE.

Library Globe. Chicago: Replogle Globes Inc., c.1934.

A 12 (31 cm) in diameter, 16½ inch tall terrestrial globe in cast iron meridian on mahogany stand with full horizon, four scrolled legs and four part incurved base, metal hour disc at North Pole. 12 chromolithograph paper gores over plaster, cartouche in North Pacific, Analemma in South Pacific. Some toning and light soiling to gores, ½ inch dent to plaster with 3 associated cracks to gores, a few small white spots.

An attractive library globe, showing Ukraine as a separate entity, as well as French Indochina and French West Africa, Italian Somaliland, and the puppet state of Manchuoko. Luther Replogle began producing globes in Chicago in 1930, and continues to be one of the largest producers of globes to this day.
\$1,000 - 1,500

33

TABLETOP GLOBE; BARROWE INC.

Official R.E. Byrd Globe. Indianapolis, Indiana: The George F. Cram Co., c.1934.

A 12 inch (30.7 cm) diameter, 18 inch tall terrestrial globe on iron axis with decorative cast-iron and turned wood stand on circular base, time dial at North Pole. 12 chromolithograph gores, circular overlable in south Indian Ocean, signed below label, Analemma in south Pacific, continents in yellow, water in green, nautical distances demarcated in red. Some general light crackling and soiling to gores, a couple small scratches with paper loss, some light wear to stand.

A special globe commemorative American explorer Richard E. Byrd's feat of reaching the South Pole. Notes Amundsen, Scott, & Byrd's landing dates on Antarctica, the puppet state of Manchuria, French Indochina and French West Africa, Italian Somaliland.
\$600 - 1,000

34

TABLETOP GLOBE; PHILIPS.

Phillips' 6-inch Terrestrial Globe. London: Selfridge & Co., Ltd, c.1936.

A 6 inch (14.6 cm) diameter, 10½ tall terrestrial globe in an uncalibrated iron half meridian on turned wood stand with circular base, poles capped with wood semi-spheres, signed in paper label overlay at North Pacific. 12 color lithographed paper gores over pasteboard with polar calottes. Gores rubbed and worn, crack running through equator, some scratches with small areas of paper loss, stand rubbed.

A very good example of an interbellum terrestrial globe, showing Ukraine as a separate entity, and delineating French West Africa and French Indochina, as well as the puppet state of Manchuria, and the Italian Somali Coast.
\$800 - 1,200



37

35

THREE GLOBES.

A group of 3 modern globes.

1. A 2½ inch diameter modern glass globe on glass cube stand, the continents represented in frosted sections on glass. Fine.
2. A 5 inch diameter modern reproduction of a seventeenth century globe, battery operated mechanical rotation. terrestrial globe on stand. Chips to paper on globe, portions of wood chipped away on horizon and meridian bands, wear to base.
3. A 6 inch diameter modern reproduction of a seventeenth century globe. Some chips to gores, as well as meridian and horizon bands, some areas of loss to wood on base.

\$800 - 1,200

36

LATTRE, JEAN & RIGOBERT BONNE.

Sphère de Copernic. Sphère de Ptolémée. Globe Terrestre. Globe Céleste. Engraved print from: RIZZI-ZANNONI; JANVIER. *Atlas moderne ou collection de cartes sur toutes les parties du globe terrestre ar plusieurs auteurs.* Paris: Lattré, 1771.

Hand-colored engraved print on paper, 506 x 370 mm (image 475 x 305 mm). Matted, glazed and framed to 475 x 645 mm.

A beautiful print depicting Copernican and Ptolemaic spheres, as well as a pair of terrestrial and celestial globes. Cf. Phillips 664; National Maritime Museum 215.

\$800 - 1,200

37

LOTTER, TOBIAS CONRAD.

Globus Terrestris ad Sphaeram obliquam delineata. Globus Coelestis cum Astro dictico artificiali iunctus. Augsburg, 1774.

Handcolored engraved print on paper. 540 x 645 mm (image 485 x 573 mm). Matted, glazed and framed to 770 x 842 mm.

\$800 - 1,200



38

38
**ARMILLARY SPHERE AND TERRESTRIAL GLOBE;
 DELAMARCHE, FÉLIX.**

[Untitled Armillary Sphere.] WITH: *Globe Terrestre Dressé par Fx. Delamarche*. [Paris]: Delamarche, 1834.

A matching pair of 7 inch diameter (27 cm), 15½ inch tall Ptolemaic armillary sphere and terrestrial globe, armillary sphere with 2 inch (5.5 cm) diameter terrestrial globe, both on ebonised turned wood stands with circular bases. Globe with 12 hand-colored engraved paper gores and two polar calottes over wood, paste board frame, small metal dial at North pole, horizon ring with engraved paper ring printed with months, days, signs of the zodiac, and directions. Horizon ring with four supports, each support printed on both sides with latitude and longitude of major world cities, the meridian ring printed with the degrees of elevation of the poles, the circumferences of rings painted red. Armillary sphere with horizon ring with engraved paper ring printed with months, days, signs of the zodiac, and directions. Horizon ring with four supports, each support printed on both sides with latitude and longitude of major world cities, the meridian ring printed with the degrees of elevation of the poles, mounted within meridian ring are five armillary rings, one each for the equator, arctic, antarctic, and Tropics of Capricorn and Cancer, the five rings surrounded by a band printed on both sides with the names of the zodiac as well as the months, mounted in the center is a terrestrial globe, above which

are suspended movable sun and moon discs on brass strips, hour ring above north pole, circumferences of rings painted red. Varnish to globe and sphere browned, half of hour ring on sphere lacing, some repairs to rings on both sphere and globe, chipping to edges of rings. Overall, an attractive pair.

“The first person to direct the production of globes in France at the general public, and to succeed in this, was Charles François Delamarche (1740-1817) ... For use in armillary spheres, a special small terrestrial globe was made, measuring about 2 inches (5.5 cm) ... the meridian of the globe and the rings of the spheres were made, like the horizons, in wood or stiff board. The degrees are printed on paper and stuck on. A characteristic of Delamarche is that the narrow outer side of these rings is painted red” (Dekker *Globes from the Western World* p 63). Charles François’ globemaking business soon dominated the French globe making industry. His son Félix took over the business in 1817, continuing the high quality work of his father.

\$10,000 - 15,000



39

39

MINIATURE CELESTIAL GLOBE; FLETCHER, PETER.

Fletcher's New Celestial Globe. [London: Fletcher, c.1860]. A 3 inch (7.3 cm) diameter, 5½ inch-tall miniature celestial globe with full bronze meridian circle on later mahogany stand with three baluster turned legs joined by cross stretchers, mahogany horizon with applied hand-colored paper circle showing days of the month, signs of the zodiac, and degrees. 12 hand-colored engraved gores and 2 polar calottes. Signed between Andromeda and Pegasus. Small neat repair to northern hemisphere at Cepheus, repairs to stand.

A lovely miniature celestial globe, showing the circles of perpetual occultation and apparition, the constellations labelled in Latin and depicted as scientific instruments, and mythical beasts and figures.

\$2,000 - 3,000



40

40

TELLURIAN; HEYMANN, LUDWIG.

[German school tellurian.] Leipzig: Ludwig Jul. Heymann, c.1870. A mid nineteenth-century geared tellurian on cast-iron stand. 14 inches tall, 13 inches long, the terrestrial globe 3 inches (7.6 cm) in diameter with 12 color lithograph gores and 2 polar calottes, signed "Erd Globus. Leipzig. Ldw. Jul. Heymann." Candle plate with paper onlay printed with seasons, months, days, direction, and signs of the zodiac. Crank mechanism Wanting candle-holder and reflector, paper on candle-plate wax-stained and chipped with some loss, about half of teeth to base gear broken off, paint to moon chipped, some wear and soiling to globe.

Tellurians were designed to demonstrate the rotations of the moon around the Earth, and the Earth around the Sun using a candle to act as the Sun. Using a geared mechanism, the Earth and Moon rotate around the Sun at the end of a long arm, while a candle reflector, which was fitted to a base that could be adjusted in height, demonstrated the position of shadows on the Earth and Moon according to their relative positions in relation to the Sun and each other.

\$800 - 1,200



41

41

CELESTIAL GLOBE; JOSLIN, GILMAN.

Improved Globe. Boston: 1870s.

A 16 inch (40.6 cm) diameter celestial table globe. Hand-colored steel engraved gores over plaster, titled on horizon ring "IMPROVED GLOBE, BOSTON, MANUFACTURED BY GILMAN JOSLIN CORRECTED TO 1870" and "Entered according to Act of Congress in the year 1852 by Charles Copley," within brass meridian ring and mahogany horizon ring applied with printed and colored scales of degrees, calendar, and zodiac, set within original turned mahogany stand. Overall good condition with surface staining, several indentations (the largest 1 1/2 x 3/4 inches) and small losses throughout, some light fading but colors overall vibrant.

Provenance: W. Parker Lyon Pony Express Museum; purchased by William Harrah and gifted to Ward Kimball; by descent to present owner.

The present globe was originally designed by Charles Copley (fl. 1843-69), a map and globe publisher and engraver working in Brooklyn, New York, and sold by E. & G.W. Blunt. In 1852, Copley copyrighted a pair of 16-inch terrestrial and celestial globes and received a gold

medal for them at the Fair of the American Institute in New York in the same year. In 1858, Copley (also with Blunt as seller) reissued the globe, corrected to that date, but also bearing the original 1852 copyright date. In the last quarter of the 19th Century, Copley's globes were revised and reissued by the prominent American globe maker Gilman Joslin, and the Franklin group of globe makers. Though the 16-inch terrestrial globes appear with some frequency on the market, their celestial counterparts are more scarce.

The present example has an interesting provenance. Originally displayed at the William Parker Lyon Pony Express Museum in Arcadia, California, it was gifted to Disney animator Ward Kimball (1914-2002) after the museum was purchased by casino and hotel owner William Harrah—according to the Kimball family as a thank you gift for Kimball having brought the museum to Harrah's attention. Kimball was one Disney's "nine old men," the core group of the studio's original animators responsible for creating some of its most iconic work.

\$8,000 - 12,000



42

42

TELLURIAN; TRIPPENSEE CO.

The Trippensee Planetarium. Detroit, Mich: The Trippensee Mfg. Co, 1908.

A 14½ inch tall, 18½ inch long Trippensee tellurian, in original wood case with label. Fitted with a 3 inch (7.6 cm) diameter terrestrial globe with 12 color printed gores over papier mâché and plaster, signed within shield shaped cartouche in Pacific, with a 1 inch diameter wooden moon painted black & white rotating around it on a geared metal arm, the two revolving around a central 6 inch (14.8 cm) diameter brass sun which has a wooden 2 inch diameter planet Venus painted black and white rotating around it on a metal arm, all mounted on geared mechanisms on a maple arm with metal label and small compass, on turned wood stand with round brass base printed with seasons, signs of the zodiac and months.

An excellent example of a Trippensee tellurian, a model which demonstrates the rotation of the moon around the earth, and the rotations of the earth and Venus around the sun, as well as the phases of the moon and Venus from the sun.

\$1,500 - 2,500

43

GLOBE REFERENCE BOOKS.

A collection of 20 reference books and auction catalogs on globes, including:

1. KEITH, Thomas. *A New Treatise on the Use of the Globes of the Earth and the Heavens.* New York: Samuel Wood & Sons, 1832.
2. HARRIS, Joseph. *The Description and Use of the Globes and the Orrery...* London: Thomas Wright, 1738.
3. VAN DER KROGT, Peter. *Old Globes in the Netherlands.* Utrecht: HES Publishers, 1984.
4. DEKKER, Elly. *Globes at Greenwich.* Oxford: Oxford University Press, 1999.
5. DEKKER, Elly. *Globes from the Western World.* London: Zwemmer, 1993.

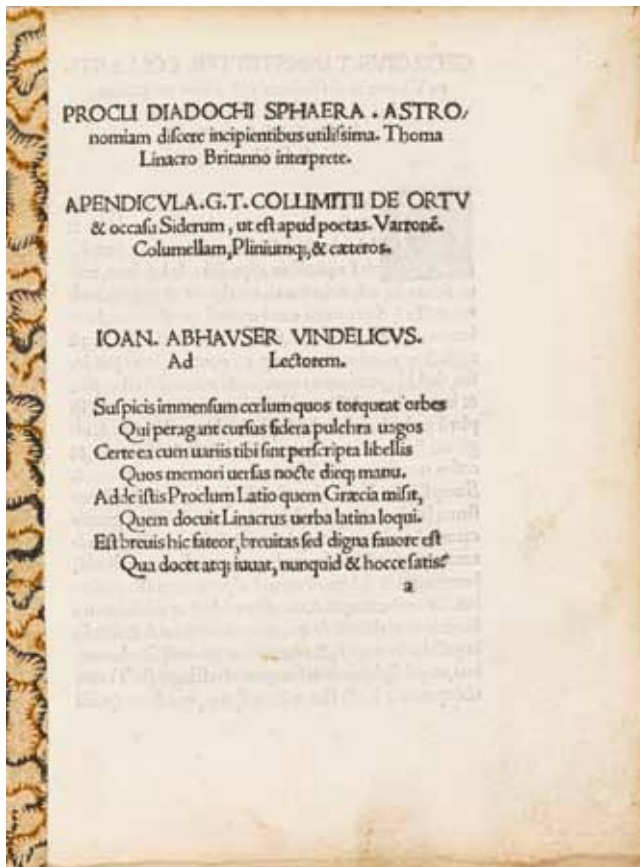
\$300 - 500

July 20, 1964
10 inches aperture (10" type) Moon's Age 7^d/16th, $\delta = -13^{\circ}7'$
AK

ASTRONOMY

Lots 44-62





44

44

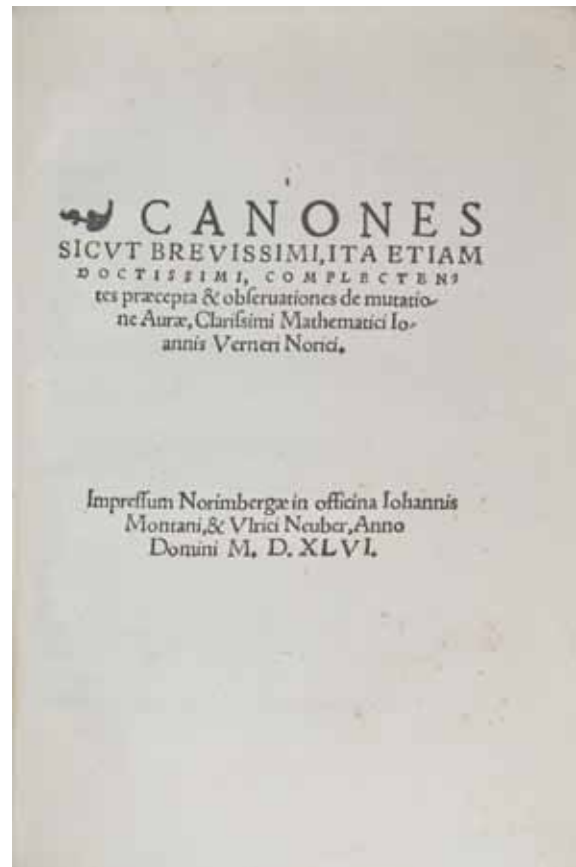
PROCLUS, DIADOCHUS. C.410-485.

Procli Diadochi Sphaera. Astronomiam discere incipientibus utilissima. Thoma Linacro Britanno interprete. Apendicula. G. T. Collimiti de Ortu & occasu Siderum, ut est apud poetas. Varronē[m]. Columellam, Pliniumq[ue], & caeteros. Ioan. Abhauser Vindelicus. Ad Lectorem. [Vienna: Hieronim Wietor & Johann Singriener, 1511.] 4to (212 x 159 mm). A⁶ B⁴. 10 ff. Edited by Georg Tannstetter and translated by Thomas Linacre. Bound at spine with 18th century paste-paper. An uncut, wide margined copy. Provenance: half-page manuscript biography of Proclus to A2 signed and dated Conrad Dasypodius (1530-1600), as well as numerous marginal annotations in the same 16th century hand (it is unclear from the signature whether the biography was written by Dasypodius, or if it was copied down by one of his students).

FIRST EDITION of these two astronomy texts edited by Georg Tannstetter (c. 1460-1524), aka Collimitius. Tannstetter was one of the leading Humanists at the University of Vienna, and was not only an astronomer, mathematician, and cartographer, but also a medical doctor.

The first text is the *Sphaera*, here attributed to Proclus, but now believed to be by Geminus of Rhodes (fl. c.70 BC): "It is a medieval compilation of extracts from Geminus's work" (Sarton I p. 212). The second work is the first appearance of Tannstetter's own work on the rising and the setting of the stars in the texts of the early poets. On the last page is a twelve line poem, taken from Hyginus, to aid in memorizing the fixed stars and constellations. Denis, *Wiens Buchdruckergesch* 41; Houzeau-Lancaster 913; Zinner 913.

\$2,500 - 3,500



45

45

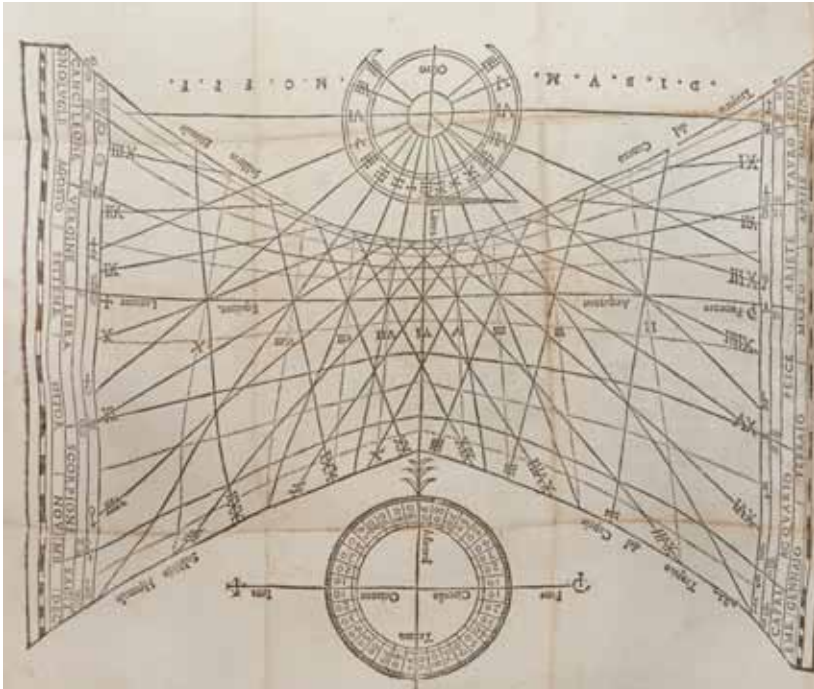
WERNER, JOHANN. 1468-1522.

Canones sicut breuissimi, ita etiam doctissimi, complectentes praecepta & observationes de mutatione aurae. Nuremberg: J. Montanus & U. Neuber, 1546. 4to (200 x 137 mm). [20] ff: A-E⁴, last leaf blank. 2 woodcut initials. Modern vellum. Minor soiling on verso of last leaf, otherwise fine. Provenance: manuscript annotations in an early hand, titled "Aphorismi Astrologiae," on recto of last leaf.

FIRST EDITION OF AN IMPORTANT METEOROLOGICAL TEXT. One of the rarest works by the mathematician and astronomer Johann Werner, and a pioneering contribution to environmental science at the height of the scientific revolution. Werner, a priest in Nuremberg, was the first to make regular observations of weather conditions in Germany; together with Tycho Brahe, he pioneered the practice of collecting meteorological data for scientific purposes. "In meteorology Werner paved the way for a scientific interpretation. Meteorology and astrology were connected, but he nevertheless attempted to explain this science rationally ... The 'guidelines that explain the principles and observations of the changes in the atmosphere,' published [posthumously] in 1546 by Johann Schöner, contain meteorological notes for 1513-1520. The weather observations are based mainly on stellar constellations, and hence the course of the moon is of less importance. Although Werner did not collect the data systematically, as Tycho Brahe did, he attempted to incorporate meteorology into physics and to take into consideration the geographical situation of the observational site. Thus he can be regarded as a pioneer of modern meteorology and weather forecasting" (*Dictionary of Scientific Biography*).

This pamphlet by Werner is rare, with only three copies in the United States cited in OCLC (UC San Diego, Yale, U. Michigan). Our copy appears to be the first on the market since the Honeyman copy sold in 1981.

\$5,000 - 8,000



46

46

VIMERCATO, GIOVANNI BATTISTA.

Dialogo della descrizione teorica et pratica de gli horologi solari.

Ferrara: Valente Panizza, 1565.

4to (200 x 150 mm). [6], 171 pp, with 29 full-page woodcuts, 1 large folding woodcut, and 4 tables in text, woodcut arms of the dedicatee, Alfonso d'Este, duke of Ferrara to title, woodcut headpiece and large woodcut initials with city views. Modern limp vellum with loop and ball ties. Occasional very light marginal foxing.

Provenance: Notations to charts in an early hand.

FIRST EDITION. This influential and popular treatise on sun dials went through at least nine editions and was reprinted as late as 1672. Zeitlinger, *Bibliotheca Chémico-Mathematica* (1921), listed the 1672 edition and noted: "All editions of this work, which was unknown to Lalande, Poggendorff, and Brunet, are now very rare." This, the first of two 1565 editions is probably the true first edition, as a 1557 edition that Riccardi cites but never saw is likely a ghost. "Panizza (the publisher) placed an extra leaf at the front of the volume with an address to the reader complaining of the treatment he received from the author. It had been agreed that Panizza would write the dedication, but when the printing was finished except for the preliminary leaves, the author appeared, carried off some thirty copies, and had another printer complete them for him with his own dedication (it is possible that the 1557 edition that Riccardi cites is actually this edition predated in the author's stolen copies)" (Mortimer *Italian 16th Century Books* 541, reproducing two of the illustrations). Adams *Cambridge* V807; Graesse v 6, pt 2, p 325.

\$1,200 - 1,800



47

47

CLAVIUS, CHRISTOPHER. 1538-1612.

In sphaeram Ioannis de Sacro Bosco commentarius. Venice: apud Io. Baptistam Ciottum, 1603.

4to (216 x 155mm). [32], 483, [1] pp. Woodcut text illustrations.

Contemporary limp vellum, minor foxing and toning, still very good.

Provenance: Astrological bookplate.

Seventh edition of this very widely used textbook. Clavius, a member of the Jesuit order, was one of the most respected astronomers in Europe. He was the main architect of the Gregorian calendar (which we use today). His commentary on the *Sphaera* of Sacrobosco, first published in 1570, demonstrates his adherence to the geocentric model of the universe sixty years after publication of Copernicus' *De revolutionibus*.

\$1,000 - 1,500



48

A GREAT CLASSIC IN THE HISTORY OF SCIENCE—
ONE OF THE ONLY KNOWN COPIES

48

KEPLER, JOHANNES. 1571-1630.

Tabulae Rudolphinae, quibus Astronomicae scientiae, temporum longinquitate collapsae Restauratio continetur. Ulm: Jonas Sauer, 1627. WITH: *Sportula*. [Sagan: n.p., 1629.]

Folio (342 x 228 mm). [xvi], 12, [3]; 115 [recte 119] pp. with engraved allegorical frontispiece designed by Kepler, depicting Hipparchus, Ptolemy, Copernicus, Brahe, and Kepler gathered in the Temple of Urania, numerous woodcut diagrams in text. Original binding of half pigskin and rose blind-ruled paper-covered boards. Quarter morocco clamshell. Binding worn with some loss of the paper on both covers, pigskin very rubbed; margin of k3 folded in, with a contemporary marginal extension and parts of the first letters of the marginal notes supplied in contemporary manuscript, a little marginal worming to prelims, not affecting text, a single small wormhole in lower blank margin penetrating about a third of the way through, not touching text. *Provenance:* RLA (bookplate); C.W. Turner (presentation bookplate to the University of Keele); Extensive annotations in a contemporary knowledgeable hand. Full details on annotations available upon request.

FIRST EDITION OF KEPLER'S LAST LIFETIME PUBLICATION AND HIS CROWNING ACHIEVEMENT, THE "FOUNDATION OF ALL PLANETARY CALCULATIONS FOR OVER A CENTURY" (Sparrow *Milestones of science*) third state. "The tables are extraordinarily important, for they document in a unique way Kepler's great contributions to astronomy" (Gingerich *Johannes Kepler and the Rudolphine tables*). "Besides the planetary, solar, and lunar tables and the associated tables of logarithms it includes Tycho Brahe's catalog of 1,000 fixed stars, a chronological synopsis, and a list of geographical positions ... Kepler was an astronomer's astronomer. It was the astronomers who recognized the immense superiority of the *Tabulae Rudolphinae*. For the professionals the improvement in planetary predictions was a forceful testimony to the efficacy of the Copernican system" (Sparrow). Based on Tycho Brahe's observations, the tables were then supplemented by Kepler's own observations. The calculations were a major mathematical achievement, as of course, Brahe's data applied erroneously to "perfect" circular orbits. Kepler had discovered the true elliptical shape of the planetary orbits, and thus, had to recalculate everything according to his new laws. The printing history of the book is quite complex. There were 1000 copies printed in Ulm in 1627, with three known states, affecting the title and the first two gatherings. Some copies are known with a posthumously published world map, and some have a posthumous appendix - neither is present in this copy. Caspar 79; Houzeau and Lancaster 12754; Lalande p 190; Norman 1208; Sparrow 116. \$25,000 - 35,000



49

49

LUNAR MANUSCRIPT—COLONIAL PHILADELPHIA.

[RITTENHOUSE, DAVID, attrib.]

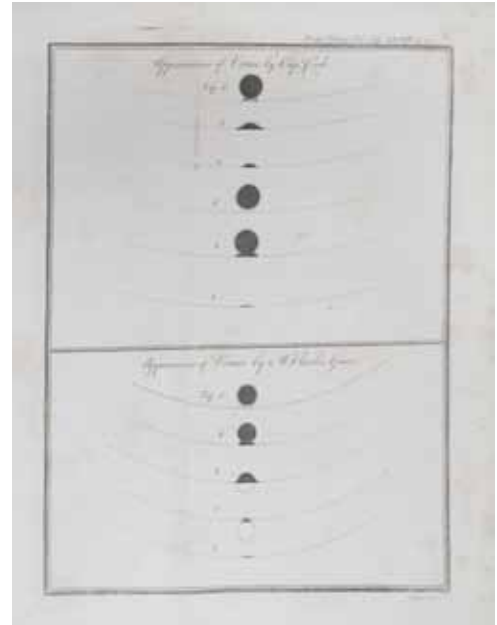
Manuscript of lunar observations, 4 pp, 8vo (174 x 110 mm), 1747, Philadelphia, in brown and red ink, with diagrams, tables, and illustrations, browning, faint old dampstain at centerfold with a few pinholes to same, matted and framed.

COLONIAL PHILADELPHIA MANUSCRIPT RECORDING TWO LUNAR ECLIPSES. The manuscript takes the form of an almanac and records the lunar eclipses of February 13 and August 9, 1747, at "Lat^d 40° N" (running through Philadelphia), with two diagrams and three shaded sketches showing the moon with human face at full and partial eclipse, and with detailed annotations. The first page includes a table showing the weather and phases of the moon for each day of the month of January, headed by a six line poem ("The two fac'd Janus begins the [...] year..."). The fourth page is a table titled "An Ephemeris of the Planets motions in 1747."

An old pencil annotation in the margin attributes the manuscript to DAVID RITTENHOUSE (1732-1796), the prominent Philadelphia astronomer, mathematician, and maker of scientific instruments, and the second most famous colonial American scientist after Benjamin Franklin. Though Rittenhouse was only fifteen at the time the manuscript was created, his precocity is well-documented, having begun to build mechanical models at age eight. He would go on to create numerous astronomical instruments, including transit and equal altitude instruments, zenith sectors, and telescopes, as well as two orreries (mechanical models of the solar system) which were among his most notable achievements (ANB).

Regardless of the attribution, scientific manuscripts from colonial America are scarce on the market, and the association with Philadelphia makes this an especially fine example.

\$5,000 - 8,000



50

50

SCIENTIFIC PAPERS OF CAPTAIN COOK.

COOK, JAMES. 1728-1779. "Observations made, by appointment of the Royal Society, at King George's Island in the South Sea." WITH: "Variation of the compass, as observed on board the Endeavour bark, in a voyage round the world." WITH: "Transitus Veneris & Mercurii in eorum exitu e disco solis, 4to mensis Junii & 10mo Novembris, 1769, observatus." WITH: "Of the tides in the South Seas." WITH: "The method taken for preserving the health of the crew of His Majesty's Ship the Resolution during her late voyage round the world." Extracts from: *Philosophical Transactions*, Nos 61 & 66, pp 397-421, 422-432, 433-436, 447-449, & 402-406. London: The Royal Society, 1771; 1776.

Five works in one. 4to (229 x 177 mm). 3 folding engraved plates. calf-backed marbled boards, some minor foxing and toning, last 2 leaves detached but present.

FIRST EDITIONS (second edition of no 5) OF ALL THE SCIENTIFIC PAPERS PUBLISHED BY CAPTAIN COOK IN THE PHILOSOPHICAL TRANSACTIONS, including his observations of the transit of Venus in 1769 during his first voyage around the world and his methods of preventing scurvy on board ship during his second circumnavigation. In 1768, at the suggestion of the Royal Society, the British Navy sent an expedition to Tahiti aboard H. M. Bark *Endeavour* to observe the transit of Venus across the sun and to perform other secret missions. Cook was appointed commander of the *Endeavour* and ordered to conduct some of the astronomical observations of the transit. On his second voyage around the world, commanding the ships *Resolution* and *Adventure*, Cook was so successful at preventing scurvy among his crew that he did not lose a single man to the disease. Garrison-Morton 3714.

\$1,200 - 1,800



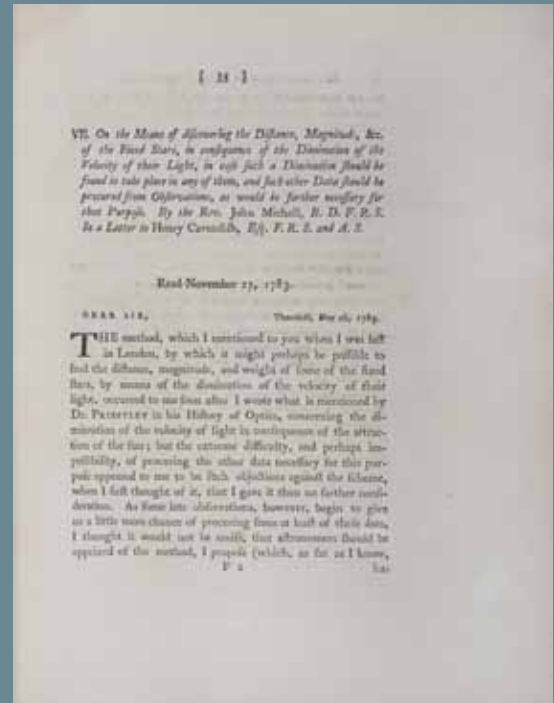
51

51
REFLECTING TELESCOPE; NAIRNE, EDWARD.

A 3¼-inch brass Gregorian reflecting telescope, English, third quarter 18th century, boldly signed on the tube *Nairne London*, focusing to the secondary mirror by long shank and screw, two-lens eyepiece of the Huygens type, the tube mounted by bracket and two butterfly wing nuts above joint with altitude and azimuth movement, tapering brass column and folding tripod base, brass endcap, length of tube 18 1/4 inches (46.5 cm).

A fine example of a Gregorian reflecting telescope from English inventor, optician, and instrument maker Edward Nairne (1726-1806). A fellow of the Royal Society, Nairne supplied scientific instruments to the Royal Observatory, Harvard University (on the recommendation of Benjamin Franklin, for whom he had made magnets), and Cook's second voyage, among other ventures. Until 1802 he kept a shop in 20 Cornhill, London, from which he sold telescopes and other scientific instruments, and employed the likes of Jesse Ramsden and Thomas Blunt, the latter acting as his partner from 1774-1793 (*ODNB*).

\$5,000 - 8,000



51A

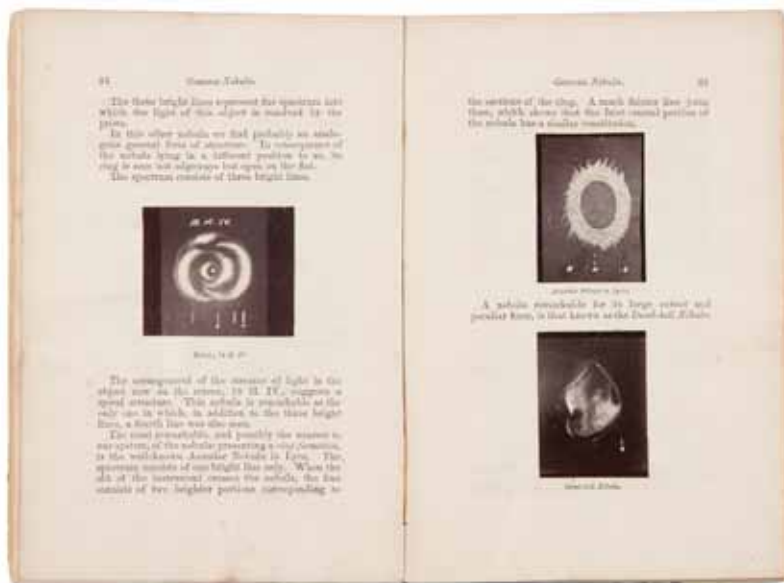
FIRST DISCUSSION OF BLACK HOLES

51A
MICHELL, JOHN. 1724?-1793.

"On the means of discovering the distance, magnitude, &c. of the fixed stars, in consequence of the diminution of the velocity of their light." WITH: CAVENDISH, HENRY. "Experiments on air." WITH: KIRWAN, RICHARD. "Remarks on Mr. Cavendish's Experiments on Air." WITH: CAVENDISH. "Answer to Kr. Kirwan's Remarks upon the Experiments on Air." WITH: KIRWAN. "Reply to Mr. Cavendish's Answer." In: *Philosophical Transactions of the Royal Society of London*, vol 74, part 1, pp 35-57; 119-153; 154-169; 170-177; 178-180. London: Lockyer Davis, and Peter Elmsly, 1784. 4to (270 x 208 mm). Whole volume. vii, [1], 521 pp. 21 plates.

FIRST EDITIONS. Michell's paper, rediscovered in the 1970s, represents the first discussion of the idea of a "black hole." Working with Newton's corpuscular theory of light and the Newtonian concept of escape velocity as the minimum velocity needed to escape from a body's surface to infinity, Michell postulated the existence of a body so massive that the escape velocity at its surface would equal the speed of light. Such bodies, or "dark stars," would of course be invisible, but could be identified by the motions of other bodies affected by its gravitational field. Speculation about dark stars ended in the early 1800s with the rise of the wave theory of light, but revived after the publication of Einstein's *General Theory of Relativity* (1915), which predicted the effect of gravity on light and allowed a modern scientific proof of Michell's 1784 hypothesis. Cavendish's 1784 paper describes his experimental proof of the compound nature of water, thus destroying the elemental status of "water" in the Aristotelian system. Cavendish was the first to demonstrate experimentally that hydrogen ("inflammable air") and oxygen ("dephlogisticated air"), when mixed in the proper proportions and fired, produce their own weight in water.

\$1,500 - 2,500



53



54

52

HERSCHEL, JOHN F.W. 1792-1871.

"On the chemical action of the rays of the solar spectrum on preparations of silver and other substances, both metallic and non-metallic, and on some photographic processes." In: *Philosophical Transactions*, part 1, pp 1-59. London: Richard & John E. Taylor, 1840. 4to (297 x 234 mm). xii, 224, [4] pp. 6 plates numbered i-v, vii. Original printed wrappers, a little soiled & chipped, front wrapper starting.

FIRST EDITION OF HERSCHEL'S FIRST MAJOR CONTRIBUTION TO PHOTOGRAPHY. It contains the first use of the terms "positive" and "negative" in connection with photography, as well as a detailed account of the use of hyposulfite of soda as a fixative, his observation of the superior light-sensitivity of bromide of silver, a description of his first experiments with photography in solar spectroscopy, his process (anticipating Bayard) for obtaining direct positive proofs on paper, the necessity of using achromatic lenses for correct delineation, etc. Herschel's paper represents "a densely packed comprehensive summary" (Schaaf p 94) of the intensive researches in photography that had occupied him when he and his friend Henry Fox Talbot were striving to steal a march on Daguerre and the French by perfecting the process of making and fixing photographic images on paper that Talbot had begun developing some seven years before. Also included are the sixteenth and seventeenth series of Faraday's "Experimental researches in electricity" (see Horblit 29; PMM 308), and Sabine's "Contributions to terrestrial magnetism." Gernsheim *History of Photography* pp 96-98; *Incunabula of British Photographic Literature* 1068; Boni p 127.

\$1,500 - 2,500

53

HUGGINS, WILLIAM. 1824-1910.

On the Results of Spectrum Analysis Applied to the Heavenly Bodies. A Discourse Delivered at Nottingham, before the British Association, August 24, 1866. London: W. Ladd, [1866]. 8vo (180 x 120 mm). 56, 2 ad pp; tipped-in advertisement for the photographs on glass for lantern slide use. 18 albumen prints mounted in text reproducing diagrams of spectrums, sketches of nebulae, and "Apparatus for the Measurement and Comparison of Stellar Spectra"; additional albumen print of the latter loosely inserted. Original purple cloth, blindstamped and gilt lettered. Occasional very light spotting, lightly rubbed, spine faded. *Provenance:* J. Parnell (ownership inscription on front free endpaper); Harvey Plotnick (his sale, Christie's, October 4, 2002, lot 138).

RARE PHOTOGRAPHICALLY-ILLUSTRATED SCIENTIFIC WORK.

Only one other copy appears in the auction records since 1975. "Huggins perfected a spectroscope which, attached to his telescope, brought the prominent spectral lines of the brighter stars into view. Huggins's star spectroscope enabled astronomers to ask new questions and undertake new mensuration, and ultimately altered the boundaries of acceptable astronomical research" (*ODNB*). Ladd, the publisher, appears to have also been a manufacturer and retailer of spectroscopes and apparatus.

\$1,500 - 2,500

54

LARGE REFLECTING TELESCOPE.

A very large 7-inch reflecting telescope, England, c.1870, the tube of wooden barrel-like construction, sighting scope, with substantial blue-painted metal stand, 1550 mm long, the stand 1000 mm high, with small wooden box containing 3 additional small lenses.

\$4,000 - 6,000

55

TRANSIT OF VENUS OF 1882, PHASES OF VENUS & SUNSPOTS.

"*Transit of Venus*," being an albumen print photograph of the 1882 transit of Venus taken in Santiago, Chile. Image 157 x 158 mm, mounted on 200 x 250 mm card, identifying notations in manuscript in pencil, identifying mark in glass plate "CH 82." Tears to two corners. *Provenance:* Label of the British Astronomical Association Library to verso.

An important photograph of the 1882 Transit of Venus, taken by the American expedition to Chile, one of 8 parties sent around the world by the the Naval Observatory and Transit of Venus Commission to observe the transit. There were hundreds of dry collodion emulsion plates exposed on the expedition, but only 11 of them survive.

WITH: SMITH, ALEXANDER. "Planet Venus," silver gelatin print, 152 x 200mm, mounted to 210 x 257 card, identifying printed paper label below image, being four series of 5 photographs of the planet Venus taken at the primary focus of 12¼ reflector. Dalbeattie, Scotland, 13th, 17th, 28th & 30th January, 1902. Images enlarged 28 diameters. Silvering to edges of image.

Provenance: British Astronomical Association (stamp & label).

A most interesting series of images, depicting the changes in shape and size of the planet Venus, taken every 5 minutes from 5:20PM to 6 PM.

WITH: "Études de la Surface Solaire," being a silver gelatin print of a sunspot taken from the *Observatoire de Meudon* in Paris on August 7, 1893 at 9:39:44

AM, at a average latitude of 16.30 south, with a disc diameter of m894. 228 x 170 mm, mounted to printed board 278 x 212 mm.

An excellent early photograph of a sunspot.

\$800 - 1,200



55

56

MOUCHEZ, ERNEST. 1821-1892.

La photographie astronomique à l'Observatoire de Paris et la carte du ciel. Paris: Gauthier-Villars, 1887.

8vo (184 x 115 mm). 107 pp. 7 plates, including 4 with original photographs tipped to mounts, each with printed tissue guard. Contemporary quarter morocco and marbled boards. Paper evenly toned, some light foxing in the plate leaves, one signature starting, corners of boards worn.

FIRST EDITION. Extracted in part from the Bureau des Longitudes' *Annuaire pour l'an 1887.* Mouchez, an astronomer and cartographer, launched a plan to compile a photographic map of the sky, enlisting the help of over a dozen observatories using the photographic telescope of Paul and Prosper Henry of the Paris Observatory. The present work describes this plan and includes four striking original photographs of the moon, Saturn and Jupiter. Mouchez, who became director of the Paris Observatory in 1888, expected that a complete photographic star map would be produced by 1891; however, the project still remains incomplete and may never be realized. See Frizel, ed, *A New History of Photography* pp 278-79; illustrating one of the plates from this book on p 273.

\$2,000 - 2,500

PHOTOGRAPHED BY A PIONEER OF ASTROPHOTOGRAPHY



56

57

DEEP SPACE PHOTOGRAPHY; ORION, SAPPHO & MESSIER H.

WOLF, MAXIMILIAN FRANZ JOSEPH CORNELIUS. 1863-1932. "*Planet 329 (Sappho).* 1892 *Mars 21 10h54-12h54.*" Heidelberg, Sternwarte, 1892.

Silver gelatin print, 115 x 170 mm, mounted to 150 x 215 mm card, depicting the then-unnamed planet Sappho. Titled in manuscript in ink on card, with two manuscript arrows on card pointing out planet position.

Wolf was the Chair of Astronomy at the university of Heidelberg. He was well known for applying astrophotography to the observation of stars, and pioneered its use to automate the discovery of asteroids. He made major contributions to the star catalog, and perhaps most importantly, determined the nature of dark nebulae.

WITH 3 others:

1. "*Photograph of the Belt of Orion taken by A. Smith, Dalbeattie, on 2nd February, 1902. Exposure 2 hours 40 min.*" Silver gelatin print, 205 x 154 mm, mounted to 260 x 200 mm card. Printed paper label affixed below image. Corners of card chipped.

2. FENET, LÉON. "*Agradissement de la partie centrale de l'Amas Stellaire Messier H, d'après la reproduction d'un cliché photographique d'Isaac Roberts. Nombre des étoiles 392 de la 8ème à la 14ème grandeur, chaque granduer en 2 séries de grosseurs différentes. Echelle: 1 millimètre=4 secondes d'arc.*" Beauvais, October, 1894. Albumen print, 165 x 112 mm, mounted to 250 x 190 mm card, titled in ink on card below image, matted. Some foxing, mostly to edges of card, but lightly touching image.

3. "*Region round Orion (Wilding). Ross portait lend 5 in. ap. exposure 1 hr. 50 min.*" Silver gelatin print, approx 185 x 185 mm, mounted to board with circular framed mat edged in gold, titled in ink to verso.

Provenance: British Astronomical Association Library (stamp or label).

\$1,000 - 1,500



57

1893 July 20, 30 H 40 H 151 214 246 26 P
8 inches aperture (10 trip) Moon's Age $7\frac{2}{16}^h$, $\delta = -13^{\circ}7'$ AE





58



ARCHIVE OF NOT ONLY ONE OF THE GREATEST ASTRONOMICAL PHOTOGRAPHERS, BUT ALSO ONE OF THE MOST SIGNIFICANT DESIGNERS OF TELESCOPES

58

RITCHEY, GEORGE WILLIS. 1864-1945.

“This series of telescopes, by revealing to all men, graphically, by means of exquisite photographs, a Universe of which the Earth, the Sun and the Milky Way are but an infinitesimal part, will bring to the world a greater Renaissance, a better Reformation, a broader science, a more inspiring education, a nobler civilization.”
In *Transactions of the Optical Society*, vol 29 p 197, London, 1928.

The substantial archive of pioneering astronomer, photographer, and telescope designer George Willis Ritchey, c.1895-1935, including (all figures approximate):

1. 80 glass plates of celestial phenomena taken as seen from the observatories at Mount Wilson, Yerkes and Lick, and of the Observatory at Mount Wilson and its construction, of which at least 35 are original negatives, the remainder being contact print positives, and enlarged positives and negatives.
2. 283 vintage photographs of celestial phenomena; many of these and the following photographic prints are annotated on the verso by Ritchey.
3. 244 vintage photographs of various observatories and their telescope apparatus.
4. 76 vintage photographs of Ritchey's cellular mirrors.
5. 83 vintage photographs of Ritchey-Chrétien telescopes and celestial phenomena seen through them.
6. A 27-inch cellular mirror, and a 20-inch optical flat, the latter in original crate with Ritchey's annotation.
7. 150 glass slides used by Ritchey in a series of lectures.
8. 371 vintage or near-vintage photographs of mostly terrestrial natural wonders by photographers such as Vroman, Hillers, Mindeleff, and others, intended for reproduction in Ritchey's proposed book *Depths of the Universe*.
9. Various printed and manuscript items, such as detailed lists of exposures, blueprints, notes on the manufacture, polishing and silvering of the 100-inch mirror, correspondence with sub-contractors and further notes relating to the Ritchey-Chrétien telescope in

Washington, DC, notes on the origin of the Moon, lecture notes, and the original French patent for cellular mirror technology.
10. Upwards of 40 books, periodicals, and pamphlets.
A more detailed listing is available on request.

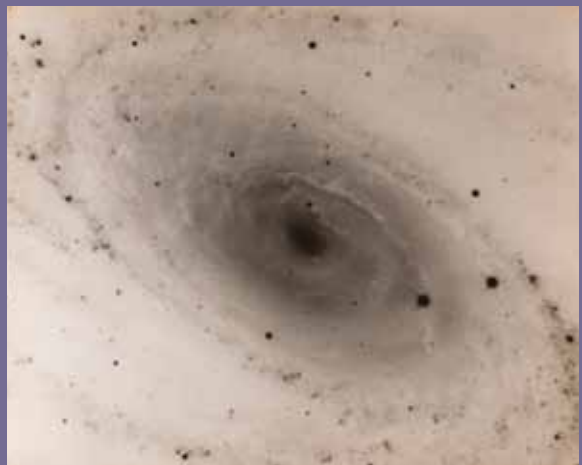
BEGINNINGS

Ritchey's grandfather George, a mechanic, was an Irishman who emigrated to America in 1841 shortly before the potato famine. With his wife and three young sons, he settled in Ohio and bought a mill. By around 1850, Ritchey's father James, the eldest child, was of working age, and the father and son founded a furniture company in Pomeroy, Ohio. Ritchey himself was born on the last day of 1864.

Initially Ritchey followed his father and grandfather into the cabinetmaking business, but soon enrolled at the new University of Cincinnati. There he studied drawing and design for one year, and science for a second. His grandfather had been an amateur astronomer, and George Willis Ritchey likewise worked as an assistant at the Cincinnati Observatory during his college years. Studying the writings of Henry Draper and A.A. Common, he began to produce his own telescope mirrors at home. In 1888, he married and moved to Chicago, teaching in the Manual Training School.

CHICAGO, HALE, AND YERKES

It was in Chicago in 1890 that Ritchey met George Ellery Hale. Hale, a graduate of MIT, was from a wealthy family and had a private observatory at his family's mansion in Kenwood, a suburb of Chicago. Ritchey did occasional machining and optical jobs for Hale. The combination of the new University of Chicago and a donor named Charles T. Yerkes accelerated the careers of Hale and Ritchey, and by 1897 Hale was running the new Yerkes Observatory in Williams Bay, Wisconsin, home of the largest refracting telescope in the world, with a Clark 40-inch lens.





58

Even while the 40-inch was under construction, Ritchey and Hale felt that a reflecting telescope was the future, and they began work on a 60-inch lens. With the existing 40-inch refractor, and a new 24-inch reflector telescope Ritchey had designed and built, he began to produce ever better photographs of the Moon, faint stars, and nebulae. His images were an improvement upon those taken through the 36-inch refractor at Lick Observatory, and Ritchey impressed the astronomical community when they were unveiled in Washington in 1901.

MOUNT WILSON

Around that time, Hale began to develop a new observatory in California, on Mount Wilson near Pasadena. Ritchey came with him, and by 1908 a new telescope with the 60-inch lens was in operation. Once again, the photographic results were dramatically better than anything that had gone before. The next logical step was a 100-inch reflector. Ritchey began to focus on the idea of a cellular mirror, essentially two thin glass discs separated by a waffle pattern of supports cemented together, which would allow air to flow freely and keep the mirror at a constant temperature. Hale vetoed the plan. Ritchey was increasingly in conflict with Hale and his efforts at Mount Wilson were marginalized before the 100-inch Hooker telescope saw first light in September 1917. Ritchey continued to develop his cellular mirror experiments and carry out further work on a new type of telescope today known as a Ritchey-Chrétien. Henri Chrétien was a visiting French astronomer at Mount Wilson who had worked closely with Ritchey. Hale felt that Ritchey's technical path was ill-suited to his own primary goal for Mount Wilson, stellar spectroscopy, where only the center of the field of a telescope mirror needed to be so sharp in focus. In 1919, Ritchey was fired and left Mount Wilson.

FRANCE

In 1924, Ritchey arrived at the Paris Observatory, through the efforts of his former colleague Chrétien. Throughout the 1920s, Ritchey, with

help from Chrétien, experimented with cellular mirrors and together they went on to construct the first Ritchey-Chrétien telescope. The telescope was of limited success, a result of the light pollution that was inevitable given its location.

FINAL YEARS AND LEGACY

In 1930, Ritchey came back to the United States and went on to design and build a 40-inch Ritchey-Chrétien telescope for the US Naval Observatory in Washington, DC. That telescope yielded mediocre results, but when it was moved to a light pollution-free site in northern Arizona in the late 1950s—after Ritchey's death—the results were spectacular. In common with other visionaries who suffered setbacks during their lives, Ritchey has been vindicated by history: the Hubble Space Telescope is a reflector of Ritchey-Chrétien design, and the primary mirror is cellular, consisting of inch-thick top and bottom plates sandwiching a honeycomb lattice.

Ritchey is arguably the greatest astronomical photographer in history, and is one of the most significant telescope designers. At his core, he was a photographer, and he saw the telescope as a lens through which to take ever better celestial photographs. Through his efforts in improving the design and construction of telescopes and observatories, and advancing the chemistry of astronomical photography, Ritchey left a legacy that continues today.

References:

- Hargreaves, F.J. Obituary of Ritchey in *Monthly Notices of the Royal Astronomical Society*, vol 107, p 36. Oxford: Blackwell Scientific Publications, 1947.
- Osterbrock, D. E. "The Canada-France-Hawaii Telescope and George Willis Ritchey's Great Telescopes of the Future," in *Journal of the Royal Astronomical Society of Canada*, vol 87, no 1, p 51. Toronto: RASC, February, 1993.

\$450,000 - 550,000



59

59

REFRACTING TELESCOPE; ATELIERS R. MAILHAT.

A 4-inch refracting telescope, Paris, c.1900, signed "Ateliers R. Mailhat | Paris - XIVe," brass, with sighting scope, on heavy steel mount with counterweights, 1690 mm long, bracket 550 mm tall including counterweight, the drive mechanism incomplete.

Mailhat's workshop was founded in 1894, when he acquired the business of Lerebours & Secrétan which had itself been founded at the beginning of the 19th century. In 1909, Mailhat stepped down as director, and the firm continued under the direction of Mouronval. The present telescope resembles the two *lunettes équatoriales à latitude variables* illustrated in Ateliers R. Mailhat's 1910 catalog (pp 11-12).

\$6,000 - 8,000



60

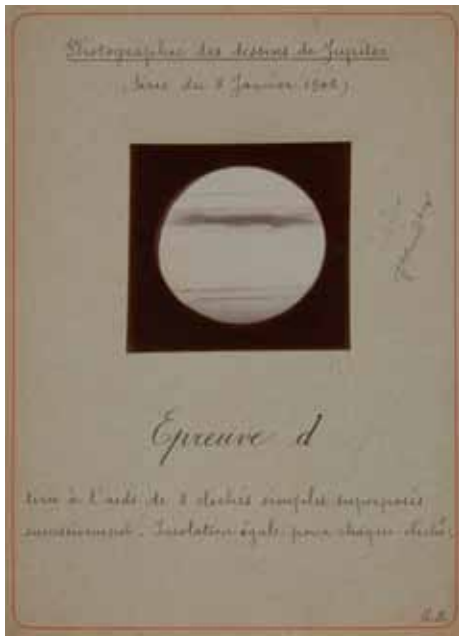
60

DEEP SPACE PHOTOGRAPHY; MILKY WAY, URSA MINOR & NOVA PERSEI.

OFFORD, J. MILTON & ALEXANDER SMITH. Group of four silver gelatin prints depicting images of deep space, as follows:
 1. "The Milky Way in Cygnus. August 17th, 1901. 2 Hours Exposure." 154 x 202 mm, mounted to 255 x 302 mm matte. Titled in ink to matte, and signed "J. Milton Offord, FRMS." Edges of matte chipped, image fine.
 2. "The Milky Way in Cassiopeia. Sep 18th, 1901. 3 hours Exposure." 154 x 202 mm, mounted to 255 x 302 mm matte. Titled in ink to matte, and signed "J. Milton Offord, assisted by F Dyves." Edges of matte chipped, chip to corner of image.
 3. "Ursa Minor +c. May 22nd 1901. 1 Hours Exposure." 154 x 202 mm, mounted to 255 x 302 mm matte. Titled in ink to to matte, and signed "J. Milton Offord." Edges of matte slightly bumped.
 4. "Photograph of Region Surrounding Nova Persei, taken by Alex. Smith, Dalbeattie, on 16th August 1901. Exposure 1 hr. 25 m." 145 x 190 mm, mounted to 205 x 255 mm matte. Overlaid onto upper corners of image are two small exposures enlarged to 14 diameters, the first, 20 x 26 mm, of *Nova Persei*, from a negative taken on 16th August 1901, the second, 40 x 20 mm, also of *Nova Persei*, being two exposures from a negative taken on 10th October 1901. Title in ink to matte. Some silvering to edges of image, corners bumped.
Provenance: British Astronomical Association (stamp or label).

A stunning collection of deep space photographs.

\$1,000 - 1,500



61

61

JUPITER.

"Photographie des dessins de Jupiter (Série du 8 Janvier 1906)." Collection of four albumen print scientific photographs of drawings of the planet Jupiter, 55 x 57 mm, each mounted to 181 x 130 mm cards, each card labelled in manuscript in French, and including an explanation of the printing process. Each card with initials "G.B." to lower right corner, with additional pencil notation to recto near images, versos with "609" in blue pencil.

An excellent collection, showing four different early views of the planet Jupiter. The give exacting specifications on how the photographs were executed, for example *"tirée à l'aide de 8 clichés simples superposés successivement. Insolation proportionnelle, pour chaque cliché, au diamètre de l'objectif"* [printed with the help of 8 simple negatives successively superimposed. For each negative, the insolation is proportional to the diameter of the objective lens].

\$1,500 - 2,500



62

62

MOREHOUSE COMET.

QUÉNISSET, FERNAND. 1872-1951. *"Photographie de la Comète Morehouse (1908c) le 1 Octobre 1908, 22h48 à 24h55m."* France, 1908. Silver gelatin print, 180 x 130 mm, mounted to 150 x 195 mm board. Matted.

A stunning photograph of the Morehouse Comet, taken by the French astronomer Quénnisset, discoverer of comets C/1893 N1, and C/1911 S2. He worked at Camille Flammarion's private observatory in Juvisy-sur-Orge, France. This image was taken 1 month after the Morehouse Comet was discovered by Daniel Walter Morehouse at the Yerkes Observatory on September 1, 1908. (The image was presumably prepared for publication, as a ink note to the card states: *"Réduire à la largeur de 2 colonnes. Fig. 2"* [Reduce to the width of 2 columns. Fig. 2].

\$1,000 - 1,500

NATURAL HISTORY

Lots 63-91

115





63

63

PREYEL, ADAM. FL.1655.

Abentheure von Allerhand Mineralien, Wurtzeln ... Thieren ... Bergen ... Gebäwen/Sitten und Geschichten welche in ... Sina ... auch in Europa.... Frankfurt: Wilhelm Serlin & Georg Fickwirth, 1656. 4to (190 x 145 mm). [14], 1054, [1], [28], 174,[1] PP. Engraved title by And. Frölich. Contemporary vellum over boards with overlapping edges, title in manuscript to spine. Some foxing & browning, remains of paper label on spine.
Provenance: Fuerstl. Auersperg. Fid. Com. Bib. zu Laybach (book plate).

FIRST EDITION IN GERMAN of Preyler's *Artificia hominum miranda naturae in Sina & Europa* (1655), the first extensive comparison of China and Europe, covering natural history, geography, and political systems in over 1000 pp. The range of the work is broad enough to include references to European colonies in America, for example Virginia and its tobacco. Chinese culture, especially the political system, was admired by philosophers in the Enlightenment and offered a model for reform in Europe; Preyler's book is perhaps an early indicator of this eighteenth century trend. Rare. Cordier I, 25-26 (listing book under its title). The Berlin exhibit catalog *Europa und die Kaiser von China* (1985) attributes it to Preyler (entry 7/7) and illustrates the title as fig. 247.

\$1,200 - 1,800



64

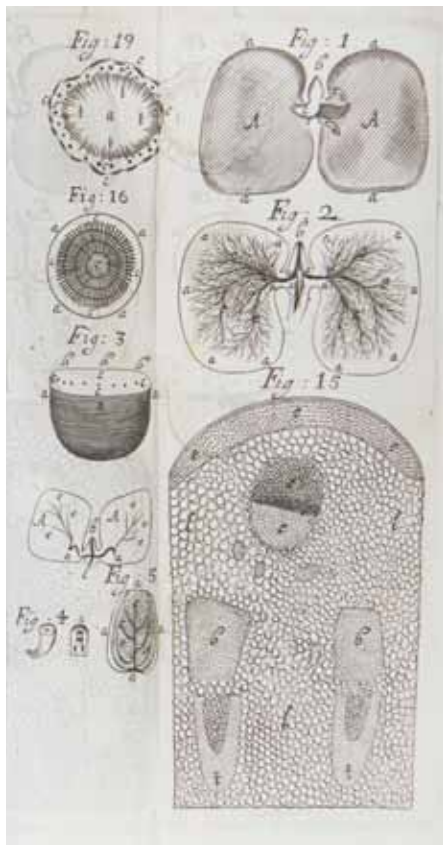
64

THE SUN KING AS PATRON OF THE SCIENCES.

LECLERC, SÉBASTIEN. 1637-1714. [Louis XIV Visiting the l'Académie des Sciences.] Engraved frontispiece from PERRAULT, CLAUDE, *Memoires pour servir a l'Histoire Naturelle des Animaux*. Paris: Sébastien Mabre-Cramoisy for the Imprimerie royale, 1671-1676. Engraved print on paper, 430 x 316 mm (image 410 x 303 mm). Matted, glazed, and framed to 602 x 484 mm.

FIRST IMPRESSION, a fine example of this beautifully engraved print, which showcases Louis XIV's patronage of the sciences. The scene depicts *Le Roi Soleil* surrounded by members of his court and several *académiciens*. They are surrounded by several large natural history specimens, including full sized human and animal skeletons, a telescope, several scientific instruments, maps, and an armillary sphere. The Paris Observatory is visible in the background. Leclerc was the best known of Louis XIV's court artists and engravers. Jombert 101(1); BN 2915.

\$800 - 1,200



65

65

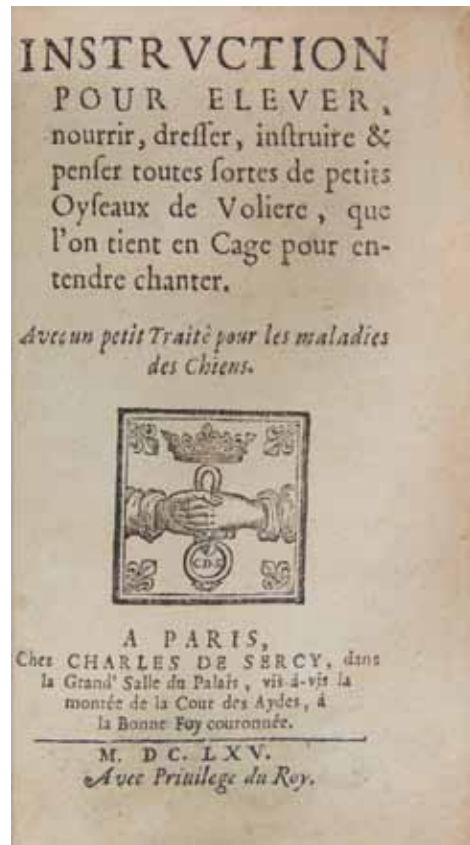
GREW, NEHEMIAH. 1641-1712.

The Anatomy of Vegetables Begun, with a General Account of Vegetation Founded Thereon. London: Spencer Hickman, 1672. 8vo (153 x 96 mm). [32], 198 (i.e. 186), [20] pp, with 3 folding engraved plates. Modern half calf and marbled boards in period style, spine gilt in compartments. Some offsetting onto plates, but a very good copy.

Provenance: "J. Willoughby" on title (contemporary ownership inscription to title); James Small Brechin (bookplate).

FIRST EDITION. Along with Malpighi, Grew is considered the founder of plant anatomy; his pioneering investigations into how organs and tissues are formed during plant growth marked the beginning of efforts to link plant structure and development. *The Anatomy of Vegetables*, his first book, contained accurate observations of the structures of wood, bark and roots, and introduced the term "parenchyma." Grew also described fruits, seeds and flowers, distinguishing in the last the clayx, stamen and pistils; he was also the first to observe that plants had two sexes. Dibner 21; Henrey I, 163; Le Fanu, Grew, pp 77-78; Morton *History of Botanical Science* pp 178-95; Norman 944; Osler 2837; Pritzel 3554; Wing G-1946.

\$1,000 - 1,500



66

66

FALCONRY.

MANCINI, CESARE. *Instruction pour elever, nourrir, dresser, instruire & penser toutes sortes de petis oyseaux de voliere, que l'on tient en cage pour entendre chanter. Avec an petit traite de maladies des chiens.* Paris: Charles de Sercy, [1674].

12mo (146 x 85 mm). [12], 84 pp. Woodcut printer's device to title, woodcut head- and tail-pieces. Later sprinkled calf, marbled endpapers and edges. Lower portion of title restored at an early date with facsimile to the imprint [incorrectly dating the work 1665].

Provenance: Marcel Jeanson (booklabel; his sale, Sotheby's Monaco, 1 March 1987, lot 395).

Very rare early work on raising and training birds, as well as treating illnesses in dogs. First published in 1671 with the title *La methode d'elever, nourrir et guerir toute sorte d'oyseaux de ramage, composée en italien par Cesar Mancini Romain...* (without the tract on dogs). Very rare, from the famed ornithological library of Marcel Jeanson. Schwerdt I, pp 261-262; Souhart p 601; Wood & Fyfe *The Art of Falconry* p 564.

\$1,200 - 1,800



67

67

MALPIGHI, MARCELLO. 1629-1694.

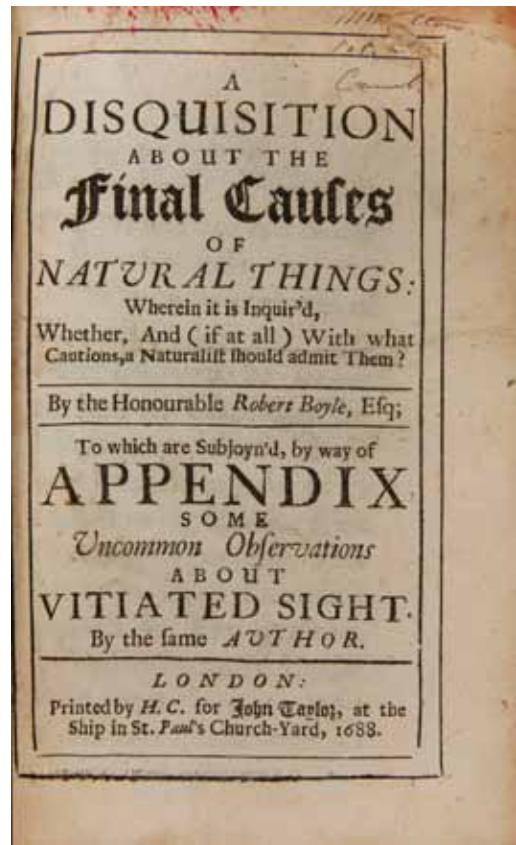
Anatome plantarum. Cui subjungitur appendix iteratas & auctas ejusdem authoris de ovo incubato observationes continens; Anatomes plantarum pars altera. London: John Martyn, 1675-1679.

Two volumes, folio (362 x 236 mm). [2], 15, [5], 82, [2], 20; [6], 93, [3] pp. Elaborately engraved allegorical title in each volume by Robert White, second letterpress titles in red & black with large engraved arms of the Royal Society, 100 engraved plates. Contemporary vellum, soiled, corners worn, spine of vol I repaired. Engraved title in vol 1 supplied from another and remargined, minor soiling and dampstaining, margins of prelims slightly frayed.

Provenance: W.V.W.H. (initials dated 1687); The Janus Foundation of San Francisco (bookplates); W. Junk (bookseller labels).

FIRST EDITION. Malpighi, together with Nehemiah Grew, founded the science of plant anatomy: both men published their first works on the subject in 1671, and although they worked independently of one another, each was aware of the other's continuing investigations over the fifteen years following. Unlike Grew's *Anatomy of Plants*, which was written as a complete textbook of plant anatomy, Malpighi's *Anatome plantarum* contained only the account of his own researches. Apart from the contributions paralleled in Grew's work, the *Anatome* is valuable for its clear accounts of details Grew failed to see, and for introducing a standard Latin-based terminology for the various plant organs and structures. As with Grew, the microscope was fundamental to Malpighi's investigations; "the many anatomical observations made by Grew and Malpighi still excite astonished admiration by their completeness, accuracy and grasp of reality—almost all eventually became part of the enduring foundation of plant anatomy" (Morton, p 192). The first volume of Malpighi's work also contains as an appendix a reprint of his *De ovi incubato* (1672). Dübner 22; Garrison-Morton 536; Henrey 239; Horblit 43aL; Morton, pp 178-194; Nissen (botany) 1269; Norman 1430; Wing M-345.

\$2,000 - 3,000



68

68

BOYLE, ROBERT. 1627-1691.

A disquisition about the final causes of natural things ... To which are subjoyn'd ... some uncommon observations about vitiated sight... London: H. C. for John Taylor, 1688.

8vo (168 x 109 mm). [16], 274, [6] pp. Contemporary speckled calf, edges sprinkled red. Re-backed, small hole running through first 3 ff, some red ink splashes to a few edges, endpapers browned. *Provenance:* Hugh Macdonald Sinclair (19th cent. armorial bookplate); bookbinder's label.

FIRST EDITION, issue with Boyle's name in full on title. The *Disquisition* can be taken as Boyle's confession of faith as a biologist. Recognizing the limitations of experiment, Boyle made a plea for a teleological interpretation of natural phenomena. "The volume is replete with allusions indicating [Boyle's] powers of observation as a naturalist and there are many references to physiology; perhaps the most interesting is the record of a conversation with William Harvey on how he discovered the circulation of the blood ... Appended to the *Disquisition* is a brief tract on disturbances of vision; Boyle describes cataract, and was aware of the location of the opacity. A variety of case histories are recorded, drawn from his own experience, and the tract appears to be one of the first in which this method of teaching was employed in an ophthalmological treatise" (Fulton, pp. 126-27). The ophthalmology case histories, of which there are fourteen, include a description of the progressive loss of first color, then black and white vision following trauma; also included is a case of exophthalmic ophthalmoplegia that exactly parallels the classic account of this condition given by Naumann in 1853. Fulton 186A; Wing B 3946A.

\$1,200 - 1,800





69

"THE FINEST COLLECTION OF FLOWER ENGRAVINGS MADE DURING THE SEVENTEENTH CENTURY" (Blunt)

69

DODART, DENIS & NICOLAS ROBERT.

[*Estampes pour servir à l'histoire des plantes.*] Paris: [c.1719-1786]. Folio. (518 x 385 mm). Without title and text, as issued. 160 engraved plates (numbered in ink 1-13, 15-159 with two bis. plates) by Nicolas Robert, Abraham Bosse and Louis de Chatillon after Nicolas Robert and de Chatillon, with occasional engraved additions and alterations by Jean Marchant, all with early numbering in ink, most with Linnaean bi-nomials added in ink or pencil. Contemporary mottled calf, spine gilt in compartments in a floral motif. re-backed and re-cornered, edges repaired. Light darkening or dust soiling, last 20 plates with marginal ink stain), still a beautiful copy, the images bright and crisp.

This very rare selection of engravings are by or after Nicolas Robert, the greatest botanical artist of the seventeenth century. The work was never published or offered for public sale, and the present album copy was probably given as a Royal gift some time between 1719 and about 1780, the binding suggesting a date closer to 1719. The plates form a valuable and unique record of a selection of the plants in cultivation in the second half of the seventeenth century.

"The original idea for this encyclopaedic undertaking was conceived by Perrault and the proposal was enthusiastically received by Colbert, minister to Louis XIV, although it appears to have actually begun to take shape only when the botanist Denis Dodart (1634-1707) joined the Académie in 1673. His work, *Mémoires pour servir à l'Histoire des Plantes*, which was intended to form the introductory volume to this series, appeared in 1675 and contained thirty-nine plates by Robert. In it Dodart lamented the fact that none of the engravings could be in colour, but at least, he assured the reader, all the illustrations in the new series would be drawn directly from life, the artist making every effort to present the plants in their actual

dimensions" (Lucia Tongiorgi Tomasi *An Oak Spring Flora* p 168). Part of the original intention had been that the engravings should accompany text based on the latest chemical, medical and botanical analysis of the species depicted: this text was never published.

"Putting to one side his regular activity of flower painting on vellum in order to concentrate on this project, Robert managed to produce an enormous number of engravings [but at the time of his death the work was incomplete] ... The *Recueil des plantes* was judged by the master flower painter Gerard van Spaendonck to be the most beautiful botanical work ever published. Most of the engravings show the plants in flower, complete with their roots, and many are accompanied by enlarged drawings of certain details. This work was clearly the result of a close collaboration between the scientist and artist, both seeking to portray the plant as accurately as possible. The plates engraved by Robert are instantly distinguishable by the lightness of his touch and by the sensitive modulation of the various tones of grey and black in the leaves and flowers" (Tomasi pp 168-170). He was however ably assisted by both Abraham Bosse (1602-1676), whose wide experience of engraving would have been invaluable to Robert, and Louis de Chatillon (1639-1734), who continued the work after Robert's death in 1684. BM (NH) IV, p 1515; Brunet IV.1325; Bultingaire *Les Velins du Museum d'Histoire Naturelle de Paris* [n.d.]; *Great Flower Books* (1990) p 91; Hunt, "Flora Portrayed" (1985) p 21; Hunt, "Printmaking in the Service of Botany" (1986) 16; Laissus & Monseigny, "Les Plantes du Roi" in *Revue d'histoire des sciences*, XXII, fasc. 3, pp 193-236; Nissen *BBI* 533 & 504; Rix *The Art of the Plant World* p 61.

\$30,000 - 50,000



70

70

MICHELI, PIER ANTONIO. 1679-1737.

Nova Plantarum genera juxta Tournefortii methodum disposita quibus plantae MDCCCC recensentur... Florence: Typis Bernardi Paperinii, 1729.

Folio (290 x 205 mm). [24], 234 pp. Title in red and black with engraved allegorical vignette, 108 engraved plates, 2 finely engraved historiated initials, finely engraved head- and tail-piece, elaborate woodcut tail-piece, and 1 woodcut chart. German mottled calf, upper cover with large centrally-placed "TGC" monogram, lower cover with related coroneted gilt arms, spine gilt in compartments with morocco label. First few leaves with small repaired worm-holes, some light, scattered foxing.

Provenance: Provenance: TGC (binding); Flower Bookstore (blindstamps).

FIRST EDITION of this important work by Micheli, the "father of modern mycology." Micheli's major work. Stafleu writing in *Linnaeus and the Linnaeans* states that this is "the best work on fungi produced in the late Tornefort era, from a systematic point of view as well as from a general biological standpoint. Micheli was one of the most prominent botanists of his age (Linnaeus named the genus *Michelia*, a Southeast Asian relative of the magnolia, in his honour), he was appointed botanist to Cosimo III de' Medici, Grand Duke of Tuscany, in 1706 and served as "professor of botany in Pisa [and] curator of the Orto Botanico di Firenze ... He discovered the spores of mushrooms, was a leading authority on cryptogams, and ... [named] several important genera of microfungi including *Aspergillus* and *Botrytis*." The present work marked a major advance in our knowledge of fungi. Micheli gives "descriptions of 1900 plants, of which about 1400 were described for the first time. Among these were 900 fungi and lichens, accompanied by 73 plates. He included information on 'the planting, origin and growth of fungi, mucors, and allied plants,' and was the first to point out that fungi have reproductive bodies or spores." Hunt 480; Nissen BBI 1363; Stafleu & Cowan 5974.

\$2,000 - 3,000



71

71

KNOOP, JOHANN HERMAN. 1700-1769.

Pomologia, dat is Beschryvingen en Afbeeldingen van de beste soorten van Appels en Peeren... WITH: *Fructologia, of Beschryving der Vrughtbomen en Vrughten*. WITH: *Dendrologia, of Beschryving der Plantagie-gewassen*. Leeuwarden: Abraham Ferweda; Gerrit Tresling, 1758-1763.

Folio, 3 volumes in 2 (356 x 250 mm). [iv], 86, [2]; [iv], 132; [iv], 168, [4] pp. Titles with typographic border printed in red, large engraved arms on the dedication. 39 hand-coloured plates engraved by Jan C. Phillips or Jacob Folkema after Knoop. Contemporary speckled calf, spines gilt in compartments with morocco labels. Very lights wear to joints, light blue mark to upper cover of volume 1, text lightly toned, paper flaw to lower margin of plate 2 of fructologia (image not affected). Overall near fine to fine.

FIRST EDITIONS OF KNOOPS FRUIT MONOGRAPHS, "among the earliest books on the subject to be illustrated with coloured plates" (*Oak Spring Pomona*). Knoop served as the head gardener to the Dowager Princess of Orange et Marienburg, near Leeuwarden. "[His] fruit monographs, apples and pears in the first, plums, peaches, cherries, nuts and soft fruit in the second, are among the earliest books on the subject to be illustrated with coloured plates, the *Pomologia* ones packed with a dozen or so varieties, each with a label giving its time of ripening ... As descriptive records of varieties of fruit in cultivation, observed by a dedicated and scientific gardener late in his career, they are often cited by later authors" (*Oak Spring Pomona*). In all, Knoop published four monographs in the series, three of which are found here, with the fourth on herbs and vegetables being published in 1769 over a decade after the first part. Raphael notes that "the last part is very rare and most sets lack this final section on the contents of the kitchen garden." The plates, based on Knoop's own drawings, are made up as follows: in the first work are 12 plates of apples showing 103 varieties; 8 of pears showing 82 varieties. The plates in the second work include one plate with 2 quince varieties; 3 varieties of cherry on one plate; 3 varieties of plum on one plate; 1 apricot, 1 peach, 1 almond, 1 fig, each on a single plate; 2 grapes on one plate; 1 chestnut, 1 walnut, 1 hazelnut, 1 medlar, 1 mulberry, 1 raspberry, 1 blackberry, each on a single plate; 3 currants on one plate; 1 gooseberry, 1 unidentified fruit tree, 1 cornelian cherry, each on a single plate. No illustrations appear in the third part concerning trees. Stafleu & Cowan *TL2* 3766, 3767 & 3768; *Oak Spring Pomona* p 131.

\$4,000 - 6,000



71

72

BUFFON, GEORGES, COMTE DE. 1707-1788.

Les Époques de la Nature. Paris: De L'Imprimerie Royale, 1780.

Two volumes. 12mo (166 x 99). [4], 168, 171-246; [4], 264 pp. With 6 engraved plates. and 2 folding engraved maps. 18th century mottled sheep gilt, light rubbing and wear. Very good.

Provenance: From the library of Swiss Alpine explorer Marc Théodore Bourrit (1739-1819), with Bourrit's notes on the front and back pastedowns of Vol. II; Paul Barde, Geneva, Bourrit's publisher (bookplates).

FIRST SEPARATE EDITION, very rare. Buffon, a French naturalist and mathematician, is best known for his encyclopedic *Histoire naturelle générale et particulière*, published between 1749 and 1788. This work presented a natural history virtually free of theological influence, in which all phenomena could be explained scientifically. He is regarded as a founder of evolutionism, as he introduced a large number of evolutionary problems, such as common descent, extinction, and reproductive isolation of species, into the realm of scientific investigation. The present work, first published in 1778 as a supplement to the *Histoire naturelle*, contains Buffon's fully developed theory of the earth: "Buffon's treatment of the chronology of earth and human history was important in several respects. First he denied the applicability of the biblical chronology to earth history and substituted in its place a very different and empirically derived set of dates ... Second, Buffon popularized a means of retaining Scripture and the Mosaic chronology, even while arguing for a lengthy earth history" (Grayson 1983, pp 35-36). Marc Théodore Bourrit was the first to attempt the ascent of Mont Blanc. Bourrit met Buffon in 1781, the year after the publication of Buffon's work. Bourrit's note on the front pastedown of vol II cites a reference to himself on p 143 of the volume.

\$1,500 - 2,500



72

73

LESSON, RENÉ PRIMEVÈRE. 1794-1849.

Histoire Naturelle des Oiseaux-Mouches. WITH: *Histoire Naturelle des Oiseaux de Paradis et des Épimaques*. Paris: Arthus Bertrand, [1829-30]; [1834-35].

2 volumes. 8vo (233 x 141 mm). xlvii, [2], 223; vii, 34, [2], 248 pp. With 86 hand-colored lithographed plates book 1, and 43 hand-colored lithographed plates (3 folding) in book 2. Uniform morocco backed marbled boards. Plates evenly toned, text foxed, rubbing and mild wear to boards.

FIRST EDITIONS. The first work is a "fundamental classic ... one of a well-known series of volumes on humming-birds by the same author" (Wood). The second work is also a classic on the subject, featuring extensive scientific descriptive text and exquisite colored plates after Ayer/Zimmer pp 386-7; Prêtre and Oudart; 390; Wood p 433.

\$1,500 - 2,500



73



73



Zebrina Scapula



74



THE DIRECTOR OF THE EAST INDIA COMPANY'S COPY

74

WALLICH, NATHANIEL. 1786- 1854.

Plantae Asiaticae Rariores, or, Descriptions and Figures of a Select Number of Unpublished East Indian Plants. London: Treuttel and Würtz, 1830-32.

Three volumes. Elephant folio (530 x 360 mm). x, [vi], 84; [iv], 86; [iii], [i-v], vi-viii, 117, [1] pp, including 3 page list of subscribers in vol.1, half-titles in vols. 1 & 3, and list of plates in each volume. With 295 full page hand-colored lithograph plates on 294 sheets, and 1 double paged engraved map of India (numbered 296-300). Full contemporary calf, covers with ornate blind-stamped and gilt panels, all edges gilt. Re-backed to style, some light wear to covers and edges, slight bumps to corners; some very light scattered foxing to text in v 1, small spot to plates 132 & 266; a near fine copy.

Provenance: Sir William Young, Baronet, Director of the East India Company (engraved armorial bookplate); Los Angeles based artist Julio Sammarcelli (art-deco woodcut bookplate).

FIRST EDITION OF THIS MAGNIFICENT WORK ON THE PLANTS OF INDIA, financed by the East India Company. Wallich was a Danish botanist who served as the superintendent of the Calcutta Botanical Gardens. The first European to study the plants of Nepal and of the countries south of the Himalayas, he was commissioned by the East India Company to produce this sumptuously illustrated work. While at the Botanical Gardens, Wallich trained several Indian artists to draw botanicals. Almost all of the illustrations in the present work are from the

watercolors of the two most accomplished of these artists, with 109 by Vishnu Prasad and 146 by Gorachand, of whom little is known other than the fact that they received the same dismal wages as did the scribes.

Their work was of exceptional quality and vibrance, and is "so vivid and vigorous that they make most other plant drawings look insipid by comparison." (Coates, p. 109) Wallich and his artists spent years drawing and collecting specimens. In 1828, he went to England to have the plates for the book printed, bringing with him 1,200 drawings and 8,000 specimens. The result was his magnum opus, an astonishing work which truly captures all of the color, life and variety of the flora of India.

Sir William Young (1807-1876) served in the Bombay infantry as a young man, retiring from the military after obtaining the rank of lieutenant-colonel. He was awarded a baronetcy in 1821, and in 1829 he was made director of the East India Company.

see Blunt, *The Art of Botanical Illustration*; see Coates, *The Book of Flowers*; Desmond, *The European Discovery of the Indian Flora*, p.90; Dunthorne 326; Lack, *Ein Garten Eden*, 70; Nissen 2099; Plesch 459-60; Pritzell, 9957; Sitwell, *Great Flower Books* p. 149; Stafleu & Cowan, 16,583

\$35,000 - 55,000



76

75

MATTHEW, PATRICK. 1790-1874.

On Naval Timber and Arboriculture. Edinburgh: Adam Black; London: Longman, 1831. 8vo (227 x 144 mm). xvi, 391, [1], pp with 4 leaves of advertisements bound at front. Original green cloth with printed paper spine label, re-backed with original spine laid down, light bubbling to front cover, lightly soiled, corners rubbed, minor foxing and a few dampstains.

FIRST EDITION, RARE especially so in the original cloth. Matthew is considered the first to clearly and completely anticipate the Darwin-Wallace theory. He used the expression “natural process of selection” and was acknowledged by Darwin in the third and subsequent editions of his *Origin*: “Mr. Patrick Matthew ... gives precisely the same view on the origin of species as that ... propounded by Mr. Wallace and myself.” Matthew’s anticipation of Darwin is found in the appendix to his little-read book on arboriculture; however, he gives no scientific evidence for his view. Even so, Matthew had cards printed up identifying himself as “the discoverer of natural selection.” Garrison-Morton 216.3; Norman 1457 (original cloth).

\$3,000 - 5,000



77

76

WRIGHT, WILHELM VON, ILLUSTRATOR.

FRIES, BENGT FRIEDRICH & CARL JACOB SUNDEVALL. *Skandinaviens Fiskar, målade efter levande exemplar och ritade på sten af Wil. von Wright, med text af B. Fr. Fries* Stockholm: P. A. Norstedt & Söner, 1836-1857.

10 parts in 1. 4to (292 x 245 mm). Upper wrapper to part I bound as title. 63 plates (60 lithographed by Wilhelm von Wright, with 59 of these hand-coloured). Green morocco gilt by Hedberg of Stockholm, small cornerpieces with fish motifs, original yellow, orange or light blue paper wrappers bound in at rear top edges gilt, others uncut, slipcase. Scattered light foxing, a few plates toned with marginal spotting.

Provenance: Emil H. Küsel (etched bookplate).

FIRST EDITION OF THIS VERY RARE WORK ON THE FISH OF SCANDINAVIA, with only one other copy listed as having sold at auction in the past thirty years. The chief glory of this work is the series of excellent finely hand-colored lithographs, the work of Wilhelm von Wright (1810-1887). He was a Finnish-born natural history painter, illustrator and lithographer of rare talent. The middle of three brothers who made their living as painters, illustrators or naturalists, he moved to Stockholm in 1828 to assist his eldest brother Magnus with his work on his *Svenska Foglar* [The Birds of Scandinavia]. The publication of the present work (Wilhelm’s masterpiece) began in 1836 and was completed with the help of his younger brother Ferdinand in 1857. One of the great early works on the ichthyology of northern Europe, it was issued in ten parts (including the supplement) with the plates either uncolored or finely hand-colored (as here). Wilhelm von Wright, who had taken Swedish nationality in 1834, married in 1845, settled in Marieberg in Bohuslän, and spent the rest of his working life in Sweden. The text was started by the director of the Natural History Museum in Stockholm Professor Fries and, after his early death, was completed by C.U. Ekström and Fries’ successor at the Natural History Museum, Dr. Sundevall. BM (NH) II, p 622; Nissen *Fischbücher* 56; Nissen *ZBI* 1435.

\$8,000 - 12,000



77

77

GRAY, GEORGE ROBERT. 1808-1872.

The Genera of Birds: Comprising Their Generic Characters, a Notice of the Habits of Each Genus, and an Extensive List of Species Referred to Their Several Genera. London: Longman, Brown, Green, and Longmans, [1844]-49.

Folio (368 x 252 mm). xxvi, [300]; iv, [301-483]; iv, [484-669], 117 pp. Half-title and list of subscribers in volume 1. With 185 hand-colored lithographed plates of birds and 150 uncolored lithographed plates of anatomical detail by and after D.W. Mitchell and Joseph Wolf. Modern blue morocco, spines gilt-lettered, t.e.g. Scattered spotting to uncolored plates mostly to verso and margins, dampstaining to top margin of four uncolored plates in vol 2; a bright, clean copy overall.

FIRST EDITION. “A very important and beautifully illustrated fundamental work” (Wood), and the first book worked on by Joseph Wolf after his move to England in 1848. It was originally issued in 50 parts. Ayer/Zimmer p 268-9; Nissen *IVB* 388; Sitwell p 103; Wood p 367.

\$5,000 - 7,000

WARREN MASTODON—EXHIBITION BROADSIDE.

Great American Mastodon!! Now Exhibiting at the Hall. [United States: c.1846]. Large broadside, 640 x 440 mm, announcing the discovery and exhibition of a large mastodon skeleton, left edge ragged, very minor spotting at bottom edge, some light toning but excellent condition overall, tipped to mat at top edge verso, framed.

“NO ANIMAL LIVING APPROACHES THIS IN SIZE.” Rare broadside advertising the exhibition of the nearly complete mastodon skeleton unearthed in 1845 near Newburgh, New York on the farm of Nathaniel Brewster by workers digging for peat fuel. One of the most famous finds in the annals of American paleontology, the skeleton was purchased from the Brewster family by the noted surgeon Dr. John Collins Warren, who wrote a monograph on the specimen in 1852 and kept it on display in a small Boston museum. The Warren Mastodon was later acquired by the American Museum of Natural History in New York, where it is remains on display. “The discovery of the mastodon skeleton, and Warren’s serious treatment of it, mark the beginning of vertebrate paleontology in this country” (*Expedition*[AMNH gallery guide] 46).

Warren recalls in his memoir that he had learned of the skeleton after “it was brought into New England, shown in various towns, and ultimately in Worcester” (*Life...* vol 2, pp 223); that the broadside does not state a locale other than “the Hall” suggests that the broadside was designed for this traveling exhibition.

\$2,000 - 3,000



78

LINDEN, JEAN-JULES. 1817-1898.

Pescatorea. Iconographie des Orchidées Brussels: M.Hayez for Librairie de Charles Muquardt, [1854-]1855-1860.

Folio (450 x 320 mm). Volume I (all published). [viii] pp. With 48 hand-coloured lithographed plates by F. Detollenaere after Detollenaere and Maubert, each plate with facing explanatory text leaf. Half blue morocco and marbled boards, spine gilt in compartments with a floral pattern. Preliminary text leaves chipped at fore-edge, occasional faint offsetting or toning.

FIRST EDITION of this important large format work on a wide-ranging selection of the most beautiful orchids then in cultivation, originating from all the tropical regions of the world. Although the work was a collaborative effort between Linden, G. Lüddemann, J.E. Planchon and M.G. Reichenbach, the editorial control remained with Linden. A native of Luxembourg, Linden moved to Belgium in his youth and during his working life was responsible for the importation of over 1100 different orchid species. He was “An orchid hunter par excellence ... [and] was the first to search the mountain regions diligently for his orchids. In so doing, he was able to obtain many cool-temperature plants for his sponsors in Belgium. After ten years in the western hemisphere, Linden returned to work in Brussels in 1845, where with his son, Lucien, he founded *Horticulture Internationale*, the first major commercial competitor of the British orchid house Messrs. Sander” (*The Orchid Observed* no 16). The work is named in honor of J.P. Pescatore of St. Cloud, one of the earliest amateur orchid growers, a client of Linden’s, who maintained “la plus riche collection d’Orchidées du continent” at his home the Chateau de la Celle-St.-Cloud. According to Linden’s preface, Pescatore’s death and subsequent withdrawal of financial support by his executors meant that the publication was unable to continue beyond the present 12 livraisons: this was apparently very much against Pescatore’s wishes, but the unexpectedness of his death had not allowed him time to make his views clear to his heirs. This version of events is generally accepted, but it is interesting to note that the “Conditions de la souscription” printed on the lower cover of the wrappers announce that the book will be published in 12 monthly parts, each containing 4 plates, beginning on 1 June 1854, and forming a single “magnifique volume in-folio”: no mention is made of any further volumes. *Great Flower Books* (1990) p 113; Nissen *BBI* 1196; Staffeu & Cowan TL2 4622.

\$8,000 - 12,000



79



79

From Bromley Kent
Nov. 29th

My dear Sir

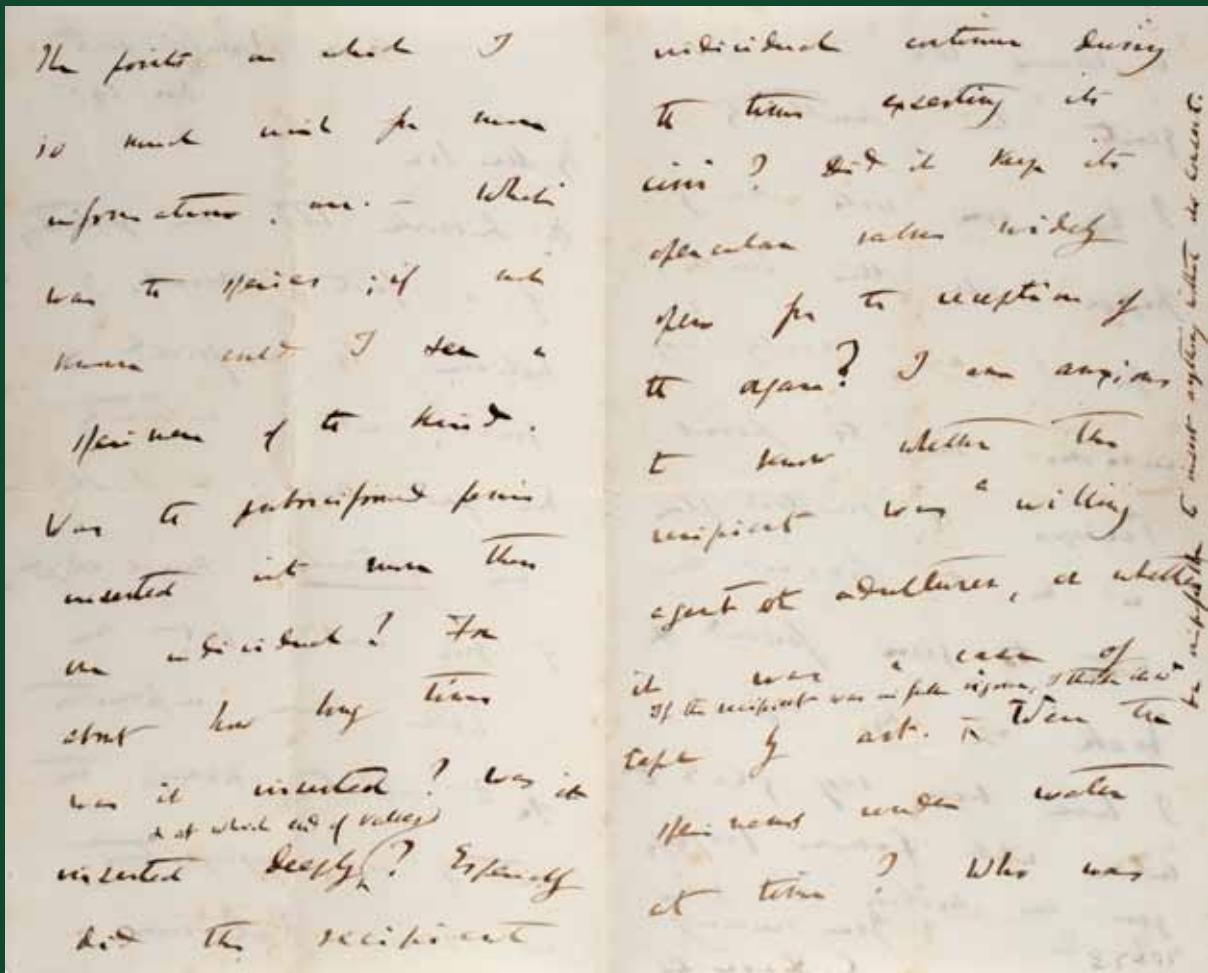
Mr Lubbock told me yesterday
of a fact, assured, I
believe, by a friend of
yours, which interests
me particularly; & I sh^d
be extremely much obliged

if you could get
a little more info
of the subject, namely
acts of wife impudent
in some Balam

& should like to know the I might
give him authority.
I hope you will kindly
justify all these truths,
for I am really very
curious as to point.

Perhaps the simplest plan
will be to forward the
note to your friend &
beck up by report.

I have been very glad to
hear with favour perhaps
you are looking at your
Researches. —
C. Darwin



80
DARWIN, CHARLES. 1809-1882.

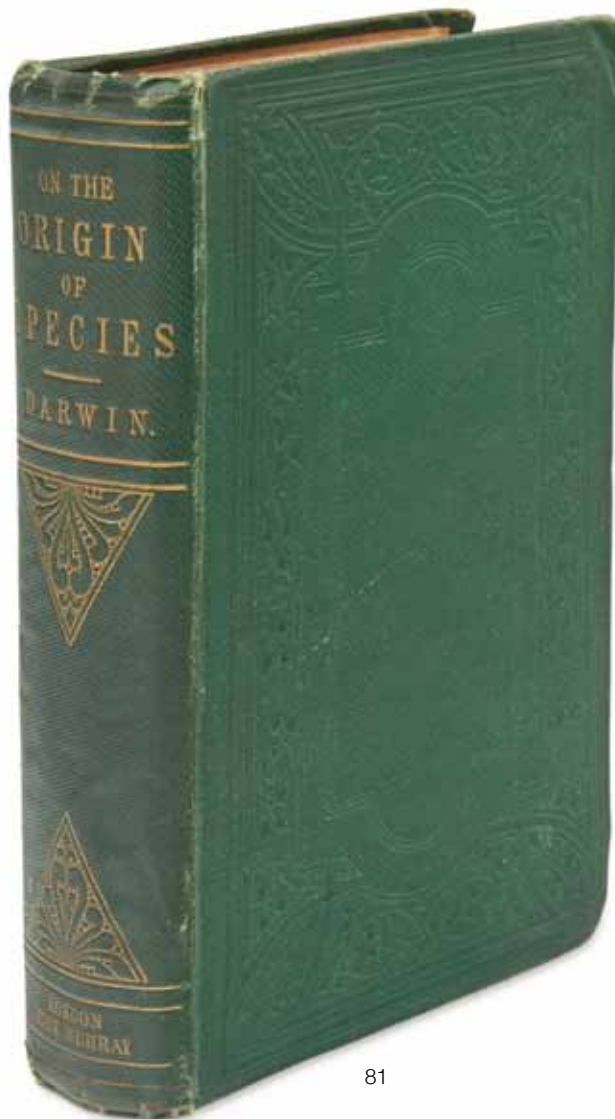
Autograph Letter Signed ("C. Darwin"), 4 pp recto and verso, 8vo (conjoined leaves), Down Bromley, Kent, November 29, [1857], to Charles Spence Bate, with autograph transmittal envelope. Light soiling to envelope, letter fine with just a couple of spots and slight fold separation at outer margin.

FINE SCIENTIFIC CONTENT: DARWIN PEPPERS A COLLEAGUE WITH QUESTIONS ABOUT THE REPRODUCTIVE ACT AMONG BARNACLES. Darwin first became intrigued by barnacles on a beach off the coast of Chile in January, 1835. However it was not until 1846 that he began the lengthy researches that resulted in the authoritative 4-volume *Cirripedia*, published from 1851-1854. In studying barnacles, Darwin was "the first person to classify a group of organisms according to the principle of 'common descent,' the idea that related animals and plants all descend from a common ancestor. This was a central idea in Darwin's theory of evolution and probably the only proposal to come from *The Origin* which was more or less immediately and widely adopted by the scientific community" ("Charles Darwin & Evolution," Christ's College, Cambridge, 2009).

In the present letter, Darwin shows that his fascination with the creatures has not abated one jot over the years. He has had it on hearsay (John Lubbock told Darwin about a friend of Bate's) that an unknown man has actually observed the sexual act in a group of barnacles and Darwin can hardly wait for the details. Darwin letters regarding sexual intercourse are rare. Indeed, it is not uncommon to be fascinated by barnacle sex. The barnacle is the creature with proportionally the largest penis in the animal kingdom.

Balanus is a genus of barnacles which includes the common barnacle. The recipient, Charles Spence Bate (1819-1889), was a zoologist and dentist. Richard Bishop's detailed response C.S. Bate's forwarding of Darwin's letter can be read on the Darwin Correspondence Database. **\$20,000 - 30,000**

Transcribed in full:
 My dear Sir,
 Mr Lubbock told me yesterday of a fact, observed, I believe by a friend of yours, which interests me particularly: & I shd be extremely much obliged if you could get me a little more information on the subject, namely the act of cross impregnation in some Balanus. The points on which I so much wish for more information are— which was the species; if not known could I see a specimen of the kind. Was the probosciform penis inserted into more than one individual? For about how long [and how many] times was it inserted? Was it inserted deeply & at which end of valves? Especially did the recipient individual continue during the times exerting its cirri? Did it keep its opercula valves widely open for the reception of the organ? I am anxious to know whether this recipient was a willing agent or adulterer. or whether it was a case of rape by act. If the recipient was in full vigour, I think it wd be impossible to insert anything without its consent. Were the specimens under water at times? Who was the observer that I might check his authority. I hope you will kindly forgive all this trouble, for I am really very curious at the point. Perhaps the simplest plan wd be to forward this note to your friend & back up my request. I have been very glad to notice what progress you are making in your researches. Yours sincerely, C. Darwin



81

"THE MOST IMPORTANT BIOLOGICAL BOOK EVER WRITTEN" (Freeman)

81

DARWIN, CHARLES.

DARWIN, CHARLES. *The Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life*. London: John Murray, 1859.

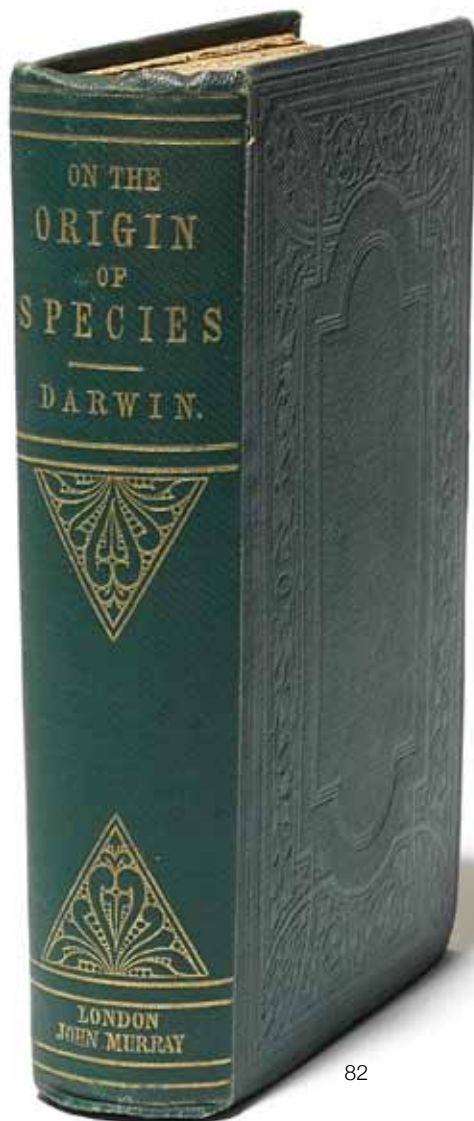
8vo in 12s. ix, [i], 502, [32, publisher's ads dated June 1859] pp. with 1 folding diagram.

Original green blind-stamped cloth. Binding shaken, corners and back edges bumped, some wear and small tears to head and foot of spine, spine slightly soiled, two small stains to lower cover, joints repaired with tape, lacking pp 225-232, p 239 detached but present.

Provenance: Mount Saviour Monastery (bookplate & book stamp); E.A. Miller (contemporary ownership inscription); Leon H Miller (ownership inscription, and gift inscription to him dated 1908 "To Leon, it is picture of the hole of the pit whence he has digged").

FIRST EDITION, FIRST ISSUE OF ONE OF THE MOST IMPORTANT AND INFLUENTIAL WORKS OF THE NINETEENTH CENTURY. "Darwin not only drew an entirely new picture of the workings of organic nature; he revolutionized our methods of thinking and our outlook on the natural order of things. The recognition that constant change is the order of the universe had been finally established and a vast step forward in the uniformity of nature had been taken" (*Printing and the Mind of Man* 344b). Dibner 199; Freeman 373; Garrison-Morton 220; Horblit 23b; Norman 593.

\$25,000 - 35,000



82

82

DARWIN, CHARLES. 1809-1882.

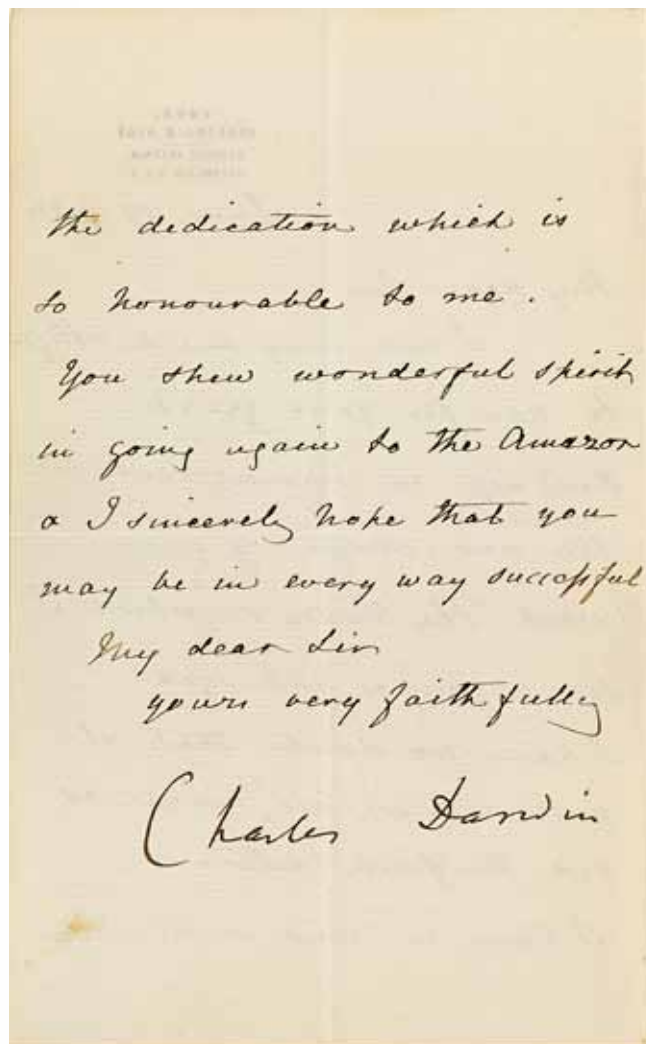
On the Origin of Species by Means of Natural Selection. London: John Murray, 1861.

8vo (195 x 119 mm). xix, [1] blank, 538, [2] ad pp. Original green cloth, covers stamped in blind, spine stamped in gilt, brown endpapers, Edmonds & Remnants binder's ticket to rear pastedown. Scattered faint foxing, text block cracked at center, touch of wear to extremities, a bright attractive copy.

Provenance: Van Korein (contemporary ownership signature to half title); Librairie de Decq (bookseller ticket to verso of f.f.e.); Baltés (pencil ownership signature to half title).

Third edition (seventh thousand), and the first edition to include Darwin's "Historical Sketch," in which he describes predecessors to his evolutionary theory. Freeman 381.

\$2,000 - 3,000



83

83

DARWIN, CHARLES. 1809-1882.

Letter Signed ("Charles Darwin"), 2 pp recto and verso, 8vo, Kent, June 19, 1876, to James Orton, thanking him for a copy of Orton's book, the text in the hand of Darwin's wife Emma, on Beckenham, Kent Railway Station stationery, light creasing and toning, old faint staining to centerfold, faint mounting remnants at left margin.

LETTER TO A FELLOW NATURALIST. Darwin writes to naturalist James Orton, who modeled his 1870 and 1873 explorations of the Amazon on Darwin's researches, and dedicated the published account of the expedition, *The Andes and the Amazon...*, to Darwin. In part: "I am very much obliged to you for your great kindness in having sent me the new edition of your work 'The Andes etc,' which I see is much enlarged. I have no doubt that it will interest me as much as did the first edition. / I have re-read with pride the dedication which is so honourable to me. You show wonderful spirit in going again to the Amazon...."

James Orton (1830-1877) embarked on the first of three expeditions to the Andes in 1870. The first expedition was sponsored by Williams College with the support of the Smithsonian. Orton went back to the Andes in 1873 and published a revised edition of his work, a copy of which elicited this note. In spite of Darwin's well wishes, Orton's third expedition in 1877 ended in disaster when he drowned crossing Lake Titicaca in Bolivia.

\$4,000 - 6,000



84

84

SEEBOHM, HENRY. 1832-1895.

The Geographical Distribution of the Family Charadriidae, or the plovers, sandpipers, snipes, and their allies. London: Henry Sotheran & Co., [1887].

Large 4to (313 x 244 mm). xxix, 524 pp. 21 hand-colored lithographed plates by and after J.G. Keulemans. Contemporary half-morocco, spine elaborately gilt. Scattered foxing heaviest at ends but affecting a few plates, occasional light marginal soiling, joints and edges rubbed.

Provenance: Edward Milner (bookplate).

FIRST EDITION of this monograph on the shorebirds of the world. "The hand-colored plates are excellent" (Ayer/Zimmer p 569). Wood p 561.

\$1,200 - 1,800

85

SEEBOHM, HENRY, AND RICHARD BOWDLER SHARPE.

A Monograph of the Turdidae or Family of Thrushes ... Edited and Completed (After the Author's Death) by R. Bowdler Sharpe. London: Henry Sotheran & Co., [1898]-1902.

2 volumes. Folio (378 x 272 mm). [xii], [337]; [x], 250 pp. Engraved frontispiece portrait of Seebohm and 149 hand-colored lithographed plates by and after J.G. Keulemans. Half crimson levant, raised bands, gilt decorated and lettered panels, t.e.g. Light finger soiling, library blindstamp to title and plates, joints and extremities somewhat rubbed, but an attractive copy overall.

Provenance: Sondley Reference Library (bookplate and blindstamps).

LIMITED EDITION, one of 250 copies. "A thorough monograph of a limited section of the family Turdidae ... Several new species are described. The hand-coloured plates by Keulemans are excellent" (Zimmer). Seebohm oversaw the preparation of most of the plates before his death, and his text occupies pp 1-91. The remainder of the text is by Sharpe. Ayer/Zimmer pp 570-71; Fine Bird Books p 141; Wood p 561.

\$4,000 - 6,000



85

86

ACHLEITNER, OSCAR, ARTIST.

WALKER, Sarah Bennett. *La Grande Flora de Colorado de Montaña y Llanos* Denver, Colorado: Frank S. Thayer, [1901].

Folio (490 x 395 mm). Series I (all published). [ii], with 12 chromolithographs, each print backed onto card and within its own mat, the oval opening of each mat framed by semi-relief decoration in blind, each print with protective guard printed with explanatory text. Unbound as issued (except for the title/introduction which is bound to the lower cover) laid into the original cloth portfolio, fore-edge flap with fastener, wide dark blue satin ties with fastener. Portfolio with some light wear, corners of mattes bumped, some light foxing to mattes. One fastener lacking snap.

FIRST EDITION, DE LUXE, NUMBER 403 OF 1000 COPIES of this beautiful western botanical work. The subjects of the plates were carefully selected from a State flora which, according to the publisher, "is perhaps the most diversified and extensive of any State in the Union. Botanists claim upwards of 3,000 different varieties, extending from the plains at an altitude of about 4,000 feet to above the timber line in the mountains, at an elevation of about 14,000 feet." The text was provided by Sarah Bennett Walker, a Colorado pioneer, who was best known at the time as "the maker of many beautiful books of pressed wild flowers, besides ranking as an authority on the habitat of the various species" (introduction).

\$800 - 1,200



86

87

[MOTHS AND BUTTERFLIES].

LE CHARLES, L, photographer. A group of 18 cards, 237 x 180 mm, each mounted with variety of silver gelatin prints and a few drawings, cards marked up with instructions and details in French. Most cards with glassine oversheet, oversheets marked up with additional instructions in French. Illustrations signed L Le Charles, a few oversheets with his stamp.

A most interesting collection of what are likely pre-publication proofs for a publication on the natural history of moths and butterflies. The illustration and photographs are finely detailed, and depict numerous details of moth and butterfly anatomy.

\$1,500 - 2,500



87

88

THORBURN, ARCHIBALD. 1860-1935.

Game Birds and Wild-Fowl of Great Britain and Ireland. London: Longmans, Green and Co., 1923.

Folio (370 x 263 mm). vii, 79 pp. Half-title. With 30 color plates. Original red cloth, spine gilt, t.e.g. Faint toning, tape removed from pastedowns, some rubbing and wear to extremities of boards.

Provenance: Walter Behrnard Sampson.

FIRST EDITION. The “splendid plates” (Wood) reproduce watercolors by the author. Thorburn states in the preface that his “aim in this work has been to represent these birds grouped in their natural surroundings rather than to make scientific plates of the species.”

Wood p 597; Zimmer p 635.

\$800 - 1,200



88

89

WRIGHT, MAGNUS, WILHELM, AND FERDINAND VON.

LÖNNBERG, EINAR, editor. *Svenska fåglar efter naturen och på sten ritade.* Stockholm: Ivar Baarsen, [1924-29].

3 volumes. Folio (377 x 273 mm). [12], 295; [10], [295]-546; 16 (i.e. 14), 547-902 pp. With 364 chromolithographed plates and 103 photographic illustrations in text. Original half calf gilt. Internally clean, scuff to upper cover volume two.

Second edition, revised by Professor Lönnberg from the rare first edition of 1828-38 (see preceding lot). Nissen *IVB* 1026; Wood p 637.

\$800 - 1,200



89



91

90

ENTOMOLOGY.

WILLIAMS, CARROLL MILTON. 1916-1991. An extensive archive of material related to the life and work of Harvard entomologist and developmental biologist Dr. Carroll M. Williams, including: 1. A group of 10 Autograph Manuscripts Signed, Typed Manuscripts Signed, and Typed Manuscripts, approximately 225 pp.
 2. Manuscript laboratory notes on an experiment regarding the eggs of moths, 57 pp, 1937; a group of 12 notecards with notes and diagrams related to the Cecropia moth; handwritten notes labeled "Cecropia Totals," 2 pp; manuscript diagram labeled "Peptidase Cleavage of Diverse Hormones from Parental Polypeptide," 1 p.
 3. A group of 22 color photo negatives by ROMAN VISHNIAC, 4 x 5 inches, being unpublished images for an article on Dr. Williams and his work titled "Why Insects Change Form," published in the February 11, 1952 issue of Life magazine. With a collection 21 AUTOGRAPH LETTERS SIGNED and 2 Typed Letters Signed from Vishniac to Williams regarding the article and other matters, copies of several letters from Williams to Vishniac, correspondence from *Life* editors, and with a few additional unidentified negatives and several offprint copies of the article.
 4. A group of 14 small memo books, 12mo, completed in manuscript, being the daily notebooks of Dr. Williams, including notes on lectures attended, names and addresses of acquaintances, reminders of appointments, names of restaurants, lists of errands, etc.; and with a bound manuscript journal of Dr. Williams' 1985 trip to China with photographs of the trip loosely inserted.
 5. Additional material including numerous offprints of journal articles authored by Williams and by colleagues; awards from various scientific institutes; congratulatory notes from colleagues; a group of photographic portraits of ALRED NORTH WHITEHEAD, including one signed; a large group of photographs of Williams in the lab, the classroom, with colleagues, and with family; school papers; press clippings, etc.
 Provenance: Carroll Milton Williams; by descent to present owner.

SCIENTIFIC ARCHIVE OF A GROUNDBREAKING ENTOMOLOGIST, WITH PHOTO NEGATIVES AND LETTERS OF PHOTOGRAPHER ROMAN VISHNIAC. Working in the research labs at Harvard University, Carroll Williams made several important breakthroughs in the 1940s and 50s in the area of insect morphology which continue to be the basis of research in the field today. The present archive gathers together approximately 300 pages of manuscript material and notes on morphology, insect respiration, etc; a group of journals which include notes taken at lectures attended by Williams; correspondence from colleagues (including a note of congratulations from A.O. Wilson), numerous offprints and other printed material; and a collection of correspondence and a group of 22 color photo negatives by Russian-American photographer ROMAN VISHNIAC, best known for his documentation of the Eastern European Jewry during World War II, but who also had a keen interest in insect photography. Vishniac took photographs for a Life magazine article on the work of Williams, and the two men and their families formed a lasting friendship. "One of the foremost physiologists and developmental biologists of his generation, Williams, along with the late Sir Vincent Wigglesworth of Cambridge University, revealed the network of hormones that govern the growth and development of insects. In the 1950s Williams became the first to extract and characterize the juvenile hormone, the substance that holds insects in the immature, larval stage until they have grown to the appropriate size to transform into adults ... Pressing this and other findings with his collaborators, Williams conceptualized what has become known as the Third Generation Pesticides, the synthetic analogs of juvenile hormone which in very small amounts retard and halt normal development ... These materials have the advantage of being non-toxic to most other forms of life— in other words, an approach to the much sought-after 'magic bullets' of ecology" (Memorial Minute Adopted by the Faculty of Arts and Sciences, Harvard University, December 12, 1995).

\$1,500 - 2,500

91

ISON, CECIL H.

"Peeps into the Microscope." WITH: *"Giant Silkmoths Reared and Photographed."* Two photograph albums in one, dos-à-dos, the first consisting of 13 (of 60?) silver gelatin photomicrographs on 14 ff, showing details of insect anatomy, 12 measuring 60 x 62 mm, and 1 measuring 160 x 155 mm. Mounted to brown paper with corner mounts, each print with accompanying manuscript notations in white pen. The second consisting of 53 silver gelatin prints of various details of silkmoths on 10 ff, including eggs, caterpillars, sex of pupae, pupating larvae, and more, ranging in size from 55 x 55 mm to 100 x 70 mm, mounted to brown paper with corner mounts, with accompanying notations in manuscript in white pen. Bound in cloth and board album. Album rubbed, with some stains.

A most interesting and unusual album compiled by an apparently amateur scientist.
\$1,500 - 2,500

MEDICINE & PHYSIOLOGY

Lots 92-207





92

92

GALEN. C.129-200 C.E.

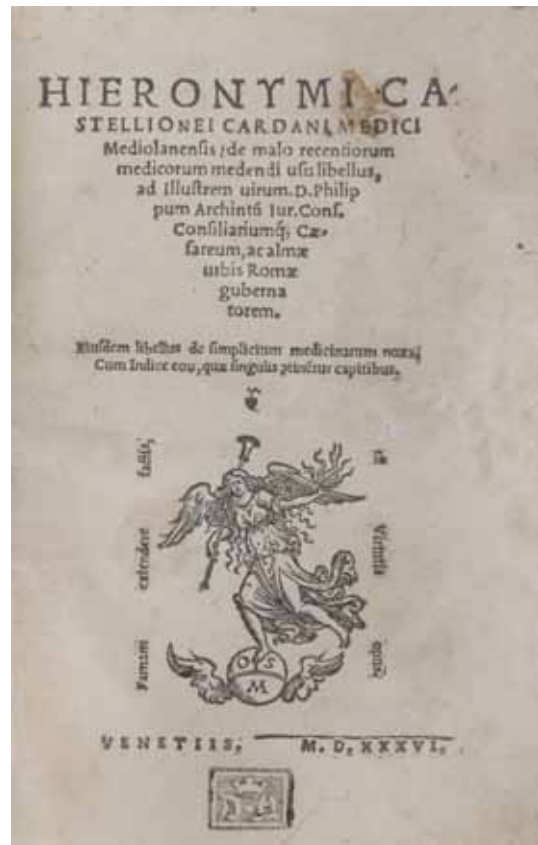
ΓΑΛΗΝΟΥ Α' [B']. *Galenii librorum pars prima [-secunda], quorum indicem vi pagina continet.* Venice: in aedibus Aldi, et Andreae Asulani soceri, April 1525.

Two volumes (of five) in 1, folio (317 x 227 mm). [4], 24, 180 (ie 181), 108; [4], 184, 106 ff. titles and colophons with woodcut dolphin & anchor printer's device. Vol 1 with colophon leaf misbound after title, lacking blank leaves F4 and &6. Full modern red morocco. First three leaves of vol 1 repaired and re-hinged, fore-edges of some leaves a little frayed, some marginal staining.

Provenance: Joseph R. Gasquet, author of *The Radical Medicine of Galen in his Time* (19th century signature); illegible 20th century ownership inscription.

EDITIO PRINCEPS IN GREEK. The first two volumes (of five) of the magnificent Aldine Galen, which, by publishing in one place all the known Greek texts of Galen, marked a new era in both medical and philological scholarship. The collection's five folio volumes, the climax of nearly 100 years of active scholarship, represent the largest single body of text issued by the Aldine press, which had by then passed into the hands of Aldus Manutius's father-in-law Andreas Asulanus, Aldus having died in 1515 before he could fulfil his long-held desire to issue a new edition of Galen. "The significance of the first printing of a classical author cannot be overestimated, especially a prolific one like Aristotle or Galen, whose works were not to be found in a single or even very few manuscripts, but had to be pieced together from as many manuscripts as the printer could lay his hands on. Not only did the texts of these authors go from being the private reserve of a few fortunate manuscript-owners and their friends to being available throughout the scholarly world—and that in a standard, corrected form—but their survival from the naufragium of the middle ages was once and for all assured" (Potter, in Norman, *100 Books Famous in Medicine* no 5). Adams G-32; Ahmanson-Murphy 202-203; Renouard p 101; Stillwell III-374.

\$6,000 - 8,000



93

93

CARDANO, GIROLAMO. 1501-1576.

De malo recentiorum medicorum medendi usu libellus ... Eiusdem libellus de simplicium medicinarum noxa. Venice: Ottaviano Scoto, 1536.

8vo (146 x 97 mm.) 105, [7] pp. Modern limp vellum. Title soiled, light dampstain to first and last few leaves, slight browning, some printed glosses minutely cropped.

Provenance: DQ (Armorial stamps); marginalia and underlining in a 16th century hand.

FIRST EDITION OF THE FIRST DESCRIPTION OF TYPHUS AND OF A RICKETTSIAL INFECTION, which Cardano called "morbus pulicaris" or "flea-like disease" due to the typhus spots' resemblance to flea-bites. The description is found in *De malo recentiorum medicorum medendi usu*, which translates as "On the bad practices of modern physicians." Not distinguishing typhus from measles is the thirty-sixth "fatal error" of the physicians. *De malo* was Cardano's first book; it sold very well, except among the physicians criticized by Cardano. His criticisms, however, put sufficient pressure on the Milanese physicians that they offered him some concessions, and this in turn opened the way to triumph for Cardano, who rose to the second most prominent physician in Europe after Vesalius. The book is extremely rare; the great medical collectors had later editions (Waller and Cushing) or none (Osler). Durling 841; Garrison-Morton 5370; Major 161-64; Ore *Cardano* (1965)12-13; Wellcome I, 1277.

\$1,500 - 2,500

MONARDES, NICOLÁS. CA. 1493-1588.

Dos libros, el uno que trata de todas las cosas que traen de nuestras de nuestras Indias Occidentales, que sirven al uso de la Medicina, y el otro que trata de la Piedra Bezaar, y de la Yerva Escuerçonera.
Seville: Hernando Diaz, 1569.

8vo (167 x 108). [140]ff, plus "Tassa" leaf inserted between A2 and A3. Title with woodcut portrait of Mondardes, woodcut initials, head-, and tail-pieces. Contemporary limp vellum, spine lettered in manuscript. Spine reinforced, a few small holes and chips, title, "Tassa" leaf and lower corner of leaf L2 repaired, all with some loss, a few minor repaired tears in some other leaves.

Second edition of Monardes's treatise on the medical plants of the New World, first published in 1565. "A reissue of the first edition of 1565. Both editions are rare" (Hunt, 106). Monardes never traveled to America from his native Spain, but was able to study a large number of New World plants due to Seville's control over the navigation and commerce operating between Spain and the Americas. He maintained a botanical garden in which he grew both native and exotic plants, and made scientific studies of the pharmacological properties of such New World species as tobacco, coca, sunflower, sarsaparilla, ipecacuanha, cinchona and sassafras. Monardes's *Dos libros* was "the first full treatise on these drugs, and for many years the most important study of the medicinal plants of Central America" (Mann *Modern Drug Use* p 202). It was through Monardes's writings that the American materia medica began to be known, and his books were widely read and translated. The English version, translated by John Frampton, was published in 1569-71 under the title *Joyfull Newes out of the Newe Founde World*. *Catalogue of Botanical Books in the Collection of Rachel McMasters Hunt* 1, 106; Morton *History of Botanical Science* p 120.

\$2,500 - 3,500

95

VALLES DE COVARRUBIAS, FRANCISCO. 1524-1592.

Commentaria in libros Hippocratis de ratione victus in morbis acutis.
Alcalá de Henares, Andrés de Angulo, 1569.

12mo (148 x 85 mm). A-2N^o. 273, [15] ff. 19th century half morocco. Browning and some scattered foxing, a few short edge tears, overall very good.

Provenance: contemporary ink annotations to title and a few in text; British Museum (sale duplicate stamp dated 1787 to verso of title); Medical Society of London (inkstamp to title); Wellcome Library (booklabel to f.f.e.p., withdrawal stamp to verso of title).

FIRST EDITION. Scarce: OCLC records only two copies (Harvard and NLM) in North American libraries. One of the more important editions of Hippocrates' *Regimen in Acute Diseases*, which is among the earliest extant pathology texts in Western medicine. This copy has a distinguished history, having passed from the British Museum in 1787 to the celebrated Medical Society of London, whose library was acquired by the Wellcome Library. Durling 4507; Long *History of Pathology* pp 5-8; Wellcome I 6465. Not in *Hispanic Society*.

\$1,000 - 1,500

96

COYTARD DE THAIRE, JEAN. D.1590.

De febre purpura epidemiali & contagiosa libri duo. Paris: Martinum Iuvenem, 1578.

8vo (228 x 150 mm). [16], 347, [9] pp. Vellum, hinges repaired, endpapers renewed. Browning and some dampstaining, a few tiny edge tears and a few repairs including to corner of title, underlining of one word in red pencil on title. some leaves repaired.

FIRST EDITION. On the differentiation of epidemic cerebrospinal meningitis from typhoid, and a model study in its field. Garrison-Morton 5372.1.

\$800 - 1,200



94



95



96



97

97

JONES, JOHN. FL. 1579.

The arte and science of preserving bodie and soule in health, wisdom and Catholike religion...
London: Henrie Bynneman, 1579.

4to (187 x 145 mm.) [12] 118 (i.e. 120), [8] pp. Title within decorative woodcut floral border, large arms of the Royal Order of the Garter to verso of title, historiated chapter initials. Black letter & italic. Contemporary limp vellum, gilt devices of the Inner Temple Library to covers. Vellum darkened, a few spots, holes for cloth ties (not present). Light soiling, a few corners creased, but very good.

Provenance: Inner Temple Library (book stamp, engraved bookplates, binding)

FIRST EDITION OF THE SECOND ENGLISH TREATISE ON PEDIATRICS, preceded only by Thomas Faier's *The Boke of Children* (1545). Jones, a Welsh physician, intended his *Arte and Science* to be read chiefly by "princes, rulers, nobles, byshoppes, preachers, parents and them of the Parliament House." The work covers all aspects of child-rearing: care of newborns, nursing, weaning, infant feeding and diet, sleep, education, dress, exercise, moral and religious training, etc. Jones was particularly solicitous about choosing the proper wet-nurse, devoting several chapters to the ideal nurse's diet, temperament, moral character, and recreation. Strangely, Jones's book is not mentioned in any of our histories of pediatrics, nor does it form part of either the Grulee or the Drake collections of pediatric literature. Scarce. *Dictionary of National Biography* 34410; STC 14724.

\$8,000 - 12,000



98

98

PLATTER, FELIX. 1536-1614.

Observanonum, in hominis affectibus plerisq[ue], corpori & animo, functionum laesione, dolore, aliave molestia & vitio incommodantibus, libri tres. Basel: C. Waldkirch for Ludwig König, 1614. 8vo (167 x 99 mm). [48], 845 pp. 19th century quarter morocco. Uneven browning and foxing, some wear to spine, split to hinge of lower board, upper board starting.

Provenance: Umberto Calameda (bookplate).

FIRST EDITION. A disciple of Eustachi, Falloppio and Vesalius, Platter was one of the foremost pathologists of the sixteenth and early seventeenth centuries, occupying a place midway between Fernel (1497-1558) and Bonet (1620-89). His *Observationes*, published the year of his death, contains a lifetime's worth of detailed pathological observations of a wide variety of human ailments, including venereal and genito-urinary diseases, tuberculosis, bodily deformities, disorders of the sensory organs, gynecological diseases, etc., gathered from both living patients (Platter was chief physician of Basel from 1571 until his death) and from 48 post-mortem examinations. "For many, Platter's fame is based on the abundance of individual observations contained in the case histories in his *Observationes* ... The *Observationes* contains observations in all branches of medicine ... It is astonishing how [Platter] could see and grasp originalities in every field" (Karcher pp 80-81 [our translation]; also pp 56-87). Garrison-Morton 3789, 4297.9, 4511.1; Krivatsy 9073; Long *History of Pathology* p 41; Norman 1716; Waller 7505.

\$2,000 - 3,000



99

99

ARETAEUS; PALLADIUS; RUFFUS; THEOPHILUS; HIPPOCRATES.

GRASSI, JUNIO PAOLO, translator. *Medici antiqui Graeci Aretaeus, Palladius, Ruffus, Theophilus...* Basil: Petri Perna, 1631.

4to (217 x 155 mm.) [8] 297 [35]; 212, [48] pp, including blank Eee4. Contemporary limp vellum worn, minor worming inside rear cover, one corner a little gnawed. Lightly browned throughout, some foxing, but very good.

Provenance: Contemporary inscription to title, noting "est Hippocrates non Palladius."

FIRST COLLECTED EDITION including the *EDITIO PRINCEPS* of Palladios the Iatrosophist's commentary on Hippocrates' sixth book of Epidemics. Grassi, professor of medicine at Padua, was a noted translator of Greek medical works. He was the first to publish a Latin translation of the works of Aretaeus the Cappadocian and of Rufus of Ephesus (Paris, 1552-54); the present collection features a reprint of Grassi's translations of Aretaeus on acute and chronic diseases, and of Rufus' *De corporis humani partium appellationibus*, as well as Grassi's 1536 translation of Theophilus Protospatharius' *De humani corporis fabrica*, amongst many other important works. Durling 2153; Garrison-Morton 56; Sarton *Introduction to the History of Science* p 393; Wellcome I, 4179.

\$1,000 - 1,500

100

GLISSON, FRANCIS. 1597?-1677.

Anatomia hepatis. Cui praemittuntur quaedam ad rem anatomicam univ[er]se spectantia. Et ad calcem Operis subjiciuntur nonnulla de Lympho-ductibus nuper repertis. London: Du-Gard for Octavian Pulleyn, 1654.

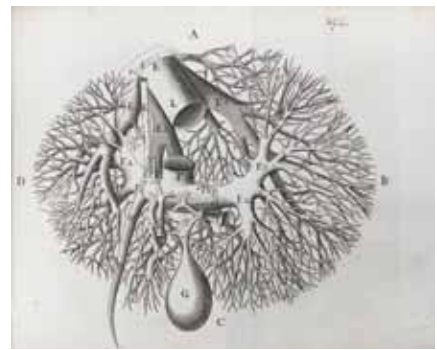
8vo (165 x 111 mm). [48] 458, [14] pp. With 2 folding engraved plates, engraved text illustration, and text woodcuts. Contemporary vellum with overlapping edges, title in manuscript to spine, author's name to spine in later hand. Vellum soiled, otherwise a fine, crisp copy.

Provenance: A few pages with marginalia in an early hand, minute ownership inscription in same hand; Louis P. Hamburger (gift inscription from Harry Friedenwald, author of *The Jews and Medicine* dated October 9, [19]23).

FIRST EDITION. The first book printed in England to present a detailed account of a single organ based on original research, and the most important book to date on the physiology of the digestive system. Glisson used advanced anatomical methods, such as casts and injection of colored fluids, which enabled him to illustrate the vessels of the liver (portrayed in the two engraved plates). He described the passage of blood from the portal vein to the vena cava, and proved that lymph flows not to the liver, as was then believed, but from it, passing to the recently discovered capsula communis. This fibrous capsule, which Glisson was the first to describe accurately, is now known as "Glisson's capsule."

Garrison-Morton 972; Grolier Club *100 Books Famous in Medicine* 29; Lilly p 67; Norman 911; Russell 322.

\$5,000 - 8,000



100

101

RIVIÈRE, LAZARE. 1589-1655.

Observationum Medicarum, & Curationum insignium Centuriae tres.... Lyons: Antoine Cellier, 1659.

4to (225 x 167 mm). [8], 311, [9] pp. Title in red and black with engraved vignette, woodcut initials, head- and tail-pieces. Contemporary mottled sheep. Sheep rubbed, small area of worming to front cover, loss of sheep at lower corner as well as some staining. Some scattered foxing, browning & dampstaining, old repair to one leaf.

Provenance: Partially effaced contemporary ownership inscription to flyleaf, notes to endpapers in same hand; Dr. LeBlanc (early ownership inscription to title).

First Lyons Edition. Rivière was the first to describe stenosis of the aortic valve, from a case that he treated in 1646. Garrison-Morton 2727 cites Rivière's description of this condition in his *Opera medica universa* (1674), of which the present work is the first edition; the description appears here on p 177, and is entitled "Cordis palpitatio & pulsus inaequalitas." An edition of the present work was published in The Hague in the same year as this Lyons edition. Norman 1837; Thorndike VIII, p 518; Willius & Dry, p 58.

\$1,000 - 1,500



101

102

BARTHOLIN, THOMAS. 1616-1680.

Anatomia, ex Caspari Bartholini parentis institutionibus ... reformata. The Hague: Adrian Vlacq, 1666.

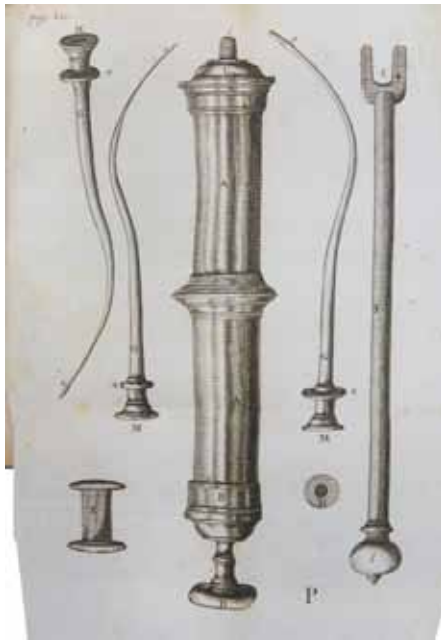
8vo (203 x 106 mm). [16], 594, [14] pp. With 8 folding engraved plates and numerous engraved text illustrations (many full page), including a portrait of Bartholin. 19th century quarter sheep, gilt spine. Some scattered light foxing and browning, repairs to folding plates, early ownership signature inked out on title.

Early edition of Thomas Bartholin's revision of his father's classic *Anatomicae institutiones* (1611). Bartholin began his influential series of revisions in 1641, bringing his father's text up to date in view of the discoveries of Harvey and other contemporaries, and presenting his own important anatomical findings. The present edition includes Bartholin's discovery of the thoracic duct (Garrison-Morton 1096) and his analysis of the lymphatic system (Garrison-Morton 1097), first published in 1652-53. Krivatsy 35953.

\$1,000 - 1,500



102



103

103

GRAAF, REGNIER DE. 1641-1673.

De virorum organo generationi inservientibus de Clysteribus et de Usu Siphonis in Anatomia. [WITH] Partium Genitalium Defensio. Leiden: Ex Officina Hackiana, 1668; 1673. Two books in one. 8vo (155 x 98 mm). [30], 234, [14] pp. Each book with separate title, book 1 with engraved title frontispiece portrait of De Graaf by Gérard Edelinck (bound after dedication), and 11 folding engraved plates. Contemporary stiff vellum with overlapping edges, spine titled in manuscript. Back hinge repaired, vellum lightly soiled, light foxing and browning, tears in 2 or 3 plates repaired, but very good.

Provenance: Bookplate (owner's name partially effaced).

FIRST EDITIONS. An "exact and detailed account of the male reproductive system" (Garrison-Morton 1210). This preceded Graaf's account of the female reproductive system by four years ("Graafian follicle," Garrison-Morton 1209). Graaf's two books on the reproductive system were the most complete and best illustrated of several publications on the subject which were inspired by Harvey's 1651 *De Generatione*. Graaf and Swammerdam were embroiled in controversy over priority in research on the reproductive system, and their dispute was very helpful in spreading the idea that mammals have ovaries. The second book is his work defending his priority in the dispute with Swammerdam. *Dictionary of Scientific Biography* 12761; Garrison 264 & 251; Kiefer 244 (later ed).

\$800 - 1,200



104

104

WILLIS, THOMAS. 1621-75.

De anima brutorum. London: E. F. [for] Ric. Davis, 1672.

Small 8vo (152 x 85 mm). [48], 400, [16] pp. 8 engraved plates (mostly folding). Signatures R & S transposed; pl. VIII bound in upside-down. Full modern calf to style, gilt spine. Some light browning but a very clean copy overall.

Provenance: Faint 17th century signature to imprimatur leaf; recent owner's signature penciled to title.

FIRST OCTAVO EDITION, published shortly after the initial quarto and with copperplates identical to the quarto version. Willis recognized the difference between the symptoms of gross brain disease and those of mental illness. Because he postulated a disturbance of the brain and nerves in terms of disordered "animal spirits" in the absence of pathological findings, he is often considered the first to have equated mind disease with brain disease. Also includes probably the earliest description of general paralysis, and the paracusis of Willis. Garrison-Morton 1544; Hunter & Macalpine pp 187-92; Wing W 2826.

\$2,000 - 3,000



105

105

GLISSON, FRANCIS. 1597-1677.

Tractatus de ventriculo et intestinis. London: E.F. for Henry Brome, 1677.

4to (190 x 150 mm). [32], 509, [3] ad pp. Fine engraved portrait by William Faithorne and 3 engraved plates. Contemporary speckled calf, rebounded, corners repaired, First 2 signatures loose, light foxing and browning, some old dampstaining, upper corner chewed.

Provenance: Norwich & Norfolk United Medical Book Society (bookplate, stamp); George Cuthbert (contemporary ownership signature); J. Manning (19th century ownership signature).

FIRST EDITION. An introduction of the concept of irritability as a broad biological principle. Glisson's book is also the standard source for the first known plethysmographic test—the classic experiment performed by Goddard in 1669 before the Royal Society, in which the arm of a muscular individual was submerged in a glass container with a funnel opening on top, and in which the water level was observed to decrease upon muscular contraction. Brazier pp 57-59, 159-60; Fulton & Wilson pp 218-20; Garrison-Morton 579; Rothschild 86-87; Wing G 859.

\$1,500 - 2,500

FABRICIUS AB AQUAPENDENTE. C.1533-1619.

L'Opere Chirurgiche del Signor Girolamo Fabritio d'Aquapendente...
Bologna: Per Gioseppo Longhi, 1678.

Folio (328 x 217 mm). [12] 359 [1] pp, with 9 engraved plates of orthopedic and surgical instruments, the first signed "Gio. Bettamini fece," the rest unsigned. Modern vellum over boards, leather spine label. Inner margin of half-title expertly repaired, moderate browning and foxing. Very good.

Provenance: M. Gonzalez-Ulloa of Mexico (book plate).

FIRST EDITION IN ITALIAN of Fabrizio's collected surgical works, first published in Latin in an unillustrated small-format edition in 1619. The plates illustrating this Italian edition first appeared in the 1647 folio Latin edition issued by Bolzetta; these were reproduced in later editions and translations. This edition of Fabrizio's collected surgical works contains Italian translations of the *Pentateuchos cheirurgicum* (first ed 1592) and the *Operationes chirurgicae*, originally published in 1619. "The five books of the Pentateuchos are primarily devoted to the description of tumors, wounds, ulcers and fistulas, fractures, and dislocations; to these the *Operationes* adds a description of surgical instruments (some of which are illustrated) and classic surgical techniques, including a discussion of particular technical expedients devised by Fabricius himself and emphasizing some differences between Fabricius's technique and that of others" (*Dictionary of Scientific Biography*). Of particular interest is Fabrizio's extensive discussion of dentistry and oral surgery, in which he describes techniques for various operations such as tartar removal, treatment of dental caries, the filing and extraction of teeth, tooth replacement, and the treatment of lockjaw and jaw dislocations. "One noteworthy item, which must be regarded as progress, is that we do not find a single word in [Fabrizio's] work about loosening teeth through cauterizing agents, the treatment which was so highly cultivated by the Arabs and so eagerly incorporated in the West" (Hoffmann-Axthelm *History of Dentistry* p 143; also pp 142 & 144). Fabrizio described several dental instruments, such as the "pelican" for tooth extraction, the crow's bill forceps for removing roots, the stork's bill forceps for removing incisors, the "dog's bite" forceps, a drill, a rasper, etc. These are not shown here, but were illustrated by Scultetus, pupil of Fabrizio's successor Spigelius, in his *Armamentarium chirurgicum* (1655 and numerous later eds). Also of interest is the suit of orthopedic armor designed by Fabrizio and illustrated in the first two plates; this device "was in the shape of a man, [and] designed to combine in one apparatus the principles for all existing devices for the correction of orthopedic injuries and deformities" (DSB). Krivatsy 3823.

Provenance: '
\$1,200 - 1,800

WILLIS, THOMAS. 1621-1675.

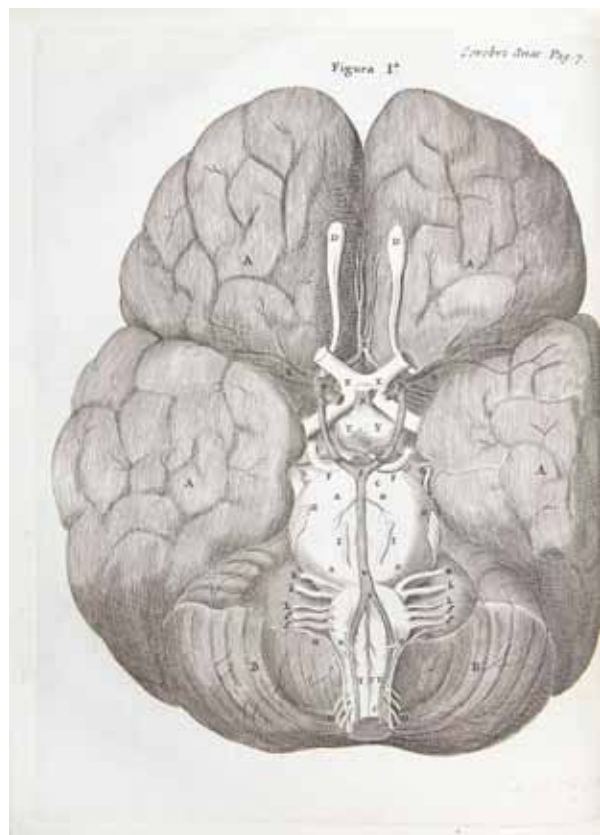
Opera omnia, nitidius quam unquam hactenus edita ... Studio & Opera Gerardi Blasii, M.D. Amsterdam: Apud henricum Wetstenium, 1682. 4to (238 x 200 mm). [16], 182; [4], 123 [1]; [4], 146; [6],[4], 41 [3], [8], 210; [8], [8], 295 [i.e. 298], [6] pp. Engraved frontispiece portrait, elaborately engraved allegorical title, second letterpress title, 37 engraved plates (some folding). Contemporary calf, re-backed and re-cornered, covers rubbed, some light browning and occasional soiling, but very good.

An early edition of the collected works of Willis, after the first edition of 1676-80. Willis coined the term "neurology," made epochal studies of the anatomy and pathology of the brain, and was one of the greatest clinicians of his time. Garrison-Morton contains 20 citations to works by Willis, 12 of which refer to the six works collected here: *Diatribae dua de fermentatione et febribus*; *Cerebri anatome*; *Pathologiae cerebri et nervosi generis specimen*; *Affectionum quae dicuntur hystericae et hypochondriacae*; *De anima brutorum*; and *Pharmaceutice rationalis*. Krivatsy 13002.

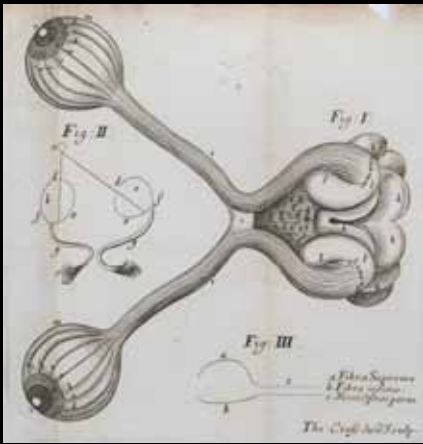
\$800 - 1,200



106



107



109

108

SYDENHAM, THOMAS. 1624-1689.

Tractatus de podagra et hydrope. London: R. N. for G. Kettilby, 1683.

8vo (175 x 97 mm). [10], 201, [1] pp. Full antique calf, gilt. Custom quarter morocco slipcase. Some foxing and old marginal dampstaining, title unevenly trimmed, corner of last leaf chipped.

FIRST EDITION. Sydenham's classic description of gout, based upon his own sufferings, "has never been surpassed" (Copeman p 65). Of the many great works by Sydenham, this is considered his masterpiece, the epitome of the practical case-oriented approach he took, which earned him the title "the English Hippocrates," and which influenced the return to Hippocratic ideals in medical practice in Europe. Sydenham clearly differentiated gout from rheumatism, and the descriptive, clinical portions of his work remain eminently readable today. He recommended a distinctive course of treatment by dietetic restriction, simple cooking, few drugs, and ample, non-alcoholic liquid intake. For acute attack he favored opium and introduced liquid laudanum, which made him famous throughout Europe.

Sydenham's book brought out the salient features of gout and its management, and perhaps contributed to the vogue for it in the next century, the so-called "Golden Age of Gout," when the disease had many fashionable victims, was much in the press, and was a recognized factor in historical events. *DSB*; Garrison-Morton 4486; Osler 998; *Printing and the Mind of Man* 159; Waller 9422; Wing S-6320. Not in Cushing or *Heirs of Hippocrates*.

\$4,000 - 6,000



110

109

BRIGGS, WILLIAM. 1642-1704.

Nova visionis theoria. London: J. P. for Sam. Simpson, 1685.

12mo (148 x 82 mm). [16], 80 pp. Engraved folding plate. Modern half calf and marbled boards to style. Some light browning and foxing.

Provenance: Pierre Amalric (bookplate).

FIRST EDITION IN LATIN AND FIRST COMPLETE EDITION of this early British excursion into the physiology of the eye, a work so appreciated by Newton that he recommended it for publication and used it in developing his system of optics. Newton's letter commending the text is printed on leaves A3r to A4v. Briggs's text had originally appeared in English in two separate parts in *Phil. Coll.* (1681) and *Phil. Trans.* (1683) before Newton suggested its publication in book form. The *Nova visionis theoria* is sometimes found separately as here, and sometimes bound with Briggs's *Ophthalmographia* (1685; original ed 1676). Combined editions of both works were issued in London in 1685, and in Leiden in 1686. OCLC shows only two North American libraries with copies of the separate edition (University of Chicago & Johns Hopkins). Wing B 4667.

\$3,000 - 5,000



110

110

PORTAL, PAUL. 1630-1703.

La pratique des accouchemens.... Paris: Gabriel Martin for the author, 1685.

8vo (185 x 116 mm). [20], 368pp. With engraved frontispiece portrait by Le Febure after Revel and 8 plates engraved by Le Febure mostly after Revel. Contemporary calf, gilt spine, rubbed, hinges repaired. Some minor foxing, browning, and creasing, binding rubbed, hinges repaired.

FIRST EDITION. Portal based his work on thousands of cases from the Hôtel-Dieu in Paris. He demonstrated that eversion could be done with one foot, and also recognized both the anatomy and clinical importance of placenta praevia. Cutter & Viets 81-83, 197; Garrison-Morton 6148.

\$1,200 - 1,800

111

BOHN, JOHANN. 1640-1718.

Circulus anatomico-physiologicus, seu oeconomia corporis animalis.... Leipzig: Johann Friedrich Gleditsch, 1686.

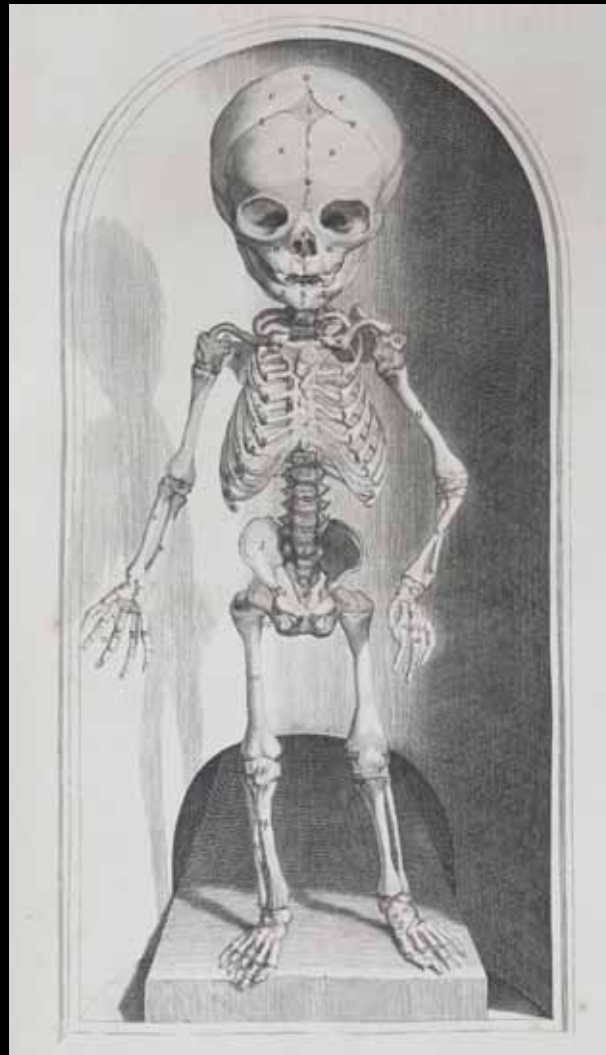
4to (190 x 152 mm). [8], 479, [25] pp. Modern calf-backed speckled boards. Light browning (heavier to first few leaves), some occasional light scattered foxing, small closed tear to title, lower margin of title shaved with no loss to text.

FIRST EDITION. Bohn's writings show him to have been "an expert on the then new anatomical and physiological discoveries ... one of the innovators in physiology who completely forsook the Galenic tradition" (*Dictionary of Scientific Biography*). In his *Circulus anatomico-physiologicus*, dedicated to Malpighi, Bohn stated that the reflex action was an entirely material and mechanical phenomenon, and showed that the nerves do not contain a "nerve juice." The *DSB* gives 1680 as the date of Bohn's work, probably in error, as neither OCLC nor RLIN cites an edition printed in that year. Garrison-Morton 1355.

\$800 - 1,200



112



THE FINEST ANATOMICAL ATLAS OF THE BAROQUE PERIOD

112

COWPER, WILLIAM. 1666-1709.

The Anatomy of Human Bodies, with Figures Drawn after the Life...
London: Sam. Smith & Benj. Walford, 1698 [printed at the Sheldonian Theater, Oxford]

. Folio (567 x 355 mm). [72] ff, including mezzotint frontispiece, allegorical engraved title with pasted-on English title in cartouche as usual, second engraved title with large vignette. With 114 engraved anatomical plates (2 folding, 105 designed by Gérard de Lairesse and probably engraved by Bloteling, 9 mostly drawn and engraved by M. van der Gucht). Contemporary paneled calf, rebacked, corners repaired, endpapers renewed, some rubbing and wear. Portrait, which is often missing, mounted as always, tears in folding plates and a few other plates repaired, a couple plates with closed tear (one touching image), some dust-soiling (especially to portrait) and fraying, scattered foxing.

Provenance: Robert Lynch; George LeGrand (early ownership inscription: "Olim liber Rob. Lynch / Nunc autem Geo. LeGrand").

FIRST EDITION IN ENGLISH of the original plates designed for Govard Bidloo by Gérard de Lairesse, a painter who rivaled Rembrandt in popularity in his time. Bidloo's text was widely criticized, and possibly because of this Cowper obtained 300 sets of the original plates to illustrate an entirely new text in English. This reissue was limited to 200 copies. The new English text was clearly superior, and the basis for

later Latin editions, and Cowper commissioned nine new plates for the edition. However, Cowper did not acknowledge Bidloo, even going so far as to paste over Bidloo's name with his own in the cartouche on the engraved allegorical title. This action resulted in a bitter plagiarism dispute between the two, one of the most famous in medical history. "Elegantly done and artistically perfect" (Choulant-Frank 250), the atlas is considered the finest of the Baroque period, and one of the greatest artistic anatomies of all time. Despite imperfections from the point of view of dissection, the anatomical studies reflect much that is good, including early depictions of skin and hair from observation with a microscope. Considered as an artistic meditation on anatomy, Lairesse's designs are a total departure from the idealistic tradition inaugurated by Vesalius. Lairesse displayed his figures with every-day realism and sensuality, contrasting the raw dissected parts of the body with the full, soft surfaces of undissected flesh surrounding them; placing flayed, bound figures in ordinary nightclothes or bedding; setting objects such as a book, a jar, a crawling fly in the same space as a dissected limb or torso. He thus brought the qualities of Dutch still-life painting into anatomical illustration, and gave a new, darker expression to the significance of the act of dissection. Dumaitre *Gérard de Lairesse*(1982); *Encyclopaedia of World Art IV* 753, V 436, VII 661; Hofer 146.; Russell 211.

\$7,000 - 10,000



113

113

RAMAZZINI, BERNARDINO. 1633-1714.

De morbis artificum diatriba. Modena: Antonio Capponi, 1700. 8vo (177 x 120 mm). viii, 360 pp. Full morocco gilt in antique style. Lower edges of first few leaves a bit frayed, minor occasional foxing, but a very good copy complete with half-title. *Provenance:* Raphaelis Boschi Med:ci (inscription to title in an early hand).

FIRST EDITION. The first comprehensive and systematic treatise on occupational diseases, and the foundation work of ergonomics. "The Western medical tradition, with its emphasis on humoral imbalance as the cause of illness, for centuries did not really favor the idea that certain diseases might be due to one's occupation or environment ... In the sixteenth century the ever insolent Paracelsus wrote a monograph on diseases of metalworkers, and the metallurgist and physician Georgius Agricola connected the injured lungs of Silesian miners to the dust they breathed. But the founder of investigation into occupational and environmental diseases is generally conceded to be the great Italian physician Bernardino Ramazzini" (Simmons *Doctors and Discoveries: Lives That Created Today's Medicine* p 123).

"In his first edition, Ramazzini addresses some forty-two groups. Miners are discussed in the first chapter, for their suffering is most pronounced and the cause is obvious. But artisans of all kinds are represented. There are chapters on diseases of apothecaries, bakers, millers, painters, and soap makers. Ramazzini details metal poisoning in metalworkers, and silicosis in stonemasons. The seventeenth chapter is devoted to tobacco workers" (Simmons p 125). Ramazzini also discussed the occupational diseases of women, recommending that midwives practice cleanliness and take precautions against syphilitic infections. Ramazzini's book was also influential in the history of economics. Adam Smith cited it in his *Wealth of Nations*, and Karl Marx cited its 1781 French translation in *Das Kapital*. Felton, "The Heritage of Bernardino Ramazzini," In: *Occupational Medicine* vol 47 (1997): 167-79; Garrison-Morton 2121; Hunter pp 30-34; Lilly *Notable Medical Books* p 99; *Printing and the Mind of Man* 170; Norman 1776l; Rosen *History of Miners' Diseases* pp 108-120.

\$5,000 - 7,000



114

114

PETIT, JEAN LOUIS. 1674-1750.

L'Art de Guérir les Maladies des Os, Où l'on Traite des Luxations & des Fractures... Paris: Chez Laurent d'Houry, 1705. 8vo (159 x 89 mm). [20], 304 pp, woodcut head and -tail pieces, 1 woodcut text illustration. Contemporary sprinkled calf, spine gilt in compartments with morocco label, head of spine and corners restored. A little browning and foxing, slight soiling, but very good. *Provenance:* Pierre Louyk (18th century ownership inscriptions); Charles Mortes (ownership inscription dated 1708); Amédée Noblot (ownership inscriptions dated 1818).

FIRST EDITION, very rare. The first important book on injuries and diseases of bones, composed from Petit's lectures and widely used in the eighteenth century. Petit was the first to describe osteomalacia. "His book, *l'Art de Guérir les Maladies des Os*, contained practical directions for the treatment of fractures" (Peltier 32). Although Petit did more for French surgery than any other figure since Paré, he published only his orthopedics text during his life. It made his reputation from its very first edition, and inspired Andry's *Orthopédie* thirty-five years later. Bick, *Source Book* 81. 7102; Garrison-Morton 4300.

\$1,000 - 1,500



115

115

KAEMPFER, ENGELBERT. 1651-1716.

Amoenitatum exoticarum politico-physico-mediciarum fasciculi v, quibus continentur ... Rerum Persicarum & ulterioris Asiae. Lemgo: Heinrich Wilhelm Meyer, 1712. 4to (220 x 180 mm). [18], 912, [32] pp. Title in red and black. Engraved frontispiece by Daniel Marot, architect to King William III, and Jacob Gole well known engraver of Amsterdam, 16 engraved plates (4 folding and 12 double-page), 63 full-page and 11 textual woodcuts and engravings. Contemporary vellum, quarter morocco slipcase. Edges worn, re-backed, lower section of title strengthened where two library stamps were removed (no loss of text), and 2 plates worn at fold, somewhat browned otherwise a very good copy with wide margins. *Provenance:* Richard C. Rudolph (1909-2003), founder of UCLA's Department of East Asian Languages and Cultures, where he was the first chairman and the first professor of Chinese (ownership inscription).

FIRST EDITION OF KAEMPFER'S FIRST WORK ON ASIAN NATURAL HISTORY AND MEDICINE, the only book Kaempfer published during his lifetime. His more famous work, *The History of Japan*, was first published in English translation after his death. Kaempfer was the first scientist to illustrate and describe the plants of the Orient, including the Camellia (Tsubaki) and the date-palm. He was also the first European to bring a collection of botanical specimens back from Japan. Included in this work is one of the first European descriptions of the healing methods of acupuncture and moxa. Other observations of medical interest concern the guinea worm, endemic hydrocele of Malabar, asafetida, mycetoma of the foot, etc. Kaempfer's book also described paper-making and the custom of drinking tea. Of extreme importance is Fascicule V which classifies nearly 500 Japanese plants. In most cases Kaempfer gives the Japanese names, illustrated with their Chinese characters. Kaempfer, a German physician and naturalist, visited Persia in 1648 as secretary to the Swedish ambassador and in 1690-92 as chief surgeon, accompanied a Dutch East India Company mission to Japan. The Japanese allowed him almost unlimited freedom to travel, and he became an authority on the geography, agriculture, mineral resources, religion, art and natural history of this country which had been virtually unknown to the West. His diverse scientific knowledge made him uniquely qualified to record the riches of Japanese culture. *Hunt Botanical Library* II, 427. *Nissen Botanische Buch Illustration* pp 89-91; 1018. *Bowers Western Medical Pioneers in Feudal Japan* pp 38-58. *Bowers, "Engelbert Kaempfer: Physician, Explorer, Scholar, and Author,"* in: *Journal of the History of Medicine*, vol XXI, no 3, pp 237-259.

\$3,000 - 5,000

116

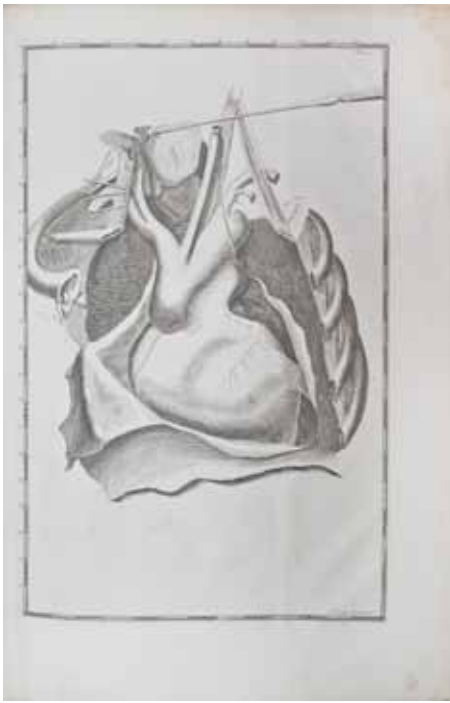
ASTRUC, JEAN. 1684-1766.

Manuscript in latin on paper, entitled "*Tractatus de Febrium Natura & Differentiis.*" WITH: Anonymous manuscript in Latin on paper, entitled "*Brevis chirurgicae εξεγησις. Seu Συνοψις, per summaria capita et quasi συλληβδην exposita,*" 76 and 81 pp recto and verso, 4to, likely Montpellier, France, 1720, brown ink in a neat cursive hand. Bound together in modern calf and marbled boards. A few small ink-spots, a few spots of light thumbsoiling, section of title clipped away, otherwise near fine.

A transcription of Astruc's lectures on fevers delivered at Montpellier, where Astruc served as professor of medicine from 1716 to 1728. Astruc, who later joined the Faculty of Medicine in Paris, was a highly skilled and influential teacher. During the 18th century it was common practice for medical lectures such as these to be transcribed and for a small number of manuscript copies to be sold to students who might not have been able to attend. Astruc was "extremely methodical and clear in his instruction. In a series of courses lasting six years he [covered all phases of medicine: anatomy, physiology, psychology, gerontology, pathology, therapy, venereology, gynecology, neurology and pediatrics. Even in American libraries there are manuscript copies of these carefully prepared and highly appreciated courses; during Astruc's lifetime some of them were used for editions printed without his knowledge in England, Switzerland and Holland" (*Dictionary of Scientific Biography*). An unauthorized edition of Astruc's lectures on fevers was published in England in 1749 under the title *Academical Lectures on Fevers*; it is likely that the present lectures are incorporated in this work.

Astruc was the author of several important medical works, most of which were first published in Latin. The best known of these is his *De morbis veneris*, the first great work on venereal disease. The surgical manuscript following Astruc's work is a brief exegesis of surgical operations arranged by chapter headings. Its authorship is unknown.

\$1,500 - 2,500



117

117

CANT, ARENT. 1695-1723.

Impetus primi anatomici ex lustratus cadaveribus nati.... Leiden: for the author by Pieter vander Aa, 1721.

Folio (504 x 372 mm). [6], 28 pp. With 6 folding engraved plates after drawings by the author, title with large engraved vignette. Contemporary peckled calf, spine gilt in compartments with morocco label. some wear to calf, re-backed with the original spine laid-down, re-cornered, fore-edge of plate 6 repaired, a few tears and chipping to some margins, some damp stains mainly confined to final blank end-leaves.

Provenance: Ira M. Rutkow (pencil signature); 19th century Russian library stamp.

FIRST EDITION. Cant, a pupil of Frederik Ruysch, was a skilled anatomist and artist whose ambitious plan to publish a great anatomical work was interrupted by his premature death at the age of 28. The present work represents the only volume of Cant's projected anatomy; it contains six large folding plates, drawn by the author, illustrating the anatomy of the head, heart, stomach, shoulder and knee joints, thoracic duct, etc. Cant was one of the few early anatomists to make use of the "grid-reference" identification system devised by Eustachius (1510/20-1574), in which anatomical structures are located by means of numbered borders at the side and top of each plate; this method allows the anatomist to illustrate his figures without superimposed lettering or numbering. Lindeboom *Dutch Medical Biography* col 325. Roberts & Tomlinson *Fabric of the Body* p 191.

\$2,000 - 3,000



118

118

GIFFARD, WILLIAM. D.1731.

Cases in Midwifry. London: B. Motte, T. Wotton, and L. Gilliver, 1734. 8vo (194 x 120 mm). xxxiii, 520 pp, with 3 folding engraved plates (forceps plate by A. Motte). Contemporary sprinkled calf, rebacked in period style. Faint staining in upper margin of first & last leaves, but very good.

Provenance: Dr. JL Rothrock (ex-libris stamps); Richard Price (book stamp & 19th century gift inscription from Price to Rothrock); Library of Ramsey county Medical Society (bookplate).

FIRST EDITION of this important obstetric work, which contains the earliest record of the use of the secret Chamberlen forceps (in 1726), as well as an account of the 225 most difficult or dangerous cases of childbirth. Giffard is considered the first Englishman to publish substantial contributions to clinical midwifery.

\$800 - 1,200

119

BUNON, ROBERT. 1702-1748.

Essay sur les maladies des dents.... Paris: Briasson; Chaubert; De Hansy, 1743.

12mo (168 x 96 mm). xii, 237 [3] pp. Contemporary mottled calf, gilt spine. Very lightly browned, occasional minor foxing.

FIRST EDITION. One of the outstanding French dentists in the period following Fauchard's *Chirurgien dentiste* (1728), Bunon was the first to perform specialized odontological research. Dissatisfied with the incomplete coverage of dental problems that he found in the works of Fauchard and Gerauld, Bunon addressed such issues as dental erosion, tooth development and the prophylaxis of dental caries and other maladies of the teeth in his *Essay*, the first of his important dental works. *David Bibliographie française de l'art dentaire* p 46; Garrison-Morton 3672.1; Hoffmann-Axthelm *History of Dentistry* pp 207-9; Weinberger *Introduction to the History of Dentistry* pp 313, 405.

\$2,000 - 3,000



120

120

LIEBERKÜHN, JOHANN NATHANAEL. 1711-1756.

Dissertatio anatomico-physiologica de fabrica et actione villorum intestinorum tenuium hominis. Leiden: Conrad & Georg. Jac.

Wishof, 1745.

4to (263 x 204 mm). [2], 36 pp. With 3 engraved plates, title with large woodcut ornament, headcut woodcut chapter initial, head and tail-pieces. Original plain wrappers, light wear to spine, scattered foxing, light browning.

FIRST EDITION. Lieberkühn, a student of Albinus and Boerhaave, was one of the most important German anatomists of his day. The present work contains his classic description of "Lieberkühn's glands" or "crypts," simple tubular glands in the mucosa of the small intestine; these organs were first observed by Malpighi in 1688. Rare on the market, with no auction records over the past 25 years. Garrison-Morton 978.

\$1,000 - 1,500



121

121

HEISTER, LORENZ. 1683-1758.

Institutiones chirurgicae.... Amsterdam: Jansson-Waesberg, 1750.

Two volumes. 4to (250 x 191 mm). [ii], viii, 56, [8], 599 [1]; [4], 603-1187, [53] pp. Engraved frontispiece portrait and 40 folding copper-engraved plates (plate 40 inserted from another copy). Contemporary French mottled calf, spines gilt in compartments. Calf a little rubbed, corners and parts of edges worn. Light browning, minor foxing and dampstaining, wormholes in plate 40 expertly filled in.

Provenance: 18th century ownership inscriptions.

Second Amsterdam edition in Latin. Heister's *Chirurgie*, first published in German in 1718, became the standard work on surgery in the 18th century, and one of the most respected surgery textbooks ever written. It was also the most graphically illustrated textbook of the period, with numerous folding engraved plates that include the finest 18th-century engravings of surgical instruments and operative techniques, the prototypes of many illustrations still in use, especially of braces and bandages. Heister introduced a spinal brace; he also made the first post-mortem section of appendicitis and introduced the term "tracheotomy." A student of the famous Dutch surgeon and anatomist Frederik Ruysch, Heister founded scientific surgery in Germany. see G-M 5576; Waller 4263; Zimmerman & Veith 313-23.

\$1,000 - 1,500



123

122

CELSUS, AULUS CORNELIUS. C.25 B.C.-C.50.

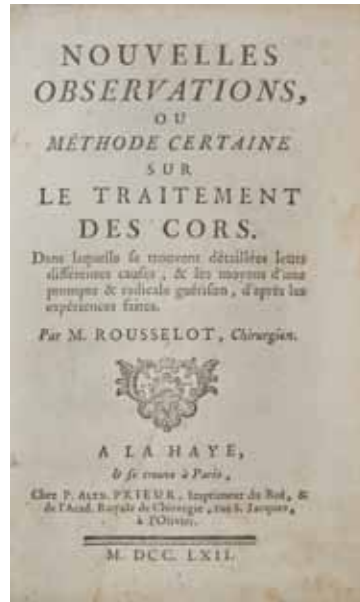
Of medicine. In eight books. Translated, with notes critical and explanatory, by James Greive, M.D. London: D. Wilson and T. Durham, 1756.

8vo (205 x 124 mm). xxxii, 519, [7] pp. Contemporary calf rebaked. Calf c. 1756, rebaked with corners repaired and endpapers renewed. Light toning, occasional light spotting.

Provenance: George Howell (ownership signature dated January 21, 1757 on front flyleaf).

FIRST EDITION IN ENGLISH. Celsus' *De medicina*, written c.30 C.E., is the oldest Western medical document after the Hippocratic writings, the earliest major medical treatise written in Latin to survive, and the first of the treatises on medicine from the ancient world to be published in English. Prior to this edition of Celsus, fragments of Hippocrates, such as the Hippocratic Oath, were translated into English, but virtually all of Hippocrates, Galen and other classical writers on medicine and surgery waited until the nineteenth or twentieth century to be translated. Celsus remains the most important source of present-day knowledge of medicine in the Roman empire. Pioreschi *A History of Medicine* vol III pp 182-211; Garrison-Morton 21 (note).

\$1,800 - 2,200



124

124

ROUSSELOT. D. 1772.

Nouvelles observations, ou méthode certaine sur le traitement des cors. The Hague & Paris: P. Alex. Le Prieur, 1762.

12mo (180 x 105 mm). [8], 45, [3] pp. Woodcut ornament to title, woodcut chapter initial and head-piece. Modern blue wrappers in glassine jacket, edges stained red. Title lightly soiled, small marginal tear to one prelim., otherwise very good.

FIRST EDITION OF THE FIRST BOOK ON PODIATRY. Only one copy is reported in the United States (NLM copy). Rousselot was podiatrist to the daughter-in-law of Louis XV. He introduced methods of treating corns and urged that podiatry become a specialty of surgery. On the last page of his book, he declares himself a specialist in podiatry ("Rousselot, Chirurgien ... a l'honneur de vous donner avis, qu'il s'est livré entièrement à l'étude particulière & utile de la guérison des Maladies des pieds & des mains..."). Garrison-Morton 4302.1.

\$1,000 - 1,500

123

HALLER, ALBRECHT. 1708-1777.

Elementa physiologiae corporis humani. Lausanne: Marci-Michael Bousquet; Sigismudi D'Arnay; Francisci Grasset, 1758, 1760-63; Berne: Societatis Typographicae, 1764 & 1766; Leyden: Cornelius Haak, 1765. 8 volumes. 4to (240 x 187 mm). Engraved folding frontispiece portrait & 6 engraved plates, title of vol 1 with large engraved vignette depicting cherubs dissecting a small animal, vols 2-4 titles with large engraved vignettes of scientific or medical scenes, vols 5-8 titles with woodcut devices. Contemporary mottled calf, spines gilt in compartments (some variation in mottling patterns & spine tools as might be expected). Bindings worn, some joints cracked.

FIRST EDITION of the first comprehensive treatise of physiology, "a vast and well-systematized storehouse of physiological knowledge, replete with citation and an incredible number of accurate references to literature" (Fulton / Wilson 81). Also includes important anatomical descriptions. "Haller's most original physiological contributions were the establishment of both concepts of sensibility and irritability, recognition of the cardiac automatism and confirmation of an airless pleural space. In addition, Haller rejected the concept of an active systole occurring in the cerebral membranes, and the previous attempts to localize the seat of the soul. Moreover, he clarified the relationships between the cerebellum and the motion of the heart as well as other vegetative functions" (Rothschuh 130, also 125ff.); Garrison-Morton 588; Lundsgaard-Fischer 284.

\$1,500 - 2,500



125

125

HALLER, ALBRECHT VON. 1708-1777.

Opera Minora; Operum Anatomici Argumenti Minorum. Lausanne: Grasset, 1763-68. 3 volumes. 4to (246 x 195 mm). [6], [v]-xxii, [2], 608; vi, 607, [1]; [2], 388 pp. (title for part 2 of vol 1 misbound at front), with 36 mostly folding engraved plates, and 1 table, titles in red & black with woodcut ornaments. Contemporary polished calf, edges and corners rubbed, front joints cracked but sound, some light scattered light browning & foxing.

Provenance: Radcliffe (engraved book plate with Bodleian withdrawal stamp); K[enneth] J. Franklin (book plate).

FIRST EDITION OF THE FIRST SCIENTIFIC BOOK ON TERATOLOGY, AND FIRST COLLECTED EDITION of Haller's principal short on anatomy & embryology. In *De Monstris Libri III*, Haller put teratology on a sound anatomical basis. He summarized the whole field of malformation, with descriptions, illustrations, and theoretical discussion. "Haller's investigations of monsters and deformities led him to observations from which he was later able to make significant generalizations ... [from his study of premature twins joined at the heart Haller concluded] this twinning was not a deformity but perhaps a new type of living creature and a proof of the manner in which divine wisdom can realize new human forms that are complete in their own ways. Haller wondered, then, if the same might be true of all fetuses classified as deformed--if indeed they might not simply be indications of the number and variety of existing forms ... Haller thought that malformations were not invariably caused by fortuity but sometimes might be the result of diseases of the fetus; he held that external factors might act upon the fetus only in rare instances" (DSB). Beckwith, *Teratology* (privately printed, 1966) 9; Garrison-Morton 534.54.

\$800 - 1,200



126

126

RAVATON, HUGUES. FL.1768.

Chirurgie d'Armée, ou Traité des Plaies d'Armes à Feu, et d'Armes Blanches, avec des Observations sur ces Maladies.... Paris: P. Fr. Didot le Jeune, 1768.

8vo (197 x 123 mm). viii, 681 (ie 685) [1] pp. With 7 engraved plates. Contemporary mottled sheep, a little rubbed, rebounded and recornered in calf. Light foxing and browning. *Provenance:* Gabriel Mullet (book label); effaced contemporary ownership inscription.

FIRST EDITION. "One of the most important works on military surgery during the 18th century" (Garrison-Morrison 2154). Ravaton wrote intelligently about the treatment of gunshot wounds, and was the first to adopt the double-flap method in amputation; he also introduced the method of suspending fractures in a hanging position by means of a tin boot hung from a wire and attached to a frame (illustrated in plate iv). OCLC states that the author's *Traité des plaies d'armes à feu* (1750) represents an earlier version of the *Chirurgie d'armée*, a statement borne out by Ravaton's preface to the latter; however, the *Chirurgie d'armée* is over 200 pages longer and substantially revised, making it in essence a new work. Hirsch treats the two titles as separate entities. Rutkow *Surgery: An Illustrated History* p 250; Wangensteen & Wangensteen pp 30, 32, 35. Not in Peltier or Le Vay.

\$1,000 - 1,500



127

127

HUNTER, JOHN. 1728-1793.

A Natural History of the Human Teeth: Explaining their Structure, Use, Formation, Growth & Diseases. WITH: A Practical Treatise on the Diseases of the Teeth Intended as a Supplement to the Natural History of Those Parts. London: J. Johnson, 1771-1778.

Two volumes in one. 4to (257 x 206 mm). [8], 128; [vi], iv, 128, [8] pp. With 16 copperplates, each with printed explanation leaf. Contemporary tree rebounded with original spine laid down, edges with some wear, some small wormholes to lower inner margin. *Provenance:* effaced library stamp.

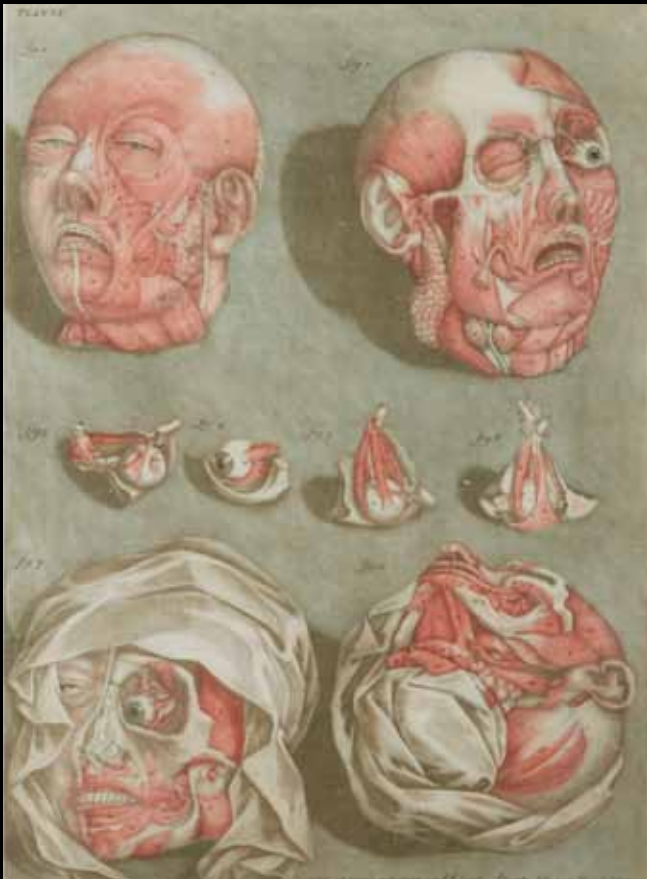
FIRST EDITION OF BOTH WORKS. Hunter was the first to study the teeth in a scientific manner, and the first to recommend complete removal of the pulp in filling them. "This classical work revolutionized the practice of dentistry, and provided a basis for later dental research. Hunter introduced the classes cuspids, bicuspid, molars and incisors; he also devised appliances for the correction of malocclusion. In part 2 of the above work he included instructions with regard to the operation of tooth transplantation" (Garrison-Morton). The first edition of the *Natural History* is rare, especially when bound with the *Practical Treatise*. Garrison-Morton 3675-76; Hoffmann-Axthelm, *History of Dentistry*, pp 219-22; Waller 10650; Wellcome III, p 317. **\$4,000 - 6,000**



128



129



130



131



132

128

GAUTIER D'AGOTY, ARNAULD-ELOI. 1741-1771?

[Dissected figure, front view.] Plate III from *Corps complet d'anatomie*. Nancy: J. B. H. LeClerc, 1773.

Mezzotint on paper printed in colors by Gautier d'Agoty's 4-color method. 547 x 356 mm. Matted, glazed and framed to 778 x 625 mm. Unexamined out of frame.

Arnaud-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 some of his sons) 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.

The series of large anatomical works issued by the Gautier d'Agotys concluded with Arnaud-Eloi's *Corps complet d'anatomie* (1773), "a major work of great merit and satisfaction ... [The work's] 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" (Franklin *A Catalogue of Early Colour Printing* [1977] pp 49-50).

\$1,200 - 1,800

129

GAUTIER D'AGOTY, ARNAULD-ELOI. 1741-1771?

[Dissected figure, front view.] Plate IV from *Corps complet d'anatomie*. Nancy: J. B. H. LeClerc, 1773.

Mezzotint on paper printed in colors by Gautier d'Agoty's 4-color method. 547 x 356 mm. Matted, glazed and framed to 778 x 625 mm. Unexamined out of frame.

\$1,200 - 1,800

130

GAUTIER D'AGOTY, ARNAULD-ELOI. 1741-1771?

[Heads.] Plate XI from *Corps complet d'anatomie*. Nancy: J. B. H. LeClerc, 1773.

Mezzotint on paper printed in colors by Gautier d'Agoty's 4-color method. 540 x 390 mm, matted, glazed and framed to 778 x 625 mm. Center fold.

\$1,200 - 1,800

131

GAUTIER D'AGOTY, ARNAULD-ELOI. 1741-1771?

[Hands.] Plate XIII from *Corps complet d'anatomie*. Nancy: J. B. H. LeClerc, 1773.

Mezzotint on paper printed in colors by Gautier d'Agoty's 4-color method. 550 x 400 mm. Matted, glazed and framed to 778 x 625 mm.

\$1,200 - 1,800

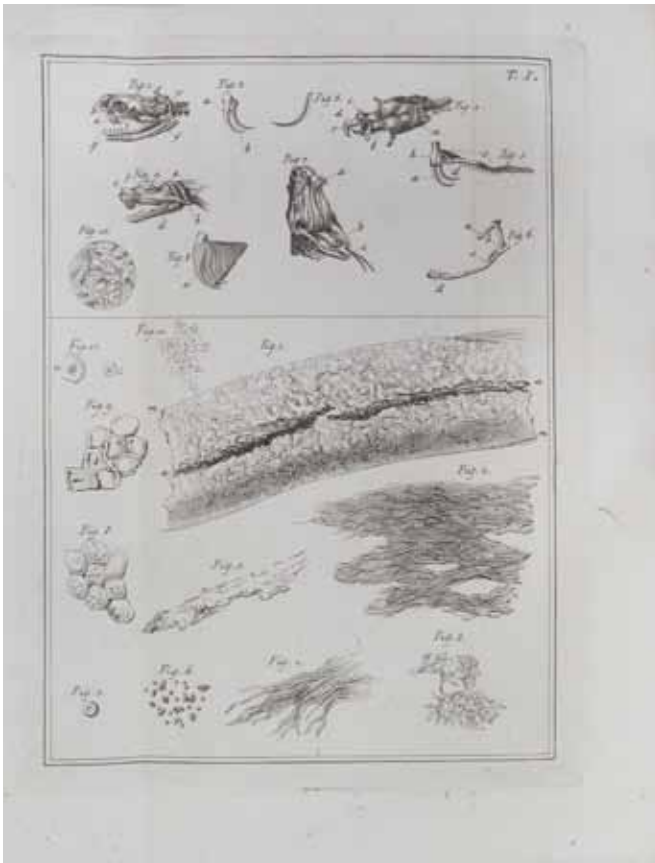
132

GAUTIER D'AGOTY, ARNAULD-ELOI. 1741-1771?

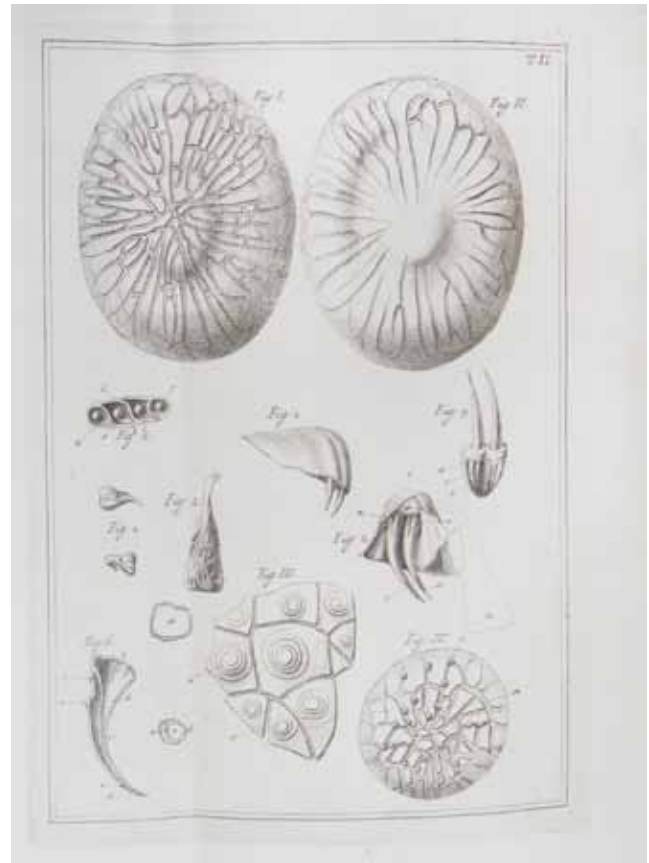
[Feet.] Plate XIV from *Corps complet d'anatomie*. Nancy: J. B. H. LeClerc, 1773.

Mezzotint on paper printed in colors by Gautier d'Agoty's 4-color method. 535 x 357 mm. Matted, glazed and framed to 778 x 625 mm. Unexamined out of frame.

\$1,200 - 1,800



133



133

133

FONTANA, FELICE. 1730-1805.

Traité sur le vnin de la vipre, sur les poisons amricains, sur le laurier-cerise et sur quelques autres poisons vgtaux. Florence: [n.p], 1781.

2 volumes, 4to (287 x 213 mm). xxviii, 329 [1]; xi [1] 373, [1] pp. 10 folding engraved plates. Contemporary flexible marbled boards, uncut. Boards lightly worn, marginal tear to first plate (not touching image), overall a fine copy. *Provenance:* Chauncey D. Leake (signatures).

FIRST EDITION IN FRENCH extensively revised and augmented by the author, and containing the *FIRST EDITION OF HIS WORK ON THE ANATOMY OF NERVES AND NERVE REGENERATION*. Fontana's *Traité sur le vnin de la vipre* is the first modern investigation of the subject; the French edition, containing over twice as much text as the 1767 Italian edition, contains the results of more than six thousand experiments in which Fontana used "upwards of 3000 vipers" (Knoefel p 270). "After a series of impressive and ingenious experiments, Fontana retraced the action of the bite of the viper to an alteration in the irritability of the fibers, which he maintained was mediated by the blood; in other words, the viper's poison directly alters the blood, coagulating it, and this in turn alters all parts of the organism—especially the nerve

fibers—that the blood would normally nourish. Fontana extended his toxicological experiments to other substances, especially to curare" (DSB). The curare studies are found in vol 2, along with Fontana's toxicological investigations of nicotine, opium, "toxicodendron" (poison ivy), and the cherry-laurel. This volume also contains Fontana's microscopical observations of the skin of eels, in which he gave the first description (albeit primitive) of an adult animal cell nucleus and nucleolus other than in a blood corpuscle (see Knoefel pp 240-41). The brief treatise on the nerves, found at the end of vol 2 of the *Traité*, is "a little gold mine of ideas ... Not only did [Fontana] describe and illustrate the solid axis 'cylinder' of the 'primitive nerve fiber,' but also the degeneration of nerve, as it loses its function when separated from its center" (Haymaker & Schiller *Founders of Neurology* p 205). This copy is from the library of Chauncey D. Leake, co-discoverer of the anesthetic properties of divinyl ether (Garrison-Morton 5713) and author of histories of pharmacology (Garrison-Morton 2068.14) and old Egyptian medical papyri (Garrison-Morton 6471.1). Knoefel *Felice Fontana: Life and Works* pp 267-306; *Felice Fontana 1730-1805: An Annotated Bibliography* 35; Garrison-Morton 2103.

\$1,000 - 1,500



134

134

WITHERING, WILLIAM. 1740-1799.

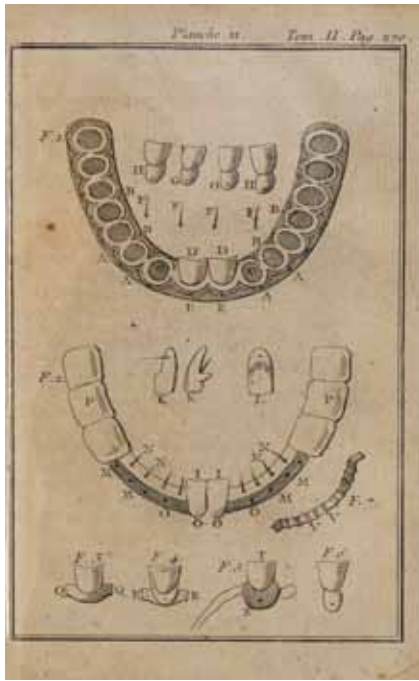
An Account of the Foxglove, and Some of its Medical Uses. WITH: An Account of the Scarlet Fever and Sore Throat, or Scarlatina Anginosa. Birmingham: M. Swinney for G.G.J. & J. Robinson, 1785; 1793.

Two works in one. 8vo (210 x 128 mm). [2], xx, [2], 207, [1]; [2], 127, [1] pp. Large folding hand colored engraved frontispiece by James Sowerby, version with the artist's name and with lower leaves pointing to the left. Repaired tear at fold, not touching image. Contemporary half-calf and marbled boards, rebacked. Cloth slip-case.

Provenance: Engraved bookplate with motto "Suum cuique"; The Honeyman copy.

FIRST EDITION of first title on the discovery of the efficacy of digitalis in heart diseases; second edition of second title, one of the first modern clinical studies of a drug. Withering's work contains the results of ten years of observations and clinical trials: of the 158 patients he treated with the foxglove, 101, who suffered from congestive heart failure, experienced relief after treatment with the drug, which is today known as digitalis, after the foxglove's Latin name, *Digitalis purpurea*. Le Fanu, in *Notable Medical Books in the Lilly Library*, points out that the frontispiece is colored in some copies but not all. There are two versions of the plate: one, with artist's name and with lower leaves pointing to the left, was copied from the original which Sowerby had engraved for Curtis's *Flora Londinensis*; the other is the original version borrowed from Curtis, without artist's name and with lower leaves pointing to the right. Estes & White, "William Withering and the purple foxglove," In: *Scientific American* 212 (1965) pp 110-119; Garrison-Morton 1836 & 2734.31; Henrey 1505; Hunt II, 676. Norman 2255.

\$10,000 - 15,000



135

135

BOURDET, ETIENNE. 1722-1789.

Recherches et observations sur toutes les parties de l'art du dentiste. Paris: Serviere, 1786.

Two volumes. 12mo (166 x 97 mm). xx, 310; [4], 333 pp. 13 engraved plates. Contemporary tree sheep, spines gilt in compartments with morocco labels. Occasional light foxing, some light brownning to endpapers, bindings lightly rubbed. Very good.

Second edition. Bourdet was probably the most significant French dental author after Fauchard. His *Recherches et observations*, first published in 1757, contained important contributions to dental prosthetics, and also described surgical therapy for severe periodontitis that anticipated modern gingivectomy. Hoffmann-Axthelm, *History of Dentistry*, pp. 210-14; Waller 10578.

\$1,500 - 2,500

136

DAIGNAN, GUILLAUME. 1732-1812.

Tableau des variétés de la vie humaine. Paris: the author, 1786.

Two volumes. 8vo (224 x 138 mm). xxiii, [1], 389, [1]; [4], 386 pp. With 5 folding tables. Original pastepaper wrappers, uncut, both volumes rebaked. Light brownning, slight foxing & soiling, otherwise very good.

FIRST EDITION of this massive and early study of puberty among Europeans, with comparative data including mortality tables. The physician author was especially interested in the plight of urban youth. He concludes his work with tables of life expectancy based on variables of age, constitution, stature, physique, climate and soil, sex, occupation and disease. 10,000 individuals are surveyed with respect to mortality according to sex, age and occupation. INED 1260. Not in Kress or Goldsmiths.

\$1,200 - 1,800



136

137

CHIARUGI, VINCENZO. 1739-1820.

Regolamento dei Regi spedali di Santa Maria Nuova di Bonifazio. Florence: Gaetano Cambiagi, 1789.

4to (273 x 200 mm). lxxvii, [2], 416, [82] pp, incl. 27 charts (some folding, some double-page). Engraved title and 10 folding engraved plates (1 in facsimile). 19th cent. half vellum and mottled boards, light rubbing. Soiling and 2 small holes at head of 2o1, otherwise fine.

FIRST EDITION of Chiarugi's first account of his historic reforms for the care of the mentally ill. In 1774, under the enlightened rule of the Grand Duke Peter Leopold of Tuscany, the first law in Europe authorizing hospital care for the insane was enacted. The following year Vincenzo Chiarugi, then senior physician at the Hospital of Santa Maria Nuova, recommended to the Duke that the insane be relocated to the old Bonifazio Hospital, which would be renovated for the purpose; in 1788, the new Bonifazio Hospital was officially opened. Chiarugi was named physician-in-chief of the new hospital, which was dedicated to the care of insane, incurable, invalid and dermatologic patients; his humane administration with regard to the insane marked the first application of the principles of treatment that form the basis of modern psychiatry. Chiarugi required a physical examination and clinical assessment of each patient admitted, hygienic rooms with segregation of the sexes, no restraint beyond strait jacket and cotton strips, a firm but kindly attitude on the part of the staff, and no work assignments for the patients except those that would benefit their situations. Mora "Chiarugi and psychiatric reform" in: *Journal of the History of Medicine & Allied Sciences* 14 (1959), pp 424-433; Norman 474.

\$1,000 - 2,000



137



138

138

HOWARD, JOHN. 1726?-1790.

An account of the principal lazarettos in Europe; with various papers relative to the plague: Together with further observations on some foreign prisons and hospitals; and additional remarks on the present state of those in Great Britain and Ireland. Warrington: William Eyres for T. Cadell, J. Johnson, C. Dilly, and J. Taylor, 1789.

4to (298 x 233 mm). [v-vii], viii, 259, [15] pp. With 22 engraved plates and 1 folding table. Half calf and marbled boards, spine gilt in compartments. Binding rubbed, light browning & foxing. Lacking half-title and initial blank, as in most presentation copies.

Provenance: Sir Richard Perryn, Baron of the Exchequer (presentation inscription from author, engraved bookplate).

FIRST EDITION, PRESENTATION COPY with blank leaf (possibly original initial blank) bound after the title, bearing Howard's inscription to Sir Richard Perryn. Although best known as a prison reformer on the strength of his famous *State of the Prisons in England and Wales* (1777; see PMM 224), the English philanthropist John Howard was also concerned with the improvement of sanitary conditions in other public institutions. His work in this area represents an important link in the development of the public health movement. The present work, an investigation of the conditions of English and European hospitals (including mental hospitals and quarantine detention houses) contains both plans and notes on management and personnel; it also includes notes of Howard's latest inspections of Irish, Scottish and English prisons. Arnold M. Muirhead, in his preface to Baumgartner's John Howard, notes that presentation copies of Howard's *State of the Prisons* usually have the half-title removed and a separate leaf with Howard's inscription inserted; Howard also followed this custom with the *Lazarettos*. Baumgartner 21; G&M 1601; Norman 1109.

\$1,200 - 1,800



140

139

LAVATER, JOHANN CASPAR. 1741-1801.

Essays on physiognomy, Designed to Promote the Knowledge and the Love of Mankind. London: John Murray, 1789-98.

3 volumes in 5. 4to (335 x 275 mm). Various paginations. 173 plates plus numerous text engravings, titles with large engraved vignettes. Contemporary half morocco and marbled boards. Bindings a little rubbed, some minor foxing and offsetting, overall very good.

FIRST EDITION IN ENGLISH of Lavater's exposition of character on the basis of physical features. The work was grounded in his religious views and in the philosophy of Goethe, who worked with him on the book for a time. It was the last and most complete work of the descriptive physiognomists, extremely influential both in the history of psychiatry and in English portraiture. The present edition was especially important for the artistic development of John Henry Fuseli (1741-1825) and William Blake (1757-1827), who engraved one plate after Rubens in vol 1 and two vignettes signed "Blake Sc." or "Blake sculp." See Garrison-Morton 154; Ryskamp *William Blake, Engraver* 22.

\$1,000 - 1,500

LECTURES OF AN INNOVATOR IN OBSTETRICS

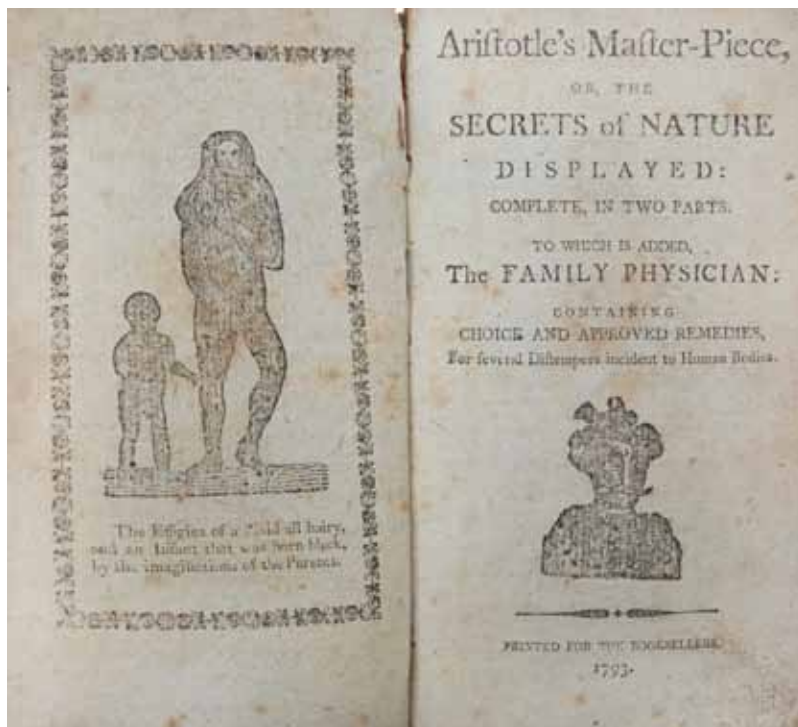
140

PÉAN, FRANÇOIS RENÉ. FL. 1780.

Manuscript in French on paper, entitled "*Cahiers sur les accouchemens & les maladies des femmes en couche*", 683 pp recto and verso, 4to, probably Paris, late 18th or early 19th century, in 2 or 3 scribal hands, brown ink. WITH: Manuscript copy of "*Lettres de Monsieur Lucas & Monsieur de la Motte*," 50 pp (of apparently 70). Paste-boards, rebacked; uncut. Some areas of soiling and foxing, but overall very good.

UNPUBLISHED MANUSCRIPT TRANSCRIPTION OF A COMPREHENSIVE COURSE IN MIDWIFERY. There is no citation to Péan in Hirsch, and we do not know where these lectures attributed to him were delivered. NUC shows only Péan's thesis, *Positiones Anatomicae et Chirurgicae de Partu* (Paris, 1778, only the NLM copy). Radcliffe in his history of the forceps mentions "Péan's forceps," a modification of Levret's, described in 1781. The attribution to Péan, written on the title leaf, was made at an early date, probably before 1850, and on account of this, has a good chance of being correct. If so, the densely written manuscript of nearly 700 pp offers scholars the opportunity to greatly enlarge on what is known of this obstetrical innovator.

\$1,500 - 2,500



141

141

PSEUDO-ARISTOTLE.

Aristotle's Master-Piece, or, the Secrets of Nature Displayed: Complete, in Two Parts, to Which is Added, The Family Physician: Containing choce and Approved Remedies, for Several Distempers Incident to Human Bodies. [n.p.]: Printed for the Booksellers, 1793. 8vo (160 x 95 mm). 108 pp. Printed on blue paper, with woodcut frontispiece, woodcut vignette to title, and 7 woodcut text illustrations. Contemporary calf, worn at spine, covers rubbed, paper browned and foxed.

An eighteenth century edition of this popular sex manual and midwifery book, first published in England in 1684. It discusses matters of anatomy, sexual intercourse, and childbirth, including questions concerning fertility, determining the sex of the fetus, what to do and not to do during pregnancy, amongst others.

\$2,000 - 3,000

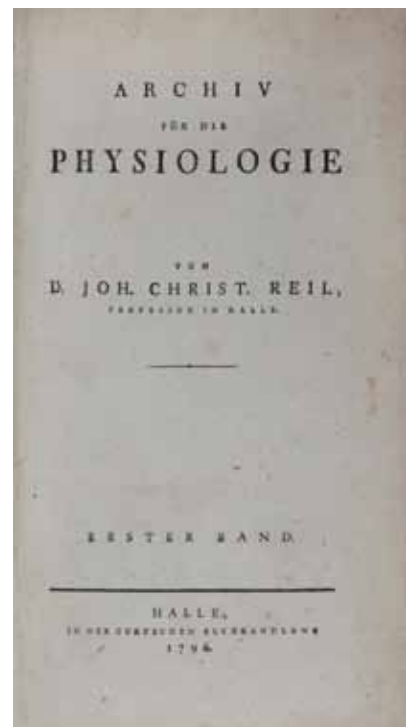
142

PLASTIC SURGERY.

ANONYMOUS. Untitled article on Hindu rhinoplasty by "B.L." In: *The Gentleman's Magazine* LXIV, pt 2, no 4 (October, 1794), pp 891-92. [London]: Nichols, 1794. 8vo (204 x 115 mm). [2], [585]-1212, [16] pp (whole volume, containing 6 numbers, July-December, 1794 & supplement). 19 engraved plates (of 21), including plate accompanying article at p 883. Contemporary calf rebounded. Internally clean, library bookplate and stamp to endpapers. *Provenance*: Richard Kneeshaw (contemporary signature to title, bookplate to f.f.e.).

Signed by one "B.L.," the article reports on the curious operation performed in India of making a nose from a forehead flap and is accompanied by an engraving of the patient Cowasjee with restored nose and showing the stages of the operation. The report, the first on the subject published in Europe, sparked Western interest in plastic operations, culminating in Carpué's successes with the Indian method in 1814-1816 (Garrison-Morton 5737), which were the turning point in the development of modern plastic surgery. Gnudi & Webster pp 309-16 & fig 47 reproducing the famous Cowasjee plate; McDowell pp 74-88, reproducing plate; Zeis / Patterson 438.

\$800 - 1,200



143

143

REIL, JOHANN CHRISTIAN, ED.

Archiv für die Physiologie. Halle: Curt, 1796-1813. 12 volumes. 8vo (202 x 122 mm). 48 plates (9 plates supplied in facsimile). Contemporary half sheep, rubbed. Lightly browned and foxed throughout, minor worming in one volume. Library stamps.

FIRST EDITION OF THE FIRST GERMAN JOURNAL OF PHYSIOLOGY, founded by the neuroanatomist and psychiatrist Johann Christian Reil, discoverer of "Reil's island" in the brain (1796; Garrison-Morton 1387) and coiner of the term "psychiatry" (Garrison-Morton 4923). The *Archiv* attracted contributions from medical and scientific writers throughout Europe, including A. A. Fourcroy, Everard Home, W. C. Cruikshank, Georges Cuvier, Astley Cooper and Benjamin Collins Brodie. Reil himself contributed numerous articles to the *Archiv* between 1796 and 1812 on such subjects as medical semeiology, brain anatomy and the polarity of forces in the pregnant uterus. One of his best-known contributions was his "Von der Lebenskraft" ("On vital force" Garrison-Morton 596), published in the first volume of the *Archiv* (pp 8-162). Between 1807 and 1812 Reil published in the *Archiv* a series of important papers on cerebral anatomy, based on his dissections of the alcohol-fixed brain. These included descriptions of the nucleus (a concept Reil introduced), the lenticular nuclei and lemniscal system, as well as the "island" that now bears his name. See Meyer *Historical Aspects of Cerebral Anatomy* pp 25-30, 111-13 and 125-28. Haymaker & Schiller *Founders of Neurology* (2nd ed) pp. 62-66. McHenry *Garrison's History of Neurology* pp 141-44.

\$1,500 - 2,500



144

144

PINEL, PHILIPPE. 1745-1826.

Traité médico-philosophique sur l'aliénation mentale, ou la manie.
Paris: Richard, Caille & Ravier, An IX [1800/1801].

8vo (191 x 110 mm). lvi, 318 pp. Half-title, folding table. With 2 engraved plates. Quarter mottled sheep, paste paper boards, vellum corners. Light browning and scattered light foxing, slight wear to spine. but a fine copy.

FIRST EDITION. Pinel was one of the first to treat the insane humanely, striking the chains from the lunatics at the Bicêtre Hospital and implementing his "traitement moral," a compassionate form of psychiatric therapy that identified insanity with illness rather than moral perversity or demonic possession. In his *Traité*, Pinel replaced the theorizing and speculation characteristic of earlier works on mental illness with his own practical observations of the Bicêtre's mental patients, whose behavior could now be observed undistorted by cruel treatment. Pinel founded the Salpêtrière's famous school of psychiatry and trained a generation of psychiatrists, the most important of whom was Esquirol. Norman 1701; Garrison-Morton 4922; Hunter & Macalpine pp 602-10; Zilboorg pp 319-41.

\$1,500 - 2,000



145

145

BELL, CHARLES. 1774-1842.

A System of Operative Surgery, Founded on the Basis of Anatomy.
London: Longman [et al.], 1807-9.

2 volumes. 8vo (229 x 130 mm). xxxii, 448; xxiv, 385, [1], [6] ad pp. Half-title volume 1. With 21 full-page engraved plates by J. Stewart after Bell's drawings; 93 engraved figures after Bell in text. Contemporary tree calf, spines gilt with morocco labels. Text foxed and browned, plates largely clean with some minor spotting and toning mostly to margins, bindings rubbed.

Provenance: Rob[er]t Crowe, M.D. (contemporary ownership signature to titles).

FIRST EDITION of the first English handbook of operative surgery founded on anatomy, scarce in the original edition. Garrison-Morton 5583; Gordon-Taylor 7; Heirs of Hippocrates 782; Zimmerman & Veith 410-13.

\$1,000 - 1,500

146

MEDICO, GIUSEPPE DEL.

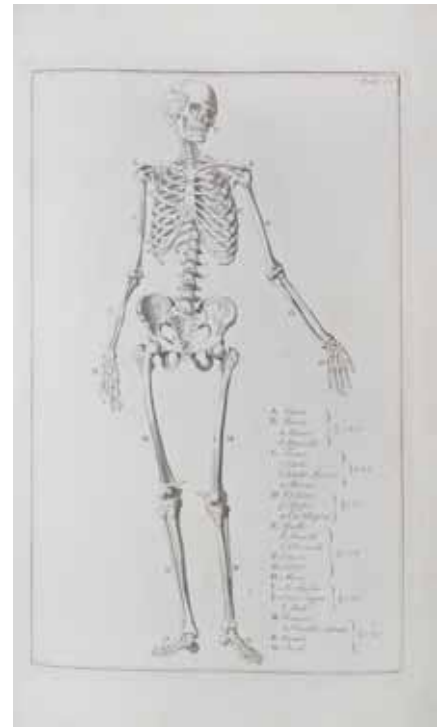
Anatomia per uso dei pittori e scultori. Rome: V. Poggioli, 1811.

Folio (418 x 280 mm). 84 pp, plus unnumbered dedication leaf inserted between pp 4 and 5. 38 engraved plates (28 hand-colored). Half vellum and marbled boards, boards and vellum a bit soiled and rubbed, light scattered foxing (slightly heavier to title), one or two faint smudges

Provenance: Sculptor Aristide Cianfarani (woodcut book plate).

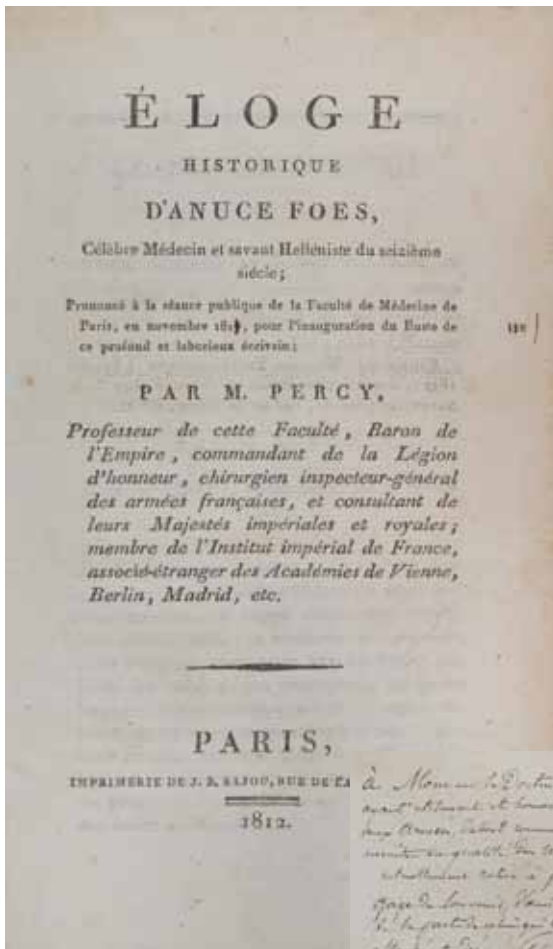
FIRST EDITION. A manual of anatomy for artists, by a professor of surgery at Rome. Some copies have plates 14-33 and 36-38 printed in colors, as stated by Choulant; it appears, however, that some copies were issued with plates printed in black and hand-colored, as in this and the Pybus copy. The illustrations are of high artistic quality, and accurate on the whole as to anatomy. Choulant / Frank, p 331; Garrison-Morton 406; Pybus 1339.

\$1,000 - 1,500



146

146



147

147
PERCY, PIERRE FRANÇOIS, BARON. 1754-1825.

A collection of 7 offprints, including:
Éloge historique d'Anuce Foës. Paris: Sajou, 1812. 50 pp. * *Mémoire sur l'ancienneté...* Paris: Sajou, 1812. 20 pp. (2 copies) * *Mémoire sur des espèces d'ampoures, dites tenajas...* Paris: Sajou, 1811. 26 pp.
 With 3 others.
 Together, 7 offprints (including one duplicate). 8vo (197 x 117 mm).
 Approximately 300 pp. Contemporary half calf. Binding rubbed with some old dampstaining, upper hinge tender, internally clean.

WITH PRESENTATION IN PERCY'S HAND. A collection of offprints with presentation in Percy's hand on sheet bound in at the front. The papers include Percy's biographies of Anuce Foës, the 16th century editor of the best edition of Hippocrates up to Littré (50 pp) and of Raphael Sabatier (1732-1811), Percy's surgical colleague and the teacher of Desault (see Leonardo; 125 pp). One of Napoleon's leading surgeons, Percy was at the height of his power as administrator and essayist in the first decade of the 19th century. He had been made baron by Napoleon in 1809 in recognition of his services during the many campaigns of the Revolution and Empire, was the author of an important manual of military surgery (1792), and had invented instruments and special ambulances in collaboration with Larrey. The inscription in his hand here is an 8-line testimonial to [Léopold Joseph] Renaudin (1775-1859; see Hirsch), a distinguished military surgeon and medical historian, with whom Percy must have been personally acquainted. The papers in the volume are virtually all on historical subjects, either biographical or dealing with antiquities, both of which subjects interested Renaudin and about which he wrote. Hirsch 5255; Wangenstein 501.

\$1,000 - 1,500



148

148
BELL, CHARLES. 1774-1842.

Engravings from specimens of morbid parts ... urethra, vesica, ren, morbosa, et laesa ... [Fasciculus I—all published.] London: Printed for Longman, Hurst, Rees, Orme, and Brown, 1813.
 Folio (454 x 324 mm). vii, 45 pp. With 12 plates after Bell, some engraved by him, others by Stewart. Modern quarter morocco and marbled boards. Faint offsetting from plates.

FIRST EDITION of what is probably the rarest of Bell's publications after his *New Idea*, and one of the finest publications on its subject, with life-size plates from Bell's drawings, many etched by Bell himself. Goldschmid (103) described the twelve plates as "of the very greatest accuracy." In 1811 Bell had published his *Diseases of the Urethra* and classified strictures of the urethra. He was one of the few nineteenth century surgeons to give precedence to pathology over complicated instruments in the treatment of strictures. Gordon-Taylor 12; Murphy 463-64.

\$1,000 - 1,500



149

149

DUTERTRE, PIERRE. 1758-?

Chirurgie. Traité d'opérations nouvelles, et inventions de mécaniques, servant de moyens secondaires pour en assurer le succès. Paris: Méquignon-Marvis, 1814.

8vo (222 x 125 mm). 85 pp. Half-title, 3-page engraved "Copie de la lettre envoyée a M. le Docteur Dutertre ..." bound between pp. [8]-[9]. Engraved frontispiece portrait and 21 plates. Modern quarter morocco and marbled boards. Some old marginal dampstaining, but overall very good.

FIRST EDITION of the first separate illustrated treatise on the orthopedic treatment of hand injuries and deformities. Prior to the work of William Adams on Dupuytren's contracture (1879) few, if any, orthopedic surgeons operated substantially within the hand itself. Instead, like Dutertre, they treated injured and deformed hands externally with braces, splints, etc. In this remarkable but little-known book Dutertre describes braces and splints of his own invention, which are illustrated in the plates. Dutertre is not noticed in the major surgical or orthopedic references, nor does he appear in Hirsch. Waller 2662.

\$1,000 - 1,500



150

150

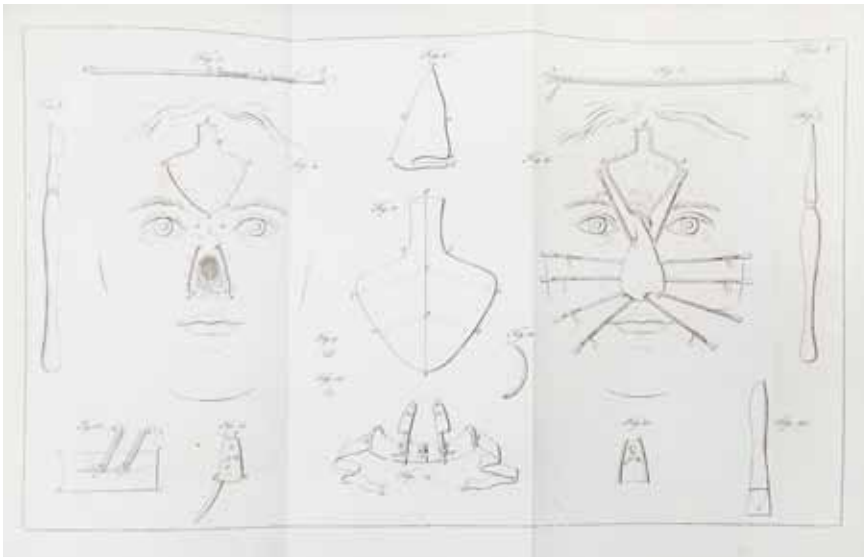
COOPER, ASTLEY PASTON; TRAVERS, BENJAMIN.

Surgical Essays. London: Cox [et al.] (vol 1); Longman [et al.] (vol 2), 1818-19. 2 volumes in one. 8vo (210 x 124 mm). xiii [- i/ii (half-title) and vii/viii (divisional preceding preface)], [3], 264, [6]; [4], 239 pp. With 21 engraved plates (some double-page, one hand-colored, one folding). Modern quarter morocco gilt. Occasional foxing and soiling, some toning to plates.

Provenance: Charing Cross Hospital Medical Library (old ink stamps to title vol 1).

FIRST EDITION. Describes among other things Cooper's landmark ligation in 1817 of the abdominal aorta (the patient died two days later). Cooper's co-author Travers contributed an important account of surgery of the veins. Garrison-Morton 2941 & 5587; Wellcome II p 388.

\$1,200 - 1,800



151

151

[PLASTIC SURGERY].

GRAEFE, CARL FERDINAND VON & ALBRECHT VON SCHOENBERG. *Sulla restituzione del naso*. Naples: Tipografia della Guerra, 1819.

4to (268 x 209 mm). 60 pp. 6 folding plates. Contemporary half morocco and marbled boards, rubbed, small wormholes in spine, minor foxing & browning.

FIRST EDITION IN ITALIAN of von Graefe's classic *Rhinoplastik*, the first great treatise on plastic surgery after Tagilacozzi and Carpue, and the work that founded the modern specialty via its wide influence in Europe and America. The Italian edition is a summary version prepared by the Danish-born army doctor Schoenberg, who was chief physician of the Austrian army hospital in Naples at the time of writing. Schoenberg uses both von Graefe's text and plates in his summary, but also cites Carpue's *Account of Two Successful Operations for Restoring a Lost Nose*, together with its German translation with preface by von Graefe. Thus Schoenberg's summary is apparently the earliest general account of modern plastic surgery in Italian. Gnudi & Webster, p 320; Zeis 548; 943.

\$1,200 - 1,800



152

152

SYLVESTER, CHARLES. 1774-1828.

The philosophy of domestic economy ... adopted in the Derbyshire General Infirmary... Nottingham: H. Barnett, 1819.

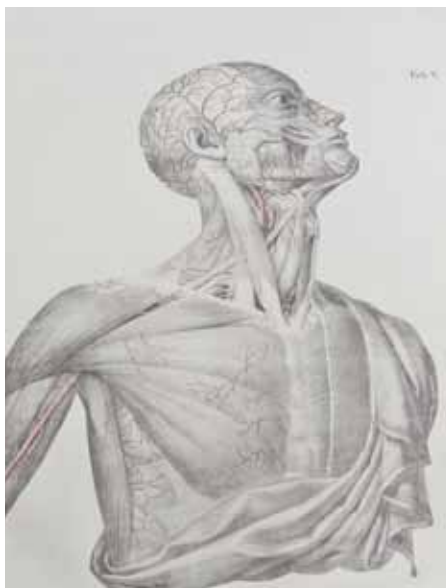
4to (284 x 231 mm). [2], ix (i.e. xi), 11, 62 pp. Erratum slip tipped in after title, 4 pp publisher's adverts bound before title. Frontispiece engraved by J. Pye after E. Goodwin & 10 plates including plans.

Original boards, uncut, rebacked in matching paper. Offsetting to title, some foxing & light browning.

Provenance: Kenney Collection (book plate); Kimbolton Castle (book plate).

FIRST AND ONLY EDITION of this important and infrequently seen source on the famous (or infamous) Derbyshire Infirmary. Built in the early 1800s, the Derbyshire Infirmary was designed on what were then considered the best principles of sanitation and ventilation. The heating, toilet facilities, oven, and laundry equipment were invented by William Strutt (1756-1830), a pioneer in heating by application of convection in early industrial buildings. Charles Sylvester was the engineer with Strutt on the Derbyshire Infirmary. His *Philosophy of domestic economy* is the principal published source on the project, giving complete plans of the original building, with details of the hot-air stove, drying closet, roasting oven, and a water-closet, illustrated in eleven engraved plates.

\$700 - 1,000



154

153

LIZARS, JOHN. CA. 1787-1860.

A system of anatomical plates of the human body. Edinburgh: W.H. Lizars, 1822-26. Folio (430 x 270 mm). Engraved title and 101 plates (15 hand-colored). Plate atlas only. Half calf, marbled boards, a little rubbed. Scattered foxing on the plates, small tears in upper margin of last 4 plates, a few minor dampstains, but a very good copy.

FIRST EDITION, of this impressive and highly successful collaboration between anatomist John Lizars and his brother William Home Lizars, a talented artist and head of the publishing and engraving firm established by the brothers' father, Daniel Lizars (1754-1812). John Lizars studied under John Bell and later became a partner in Bell's anatomy school. The partnership with Bell was eventually dissolved but Lizars continued to teach on his own, and also maintained a private surgical practice. In 1825 Lizars became the first surgeon in Britain to perform an ovariectomy (see Garrison-Morton 6026), and in 1831 he was appointed professor of surgery at the Royal College of Surgeons in Edinburgh. Lizars's *System of Anatomical Plates* was by far his most successful work, going through many editions; "the sale of the book in its various forms was reported to be immense" (Roberts & Tomlinson p 505). The first edition of the folio atlas illustrating Lizars's System was issued in both uncolored and hand-colored versions, although the 15 plates devoted to the brain and spinal cord are colored in all copies of the first edition. All copies of the first edition of this work are rare, and because the plates were issued in folio, and the text of the first edition was issued in 12 parts in octavo, most often the first edition of the atlas is not found with the text. Lizars's fame as engraver led John James Audubon to engage Lizars to engrave the plates for the elephant folio *Birds of America*; however, after Lizars had engraved the first ten plates, he recommended to Audubon that this enormous project (requiring over 76,000 elephant folio hand-colored plates for the 175 copies in the edition) be turned over to Robert Havell in London. Lizars's atlas for his brother's *System of Anatomical Plates* represents the highest quality of artistic production available in Scotland at this date. Roberts & Tomlinson *The Fabric of the Body*, pp 504-8.

\$1,500 - 2,500

154

TIEDEMANN, FRIEDRICH. 1781-1861.

Tabulae articularum corporis humani.... Karlsruhe: C. F. Müller, 1822.

Folio (736 x 536 mm). [4] pp. With 38 lithographed plates with hand-coloring, each with facing outline plate. Half morocco & cloth. Extremities lightly rubbed. Title soiled, scattered marginal foxing (heavier to a couple plates), some thumb-soiling.

Provenance: Wellcome Library (withdrawal stamp); Medical Society of London (stamps to title and some plates).

FIRST EDITION of one of the first lithographed anatomical atlases to be published in Germany. The life-size illustrations of the arteries were widely copied in the 19th century. Tiedemann had been singled out by Soemmerring early in his career for his excellent anatomical preparations; his later beautifully illustrated anatomical, embryological and physiological researches bore out Soemmerring's assessment. Weber *History of Lithography* (1966) pp 39-40. Not in Choulant-Frank, Bedford, Waller, Osler, Cushing or *Heirs of Hippocrates*.

See illustration on facing page.

\$1,000 - 1,500

155

COOPER, ASTLEY PASTON. 1768-1841.

A treatise on dislocations, and on fractures of the joints. London: for the author by Longman, 1823. 4to (294 x 240 mm). [2], viii, [2], 592 pp. 30 engraved plates by J. C. Canton, each with explanation leaf, one plate with fold-out flap. Modern buckram. Light browning & foxing, but very good.

Provenance: William Hunter (ownership signature dated 1865).

Second edition, enlarged, of the most famous work on fractures and dislocations ever published. Cooper's work, first published in 1822, became the standard work in its era for British, American and even Continental surgeons. "Many later clinical modifications were developed from Cooper's original methods" (Bick *Classics of Orthopedics* p 102). In the spirit of his teacher John Hunter, Cooper discussed not only anatomical and clinical problems with fractures, but also the results of some animal experiments on fracture healing. The second edition includes an appendix containing several additional case histories. Garrison-Morton 4412.1 (first edition); Peltier *Fractures* pp 42-43.

\$800 - 1,200



153



153



155

156

[MASCAGNI, PAOLO]

ANTOMMARCHI, FRANCESCO. [*Planches anatomiques du corps humain exécutées d'après les dimensions naturelles....* Paris: Imprimerie Lithographique de C. Lasteyrie, 1823.]

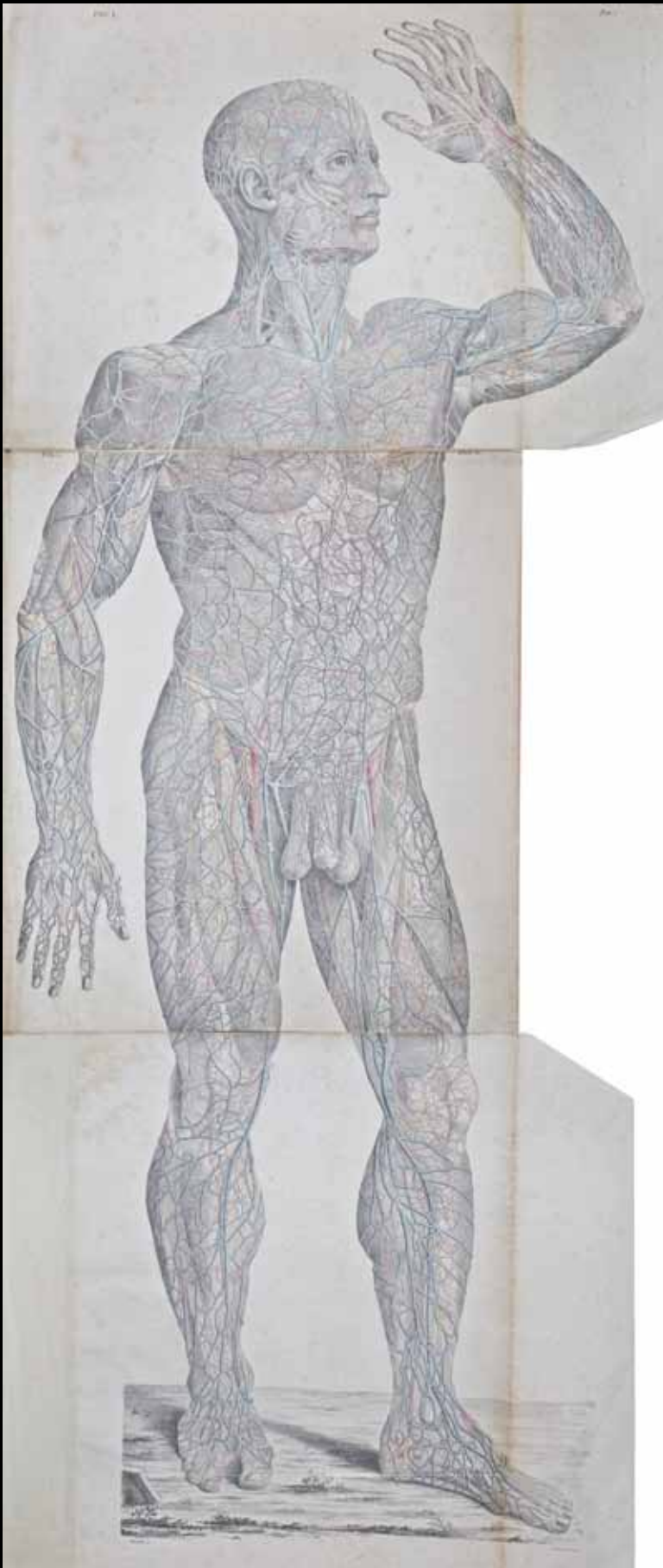
Elephant folio (690 x 710 mm). 8 life-size partially hand-colored folding lithograph plates backed in linen (plates i-iv plus 4 outline plates) only, of 96 plates (48 plus 48 outlines), plates unfold to approximately 1900 mm in length. Contemporary half morocco and cloth, blind-stamp and gilt morocco label to upper cover, binding rubbed, large stain to lower cover. Foxed, some plate margins reinforced not affecting images.

Provenance: Library of the Medical Society of the County of Kings (bookplate with withdrawal stamp dated May 28, 1937, plus stamps to plates); Liverpool Medical Institution (bookplate).

A collection of some of the most significant plates from Antommarchi's *Planches anatomiques du corps humain*, the pirated lithograph edition of Mascagni's *Anatomia universa* (Pisa, 1823-32). These remarkable life-size plates consist of two complete frontal and two complete back views of a standing male figure with the blood vessels and lymphatics partially hand-colored. The complete atlas, consisting of 48 plates and 48 outline plates, was issued in 15 parts between 1823 and 1826 by the lithographic press of the Comte de Lasteyrie, one of the two founders of lithography in France (the companion text volume, entitled *Explication des planches anatomiques du corps humain*, appeared in 1826). The first part of the pirated lithograph edition appeared before that of the official engraved edition, thus the first few plates of the pirated edition (including presumably our plates i-iv) are actually the First Editions of these images.

Paolo Mascagni, the great Italian anatomist, spent a great deal of his time, energy and money in the production of his *Anatomia universa*, which required meticulous engraving of very large copperplates for the work's life-size images. The work, which was edited by Francesco Antommarchi, Mascagni's pupil and colleague, remained unfinished after his death. Following a quarrel with Mascagni over money, Antommarchi left Italy, taking with him impressions of about thirty plates of the *Anatomia universa*, subsequently publishing them in his pirated edition. Roberts & Tomlinson pp 384-96. Twyman *Lithography 1800-1850* pp 50-52.

\$1,500 - 2,500



157

CLOQUET, JULES GERMAIN. 1790-1883.

Manuel d'anatomie descriptive du corps humain, représentée en planches lithographiées. Paris: Béchét, 1825-[36]. Three volumes. 4to (269 x 207 mm). 567, [1]; 536; [2], ii, with frontispiece & 340 plates lithographed by Feillet, Langlumé, Frey, etc. Contemporary half morocco and mottled boards, slightly rubbed, some foxing & minor worming in text margins, 1 or 2 minor tears, some plates foxed & dampstained in upper corner, 1 or 2 plates repaired at outer margin.

First 4to. edition of the first anatomy atlas with lithographic plates. The smaller format 4to. edition, with plates and text in separate volumes for easier reference, was intended to provide a working atlas more manageable than the original. The 4to. edition was published by the same pioneer in French lithography, Lasteurie, with mostly the same artists. Corrections were made and new plates added to represent the anatomy of the tissues, microscopic anatomy, and the mechanics of muscle and bone. Cloquet received artistic training from his draftsman father, and worked as a modeler of anatomical figures at the Paris Faculty before earning his M. D. He did his own lithographs for his publication on hernia in 1819) (*Weber History of Lithography* 1966) 51 ff; Hahn & Dumaitre 330, 334.

\$800 - 1,200



157

158

CALMEIL, LOUIS FLORENTIN. 1798-1895.

De la paralysie considérée chez les aliénés, recherches faites dans le service de feu M. Royer-Collard et de M. Esquirol. Paris and London: J.-B. Baillière, 1826.

8vo (197 x 116 mm). [4], ii, 446 pp. Half-title. Contemporary quarter calf and marbled boards, gilt spine. Moderate foxing and browning, some mild wear to binding, spine a bit darkened. but very good.

FIRST EDITION. A PRESENTATION COPY, INSCRIBED BY THE AUTHOR on the half-title "Cher Dr. T. Mozeau, son collègue et ami F. Calmeil." Calmeil was a pupil of the French psychiatrist Esquirol. His treatise contains the classic description of general paralysis of the insane, along with an attempt to correlate the pathology of the disease with its clinical manifestations. However, Calmeil did not recognize that general paralysis was a separate disease entity (syphilis) and not simply a complication of mental illness. Garisson-Morton 4797; Norman 389; Zilboorg & Henry p 529.

\$800 - 1,200



157

159

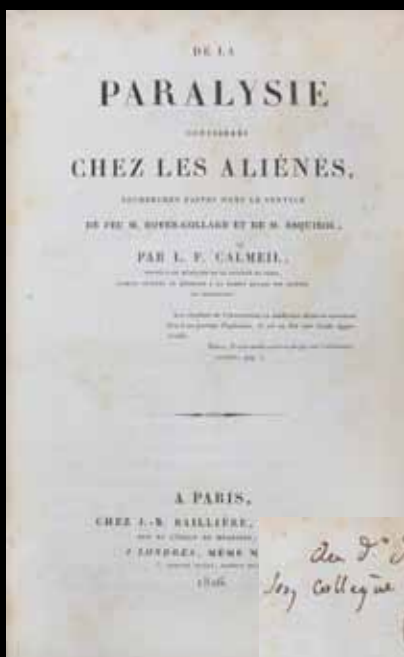
MACMICHAEL, WILLIAM. 1784-1839.

The Gold-Headed Cane. London: John Murray, 1827.

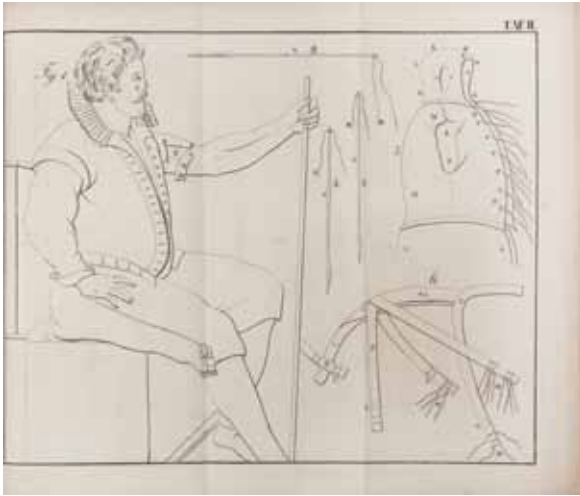
8vo (198 x 122 mm). [8], 179 [1] pp. wood-engravings throughout text, extra-illustrated with 40 engraved plates and portraits, one printed in color. Bound by Riviere and Son in full calf, spine gilt in compartments with morocco label, t.e.g., other edges uncut, original boards and spine label bound in at rear. Occasional foxing and browning, light offsetting from some of the plates, but very good. Provenance: Bookplate removed from inside front cover.

FIRST EDITION "This charming 'autobiography' tells of the adventures of the famous gold-headed cane, successively in the possession of [John] Radcliffe, [Richard] Mead, [Anthony] Askew, [David] Pitcairn, and [Matthew] Baillie, and then retired to a glass case in the library of the Royal College of Physicians of London. Besides good biographies of the several owners of the cane, the book gives interesting information on the condition of medicine in England in the 18th century" (Garrison-Morton 6709). Norman 1409; Waller 16091.

\$1,000 - 1,500



158



161

160

RADIUS, JUSTUS, ED. 1797-1884.

Allgemeine Cholera-Zeitung. Mittheilungen des Neuesten und Wissenswertigsten über die Asiatische Cholera. Erster [-fünfter] Band (all published). Leipzig: Baumgartners Buchhandlung, 1831-32. 4to (248 x 207 mm). 5 volumes in 1. Contemporary marbled boards. Minor foxing & browning, some wear to boards, small splits to hinges.

FIRST EDITION, THE ENTIRE RUN of Radius's weekly cholera newspaper, published during the second cholera pandemic of the 19th century, which began in India in 1826 and by 1831-32 had extended via trade routes to Europe, Great Britain and America. Includes descriptions of cholera outbreaks in different European cities and in America, lists of books and articles on cholera, articles on the medical and public health aspects of the disease, etc.

Scarce—NUC NA 0189361 and RLIN cite runs of the *Allgemeine Cholera-Zeitung* in only four North American libraries (Harvard, U. Mich., NLM and Coll. Phys. Phila.); not in OCLC. Kirchner *Die Zeitschriften des deutschen Sprachgebietes* 9769.

\$1,200 - 1,800

161

TAGLIACCOZZI, GASPARE. 1545-1599.

De curtorum chirurgia per insitionem. Berlin: G. Reimer, 1831. 8vo (205 x 120 mm). xvi, 436 pp. with 6 folding lithographed plates. Contemporary calf-backed boards, spine rubbed, hinges cracked. Browned throughout, but very good.

Fourth and last edition, dedicated to Dieffenbach, and inspired by the revival of interest in rhinoplastic procedures that Dieffenbach and von Graefe stimulated in Germany. Gnudi & Webster p 194; Waller 9453; Zeis 179.

\$1,000 - 1,500



164 (facing page)

162

SOUBEIRAN, EUGÈNE. 1793-1858.

"Recherches sur quelques combinaisons du chlore." In: *Annales de chimie et de physique*, Volume 48, pp 113-57. Paris: Crochard, 1831. 8vo (197 x 116 mm). 448 pp (whole volume). Half-title. Engraved plate. Contemporary quarter sheep, marbled boards. Light marginal dampstaining in first quarter of book, occasional foxing, but very good, binding a bit rubbed.

Provenance: College St. Michel (inkstamps to title).

FIRST EDITION. Soubeiran discovered chloroform simultaneously with the American chemist Samuel Guthrie and the German Justus Liebig; it is difficult to assign priority as each may have allowed time to elapse before publishing his discovery. Soubeiran, the pharmacist in chief of the Pitié Hospital, mixed chloride of lime with alcohol and produced chloroform by distilling the mixture; "this procedure, with some modifications, is still in use today" (Faulconer and Keys, *Foundations of Anesthesiology*, p 447; also see pp 448-53, containing an English translation of Soubeiran's paper). Sixteen years later, chloroform's anesthetic properties were discovered by James Young Simpson, and chloroform became the surgical anesthetic of choice in Great Britain and the continent for much of the 19th century. Garrison-Morton 5649.

\$1,500 - 2,000

163

VELPEAU, ALFRED. 1795-1867.

Nouveaux éléments de médecine opératoire. Paris: Baillière, 1832. Two volumes. 8vo (219 x 135 mm) and 4to (286 x 217 mm). 1800; 31 pp. With 20 engraved copperplates (1 folding). Contemporary quarter morocco and marbled boards with vellum corners, rubbed, spines sunned; atlas in contemporary half calf and marbled boards, rebounded, leather label on front cover. Some minor foxing.

Provenance: Edward Delos Churchill (bookplate).

FIRST EDITION OF THE MOST COMPREHENSIVE AND BEST ILLUSTRATED SURGICAL TREATISE OF MID-NINETEENTH CENTURY FRANCE. Velpeau is remembered eponymically for his description of *Velpeau's hernia*, a femoral hernia external to the great vessels, and for *Velpeau's bandage*, designed to support the arm in luxation or fracture of the clavicle. Velpeau included important sections on plastic operations, including important historical information and an original classification of the main plastic surgical procedures. The atlas contains fine plates of surgical instruments and numerous surgical operations including Velpeau's method of staphylorrhaphy. Cushing V54 (English trans. only); Garrison-Morton 5592; Leonardo *Lives of Master Surgeons* (1948) 434-35; *Heirs of Hippocrates* 1525 (atlas to 2nd ed only; no text); Waller 9850 (2nd ed only); Zeis 409, 661, 1506, 2007, 2370, 2577.

\$1,500 - 2,500

164

SIAMESE TWINS.

SERRES, ETIENNE RÉNAULD AUGUSTIN. 1787-1868. *Recherches d'Anatomie Transcendante et Pathologique*. Paris: J.B. Baillière, 1832.

Two volumes, 4to text (258 x 206 mm.) and folio atlas (468 x 305 mm). [4], 315 [1]pp.; atlas with title-leaf and 20 lithographed plates. Contemporary half-calf, rubbed, both volumes rebacked, stain to upper portion of atlas front cover. Some foxing, especially to plates.

FIRST EDITION. An anatomical study of "Rita-Christina," perhaps the best known of the two-headed monsters (dicephalus dipus tetrabrachius). Born in Sardinia in March 1859, the incompletely separated female twins were brought to Paris for public exhibition, where they survived until the following November. "Autopsy revealed two hearts within a single pericardium, fused livers, duplication of the digestive organs down to the distal ileum, and a double uterus" (Speert *Obstetrics and Gynecology* [2nd ed.] p 399). Serre's atlas also contains illustrations of other examples of incomplete twinning from Geoffroy Saint-Hilare, Duverney and others. Goldschmid p 256. See illustration on facing page.

\$1,000 - 1,500

165

BLASIUS, ERNST. 1802-1875.

Akiurgische Abbildungen oder Darstellung der blutigen chirurgischen operationen ... mit erläuternden Texte. Berlin: Herbig, 1833.

Folio (492 x 333 mm). 50 lithographed plates, some hand-colored. Sheep backed pebbled boards, worn, spine perished, some damp-staining and foxing.

Provenance: Dr. Löbker (19th century signature and stamp); library bookplate.

FIRST EDITION, atlas only. The atlas to Blasius's major work, *Handbuch der Akiurgie* (1830); the atlas "became especially well known for plastic surgery purposes ... Surgery is indebted to [Blasius] for his promotion of various operating methods for the reconstruction of noses, lips, and eyelids" (Gabka & Vaubel p 136). Blasius, a student of Graefe, was one of the most active practitioners of plastic surgery in 19th-century Germany, and he also made contributions to amputation methods. Blasius's term "Akiurgie" refers to operations performed with a knife as opposed to manipulation, bandages, etc. Hirsch. Zeis / Patterson no 487 (citing the 1844 second edition) & p 111; Wellcome II, p 178.

\$1,200 - 1,800

166

SWAN, JOSEPH. 1791-1874.

A demonstration of the nerves of the human body. London: Longman..., 1834.

4to (287 x 218 mm). [iv], iv, 98, lxxxii, [4] pp. With 25 plates engraved by Finden after West. Original cloth, uncut. Cloth worn and stained, re-backed with original spine laid down. Some browning, foxing and offsetting.

Provenance: George Fox (19th century signature).

First Quarto Edition. Initially issued in imperial folio in 1830, Swan's was the largest and most splendidly produced atlas of neuroanatomy ever published in English; however, on account of the great expense of the work, it was necessary to re-issue it in quarto to reach a larger audience. The plates were re-engraved by Finden, one of the original engravers for the folio. The illustrations are in some respects still unsurpassed for beauty and accuracy. Garrison-McHenry 520, citing quarto edition.

\$800 - 1,200

167

HUMBERT, FRANÇOIS & M.N. JACQUIER.

Essai et observations sur la manière de réduire les luxations spontanées ou symptomatiques de l'articulation ilio-fémorale. Bar-le-Duc: Gigault d'Oincourt; Paris: J.B. Baillière, 1835.

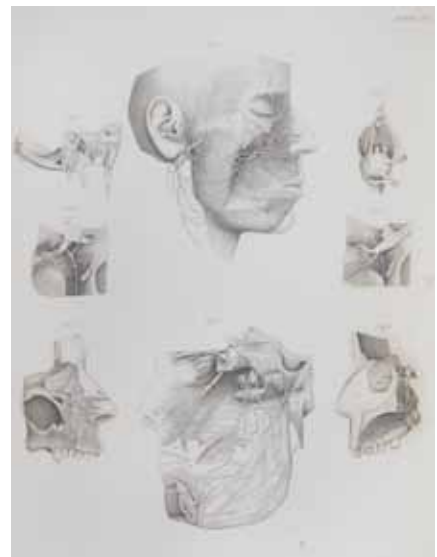
Two volumes. 8vo (232 x 143 mm text) & 4to (325 x 243 mm atlas). [4], xiii, [1], 554; [8] pp, 30 lithographed plates. Original printed wrappers, orthopedic vignette to front wrapper, atlas uncut. A little foxing but fine.

FIRST EDITION. The very rare text and atlas describing Humbert's attempts at reduction of the hip. Humbert was the first to make progress on a problem unsolved in surgery since antiquity. Taking advantage of the latest information on the anatomy of the hip presented by Dupuytren and Vrolik, Humbert developed manipulative techniques which he claimed succeeded in reducing both congenital and pathological dislocations in brief sessions. While successors such as Pravaz and Gerdy considered that he achieved a transposition and not a true reduction, both acknowledged that his innovative work was the impetus to the successful reductions achieved by Pravaz in the 1840s. Humbert founded the first orthopedic hospital in France in 1817, and invented extension beds and chairs, and an instrument to measure changes produced by spinal curvatures. Inspired by Humbert, Bradford developed the traction-counter traction apparatus which became popular in the United States. Valentin 120-21, 205-06; Le Vay 246-47, 513; Not in Wellcome or Waller.

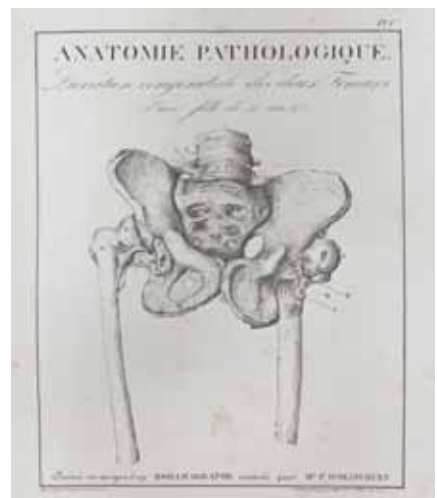
\$1,000 - 1,500



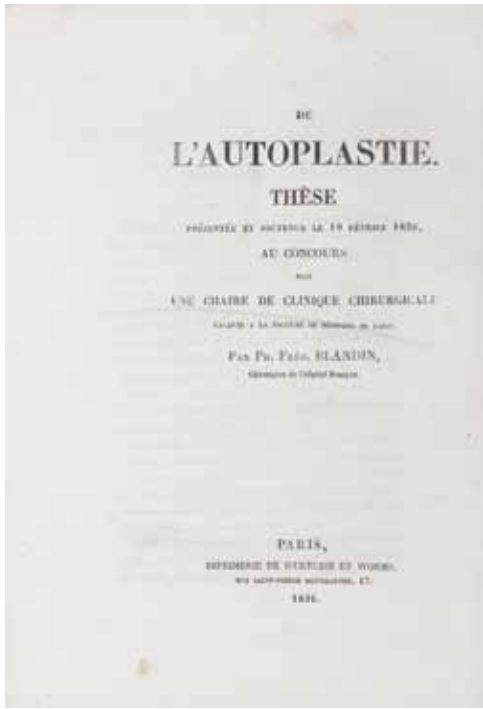
165



166



167



168

168

BLANDIN, PHILIPPE FRÉDÉRIC. 1798-1849.

De l'Autoplastie. Thèse Présentée et Soutenue le 19 Février 1836, Au Concours pour une Chaire de Clinique Chirurgicale Vacante à la Faculté de Médecine de Paris. Paris: Imprimerie d'Urturbie et Worms, 1836. 4to (246 x 197 mm). 267, [1] pp. Morocco backed mottled boards.

Provenance: J Barry Boyd (blindstamp).

FIRST EDITION of Blandin's thesis, preceding the first published edition issued in the same year by Baillière, being the first general work on plastic surgery, which Blandin called "autoplastie." Blandin's work was sharply criticized by Zeis, partly because of Blandin's strongly pro-French bias and his neglect of the achievements of German surgeons; however, Zeis did acknowledge Blandin's original contributions to the field, which included a number of surgical techniques used in rhinoplasty. See Garrison-Morton 5743.1; Zeis-Patterson 484 & p 107; Zeis *Manual* p xxix.

\$1,200 - 1,800



170

169

HODGKIN, THOMAS. 1798-1866.

Lectures on the morbid anatomy of the serous and mucous membranes. Vol I & Vol II, part 1 (all published). London: Sherwood, Gilbert & Piper; Simpkin, Marshall, 1836-40. Two volumes (212 x 132 mm). ix, [11], 402; viii, 541 pp. Contemporary half calf over cloth. Rebacked retaining original labels, endpapers renewed, slight rubbing to corners, repaired tear to second leaf of vol II. *Provenance:* McGill College Medical Faculty Library (inscription and stamp).

FIRST EDITION. Hodgkin was one of the distinguished pathologists connected with Guy's Hospital, where he served as demonstrator of morbid anatomy and curator of the museum from 1825-37. He was the first in England to pursue the lead of Bichat by discussing morbid anatomy from the standpoint of changes in tissue, and to give regular lecture courses in morbid anatomy. His *Lectures on the Morbid Anatomy of the Serous and Mucous Membranes* stimulated the study of tissue pathology in England. Hodgkin published only a few medical works during his brief medical career, which ended in 1837 after he failed to receive a promotion at Guy's Hospital; for the rest of his life he devoted himself to philanthropic pursuits. He is best known for his classic description of Hodgkin's lymphoma, contained in his paper "On some morbid appearances of the absorbent glands and spleen" (*Medico-Chirurgical Transactions* 17 [1832]: 68-114). Garrison-Morton 2290.

\$1,500 - 2,500

170

DAVIS, DAVID D. 1777-1847.

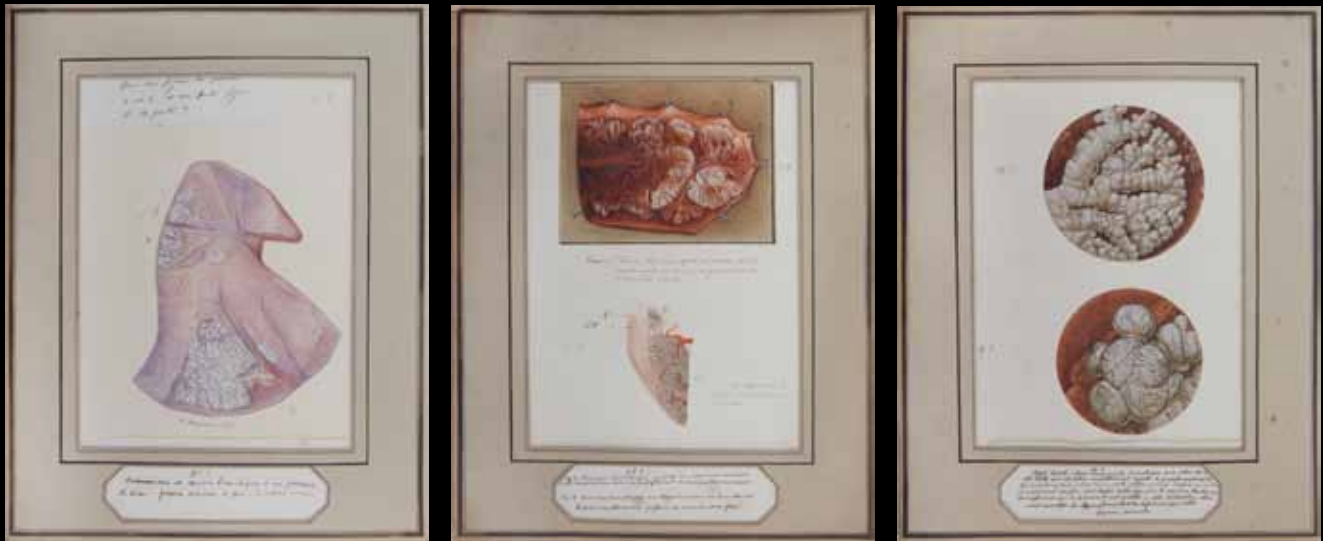
The Principles and Practice of Obstetric Medicine, in a Series of Systematic Dissertations on Midwifery, and on the Diseases of Women and Children. London: for Taylor and Walton, 1836.

Two volumes. Folio (285 x 220 mm). xvi, 697 [1]; [4] [699]-1294 pp. With 69 (of 70) irregularly numbered lithographed plates (some double-page; plate 37 present in duplicate, plate 38 lacking). Original cloth, worn and sunned, vol I rear hinge splitting. Some occasional spotting.

Provenance: Robert Ray Jr. (ownership inscription dated 1855); New York Academy of Medicine (19th century book plate).

FIRST EDITION of Davis' most important work. Like his earlier *Elements of Operative Midwifery* (1825), it is beautifully illustrated with high-quality lithographed plates printed by the pioneering lithography firm of C. Hullmandel. Davis was the physician-accoucheur at the birth of Queen Victoria, and the first to state that *phlegmasia alba dolens* is due to inflammation of the veins (1823; Garrison-Morton 6273). Wellcome II, p 436.

\$1,000 - 1,500



171

171

BAZIN, ANTOINE-PIERRE-ERNEST. 1807-1878.

A collection of autograph manuscripts, drawings and watercolor paintings on the anatomy and physiology of the lungs and on respiration, various sizes, Paris, 1836-c.1842.

1 ms in original wrappers, torn and chipped; the remaining mss in original unbound state, some soiling and browning, edges of some leaves a little frayed, a few marginal tears. 5 of the watercolors mounted; the remainder loose. Housed in 2 clamshell cases.

Bazin, who showed himself to be a brilliant student, received his doctorate in medicine in 1834 with a thesis entitled *Recherches sur les lésions de poumon dans les fièvres dites essentielles* [Researches on lesions of the lung in "essential" fevers]. At the Hôpital St. Louis he undertook until his retirement the brilliant and influential dermatological studies for which he is now known, and published over a dozen books on dermatological subjects. Although quite prolific in the years after 1850, Bazin published almost nothing in the unsettled and virtually undocumented period of his life between 1835 and 1847, save for two failed periodicals; his agrégé theses (*Quels sont les caractères distinctifs de la contagion et de l'infection* (1835) and *Déterminer ce qu'il faut entendre par maladies lymphatiques* (1838)), and two unnamed memoirs on the structure of the lung (1836), and the connection between the spinal cord and spinal nerves (1840). However, these twelve "lost" years were a more productive period for Bazin than the record of his publications indicates—the group of unpublished manuscripts and drawings offered here, which date from between 1839 and circa 1842, show that Bazin continued to rework and expand his writings on the lung. Bazin's investigations on the lung are of great interest, particularly since they date from a time when common pulmonary illnesses were beginning to be diagnosed with precision, thanks to Laennec's stethoscope (1819). Some of the manuscripts may have been intended for publication in one or the other of Bazin's failed medical journals, both of which are extraordinarily rare.

This manuscript collection is made up of the following. Full details are available upon request.

1. "*Recherches sur la structure intime du poumon de l'homme et des animaux vertébrés, suivis de considérations sur les fonctions et la pathologie de cet organe*" [Research on the interior structure of the lung in man and vertebrates, followed by thoughts on the functions and pathology

of this organ]. June 3, 1839. Autograph notebook of 56 pages in folio, extensively revised by the author with erasures, pastings, notes, etc.

2. 12 watercolors (from 2 to 5 drawings per page), by Albert Jacquemart (1808-75), dated 1836, representing both gross and fine anatomical structures in the lung and other respiratory apparatus with notes and commentary by Bazin. At least six of the drawings were prepared to illustrate the second part of Bazin's "*De la structure du poumon de l'homme et des animaux vertébrés*" (no 2); the drawings are referenced in marginal notes in the manuscript.

3. [The interior structure of the lung in man and vertebrates.] Second memoir presented to the Institute. 2 undated autograph notebooks of 15 and 13 pages in folio, with corrections, pastings, etc. as above, representing two parts of the manuscript. "Commissionnaires Blainville, Flourens, Serres" in another hand on p 1 of Part 2.

4. "*Recherches sur la structure intime des organes respiratoires*". 40pp. in folio, unbound. Undated, but not earlier than 1841, (a bibliographical citation on first page refers to a book published in that year).

5. [Breathing apparatus of the lion.] Autograph manuscript of 20 pp in folio and in quarto with 5 drawings by the author in pencil and ink: posterior bronchial plexus, anastomosis of the bronchial artery with the pulmonary artery, etc. Numerous corrections by the author. In a paper folder which contains a portion of another manuscript by Bazin entitled "*De la structure intime des organes respiratoires des animaux vertébrés,*" and beginning "*Il y a presque vingt cinq ans que j'ai commencé cette étude...*" (It has been 25 years since I began this research...).

6. A large collection of notes on lectures and dissections, in a paper folder entitled "*Notes sur l'appareil respiratoire*" (Notes on the respiratory apparatus). Undated, but 1842 or later. Approximately 500 pages in quarto, mostly filed in 42 sub-groups, each with its own folder; there are also several loose sheets. Also included in this document is the manuscript of the first lesson of a zoology course taught by Bazin. All of the materials in (6) were probably written in preparation for various lecture courses taught by Bazin during the 1840s or later.

Baudot, "Le Docteur Bazin, sa vie et ses oeuvres," in *Arch. gén. méd.*, 7th series, 1 (1879): 175-98. Besnier, "Éloge de P.-A.-E. Bazin," in *Annales de dermatologie et de syphilologie* 9 (1877-78): 467-79. Crissey & Parish *Dermatology and Syphilology of the 19th Century* (1981) pp 150-62.

\$10,000 - 15,000



172

172

DUPUYTREN, GUILLAUME. 1777-1835.

Mémoire sur une manière nouvelle de pratiquer l'opération de la pierre.
Paris: Baillière, 1836.

Folio (589 x 437 mm). [4], 50 pp. With 10 lithographed plates (9 by N. H. Jacob, 1 by A. Chazal, printed by Langlumé). Quarter morocco and marbled boards. 2 marginal paper repairs to title, minor ink staining in upper margin of title & a few plates, a little soiling.

Provenance: M. Olivier (French ownership inscription dated 1926).

FIRST EDITION. Elaborates on Dupuytren's method of bilateral lithotomy, with statistical results; also discusses Sanson's rectovesical lithotomy and the then popular lithotripsy. Remarkable for its life-size plates, boldly drawn by Jacob, Bourguery's artist. Also exceptionally rare, not in Waller or Wellcome, or cited in Murphy. Murphy 122 re: Sanson. Barsky 192.

\$800 - 1,200



173

173

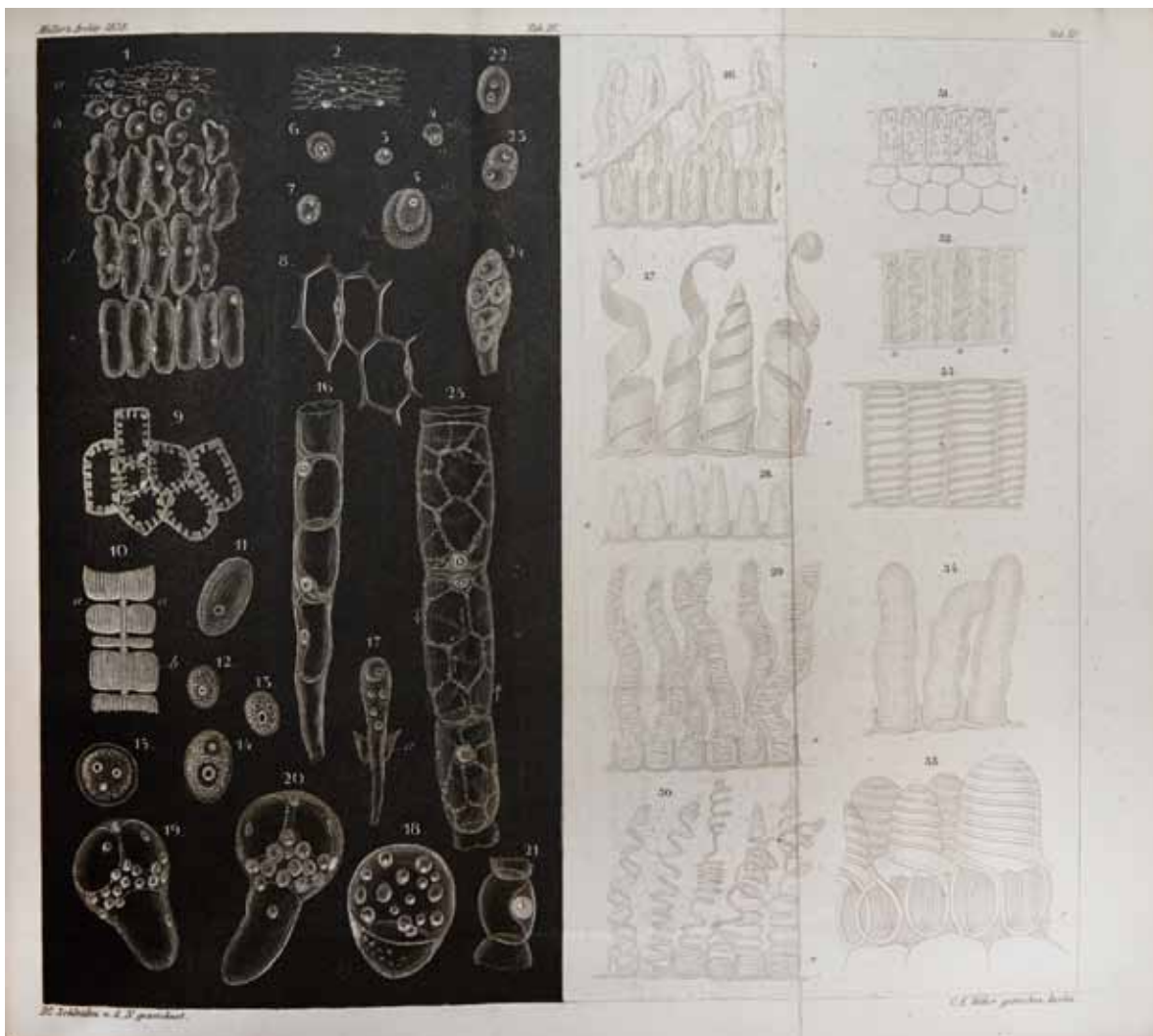
GRIMAUD DE CAUX, GABRIEL & GASPARD JOSEPH MARTIN SAINT-ANGE.

Physiologie de l'espèce, histoire de la génération de l'homme...
Paris: H. Cousin, 1837.

4to (346 x 260 mm). xiv, 439, [5]; [4], xv, [1] pp. With 36 plates, consisting of 12 lithographed outlines, 12 engraved uncolored plates printed on proof paper and mounted, and 12 engraved hand-colored plates, all after Martin Saint-Ange. Contemporary calf-backed marbled boards, re-backed corners a little rubbed. Light foxing, but very good.

FIRST EDITION, LARGE PAPER COPY, no 34 of 100 copies printed in this format. An early illustrated study of human sexuality and reproduction, with plates and comparative anatomical material supplied by the physiologist Martin St. Ange, and sections on hygiene, sexuality and law supplied by the medical writer Grimaud de Caux. The ideas on sexuality expressed in the *Physiologie* owe much to those of the 18th-century physician S. A. D. Tissot, who believed that unrestrained sexual activity (particularly the non-procreative varieties) was the cause of a host of ills, including consumption, impotence, sterility, and even madness (not an unreasonable assumption, given the prevalence of syphilis in 18th- and 19th-century Europe, and contemporary physicians' imperfect understanding of the stages of that disease). The beautifully drawn plates illustrate the reproductive apparatus of mollusks, birds, marsupials and humans. Bullough *Science in the Bedroom* pp 20-21; Wellcome III, p 167.

\$1,000 - 1,500



174

174

SCHLEIDEN, MATTHIAS JAKOB. 1804-1881.

"Beiträge zur Phytogenese." In: *Archiv für Anatomie, Physiologie und wissenschaftliche Medicin*, (1838), pp 137-76. Berlin: Veit, 1838.

2 plates (nos III and IV) on one folding sheet. 8vo. Whole volume: [2], cxcviii, 608 pp. 16 plates on 15 sheets. Pp 605-8 bound before p 1 in this copy. Contemporary marbled boards, rebounded and repaired. Light browning, occasional faint spotting, but very good.

Provenance: Muséum d'Histoire Naturelle (stamps to title).

FIRST EDITION. Acting upon his belief that plants represented aggregates of individual cells, Schleiden published a study of the vegetable cell, beginning with the nucleus (discovered by Robert Brown in 1832), and proceeding to a discussion of its role in the formation of cells. Though Schleiden's "watch-glass" theory of cell formation was wrong—he believed that they crystallized in a formative liquid containing sugar, gum and mucous—it focused attention on the problem of cell reproduction and provided a testable hypothesis. More significant was Schleiden's insistence that plants consisted entirely of cells and cell products. In 1839 Theodor Schwann published *Mikroskopische Untersuchungen*, in which he demonstrated that Schleiden's conclusion also applies to animals, thus establishing the cell as the elementary unit common to both plant and animal kingdoms. Garrison-Morton 112; Hughes *History of Cytology* pp 37ff; Norman 1907 (offprint version); *PMM* 307a.

\$2,000 - 3,000

175

ELLIOTSON, JOHN. 1791-1868.

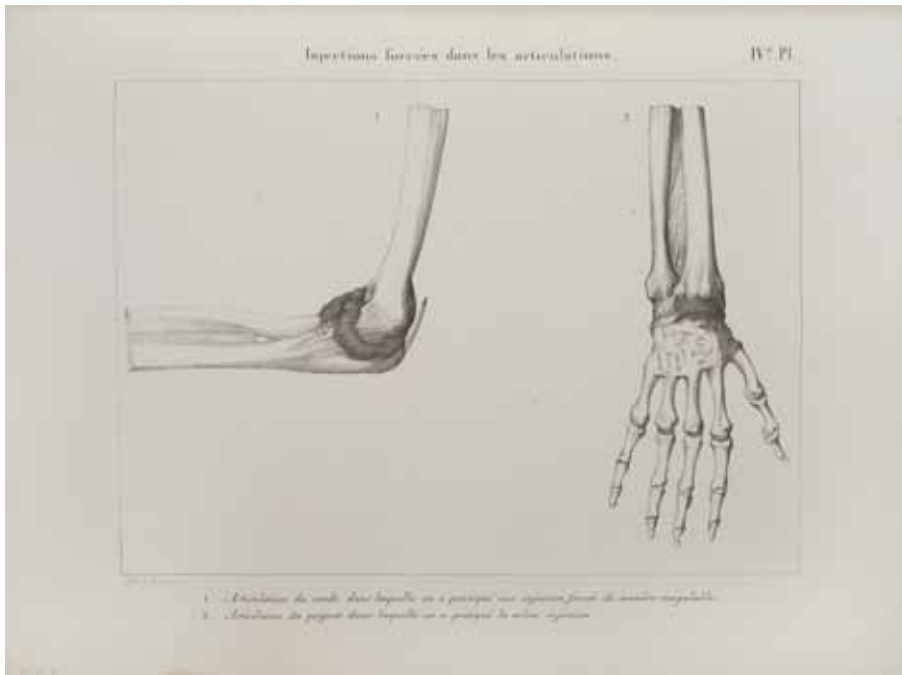
Numerous Cases of Surgical Operations without Pain in the Mesmeric State; with Remarks.... London: H. Ballière, 1843.

8vo (224 x 142 mm). 93 [3] pp. 16 pp publisher's catalog before title. Original brown printed wrappers, a little worn, spine repaired. Minor foxing and soiling, but very good.

Provenance: Society of Apothecaries (19th century book plate).

FIRST EDITION OF THE FIRST BOOK ON THE USE OF HYPNOTISM IN SURGERY. Elliotson was one of the first in England to perform surgery on hypnotized patients, and he joined with Braid and Esdaile in promoting the use of hypnotism as anesthesia during surgical operations. Despite his numerous successes, he was accused by the conservative British medical establishment of charlatanism and worse, and he was eventually forced to resign his various professional offices, including his professorship at the University of London. The present work describes numerous successful cases, but is largely devoted to the account of the famous leg amputation performed by Topham and Ward on a hypnotized patient, and the controversy that ensued when this case was reported to the Royal Medical and Chirurgical Society. Bramwell *Hypnotism* pp 4-14; Crabtree 474; Fulton & Stanton I. 14; Garrison-Morton 5650.2.

\$800 - 1,200



176

176

BONNET, AMÉDÉE. 1809-1858.

Traité des maladies des articulations. Paris & Lyon: J. B. Baillière [etc.], 1845.
3 volumes. 8vo (210 x 133 mm) and 4to (346 x 270 mm). I, 582; [4], 647, [1] pp. Half-title, title and 16 lithographed plates. Contemporary quarter morocco and marbled boards, a bit worn & rubbed; atlas in modern quarter cloth, marbled boards to match. Minor foxing and soiling, but very good.

FIRST EDITION. Bonnet, chief surgeon at the Hôtel Dieu in Lyon, proved experimentally that the characteristic postures assumed by tubercular joints were caused by the accumulation of fluid in the joint. "By injecting fluids under pressure into the capsules of the joints [of fresh cadavers], he observed that the limbs assumed the positions that permitted the greatest amount of fluid to be injected. He also noted the points of rupture, or the weak spots, in the capsule. He correlated all his findings with clinical observations on his patients" (Peltier p 149). Bonnet also used fresh cadavers to demonstrate the mechanics of meniscal injuries, comparing the varying effects of forced extension, forced flexion, varus and valgus stress, and rotation of the knee in cadavers of all ages. "Like Malgaigne in Paris and Hilton in London and many others, Bonnet was an apostle of rest for joint disease, fixing the joints proximal and distal to the diseased joint ... [He] wrote on every aspect of joint disease, thus orienting the Lyons school towards orthopaedics and its apogee under Ollier" (Le Vay, p 260; see also p 259). *Heirs of Hippocrates* 1717; Peltier *Orthopedics* pp 149-50; 255-56; Waller 1286.

\$1,000 - 1,500



177

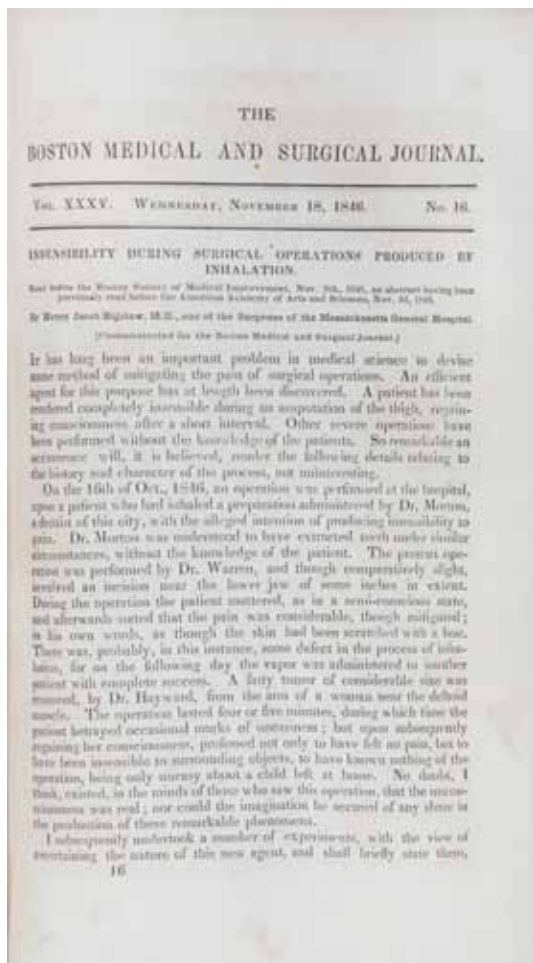
177

DIEFFENBACH, JOHANN FRIEDRICH. 1792-1847.

Die operative Chirurgie. Leipzig: F.A. Brockhaus, 1845-48.
2 volumes. 8vo (223 x 127 mm). xxvi, 856, [3]; xxiv, 864 pp.
Contemporary cloth-backed marbled boards, spine titles gilt. Some light browning, joints cracked, cloth separating from spine.
Provenance: Dr. Adalbert Jahn (ink stamp to titles); Deutsche Gesellschaft für Chirurgie (inkstamp to endpapers and 1 or 2 other leaves).

FIRST EDITION of "The surgical testament" (Gabka & Vaubel) of Dieffenbach, who made significant contributions to cardiology, gastroenterology, orthopedics, and ophthalmology. His most extensive contributions, however, were to the field of plastic surgery, from his M. D. thesis in 1822 to his *Chirurgische Erfahrungen* of 1829-34 to his final contribution of over 300 pages in the present work. Dieffenbach was also the first to use anesthesia in plastic surgery. Gabka & Vaubel 139; Garrison-Morton 5598.1.

\$1,200 - 1,800



178

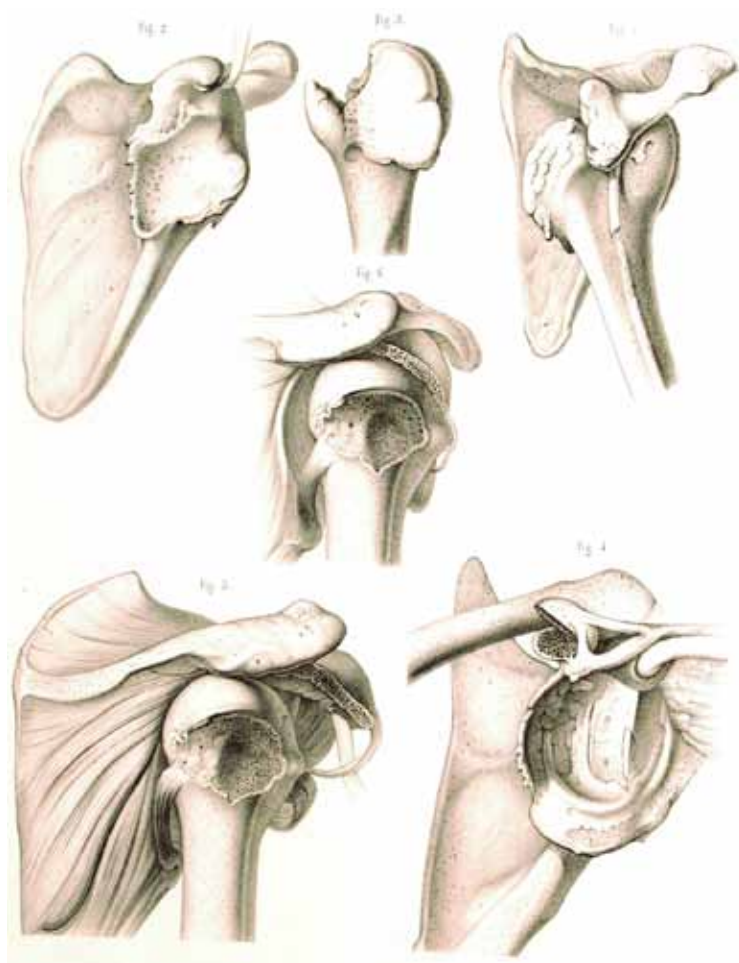
178

BIGELOW, HENRY JACOB. 1818-1890.

"Insensibility During Surgical Operations Produced by Inhalation." In: *Boston Medical and Surgical Journal*, vol 35, no 16, pp 309-317, and no 19, pp 379-82. Boston: David Clapp, November 18 & December 9, 1846. 8vo (230 x 137 mm). Whole volume, bound with vol 34. 8, iv, 528; 544 pp. Boston: David Clapp, 1846. 19th cent. marbled boards rebacked in calf, corners and boards rubbed. Slight foxing & browning.

FIRST EDITION. The formal announcement of the discovery of surgical anesthesia, probably the greatest medical discovery made in America during the nineteenth century. The Boston dentist W.T.G. Morton, after experimenting with ether anesthesia in his dental practice, obtained permission from the chief of surgery at Massachusetts General Hospital to attempt anesthesia on a surgical patient. On October 16, with Morton administering the ether, Warren successfully removed a portion of a vascular tumor from the neck of his patient. On November 6, on the advice of Henry J. Bigelow, Morton divulged that his "Letheon" was in fact sulfuric ether. On November 7, Morton administered ether to a patient undergoing amputation of the leg; with the success of this operation, "the value of ether as an anesthetic was established once and for all" (Wolfe pp 80-81). Contains Bigelow's account of Morton's discovery, written after the November 7 operation, in vol 35, no 16, as well his follow-up paper, contained in no 19. The journal numbers following no 16 also contain several articles on anesthesia by other authors, attesting to how quickly the news of the discovery spread after Bigelow's initial article. *Fulton & Stanton IV.1; Garrison-Morton 5651; Norman/Grolier Medical Hundred 64A; Wolfe, Tarnished Idol*, pp 75-83.

\$3,000 - 5,000



179

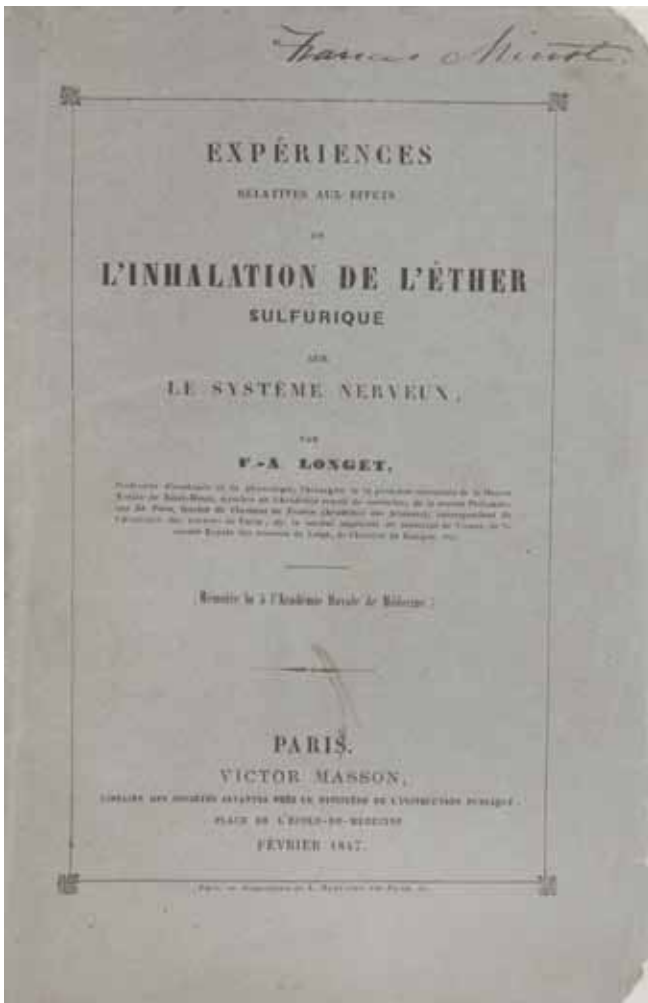
179

MALGAIGNE, JOSEPH. 1806-1865.

Traité des fractures et des luxations. Paris: Baillière, 1847-55. 2 volumes text plus atlas. 8vo (211 x 125 mm) text and folio (452 x 300 mm) atlas. vii, [1], 842; 1108 pp. 30 lithographed plates by Delahaye. 213 x 132 mm. Text in contemporary quarter morocco, gilt; atlas in original cloth-backed printed boards. Very good except for some foxing and browning affecting a few plate margins, color pencil underling on 1 or 2 text leaves. *Provenance:* 19th century ownership signature to half-title of atlas.

FIRST EDITION. The most splendid work on its subject, with 30 large-folio lithographed plates of the highest quality. Includes the classic description of "Malgaigne's fracture," a bilateral vertical fracture of the pelvis. Malgaigne was the first to devise and apply a practical method of external fixation; he also proved the existence of incomplete and longitudinal fractures, and promoted traction treatment of fractures. *Le Vay* pp 254-56; *Garrison-Morton 4417; Peltier Fractures* pp 184-85; *Waller 6187.*

\$2,000 - 3,000



180

180

LONGET, FRANÇOIS ACHILLE. 1811-1871.

Expériences relatives aux effets de l'inhalation de l'éther sulfurique sur le système nerveux. Paris: Victor Masson, February 1847. 8vo (222 x 140 mm). 54,[2] pp. Original printed wrappers, uncut, chips to corners, edges and spine repaired. Light foxing. Cloth case. Provenance: Wood Library/Museum (book plate).

FIRST EDITION OF THE FIRST PUBLISHED STUDY OF THE EFFECTS OF ETHER. Though ether anesthesia was invented in America, its inventors and early users were either scientifically untrained like Morton, or men of practical scientific or medical skills like Jackson, Warren and Bigelow. Thus, the first scientific studies of how ether anesthesia actually worked took place in France where anesthesia attracted the attention of the neurophysiologist, Longet, and his colleague, Pierre Flourens. At the time many scientists believed that ether anesthesia's effects on the nerves were analogous to those of asphyxia. While Flourens correctly distinguished between the two states, Longet, in a series of animal experiments, determined that "death from overdosage [of ether] appeared to be due to a kind of asphyxia undoubtedly connected with the etherization of the medulla oblongata (bulbe) itself" (Duncum pp 160-61).
\$2,000 - 3,000



181

181

HOBSON, BENJAMIN. 1816-1876.

Seiyi-ryakuron [First lines of the practice of surgery in the west]. Tokyo: Yorozua Hyoshiro, 1858. 4 vols (255 x 173 mm). In Chinese with Japanese reading symbols, table of contents in vol 4 in Chinese & English. 60, 1; 49; 62; 22 folded ff, woodcut text illustrations throughout. Yellow embossed paper wrappers with printed labels (a little worn). Quarter morocco slip-case.

FIRST JAPANESE EDITION of Benjamin Hobson's *First Lines of the Practice of Surgery*. Hobson was a British missionary doctor who spent two decades (1839-59) in China, founding hospitals in Hong Kong, Guangdong and Shanghai, training local physicians, and writing medical textbooks in Chinese based on European sources. "His texts were highly regarded by contemporary medical missionaries and they had a far-reaching impact on the introduction of Western medicine, not only in China but also in Japan" (Wong p 91). The second of these texts was the *First Lines of the Practice of Surgery in the West* (Xiyi luelun 1857); the work was published in Japan one year later. "This treatise, besides showing the benefit of surgical education, sets forth the entire subject of surgical practice ... Perhaps this work may be regarded as the best of the [Hobson] series, as it is certainly the most adapted for direct utility" (Wong and Wu p 365, note 310). The work contains hundreds of illustrations, and includes a list of medical prescriptions. At the end of the last volume is a table of contents and list of drug names in English and Chinese. Wong, "Local voluntarism: The medical mission of the London Missionary Society in Hong Kong, 1842-1923," in Hardiman, ed., *Healing Bodies, Saving Souls: Medical Missions in Asia and Africa*, pp 87-113.
\$1,500 - 2,500



182

182

PASTEUR, LOUIS. 1822-1895.

“Mémoire sur la fermentation appelée lactique.” In: *Annales de chimie et de physique*, 3rd Series, vol 52, pp 404-18. Paris: Victor Masson, 1858.

Whole volume: 8vo (211 x 132 mm). 512 pp. 1 folding plate. Quarter sheep, marbled boards, a bit rubbed. Minor foxing, some browning.

FIRST EDITION. Pasteur's first paper on fermentation contains most of the central theoretical and methodological features of his biological theory of fermentation, in particular the concept of fermentation as a product of the growth of yeast, the idea that air is source of microscopic yeasts and other microorganisms, and the notion of specificity, in which each fermentation could be traced to a specific microorganism. Pasteur was able to isolate, observe and propagate the yeast responsible for lactic fermentation, and to demonstrate that its activity was dependent on its environment. Pasteur's concept of fermentation as a biological process challenged the chemical theory of fermentation put forth by Liebig, which Pasteur was able to disprove with his experiments on alcoholic and acetic fermentation. Pasteur's paper underwent roughly simultaneous publication in the *Annales de chimie et de physique* and the *Mémoires de la Société des Sciences, de l'Agriculture et des Arts de Lille*, 2nd series, 5 (1858). A much-abridged version appeared in the *Comptes rendus de l'Académie des Sciences* (Paris) 45 (1857). Brock pp 27-30; Dibner 198 (abridged version); Garrison-Morton 2472; Horblit 82 (abridged version); Norman 1653 (offprint).

\$1,200 - 1,800



183

183

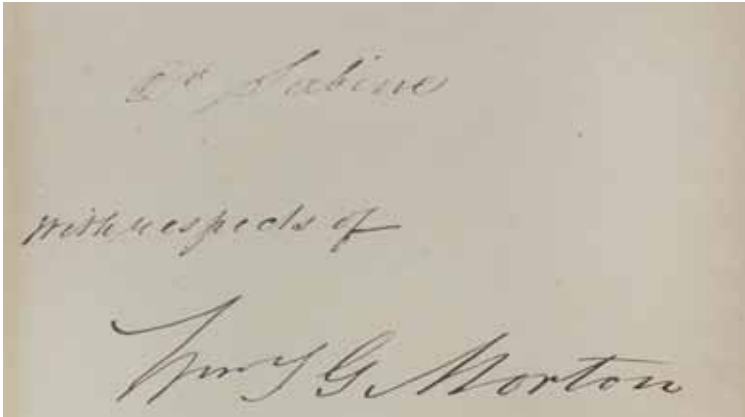
HOBSON, BENJAMIN. 1816-1876.

Fuei shinsetsu [Treatise on midwifery and diseases of children]. Kyoto: Tenkodo zohan, 1859.

Two volumes. (254 x 178 mm). 46; 27 double folded leaves. Woodcut text illustrations throughout. Text in Chinese with Japanese reading symbols. Yellow embossed paper wrappers, printed labels. Boxed.

FIRST JAPANESE EDITION. The third book in an “... unprecedented series of modern medical works [which] remained standard in China until the late nineteenth century ... each volume was reproduced widely in Japan” (Elman *A Cultural History of Modern Science in China* p 105). In this work Hobson “introduced [into Asian medicine] invasive surgery for childbirth drawn from the anatomical sciences that had evolved in Europe since the sixteenth century” (Elman p 291). The Japanese versions of Hobson's works appeared during a critical time in Japanese history, the bakumatsu period (1853-67), when Japan ended its isolationist foreign policy and began opening its ports to Western trade. During this period, “Chinese translations of Western medical texts rendered a great service to Japan. First and foremost, this refers the Chinese-language editions of works by Benjamin Hobson” (Masuda p 3). Wong and Wu *History of Chinese Medicine* p 365, note 311.

\$1,200 - 1,800



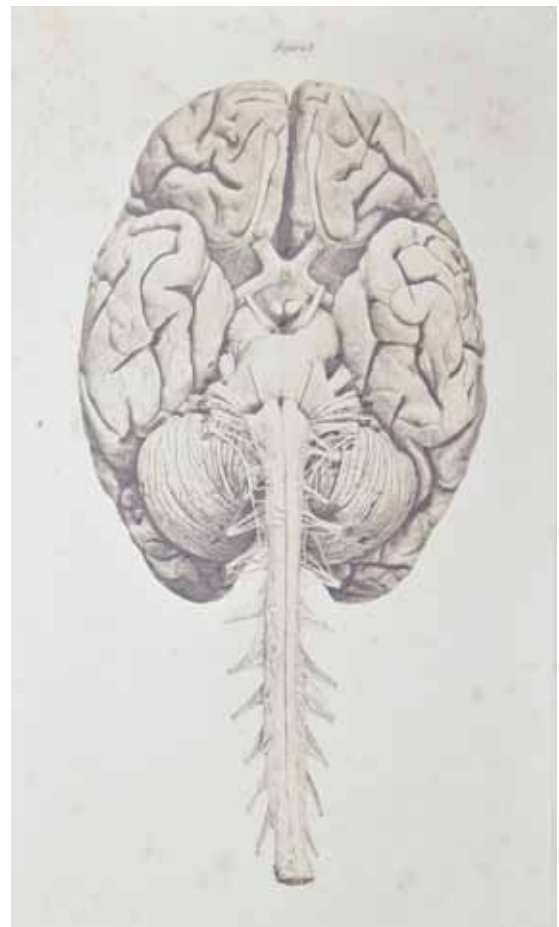
184

184

[MORTON, WILLIAM T.G. 1819-1868].

RICE, NATHAN PAYSON. *Trials of a public benefactor, as illustrated in the discovery of etherization*. New York: Pudney & Russell, 1859. 8vo (185 x 124 mm). [ij], xx, [xiii], 14-460 pp. With engraved frontispiece, and 3 plates.. Original blind-stamped cloth, re-backed with original spine laid down, extremities and corners slightly worn. Provenance: Dr Sabine (presentation inscription from Morton: "Dr. Sabine with respects of Wm. T. G. Morton").

FIRST PUBLISHED EDITION, PRESENTATION COPY. The first, and until recently, the only full-length biography of William T. G. Morton, the Boston dentist who in 1846 demonstrated to the medical profession the efficacy of sulfuric ether as a general surgical anesthetic. Completed in three months, *Trials of a Public Benefactor* was first issued in October 1858 in an unillustrated advance "press copy" edition with title-page dated 1858. The published edition, with the date changed to 1859 and quotations from Shakespeare and Burns added to the title, appeared a few months later. *Trials of a Public Benefactor*, with its self-serving rendition of Morton's role in the discovery of ether anesthesia, is a key document in the history of the ether controversy. "As the account most readily available, this has been the principal document that historians and researchers have depended upon for what they believed were the facts of the matter ... Over-reliance on the Rice version, to the exclusion of looking beyond it, has largely been responsible for legitimizing the claim of William T.G. Morton while at the same time abrogating the claims of his principal rivals, Horace Wells and Charles T. Jackson, or, at least, diminishing the critical roles they played in Morton's ultimate success" (Wolfe p 62). Fulton & Stanton IV.66; Wolfe *Tarnished Idol* pp 62; 407-11. **\$3,000 - 5,000**



185

185

RÜDINGER, NICOLAUS. 1832-1896.

Atlas des peripherischen Nervensystems des menschlichen Körpers. Munich: Cotta, 1861. Two volumes. Folio (500 x 352 mm). [13] ff. Parallel text in German and French. With 10 photographic plates. Loose in cloth-backed portfolios as issued; portfolios lightly soiled and worn, a few ties on portfolios defective. Some light foxing and browning, but very good.

FIRST EDITION of Rüdinger's excellent photographic atlas of the peripheral nerves, an important pioneering effort in medical photography. According to the prospectus tipped to the inside front cover, Rüdinger's atlas was intended to appear in 10 parts, with the first two devoted to the peripheral nerves of the head, the third through fifth to the nerves of the back, neck and arm, and the last four parts to the nerves of the torso, lower extremities and the sympathetic nervous system. However, only the first two parts appear to have been published. See Meyer, *Historical Aspects of Cerebral Anatomy* pp 146ff; Hirsch (giving publication dates as 1861-67).

\$700 - 1,000



186

186

SEMMEWEIS, IGNAZ PHILIPP. 1818-1865.

1. *Zwei offene Briefe an Dr. J. Spaeth ... und an ... Dr. F. W. Scanzoni.* Pest: Gustav Emich, 1861. 8vo. 21, [1] pp.
 2. *Offener Brief an sämtliche Professoren der Geburtshilfe.* Ofen: K. ungar. Universitäts-Buchdruckerei, 1862. 8vo. viii, 92 pp.
- Together 2 items. Original wrappers. Custom quarter morocco box. Wrappers of second item a little worn, soiled and chipped, spine reinforced with cloth tape, upper portion of title-leaf cut away not affecting text, minor soiling, a few tiny chips to wrappers of first item.

Fourteen years after initiating a system of prophylactic hand-washing which drastically reduced the mortality rate at his Vienna obstetrical clinic, Semmelweis published *Die Aetiologie, der Begriff und die Prophylaxis des Kindbettfiebers* (1861; see Garrison-Morton 6277), containing his observations on the etiology, contagiousness and prevention of puerperal fever and emphasizing the importance of hand-washing. Although the book's information and conclusions were of the first importance, its publication failed to bring about a widespread acceptance of Semmelweis's views and methods; instead, the connection he had made between cadaverous infection and puerperal fever was rejected by a large proportion of the medical establishment. *Die Aetiologie* was subject to several unfavorable reviews, to which Semmelweis responded with a series of open letters, published in pamphlet form in 1861 and 1862, in which he bitterly attacked his critics. Semmelweis issued two "Open letter" pamphlets in 1861, including the first item in the present lot. The second item is an 1862 "Open letter" addressed simply to "Professors of Obstetrics." Norman 1928 (item 2).

\$3,000 - 5,000



187

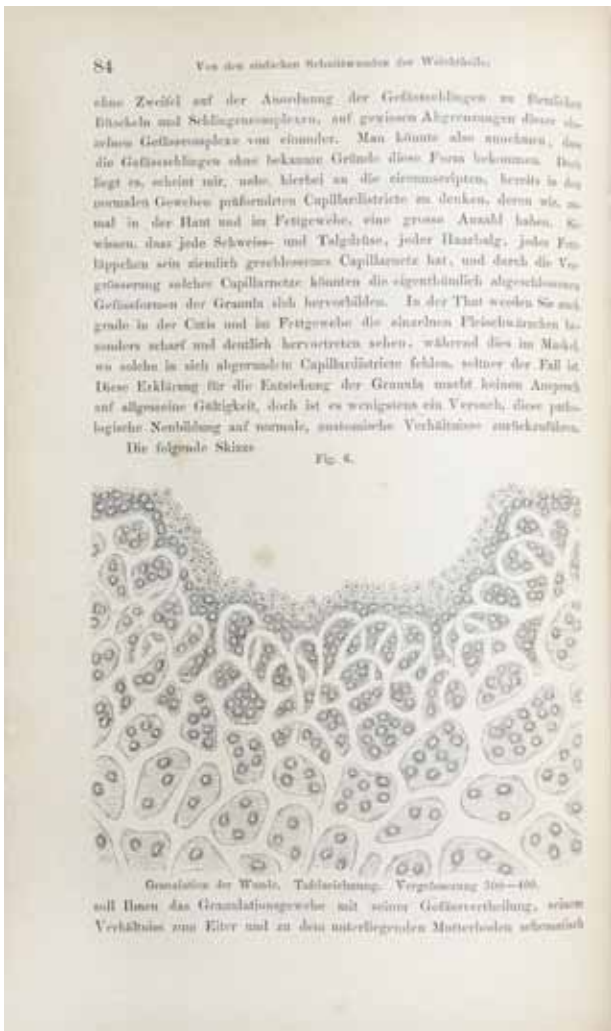
187

ZEIS, EDUARD. 1807-1868.

- Die Literatur und Geschichte der plastischen Chirurgie.* WITH: *Nachträge zur Literatur und Geschichte der plastischen Chirurgie.* Leipzig: Wilhelm Engelmann, 1863-64. 2 volumes in 1. 8vo (226 x 155 mm). [iii]-xxvi, [2], 299 [1]; iv, 52 pp. Contemporary half cloth and paste paper boards, corners and boards rubbed, spine repaired. Cloth clamshell. A few pencilled marks in the margins. Bookseller's ticket to front paste-down.

FIRST EDITION, rare, of Zeis's history and bibliography of plastic surgery, together with the supplement published a year later. The work had its origins in the extensive bibliography that formed the first section of Zeis's *Handbuch der plastischen Chirurgie* (1838), the work that introduced the term "plastic surgery"; after finding numerous errors in citations from earlier literature, Zeis set himself the enormous task of examining all of the works in the field of plastic surgery from antiquity to his own day. "For the sake of completeness [Zeis] recorded every possible reference, and also what he called 'negative' references (i.e. those which other authors had wrongly alleged to contain material relevant to plastic surgery) ... In this way he hoped to provide an authoritative catalog, which no one had ever done before, and which would provide the correct versions of the references for all time ... He was then advised by the famous historian, Choulant, to add a brief note to each title and to publish the whole up-to-date bibliography as a separate volume. This was the origin of his greatest work— *Die Literatur und Geschichte der plastischen Chirurgie*. [Zeis's] notes were often copious, and the value of the whole was greatly increased by his inclusion of important passages from the original text— often reproducing long sections word-for-word" (Patterson, "Biography of Eduard Zeis," *Zeis Index and History of Plastic Surgery*, tr. Patterson, p. xviii). Garrison-Morton 5767.

\$2,000 - 3,000



188

188

BILLROTH, C.A. THEODOR. 1829-1894.

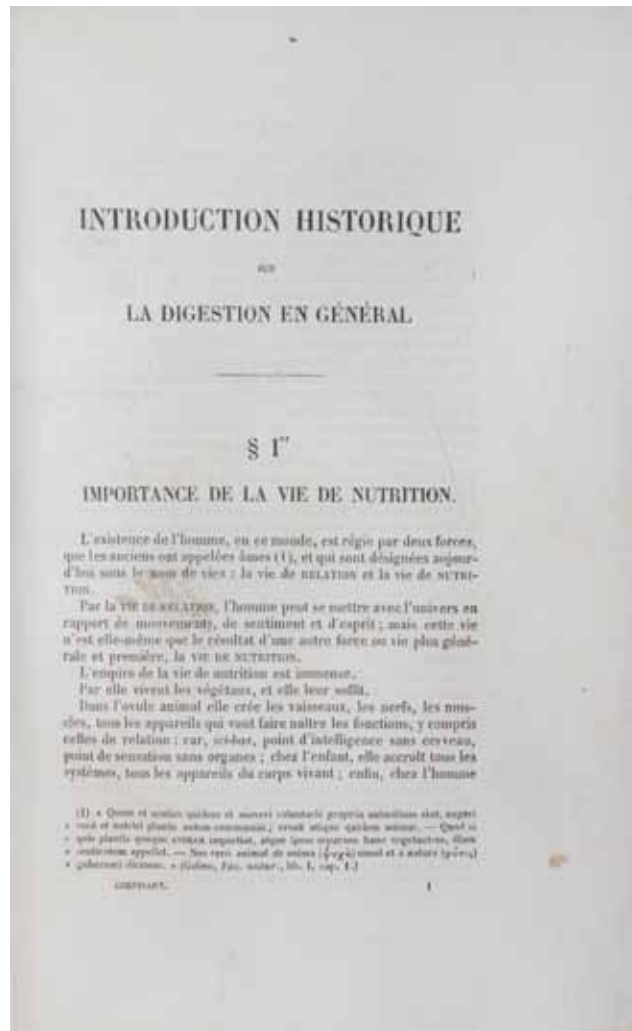
Die allgemeine chirurgische Pathologie und Therapie. Berlin: Verlag von Georg Reimer, 1863.

8vo (233 x 152 mm). xx, 712 pp. Text illustrations. Contemporary half morocco and marbled boards, rubbed, small typed library label to spine. Browned as usual due to paper stock.

Provenance: Otto Orren Fisher (bookplate).

FIRST EDITION. "Billroth, the founder of the Vienna School of Surgery, might also be called the founder of modern abdominal surgery.... Billroth was one of the first to introduce antisepsis into the Continental operating room. His *Allgemeine chirurgische Pathologie und Therapie* (1863) was a classical surgical text, translated into ten languages. He was the first to resect the oesophagus (1872) and the pylorus for cancer (1873). A man of high intelligence and ability, he was a friend of art and letters, an intimate of Brahms, and himself no mean musician. By his own work and through his many eminent pupils he was the most important single influence on the development of modern surgical knowledge" (Castiglioni p 848). Garrison-Morton 5608; Not in Cushing, Osler, Waller or Orr.

\$1,000 - 1,500



189

189

CORVISART, LUCIEN. 1824-1882.

Histoire générale de la digestion [caption title]. [Paris: n.p., c.1863]. Two volumes, 8vo (216 x 138 mm). [ix]-clii; 144 pp (Both paginations incomplete—text on last pages breaks off in mid-sentence).

Contemporary half calf, a little rubbed. Uneven browning, occasional foxing & soiling, still very good.

Provenance: British physiologist John Yudkin (book plate).

CORRECTED GALLEY PROOFS, with author's extensive annotations on about one-quarter of the pages, of what appears to be an unpublished work. Corvisart devoted a good portion of his career to the physiology of digestion, performing important research on the pancreas (see Garrison-Morton 1001) and publishing several works in the mid-19th century on various aspects of digestion and nutrition. Written some time after the publication of his *Collection de mémoires sur une fonction peu connue du pancréas* (1857-63), the present work tackles the entire history of digestion physiology from ancient times to his own era, and presents a detailed study of the function and purpose of the entire digestive and nutritional system from the stomach to the large intestine, with particular emphasis on the pancreas. This set of corrected proofs represents what may be the only written evidence of Corvisart's scientific work on this subject after 1863.

\$1,000 - 1,500



190

190

CONFEDERATE SURGEON'S ARCHIVE.

Brownrigg, Jonathan. Archive of autograph and printed materials relating to Brownrigg's service as a surgeon with the army of the Confederate States of America. The archive depicts in detail the military career of a typical Confederate army surgeon during the American Civil War, as follows:

1. Brownrigg's medical syllabus, titled "*Mütter's Syllabus*" on the spine, from his student days at one of the medical schools in Philadelphia. It is interleaved with blank pages with nearly 40 pages of medical notes, many relating to the treatment of wounds. Glued over many of the printed pages and some of the holograph ones are numerous newspaper clippings relating to medical, political and personal matters; several are obituaries of family members, including Brownrigg's wife. Inserted are approximately 21 official orders (some of them official copies, some printed, some manuscript) transferring Brownrigg between various units, raising his rank, reacting to his requests for discharge, etc. One of the printed forms, "General order no. IX" of the Provisional Army of the State of Tennessee, is cited as no 4140 in Parrish & Willingham's *Confederate Imprints*; Brownrigg's name is included in the form's list of surgeons.

2. Album titled "*Token of Love*," belonging to Brownrigg's wife Bettie Yerger.

3. 3-page Autograph Letter Signed to Brownrigg from Brig. Gen. Henry Hopkins Sibley (1816-86), dated May 15th, 1863 from Shreveport, Louisiana, describing the death of Brownrigg's brother, Major Richard T. Brownrigg, during the engagement at Irish Bend and Fort Bisland, April 13-14, 1863. Richard Brownrigg played a

minor role in Texas politics, serving as signatory to an 1861 ordinance concerning the separation of Texas from the United States.

4. Three 1 p printed medical forms filled out in manuscript, all dated April 15, 1864, recommending that "Chief Surgeon Jno. Brownrigg of Genl. S. D. Lee's Cavalry Command" be granted a 30-day extension of leave due to "facial neuralgia of an aggravated type," from which he had been suffering for the previous 15 days. The forms bear the signatures of Surg. W. L. Lipscombe and Surg. Richard L. Butt, of Way(?) Hospital in Columbus, Miss. Each form is attached to blue paper on which comments or docketing information have been written. Maj. Gen. Stephen Dill Lee (1833-1908), commander of the Department of Alabama, Mississippi and East Louisiana, was a distant relative of Robert E. Lee.

5. Special Orders dated May 9, 1864 from Headquarters, Dept. of Alabama, Mississippi and East Louisiana in Demopolis, AL, relieving Brownrigg from duty as Chief Surgeon in Maj. General [S. D.] Lee's command.

6. Special Orders dated July 29, 1864 from the Adjutant and Inspector General's Office in Richmond, VA, accepting Brownrigg's resignation from the C.S.A.

7. New Testament printed in 1868, evidently belonging to Brownrigg, and signed later by various members of the Marshall family, to whom he was related.

8. Lock of hair from Brownrigg's youngest brother Thomas, who served in the C.S.A. and died in 1879.

\$5,000 - 8,000



191

191

PIROGOV, NICOLAI IVANOVICH. 1810-1881.

Grundzüge der allgemeinen Kriegschirurgie... Leipzig: Vogel, 1864. 8vo (215 x 141 mm). iv, 1168, [2] pp. Contemporary half calf and boards, a bit rubbed and worn

Provenance: contemporary ownership inscriptions. A few pencil annotations.

FIRST EDITION OF PIROGOV'S MAJOR TREATISE ON MILITARY SURGERY, based on his experiences in the Crimean and Caucasian Wars; the German edition preceded the Russian, which was published in 1866. Pirogov, one of the greatest of all military surgeons and the most famous Russian surgeon in history, is regarded as the founder of modern Russian surgery, particularly orthopedic surgery. He developed his own technique of plaster of Paris dressings in 1851, independently of Mathijsen, and during the Crimean War he became the first to use plaster casts in the treatment of mass casualties. His well-known method of amputation above the ankle joint was popular throughout the world, and was used extensively during the American Civil War. In 1847 he became the first to use ether anesthesia under battle conditions, and in the Crimean War, during the siege of Sebastopol, he introduced the mass use of anesthesia in surgical operations at the front. He developed triage on the battlefield, sorting patients according to the severity of their wounds, and introduced female nursing into Russian military hospitals at the same time that Florence Nightingale, similarly inspired by her experiences in the Crimea, was introducing a parallel program in Great Britain. Le Vay *The History of Orthopaedics* pp 465-66; Orr 1416; Peltier *Fractures* pp 68-69; Waller 7464.

\$1,000 - 1,500

106 | BONHAMS



192

192

LUDWIG, CARL FRIEDRICH WILHELM. 1816-1895.

Die physiologischen Leistungen des Blutdrucks. Leipzig: Hirzel, 1865. 8vo (232 x 150 mm). 24 pp. Original green printed wrappers, repaired; in quarter morocco box. Light browning, otherwise fine.

FIRST EDITION. "Ludwig's inaugural address at Leipzig, in which he introduced the idea of keeping alive excised portions of organs by means of artificial circulation, or perfusion. He suggested that the blood-pressure had a stimulating effect on the vagus." (Garrison-Morton 778). As the first professor of physiology at the University of Leipzig, Ludwig created a model physiological institute where he studied vital phenomena in terms of the laws of physics and chemistry. "Ludwig hoped to elucidate physiological problems by combining the study of the anatomy of an organ with a knowledge of the physicochemical changes that occur in its functioning ... Ludwig's combination of ingenuity, resourcefulness and knowledge of physical science enabled him to become one of the greatest experimenters in the history of physiology" (DSB).

\$2,000 - 3,000



193

193

SIMON, GUSTAV. 1824-1876.

Mittheilungen aus der chirurgischen Klinik des Rostocker Krankenhauses während der Jahre 1861 – 1865. Parts I & II. Offprints from: *Deutschen Klinik* and *Prager Vierteljahrschrift für prakt. Heilkunde*. Prague: Carl Reichenecker, 1868.

2 parts in 1, 8vo (226 x 153mm). xiv, 200; xvii, [1], [3]-320 pp. 6 plates, text illustrations. Original cloth stamped in gilt and blind, rebound with original spine laid down, corners worn. Light brown. Library bookplates and stamps.

FIRST EDITION. The first report of a procedure capable of preserving the cupid's bow in repair of the lip, a critical procedure for the development of cheiloplasty. The above two-part work contains reports on surgical cases handled at the Rostock Hospital (where Simon was professor of surgery) over the five-year period between 1861 and 1865. The first volume contains, among other things, Simon's report of the cure, by incision and double puncture, of two large abdominal tumors caused by the parasite *Echinococcus*. The second part, devoted to plastic surgery, contains reports on plastic operations of the mouth, vagina and rectum, including the lip operation cited above, and an account of plastic operations on the vaginal wall between the rectum and genital canal. G&M 5749; Patterson Index, p. 496.

\$2,000 - 3,000



194

194

LENOIR, ADOLPHE. 1802-1860.

Atlas de l'art des accouchements. Paris: Masson, [1871]. 4to (273 x 189 mm). [4]pp. With 105 hand-colored lithographed plates with facing explanations. Contemporary quarter morocco, a little rubbed. Minor foxing, one explanation leaf loose, but very good. *Provenance:* Mme. Dalbon (gift inscription from a Doctor, dated "24 juin [18]88").

Second edition (first ed 1860-65) of this beautiful obstetrical atlas with over 100 hand-colored lithographed plates by the outstanding medical illustrator and lithographer Emile Beau. Left unfinished at Lenoir's death, the atlas was continued by his fellow surgeon See and by the obstetrician Tarnier, responsible for the axis-traction forceps (Garrison-Morton 6192) and the introduction of Listerism into obstetrics (Garrison-Morton 5639). See Waller 5716.

\$800 - 1,200



195

195

SIMON, GUSTAV. 1824-1876.

Chirurgie der Nieren. Erlangen: Enke, 1871 (vol 1); Stuttgart: Enke, 1876 (vol 2).

2 volumes in 1. 8vo (235 x 137 mm). viii, 89; x, 314, [1] pp. With 9 lithographed plates (including 3 chromolithographed); wood-engraved illustrations in text. Modern half morocco and marbled boards, original printed wrappers bound in. Light browning, spotting to plates.

FIRST EDITION. The era of modern urological surgery began in 1869, when Gustav Simon performed the first carefully planned nephrectomy. After writing a brief (two-page) notice of the operation in 1870 (see G-M 4213), Simon prepared a detailed illustrated account which he published as Volume I of his *Chirurgie der Nieren*. This volume contains two lithographed plates, the first a schematic drawing of the patient's injury, and the second an unusually artistic rendition (probably from a photograph) of the postoperative patient standing in front of a mirror displaying her surgical scars. The second volume, issued five years after the first, deals with the subject of kidney surgery in general, discussing operations on both injured and diseased kidneys. This volume, over three times as long as its predecessor, contains seven plates (three in color), showing a gunshot injury to the kidney, renal calculus and hypertrophy, and pre- and post-operative pictures of a case of hydronephrosis successfully cured by surgery. Garrison-Morton 4214; Kiefer 520; Murphy *History of Urology* pp 251-54.

\$1,500 - 2,500



196

196

COHN, FERDINAND. 1828-1898.

"Untersuchungen ueber Bacterien." In: *Beitraege zur Biologie der Pflanzen* Part 1, pp [127]-224, and part 2 pp [141]-207. Breslau: J.U. Kern, 1872-75.

Three parts in two volumes. 8vo (224 x 141 mm). [6], 131, [1]; [4], 224; [8], 224 pp. 15 plates (some chromolithographed). Contemporary half morocco, rebaked retaining original endpapers. Light toning due to paper stock.

Provenance: R.G.L. Dieffenbach M.D. (bookplates); Smith College Bacteriology Library (bookplate), small discrete withdrawal stamps.

FIRST EDITION, very rare. Cohn's first paper in 1872 laid out a system of classification of bacteria, distinguishing four groups based on constancy of external form linked with certain physiological phenomena. His second paper of 1875 announced the discovery of heat-resistant spores produced by certain bacteria. Cohn's classification provided a firm foundation for bacteriology as a science. Garrison-Morton 2483.

\$1,000 - 1,500



197

197

TIERSCH, CARL. 1822-1895.

“Ueber die feineren anatomischen Veränderung bei Aufheilung von Haut auf Granulation.” Offprint from: *Archiv für Klinische Chirurgie*, vol 177. [Berlin: n.p.], 1874.

8vo (223 x 146 mm). [318]-324 pp. Original wrappers, chipped and repaired. Browned throughout, chips and tears repaired; the entire offprint de-acidified and preserved between sheets of Japanese tissue. Custom cloth case.

Provenance: [Carl] Ludwig (book stamp); [Lewis] Weed (book stamp).

FIRST SEPARATE EDITION OF THIS RARE AND FRAGILE ITEM
Thiersch's first paper on his skin-grafting technique, which was tremendously influential. He correctly concluded that in granulating wounds it is best to slice off the soft granulations down to a firm base before applying skin grafts; he also advised extremely thin grafts, a less fortunate suggestion for the development of split skin grafting in the next half century. From the library of Thiersch's distinguished colleague at Leipzig, Carl Ludwig (see numerous Garrison-Morton references), and also from that of the American Lewis Weed (see Garrison-Morton 1439-1440), who worked out of Cushing's laboratory. Garrison-Morton 5753 (citing simultaneous publication in the *Verh. deutsch. Gesell. Chir.*); McDowell *Source Book of Plastic Surgery* pp 21-26.

\$1,200 - 1,800



198

198

ELEPHANTIASIS.

“*Elephantiasis both legs.*” c.1890.

Silver gelatin print 162 x 120 mm, mounted on 230 x 160 mm card. Matted.

An image by an unknown photographer depicting a young African American woman in striped dressing gown and straw hat, dressing gown lifted to her thighs to reveal elephantiasis in both legs. An absolutely striking image of a woman suffering from a symptom caused by a variety of diseases, including chronic lymphangitis, and Proteus Syndrome, the most famous case of which is of course that of Joseph Merrick, commonly known as the *Elephant Man*.

\$600 - 900



199

199

FREUD, SIGMUND. 1856-1939.

Zur Auffassung der Aphasien. Leipzig & Vienna: Deuticke, 1891. 8vo (234 x 140 mm). [4], 107 pp. Modern cloth. Light browning, small ink & perforated library stamps on title, library bookplate, a few marginal repairs.

FIRST EDITION OF FREUD'S FIRST BOOK. Freud's treatise on aphasia was little known or appreciated by contemporary neurologists, but Freud himself always regarded it as the most significant of his neurological writings. He was the first to criticize the foundations of the Wernicke-Lichtheim theory of aphasia, which held that losses of function in aphasia were caused by lesions to anatomically circumscribed centers corresponding to the various functions in language. Freud demonstrated that this concept led to localization schemes of labyrinthine complexity and did not fit with specific case studies; it was thus necessary to assume that the cerebral areas involved in language were less circumscribed. Grinstein 2; Norman F15.

\$2,000 - 3,000



200

200

MACEWEN, WILLIAM. 1848-1924.

Pyogenic infective diseases of the brain and spinal cord. Meningitis, Abscess of Brain, Infective Sinus Thrombosis. WITH: *Atlas of Head Sections.* Glasgow: Maclehose, 1893.

Two volumes. 8vo (225 x 145 mm text) and 4to (280 x 220 mm atlas). xxiv, 354; xiii, 4 pp. Text with 37 plates & text illustrations, atlas with 53 copperplate engravings each with separate printed outline key. Original cloth, worn but sound, corners a little bent. Minor dust-soiling and fraying, minor foxing to atlas, but very good. Advertisement for atlas tipped to the front free endpaper of text. *Provenance:* British surgeon George Grey Turner (ownership inscription).

FIRST EDITIONS. Cushing considered Macewen the "chief pioneer in craniocerebral surgery." His experience with meningitis, abscess of the brain and infective sinus thrombosis was summarized in the present work, which gave sixty-five detailed cases together with operative procedures. His *Atlas of Head Sections*, published the same year, was intended to supplement and illustrate it. Garrison-Morton 4872, 431 (Atlas).

\$1,500 - 2,500



201

201

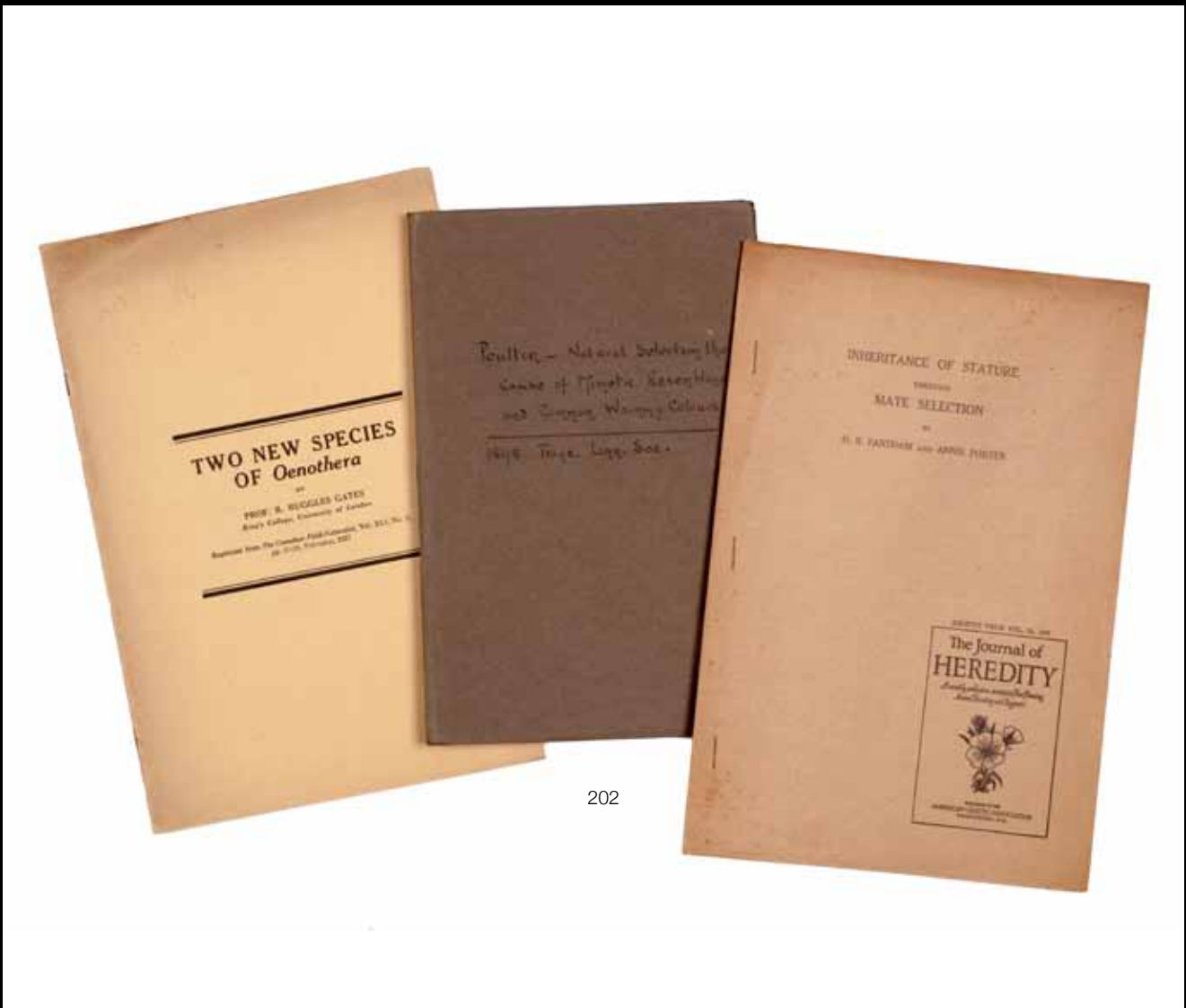
FREUD, SIGMUND. 1856-1939.

Zur Kenntnis der cerebralen Diplegien des Kindesalters (im Anschluss an die Little'schen Krankheit). Leipzig & Vienna: Deuticke, 1893.

8vo. [12], 168 pp. 2 folding tables. Original wrappers. Cloth drop-back box. Upper corners of front wrapper and first 2 leaves chipped, spine repaired.

FIRST EDITION. Freud devoted several years to the study of the cerebral palsies of childhood, making several important contributions to our knowledge of the subject; his classification of cerebral palsy is still in use today, and he was the first to suggest that cerebral palsy might result from abnormal fetal development. The present work is a companion to Freud and Rie's 1891 clinical study of the unilateral paralyses of children; it deals with the bilateral paralyses of children, and contains Freud's observations of 53 clinical cases. Grinstein 25; Norman F23.

\$1,200 - 1,800



202

202

GENETICS.

An archive of approximately 300 20th century pamphlets, primarily offprints, with a handful of pamphlets dating from the late 19th century, 1888-1955. Most in original printed wrappers, some without wrappers as issued, generally in very good condition. About 20% of the pamphlets bear presentation inscriptions, a portion in the author's hand, others secretarial. The whole housed in 9 custom clamshells. An excellent collection, which includes:

1. Bateson, *Reports to the Evolution Committee of the Royal Society*, 1908.
2. Gates, *A Genetic Study of Size Inheritance*, 1932.
3. Brooks, *The Inheritance of Disease in Plants*, 1921.
4. Hurst, *Mendel's Principles Applied to Wheat Hybrids*, 1903.
5. Huxley, *Eugenics and Society*, 1935.
6. Chamberlain, *Spermatogenesis in *Dioon Edule**, 1909.
7. Hurst, *Mendel's Principles Applied to Wheat Hybrids*, 1903.

A complete listing of titles is available upon request.

An extensive, broad-reaching collection representing the greater intellectual contributions of the first half of the 20th century to the development of the field of genetics. Collections such as these are rare on the market. The present collection is the fruit of years of careful research and compiling on the part of a careful and selective collector.

\$10,000 - 15,000



203



204

NOBEL PRIZE-WINNING WORK ON ANAPHYLAXIS

203

RICHET, CHARLES. 1850-1935.

Autograph Manuscript Signed (“Charles Richet”), being a manuscript prepared for the printer with numerous erasures and corrections, entitled “*De l’anaphylaxie ou sensibilité croissante des organismes à des doses successives de poison. Par M. Charles Richet. Laboratoire de Physiologie de la Faculté de médecine de Paris,*” 33 pp rectos only, 8vo, Paris, [c. 1910], black ink. Loose leaves laid into cloth portfolio. Light horizontal crease where previously folded, some thumb-soiling, a few small ink stains, first and last leaf lightly soiled and with rust mark from old paperclip, first leaf with paper repair to upper right corner.

Richet and his colleague Paul Portier discovered the phenomenon of anaphylaxis, a hitherto unknown property of the immune system; the discovery was fundamentally important to physiology and pathology and opened up “an immensely important field of study” (Magill p 173). In 1902, while researching the toxins produced by the Portuguese man-of-war and sea anemone, Richet and Portier injected dogs with sublethal doses of these poisons in an attempt to convey immunity and determine experimentally the parameters of toxicity. To their surprise, they discovered that second doses of the poison caused shock and death in some of their experimental animals, leading them to conclude that the poison had an effect exactly opposite to the immunizing properties of serums, vaccines, etc.—instead of reinforcing the body’s resistance to a foreign substance, a sublethal dose of the poison created a prolonged and sometimes deadly hypersensitivity to future doses. Richet continued his investigations on anaphylaxis, constructing a general theory of the phenomenon in 1907 (see Garrison-Morton 2599), and attempting to explain the function of anaphylaxis in evolutionary terms. In 1913 he received the Nobel Prize in physiology or medicine for his discovery. Magill *The Nobel Prize Winners: Physiology or Medicine* p 173.

\$3,000 - 5,000

204

MORGAN, THOMAS HUNT. 1866-1945.

Collection of 36 offprints by the 1933 Nobel prize winner for Physiology or Medicine. Original printed wrappers, overall very good but a few with marginal chipping or rust stains from staples. Many with author’s name in ink or pencil to front wrapper, various ownership stamps. A complete listing of titles is available upon request.

An excellent collection of the works of Morgan, who was awarded the 1933 Nobel prize for his discoveries pertaining to the role that the chromosome plays in heredity. The collection includes papers written in collaboration with Engelmann, Schultz, Curry, Bridges, and many others, all written from 1903-1944. A collection of this caliber is rare to find, and represents the years of focused and specialized collecting. A selection of titles includes:

1. “The Effect of Lithium Chloride on the Development of the Frog’s Egg” (1903).
2. “The Constitution of Germ Material in Relation to Heredity” (1923).
3. “The Apparent Inheritance of an Acquired Character and its Explanation” (1930).
4. “Cross- and Self-Fertilization in the Ascidian *Styela*” (1942).
5. “The Genetic and the Physiological Problems of Self-Sterility in *Ciona* VI” (1944).

\$2,000 - 3,000



205

NOBEL PRIZE WINNERS

205

MORGAN, THOMAS HUNT; JOSHUA LEDERBERG; E. L. TATUM; G. W. BEADLE; JAMES B. SUMNER; E.B. LEWIS; S.E. LURIA; GEORGE D SNELL; H.J. MULLER.

Collection of 72 offprints by 9 Nobel Prize winners in Physiology or Medicine and Chemistry. Original printed wrappers, or no wrappers as issued. Most in very good condition, some with rusting from staples. Most with author's name in ink, many with previous owner's stamp or signatures. A complete listing of titles is available upon request.

An excellent and extensive collection of the corpus of these 9 Nobelists. Included are:

1. Snell (Physiology or Medicine, 1980): 6 offprints, including "Methods for the Study of Histocompatibility Genes" (1948) and "The Immunogenetics of Tumor Transplantation" (1925).
2. Lederberg & Tatum (Physiology or Medicine, 1958): 1 offprint, "Sex in Bacteria: Genetic Studies, 1945-1952" (1953).
3. Luria (Physiology or Medicine, 1969): 3 offprints, including "Viruses as Determinants of Cellular Functions" (1959).
4. Lewis (Physiology or Medicine 1995): 2 offprints, including "The Relation of Repeats to Position Effect in *Drosophila Melanogaster*" (1945).
5. Beadle (Physiology or Medicine YEAR): 23 offprints, including "Genes in Maize for Pollen Sterility" (1932) and "Further Studies of Asynaptic Maize" (1933).
6. Sumner (Chemistry 1946): 6 offprints, including "A New Method for the Direct Nesslerization of Ammonia in Urine" (1919) and "The Isoelectric Point of Crystalline Urease" (1929).
7. Morgan (Physiology or Medicine 1933): 24 offprints, including "The Modification of the Sex-Ratio, and of Other Ratios, in *Drosophila* through Linkage" (1912) and "The Rise of Genetics" (1932).
8. Muller (Physiology or Medicine 1946): 7 offprints, including "Mutation Rate Dependent on the Size of the x Chromosome" (1943) and "Evidence Against a Straight End-to-End Alignment of Chromosomes in *Drosophila* Spermatozoa" (1954).

\$3,000 - 5,000



206

206

GNUDI, MARTHA TEACH & JEROME PIERCE WEBSTER.

The Life and Times of Gaspare Tagliacozzi, Surgeon of Bologna ... With a Documented Study of the Scientific and Cultural Life of Bologna in the Sixteenth Century. New York: Reichner, [1950]. 4to (338 x 244 mm). xxii, 538, [4] pp. 54 plates plus reproductions of the woodcuts from *De curtorum chirurgia*, historiated initials printed in red. Full paneled morocco by Bernard Middleton, spine gilt. Quarter morocco slipcase. Slipcase a little spotted with small splits in hinge), spine repaired. Fine.

Provenance: Kenneth Garth Huston (bookplate and note).

FIRST EDITION, ONE OF FIVE LARGE-PAPER COPIES printed on handmade Fabriano Perugia paper by the Tipografia Luigi Parma. The definitive biography of the founder of plastic surgery, with a detailed bibliographical history of Tagliacozzi's influence up to the 20th century. Includes a partial English translation of *De curtorum chirurgia*. The large-paper edition, which is 70 mm (2¾ inches) taller than the regular version, has the historiated initials printed in red; in the regular edition they are printed in black. The colophon states that only three large-paper copies were printed; however, according to Kenneth Garth Huston's note on the colophon leaf, "This is one of two extra large-paper copies (in addition to the three [mentioned in the colophon]) discovered by Martha Gnudi at the printers.' This copy bound by Bernard C. Middleton, Jan. 1978."

\$2,500 - 3,500



207

PAULING ON HIS TWO NOBEL PRIZES, MIND-EXPANDING DRUGS, VITAMIN C, SUGAR AND MORE

207

PAULING, LINUS & LARRY GROBEL.

Original taped interview, the only copy, consisting of an interview of two-time Nobel prize-winning chemist Linus Pauling, conducted by journalist Larry Grobel on November 11, 1974. 3 cassette tapes, totaling 3 hours and 10 minutes, plus 4th tape of a lecture by Pauling to the California Psychiatric Association on December 9, 1974. With copy of published interview and release signed by Pauling.

Larry Grobel explains:

"In 1974, Linus Pauling, whom James Watson called "the world's most astute chemist," was back in the news after publishing a controversial book innocently called *Vitamin C and the Common Cold*. It was Pauling's belief that if you took enough C, you wouldn't suffer from colds. Pauling was always ahead of his time. Born in 1901, by the time he was 18 he was teaching quantitative analysis and two years later was a teaching fellow in chemistry at the California Institute of Technology. Known for his general theory of anesthesia, he received the Nobel Prize in Chemistry for his "research on the nature of the chemical bond and its application to the elucidation of the structure of complex substances" in 1954. He wrote a book called *No More War!* making a strong appeal to end thermonuclear bomb testing and won another Nobel, for Peace, in 1962. When I interviewed him at his Institute for Science and Medicine in Menlo Park, California in 1974, he made sure that I understood that he was the only person to ever win two complete Nobel Prizes, without having to share either of them. ("In the Guinness Book of Records it says I have the championship.") The recipient of more than 30 honorary doctorates from around the world, Pauling was never one to rest on his laurels. After teaching for over 40 years at Cal Tech, UCSD, Stanford, and the Center for the Study of Democratic Institutions in Santa Barbara, he founded the Linus Pauling Institute for Science and Medicine to study the problems of health and longevity.

Our three-hour interview was wide-ranging, as Pauling talked about the benefits of vitamin C ("Between 1 and 5 grams per day will

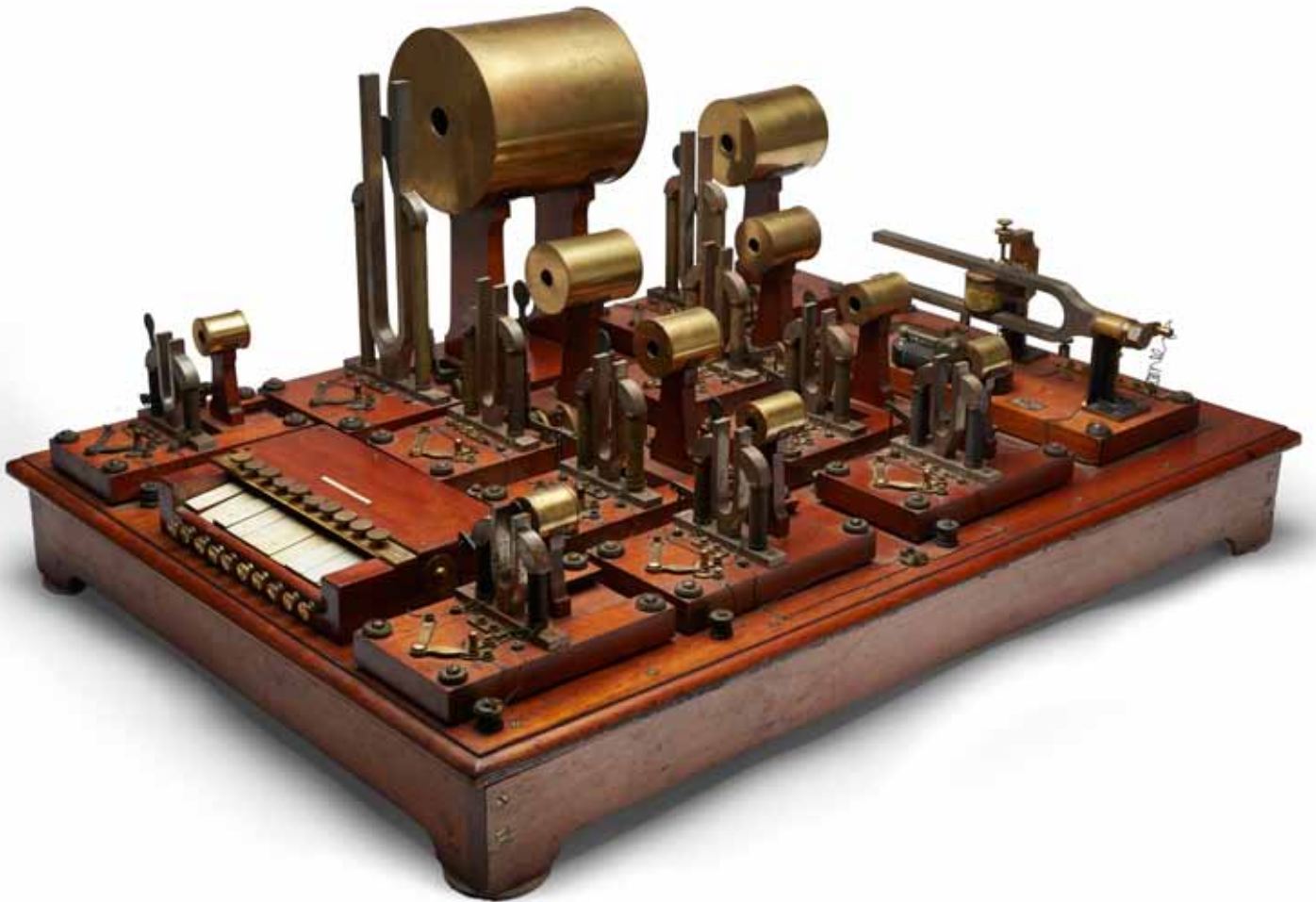
decrease the aspecific incidence from all diseases by 50%"); the negative effects of sugar ("causes high serum cholesterol and is related to high incidence of coronary heart disease"); junk food and smoking ("breakfast foods that are 50% sugar shouldn't be allowed on the market"); the theory of resonance ("a branch of structural chemistry that amplifies classical chemistry structure theory very significantly"); molecular diseases ("With sickle-cell anemia I deduced that it was a disease of the hemoglobin molecule in 1925. It wasn't until 1949 that I published the first paper, the first time the expression molecular disease had been used"); mind-expanding drugs ("I don't have any interest in experiencing episodes in which I misinterpret the impressions of my senses"); psychic phenomena ("I reject all dogma and revelation"); Richard Nixon ("I thought he was insane; he looked psychotic to me"); Gerald Ford and the immorality of our leaders; his impressions of Bertrand Russell, Albert Schweitzer, and Albert Einstein (whom he met in 1928); the energy crisis; his creative process ("I trained my unconscious to think about problems"); and why the State Department confiscated his passport and wouldn't allow him to travel abroad. One part of our interview appeared in *Newsday's LI* magazine (Jan. 26, 1975) and another part was published in *Companion* magazine (June/July 1975)."

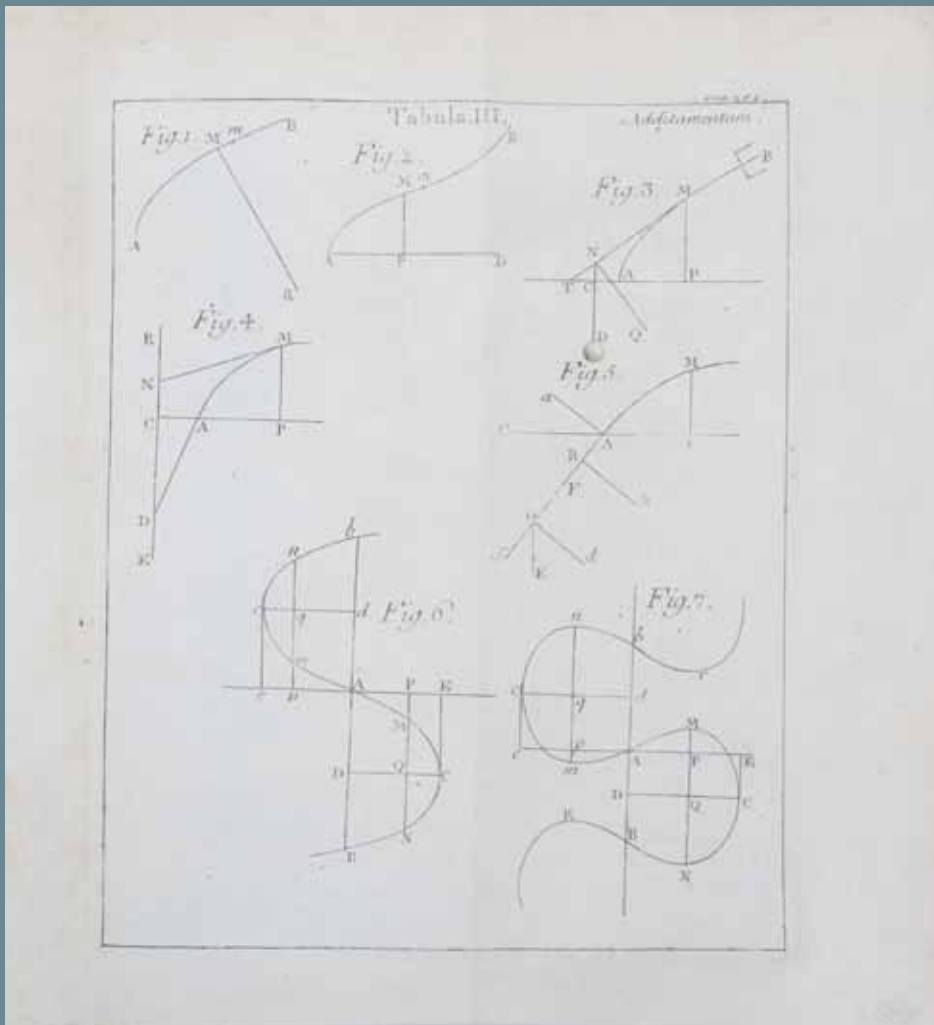
Lawrence Grobel is a novelist, journalist, biographer, poet & teacher. Many of his 22 books have made best-seller lists, and he's had 4 *Publisher's Weekly* "Best Books of the Year." He is the recipient of a NEA Fellowship for his fiction and a PEN Special Achievement Award. *Writer's Digest* called him "A legend among journalists." His *The Art of the Interview* is used as a text in journalism schools. He served in the Peace Corps, directed a graduate writing program for Antioch, and taught writing seminars at UCLA. He has appeared on CNN, the Today Show, GMA, Charlie Rose and in two documentaries, one on J.D. Salinger, the other Al Pacino's *Wilde Salome*.

\$3,000 - 5,000

PHYSICS & MATHEMATICS

Lots 208-264





209

208

DODSON, JAMES. D. 1757.

The anti-logarithmic canon. Being a table of numbers, consisting of eleven places of figures, corresponding to all logarithms under 100000. London: printed for James Dodson, 1742.

Folio (320 x 210 mm). [iv], x, 84, [306] pp. Contemporary mottled calf, gilt rules. Calf rubbed, front hinge cracked but sound, back hinge just starting. Occasional foxing and a few marginal stains, but a very good, crisp copy.

FIRST EDITION OF THE EARLIEST AND LARGEST TABLE OF ALGORITHMS, except for a very brief table published by John Long in 1714. Dodson gives the numbers to 11 places, corresponding to the logarithms from .0001 to .99999 at intervals of .00001. His table remained the only one of its kind until 1849, when Robert Shortrede's *Logarithmic Tables* was published. "Tables of antilogarithms are not nearly so common as logarithmic tables, although for computing purposes a combination of the two is most convenient. Most computers, however, generally make the logarithmic table serve the double purpose; the inverse operation is not difficult, although it involves a process of division when interpolation is necessary. An antilogarithmic table may be used for finding logarithms, but it is not generally used for this purpose. ... [Dodson's] table remains unique." (Henderson, p 17) Henderson *Tabularum mathematicarum* (1926), pp 17-20, & no 201.0; *Origins of Cyberspace* 4; Zeitlinger *Bibliotheca-chemico-mathematica* I (1921), no 1070, calling this work "very rare." **\$1,200 - 1,800**

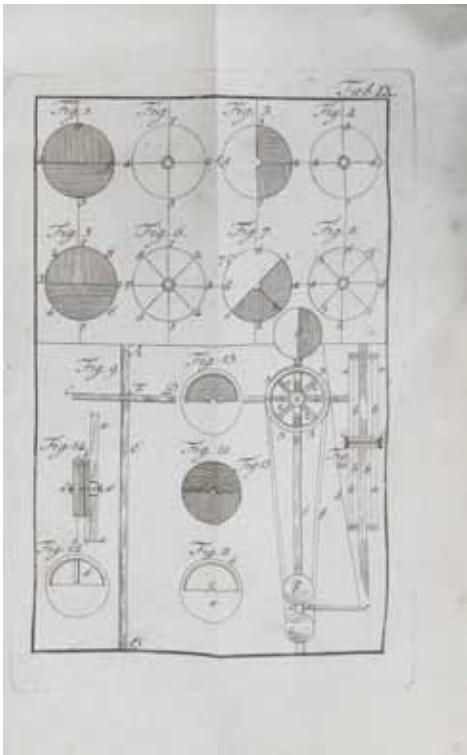
209

EULER, LEONHARD. 1707-1783.

Methodus inveniendi lineas curvas maximi minime proprietate gaudentes, sive solutio problematis isoperimetrici latissimo sensu accepti. Lausanne & Geneva: Marc-Michel Bousquet & Compagnie, 1744.

4to (248 x 199 mm). [2], 322, [2] pp. 5 folding engraved plates. Contemporary half morocco and marbled boards, gilt spine. Minor foxing and toning, but internally very good, binding rubbed, some wear at extremities and corners, bookplate removed from inside front cover. *Provenance*: Pietro Riccardi (bookplate).

FIRST EDITION. With the publication of this work, the calculus of variations came into being as a new branch of mathematics. Euler was the first to formulate the principal problems of the calculus of variations and to create general methods for their solution. His work in the *Methodus* was cumbersome by modern standards (the calculus of variations as we know it is the work of Lagrange), but it yielded simple and elegant formulae applicable to a large variety of problems. He introduced (using different terminology) the concepts of function and variation, distinguished between problems of absolute and relative extrema, and deduced the differential equation that now bears his name. This copy is from the library of Pietro Riccardi (1828-1898), historian and bibliographer of mathematics, and the author of *Biblioteca matematica italiana* (1870-93). Dibner *Heralds of Science* 111; Horblit *One Hundred Books Famous in Science* 28; Kline *Mathematical Thought* pp 377-79; Norman 731; Struik *Source Book in Mathematics* pp 399-406. **\$6,000 - 8,000**



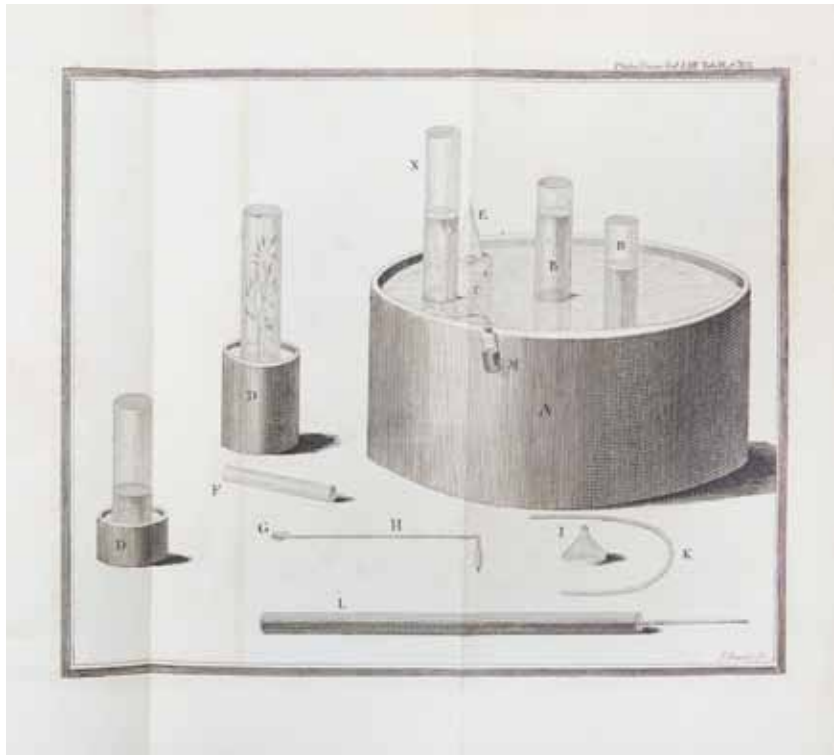
210

210

BERGSTRÄSSER, JOHANN ANDREAS BENIGNUS. 1732-1812.
Uebersichten und Erweiterungen der Signal-Order und Zielschreiberie in die Ferne, oder, neue Synthematographe und Telegraphe. Leipzig: Breitkopf, Sohn & Co., 1795.
 8vo (225 x 132 mm). xii, 204 pp. With 16 folding engraved plates. Original plain wrappers, uncut. Wrappers a little soiled, some toning and scattered, edges dust-soiled and frayed.

FIRST EDITION. Bergsträsser, a German professor, published his first work on telegraphy in XXXX. The following year he constructed an optical telegraph line between Feldberg, Homberg and Philippsruhe; not much is known about this device except that it might have used light flares (Raketen). Bergsträsser conducted his telegraphic researches at the same time that the Chappes were developing their highly successful optical telegraph network in France. Bergsträsser's researches were hamstrung due to lack of funding, however, and his writings were largely ignored by his contemporaries. The present work is a survey of telecommunications methods from ancient times to the close of the eighteenth century. It describes various systems of optical telegraphy, including shutter telegraphs, semaphores, mirror telegraphs, systems using the alphabet and/or numerals, Chappe's pendulum telegraph, the telegraph systems of Achard and Buschendorff, etc. It also touches on the problem of information coding. Holzmann & Pehrson *Early History of Data Networks* pp 42, 184-86.

\$1,000 - 1,500



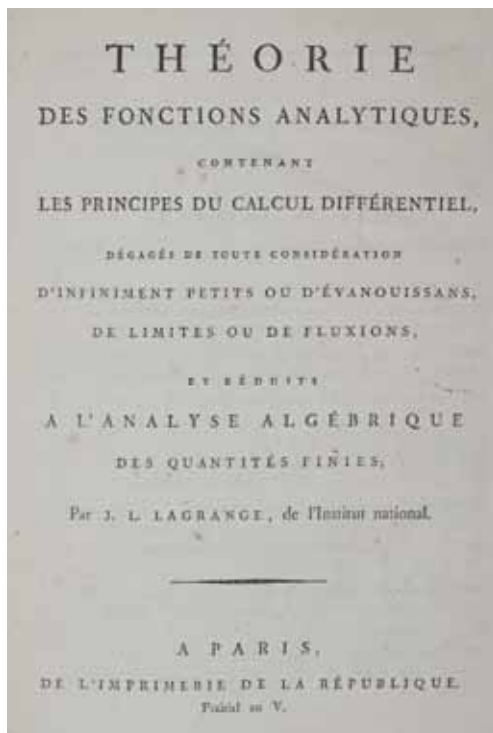
211

211

PRIESTLEY, JOSEPH. 1733-1804.

"Observations on different kinds of air." In: *Philosophical Transactions* vol 62, pp 147-264. London: Lockyer Davis, 1772.
 Whole volume. 4to (222 x 171 mm). xiv, 494, [2]pp, with errata and 12 (of 14) folding copperplates (wanting plates III and IV, but with the plate for the Priestley paper). Full calf, light foxing and toning, a few small tears in plates repaired, occasional offsetting from plates, but still very good.
Provenance: Small library blind-stamp.

FIRST EDITION OF THE FIRST OF PRIESTLEY'S REMARKABLE PAPERS ON PNEUMATIC CHEMISTRY. "In this essay Priestley showed that in air collected after the processes of combustion, respiration or putrefaction, one-fifth of the volume disappeared. He had also observed that mint grew vigorously in air tainted by animal respiration and that evidently plants reversed the process of polluting the air as respiration did. In this paper he also announced two new gases that he had obtained— nitrous oxide and carbonic oxide; these won him the Royal Society's Copley medal" (Dibner 40). Priestley's hundreds of experiments on different types of "air," carried out over several years, led to the identification of numerous gases, including ammonia, nitrogen dioxide and (most importantly) oxygen, which Priestley obtained in 1774 by heating mercuric oxide. Priestley's experiments with gases led Cavendish and Watt to discover the compound nature of water, and it was this revelation, coupled with Priestley's isolation of oxygen, that formed the experimental basis of Lavoisier's new oxidation chemistry. *Printing and the Mind of Man* 217.
\$1,200 - 1,800



213

212

COSSALI, PIETRO. 1748-1815.

Origine, Trasporto in Italia, Primi Progressi in essa dell'Algebra. Parma: [Giambattista Bodoni for] Reale Tipografia Parmense, 1797-99.

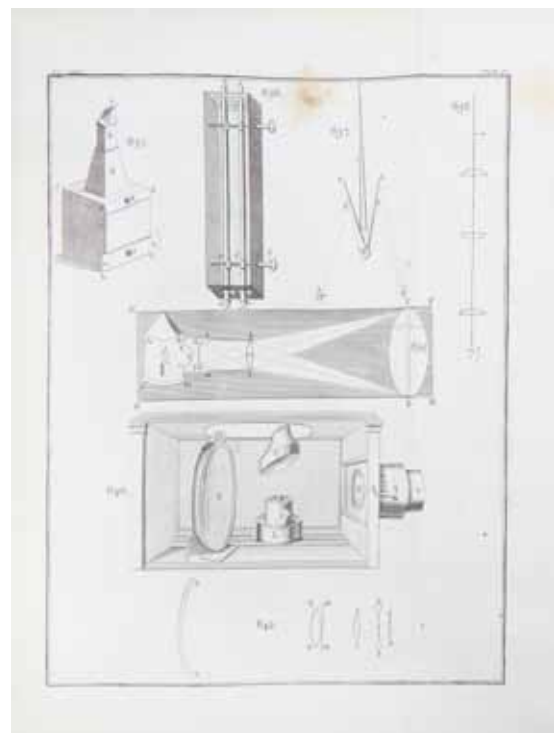
Two volumes. 4to (282 x 203 mm) [24], 396, [4]; [10], 492, [4] pp. 2 engraved plates. Contemporary calf-backed speckled boards, rebacked, with most of original spines laid down, lightly rubbed. A fine, crisp copy.

Provenance: Luigi Bramieri (contemporary ownership inscription, noting that this was a gift from the author "Dono graziosissimo dell' egregio autore a me devotissimo suo amico Luigi Bramieri").

FIRST EDITION. Cossali, the best-known historian of mathematics in 18th-century Italy, taught physics and astronomy at the University of Parma, and was later named by Napoleon to the chair of mathematics at Padua. "He wrote various memoirs on mathematical questions, chiefly algebraic, but is best known for his history of algebra, a work of considerable scholarship and even yet of service to the student of this phase of the subject" (Smith *History of Mathematics* 1, p 541)

Cossali's work was one of the very few scientific books printed by Giambattista Bodoni (1740-1813), the most successful and influential Italian printer of his era, associated with the Royal Press at Parma from 1768 until his death, and proprietor of his own press from 1791. Typefaces based on Bodoni's are still widely used. Brooks *Edizioni Bodoniane* 696.

\$1,500 - 2,500



214

214

SMITH, ROBERT. 1689-1768.

A Compleat System of Opticks in Four Books... Cambridge: for the Author, 1738. 4to (288 x 225 mm). [vi], vi, [viii], 455, [1], 171, [13] pp. With 83 folding engraved plates. Full modern calf to style, original spine label laid down. Some minor foxing, browning and soiling, but very good.

Provenance: William Meckleham (contemporary ownership inscription); William Matheu (contemporary ownership inscription, initials to fore-edge); library stamp.

FIRST EDITION. Smith held the Plumian professorship of astronomy at Cambridge from 1716 to 1760, and in 1742 he succeeded Richard Bentley as Master of Trinity College, Cambridge. Smith was in large part responsible for establishing Newtonian science at Cambridge, through both his teaching and his *Compleat System of Opticks*, which was probably the most influential textbook on its subject published in the 18th century. The work covers light, color, theory of vision, construction of microscopes and telescopes (including papers on refracting telescopes by Huygens and Molyneux), methods of grinding and polishing lenses, astronomical discoveries, and concluding with "An essay upon distinct and indistinct vision" by physician James Jurin (1684-1750, see Garrison-Morton 1689). It became widely recognized as the primary authority on Newtonian optics after Newton's own work on the subject (1704), and was influential in establishing the corpuscular theory of light as the dominant theory of light in 18th-century Britain. Jungnickel *Cavendish* pp 120-121.

\$1,200 - 1,800

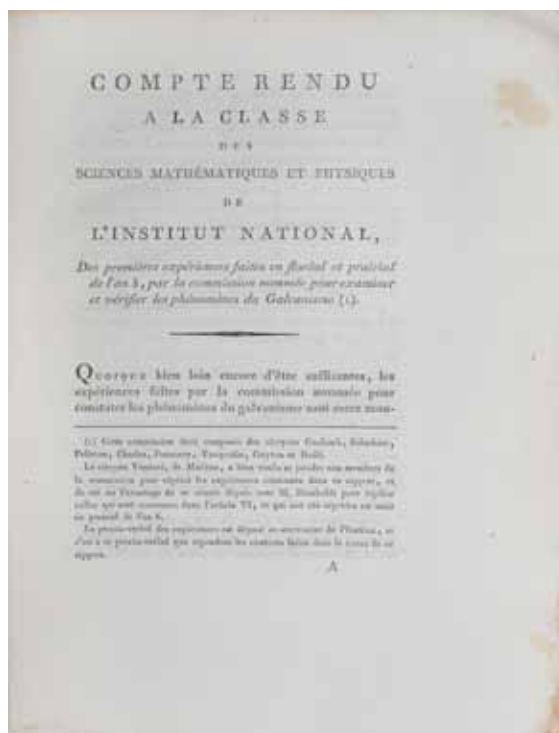
213

LAGRANGE, JOSEPH LOUIS. 1736-1813.

Théorie des fonctions analytiques, contenant les principes du calcul différentiel... Paris: Imprimerie de la République, An V [1797/98]. 4to (275 x 217 mm). [iv], viii, 277, [3] pp, with cancel leaf H2. Original paste paper wrappers, uncut. Hinges split, lower third of spine lacking. Minor foxing, upper corners creased on the first few leaves, otherwise a very good, crisp copy.

FIRST EDITION, FIRST ISSUE, with bookseller's notice to verso of the half-title, cancel leaf H2, errata list on p 277, and 4 leaves (including final blank) in signature Mm. Lagrange's first full-length attempt to show that power series expansions are sufficient to provide a solid foundation for differential calculus, a subject he had treated earlier in a 1772 paper. Lagrange's commitment to the necessity of an algebraic foundation for the calculus led him to the major accomplishment of the *Fonctions Analytiques*, in which he studied functions by means of their power series expansions. He believed that every function could be expanded into a power series ... One of the basic results that followed in the *Fonctions Analytiques* is part of what is known today as the fundamental theorem of calculus (Seikali). Norman 1258; Seikali, "Joseph-Louis Lagrange" (<http://math.berkeley.edu/~robin/Lagrange/>)

\$1,500 - 2,500



215

215

GALVANI, LUIGI. 1737-98.

“Des premières expériences faites en floréal et prairial de l’an 5, par la commission nommée pour examiner et vérifier les phénomènes du Galvanisme.” Offprint from: *Compte rendu à la classe des sciences mathématiques et physiques de l’Institut National*. [Paris]: Baudouin, [1798].

4to (273 x 203 mm.) 107, [1] pp. Original plain pink wrappers, title pencilled to upper wrapper, uncut. Clamshell. Minor foxing, marginal stain running through first half.

FIRST SEPARATE EDITION. A report of the preliminary findings of the commission appointed by the Institut nationale to study galvanism (animal electricity) in the spring of 1797. The commission included Coulomb and had the assistance of Alexander von Humboldt, whose galvanic experiments are described in the sixth part of this report. The report was published during the time that Galvani was striving to establish the existence of a separate animal electricity against the claims of Volta, who believed (correctly) that animal and common electricity were identical. The report is divided into six parts. Part 1 discusses the animal portion of the galvanic arc; part 2 discusses the excitatory or instrumental portion of the galvanic arc; part 3 describes some unusual circumstances affecting the portions of the arc; part 4 describes various means of varying, lessening or restoring galvanic susceptibility in experimental animals; part 5 compares galvanic phenomena with those of common electricity; and part 6 contains accounts of Humboldt’s galvanic experiments, repeated before the Institut nationale in the spring of 1798 a few months before his departure from Paris. See Garrison-Morton 608 for Humboldt’s later contribution to animal electricity; Dibner *Galvani-Volta* p 34.

\$1,000 - 1,500

216

VOLTA, ALESSANDRO. 1745-1827.

“Account of Some Discoveries Made by Mr. Galvani, of Bologna; With Experiments and Observations on Them. In Two Letters from Mr. Alexander Volta, F.R.S. Professor of Natural Philosophy in the University of Pavia, to Mr. Tiberius Cavallo, F.R.S.” Extracted from: *Philosophical Transactions of the Royal Society*, Vol. 83. London: W. Bulmer & Co. for Peter Elmsley, 1793.

4to (295 x 230 mm). 10-44 pp. Contemporary plain paper wrappers, uncut. Some light spotting and browning throughout, still a very good copy.

Provenance: contemporary penciled annotations.

FIRST EDITION of Volta’s account and correct interpretation of Galvani’s experiments on animal electricity communicated to the Royal Society. “In 1791 he had been made a foreign member of the Royal Society, ... Sir Joseph Banks in his address remarking, ‘The experiments of Professor Galvani, until commented upon by Professor Volta, had too much astonished, and perhaps, in some degree, perplexed many of the learned in various parts of Europe. To Professor Volta was reserved the merit of bringing his countryman’s experiments to the test of sound reasoning and accurate investigation’” (Edgar C. Smith: *Alessandro Volta*, *Nature*, vol 155, pp 473-74). Seven years later Volta’s invention of the first electric battery, the Voltaic pile, was announced in a letter from Volta to Joseph Banks and published in the *Philosophical Transactions*. *Wheeler Gift Catalogue* 2493.

\$600 - 900



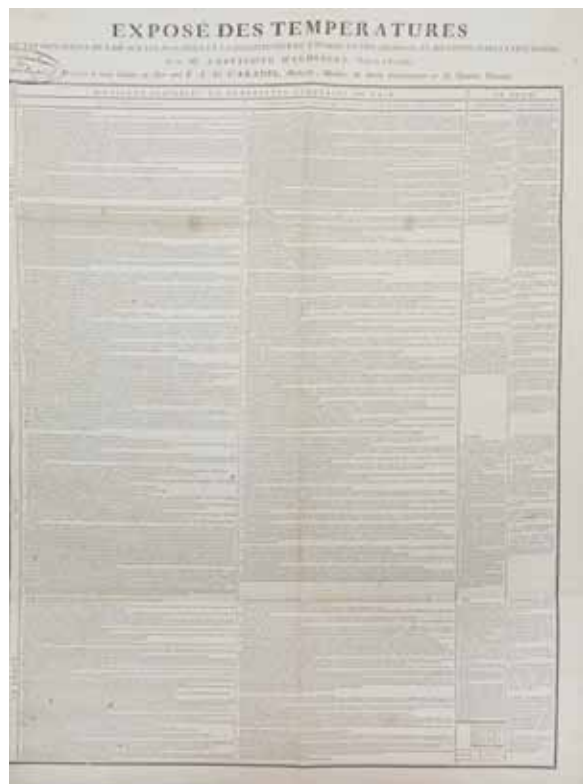
217

217

VOLTA, ALESSANDRO. 1745-1827.

“On the Electricity Excited by the Mere Contact of Conducting Substances of Different Kinds.” Extracted from: *Philosophical Transactions of the Royal Society of London*, volume 90, part II. London: W. Bulmer & Co. for Peter Elmsley, 1800. 4to (270 x 214 mm). 403-431 pp, with 1 folding engraved plate by James Basire illustrating the first electric battery. Text in French. Old tan paper wrappers with some penciled notations to front wrapper. Light offsetting from folding plate, otherwise a fine copy.

FIRST EDITION of “the first announcement of the voltaic ‘pile’, or electric battery” (Grolier/Horblit). “The voltaic pile revolutionized the theory and practice of electricity, so that within one hundred years of Volta’s invention, more progress was made than in the two thousand four hundred years between the tentative experience of Thales and the publication of Volta’s letter addressed to Sir Joseph Banks, President of the Royal Society ... The indispensability and ubiquity of electricity, in one form or another, in western civilization today emphasize sharply the fact that before 1800 human environment and existence were closer to life in ancient Egypt than to our own” (*PMM*). “This paper, in French, was sent by Volta to Sir Joseph Banks in London for communication to the Royal Society. In it Volta describes the pile of alternating dissimilar metals (silver and zinc) which, when moist, generated the flow of constant-current electricity. With this new force, water was decomposed, metal was electro-deposited, the electro-magnet was created and the electrical age was begun” (Dibner 60). Grolier/Horblit 37b; Norman 2164; *Printing and the Mind of Man* 255. **\$2,500 - 3,500**



218

218

CHAVASSIEU-D'AUDEBERT. FL.1802-1812.

Exposé des temperatures, dans lequel on traite, par aphorismes, des divers états de l'atmosphère, et des influences de l'air et des pays sur l'homme, les animaux et les plantes. Versailles: Ph.-D. Pierres; Paris: Desenne, 1802. 4to (330 x 265 mm). With 3 large printed charts (671 x 495 mm.) folded to large 4to size and bound together. Magenta paste paper boards, printed label to front cover, light rubbing & wear, minor foxing, a few light stains, tear to front free endpaper.

Provenance: Presentation inscription from the author: “A l’illustre Professeur Monsieur Fabroni de la part de l’Auteur.” The recipient may have been Italian physicist Giovanni Valentino Mattia Fabbroni (1752-1822).

FIRST EDITION, PRESENTATION COPY. Chavassieu-d’Audebert’s charts present a thorough analysis in tabular form of the effects of temperature, atmospheric conditions and terrain on humans, animals and plants. The first chart displays the effects of temperature and humidity on health: for example, rainy weather was said to promote chronic fevers, epileptic attacks and paralysis in humans, and blight in crops. The second chart organizes temperature and climate information by month and season, describing effects on agriculture and health of various types of years (hot/dry, cold/wet, cold/dry, etc.). The third chart presents the phases of the moon and how they affect health, the effects of climate and terrain on native human, animal and plant populations, and a breakdown of the human species by geographical type. **\$800 - 1,200**



219

219

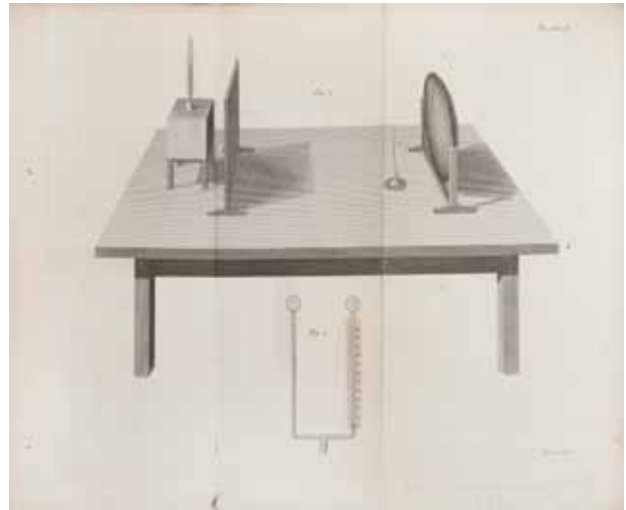
ELECTRICITY.

[VINKELES, REINIER.] [*Salle de phijsique (sic) dans l'edifice de la Societe Felix Meritis.* Amsterdam: C. S. Roos, 1802].

Engraving (proof before letters) on paper by Reinier Vinkeles after the drawing by P. Barbiers and J. Kuyper. 477 x 585 mm (image measures 377 x 511 mm). 38 mm tear to upper margin (not touching image). Matted, glazed and framed.

SUPERB PROOF BEFORE LETTERS, a rich impression before any wear to the copperplate, of this fascinating print, depicting the Dutch scientist Jan Hendrik van Swinden (1746-1823) demonstrating an electrical machine before the *Societe Felix Meritis*, a private science society in Amsterdam. Van Swinden, his assistant and the machine are shown dramatically lit from above, while the audience remains in partial shadow; the view is from the rear of the lecture hall looking out over the stage at the audience. Van Swinden was professor of philosophy, natural philosophy, mathematics and astronomy at the University of Amsterdam; he published his first paper on magnetic and electrical attraction in 1766, and continued his researches into electricity for more than fifty years afterwards. He is best known for his *Memoires sur l'analogie de l'Électricite et du magnetisme* (1784), which included a critique of Mesmer's animal magnetism, and for his experiments on the influence of electrical discharges on magnets. This is probably the most dramatic separately issued print depicting an electrical demonstration with an early electro-static generator. Dibner *Early Electrical Machines*, p 55, illustrating this print.

\$2,000 - 3,000



220

220

LESLIE, JOHN. (1766-1832.

An experimental inquiry into the nature, and propagation, of heat. London: J. Mawman, 1804.

8vo (211 x 129 mm.) xv [1, errata], 562 pp. With 9 folding plates. "Additional errata" slip tipped onto errata. Modern morocco-backed marbled boards in period style. Light browning, still very good. *Provenance*: Inner Temple Library (engraved bookplate & stamps); Baron Frances Maeseres (1731-1824) (ownership inscription, and author's presentation inscription: "To Baron Maseres with best wishes from the Author").

FIRST EDITION. Leslie's magnum opus "established several fundamental laws of heat radiation: that the emissivity and absorptivity for any surface are equal, that the emissivity of a surface increases with the increase of reflectivity, and that the intensity of heat radiated from a surface is proportional to the sine of the angle of the rays to the surface. The book also played a major role in the early nineteenth-century argument about whether heat was a form of matter or a mode of motion. Leslie's experiments showed that heat, unlike light, was not directly transmitted through transparent solids. Since Leslie embraced a corpuscular theory, he incorrectly interpreted the apparent blockage of heat radiation as evidence that heat was composed of particles much larger than those of light. He borrowed from James Hutton the basic notion that heat was a compound formed by the union of light particles with ordinary particles of matter. François Delaroché later showed that Leslie's failure to detect direct transmission of heat through solids was a result of using only low-temperature heat sources whose radiation was absorbed by the solid screens. In the meantime, Leslie's puzzling experimental results had stimulated further investigations of diathermancy and the nature of radiant heat" (*Dictionary of Scientific Biography*).

Francis Maseres wrote several works on mathematics (one with Charles Babbage) that won the praise of Joseph Priestley, and served as Quebec's attorney-general from 1766-69. He was a member of the Inner Temple, to which he bequeathed his library. Cardwell *From Watt to Clausius* pp 107-112; Roberts & Trent *Bibliotheca Mechanica* p 203.

\$1,000 - 1,500



221

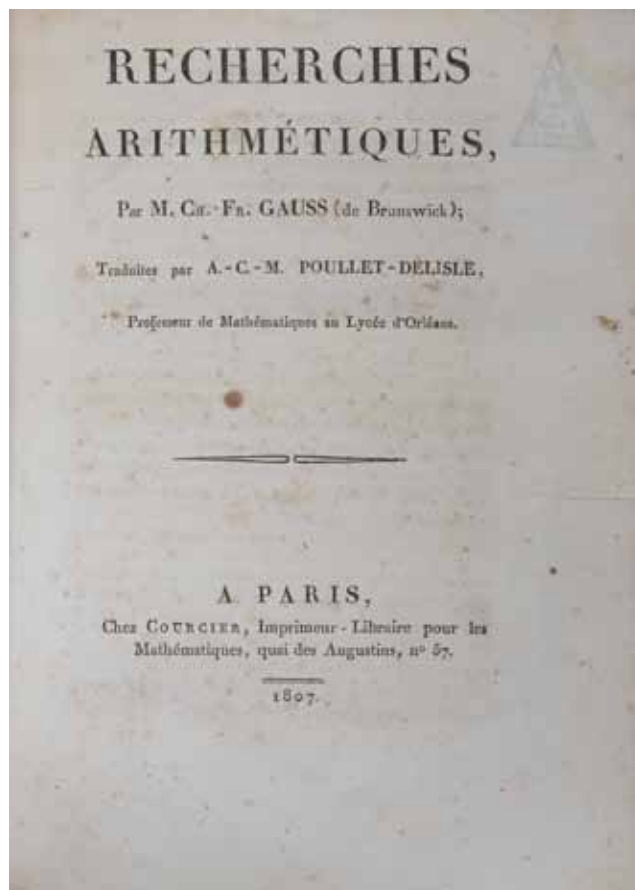
221

BUDAN DE BOISLAURENT, FERDINAND. FL.1800-05.

Nouvelle méthode pour la résolution des équations numériques d'un degré quelconque Paris: Courcier, 1807. 4to (268 x 206 mm). [viii], 86, [2] pp. Modern quarter morocco and marbled boards. Some light soiling, a few edges frayed, but very good. Provenance: Stonyhurst College (19th century book stamp).

FIRST EDITION, ANNOUNCING BUDAN'S INDEPENDENT DISCOVERY OF THE WHAT IS NOW KNOWN AS THE RULE OF BUDAN AND FOURIER. An important rule for computation, it gives necessary conditions for a polynomial equation to have n real roots between two given real numbers. "The need for such a rule as his was suggested to Budan by Lagrange's *Traité de la résolution des équations numériques* (1767) ... Budan's goal was to solve Lagrange's problem—between which real numbers do real roots lie?—purely by means of elementary arithmetic. Accordingly, the chief concern of Budan's *Nouvelle méthode* was to give the reader a mechanical process for calculating the coefficients of the transformed equation in $(x - p)$. He did not appeal to the theory of finite differences or to the calculus for these coefficients, preferring to give them 'by means of simple additions and subtractions' ... Budan's rule remains the most convenient for computation" (DSB).

\$1,000 - 1,500



222

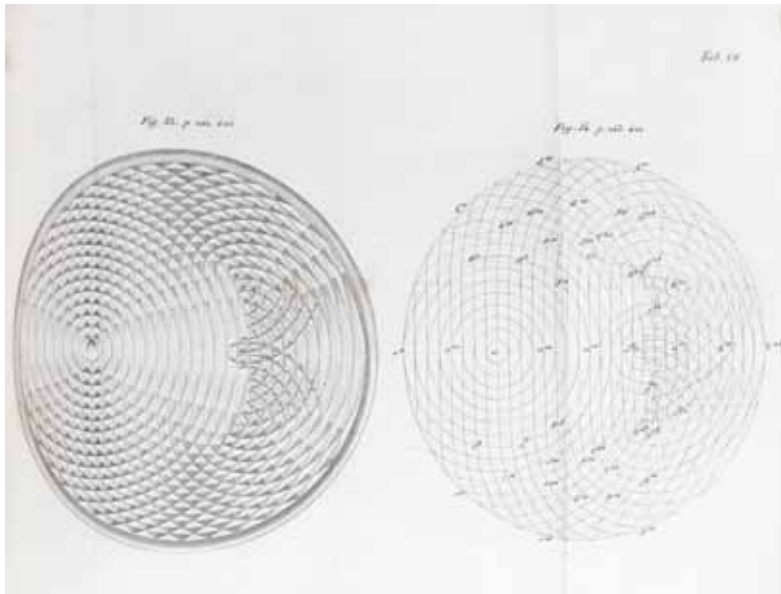
222

GAUSS, KARL FRIEDRICH. 1777-1855.

Recherches Arithmétiques. Paris: Courcier, 1807. 4to (258 x 195 mm). xx, [ii], 502 pp, complete with half-title and errata leaf. Quarter vellum over speckled boards. Text browned, some scattered foxing, wormhole running through first 11 pp. Provenance: Mario Pascal (book stamp).

FIRST EDITION IN FRENCH and the first translation of Gauss' most important work, the *Disquisitiones arithmeticae*, which defined the substance and methods of number theory and contained the first proof of the reciprocity law for quadratic residues. Dibner 114; Horblit 38; Norman 878; PMM 257.

\$1,200 - 1,800



223

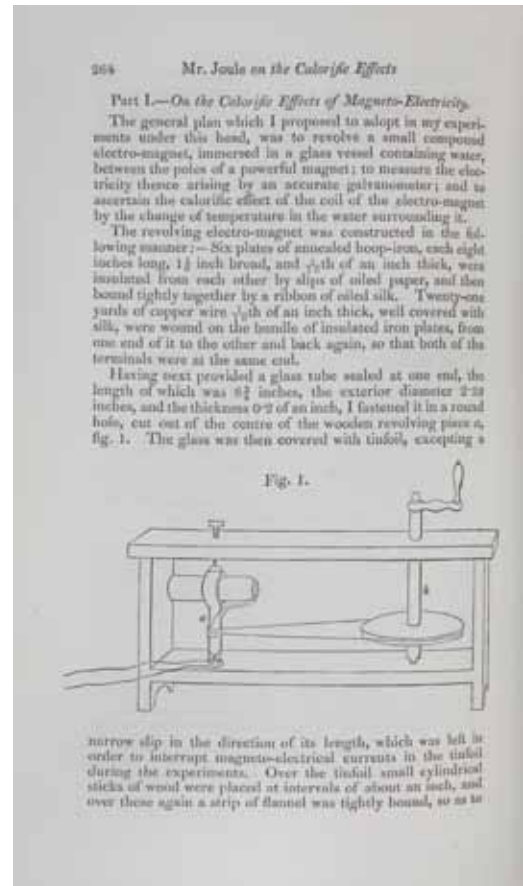
223

WEBER, ERNST HEINRICH & WILHELM EDUARD WEBER.

WEBER, ERNST HEINRICH & WILHELM EDUARD WEBER. *Wellenlehre auf Experimente gegründet...* Leipzig: Gerhard Fleischer, 1825. 8vo (209 x 130 mm). xxviii, 574, [2] pp. With 18 folding engraved plates and 2 printed folding tables. Contemporary half speckled sheep and marbled boards. Binding a bit rubbed, front hinge tender, some foxing & browning.

FIRST EDITION. The Weber brothers' *Wellenlehre*, containing experimental investigations of water and sound waves, was the first work to apply hydrodynamics to the circulation of the blood. In 1827 Ernst Weber, assisted again by his brother Wilhelm, described how the arteries' elasticity transforms the pulsing motion of the blood in the large vessels to a smooth motion in the smaller ones. In 1834, with his brother Eduard (1806-1871), Ernst became the first to measure the velocity of the pulse wave, which he showed to be much faster than the flow of the blood. Ernst Weber's work laid the base for the exact analysis of fluid motion in elastic tubes. Garrison-Morton 766; Norman 2190.

\$800 - 1,200



224

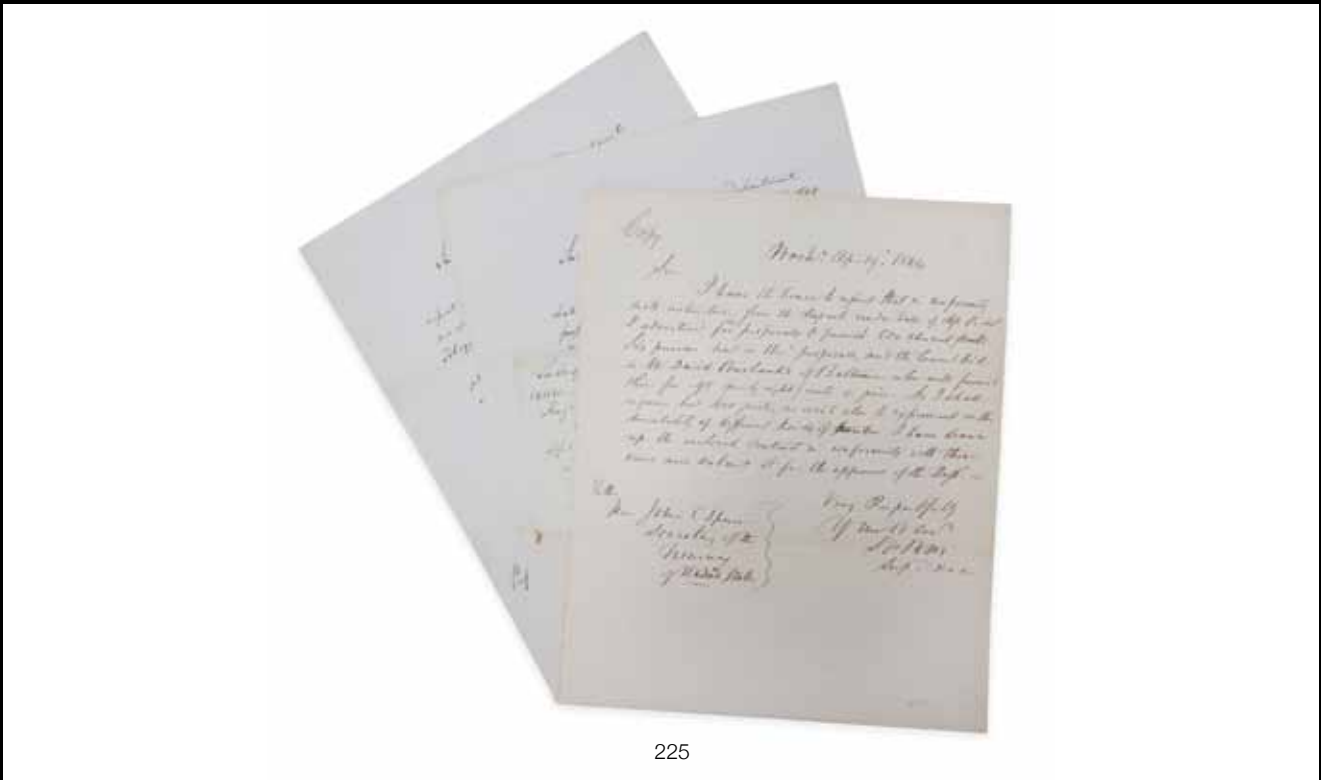
224

JOULE, JAMES PRESCOTT. 1818-1889.

"On the calorific effects of magneto-electricity, and on the mechanical value of heat." In: *London, Edinburgh and Dublin Philosophical Magazine and Journal of Science*, 3rd series, vol 23, pp 263-276, 347-355, 435-455. London: Richard and John E. Taylor, July-December 1843.

Whole volume: 8vo (215 x 133 mm). viii, 552 pp. Engraved frontispiece, text illustrations. Contemporary half calf and marbled boards, lightly rubbed, spine somewhat soiled. First and last few leaves foxed, otherwise very good. Minor foxing but very good.

FIRST EDITION, JOURNAL ISSUE of the "experimental proof of the mechanical equivalent of heat for physical phenomena" (PMM p 196). Joule demonstrated that the conversion of heat into force, and vice versa, takes place at a fixed rate. This discovery led to two conclusions: first, that heat is a form of energy; and second, that within a given system, the sum total of energy is both constant and convertible. Joule's work, along with that of Mayer and Helmholtz, was fundamental to the establishment of the principle of the conservation of energy. Dibner 158; Norman 1179; *Printing & The Mind of Man* 323. **\$5,000 - 7,000**



225

225

MORSE. TELEGRAPH DOCUMENTS.

MORSE, SAMUEL F.B. 1791-1872. Group of documents relating to Morse's construction of the first electromagnetic telegraph line, comprising:

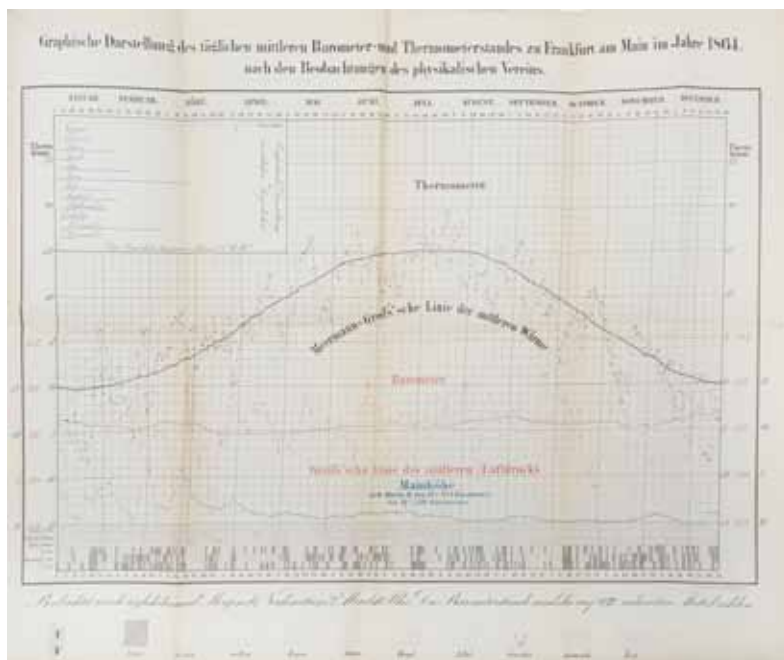
1. Autograph Letter Initialed ("SFMB"), 1 p, 4to, Washington, April 19, 1844, submitting a contract for 400 telegraph posts to the secretary of the treasury, docketed and marked "copy" in Morse's hand.
2. 2 Letters Signed ("J.C. Spencer"), each 1 p, 4to (with integral blanks), Treasury Department, Washington DC, April 8th, 1844, approving Morse's proposals to obtain chestnut for posts and to draw wire from pipe; and April 22nd 1844, approving Morse's choice of David Burbank as contractor for the telegraph posts. Both letters docketed in Morse's hand.
3. Autograph Document Signed ("David Burbank"), 1 p, 8vo, Baltimore, October 11th, 1844, documenting the sale of old lead pipe to Morse.

On March 3, 1843, nearly twelve years after Morse first conceived the idea for his electric telegraph, Congress approved a bill appropriating \$30,000 for the construction of a test telegraph line between Washington, DC, and Baltimore. The telegraph appropriation was administered by Treasury Secretary John C. Spencer, with Morse, as the newly appointed Superintendent of United States Telegraphs, acting as general contractor. Construction of the line began later that year. Morse's original plan had called for laying the telegraph wires underground in lead pipes, in accordance with a method proposed

by the British engineer Charles Wheatstone, a co-inventor of the telegraph. However, after spending a large portion of his budget on wire and lead pipe, Morse found that the underground method would not work: the wires were not properly insulated, and had a tendency to ground out. At this low point in the project, Morse's partner Alfred Vail read in a British journal of an alternative method devised by Wheatstone, that of stringing the wire above ground on poles. Vail persuaded Morse to adopt this plan, and Morse began ordering poles in February 1844. The new method proved to be quite satisfactory: construction of the overhead lines was completed in May, and on May 24, 1844, Morse telegraphed his famous message: "What hath God wrought!" The present letters were exchanged 6½ weeks prior to the telegraph's completion. Morse's letter reads in full: "*I have the honor to report that in conformity with instruction from the Depart. under date of Apr. 8 inst. I advertised for proposals to furnish 500 chestnut [sic] posts. Six persons sent in their proposals, and the lowest bid is Mr. David Burbank's of Baltimore who will furnish them for .98 (ninety-eight) cents a piece. As I shall require but 400 posts, [and] wish also to experiment on the durability of different kinds of timber I have drawn up the enclosed contract in conformity with these views and submit it for the approval of the Dept.*"

Origins of Cyberspace 178.

\$10,000 - 15,000



226

THE TRUE INVENTOR OF THE TELEPHONE?

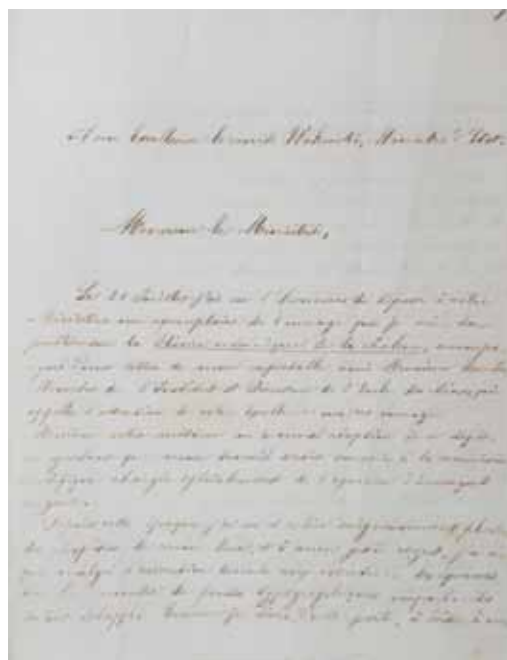
226

REIS, JOHANN PHILIPP. 1834-1874.

“Ueber Telephonie durch den galvanischen Strom” In: *Jahres-Bericht des physikalischen Vereins zu Frankfurt am Main für das Rechnungsjahr 1860-1861*. pp 57-64. Frankfurt am Main: [G. Naumann’s Druckerei], 1861. 8vo (210 x 135 mm). Whole number, 80 pp. Text illustrations, 10 folding plates/charts. Bound with the numbers for 1859-60, 1861-62, 1862-63 and 1863-64 in library buckram. Slightly toned, a little dust-soiling, but very good. Provenance: The Academy of Natural Sciences of Philadelphia (bookplate & library stamps).

FIRST EDITION of Reis’s first printed account of his electronic sound transmitting device. Reis, who some (including his biographer) consider to be the true inventor of the telephone, was a German schoolteacher and physicist. He began experimenting with the electrical transmission of sound in the late 1850s, and by 1861 had designed several transmitters and receivers. Reis’s telephone transmitter worked by alternatively making and breaking connection with a battery, while his receiver was designed to operate on the principle of magnetostriction. Between 1858 and 1863 Reis constructed three different models of his telephone, the third and best known of which was demonstrated in scientific societies throughout Europe and America. One of those who saw the machine was Alexander Graham Bell, who was shown Reis’s telephone at the Smithsonian Institution in March 1875, (Bell’s own telephone, constructed on different principles, was patented in 1876). Unlike Bell, Reis had no interest in profiting from his telephone, freely giving out information about it to anyone who asked, and selling models of it at a reasonable price. It is very likely that Reis would have continued his work in telephony, had he not died shortly after his fortieth birthday. Brief notices of two of Reis’s further papers on telephony can be found in the number for 1861-62, p 13, and 1862-63, p 35.

\$1,500 - 2,500



227

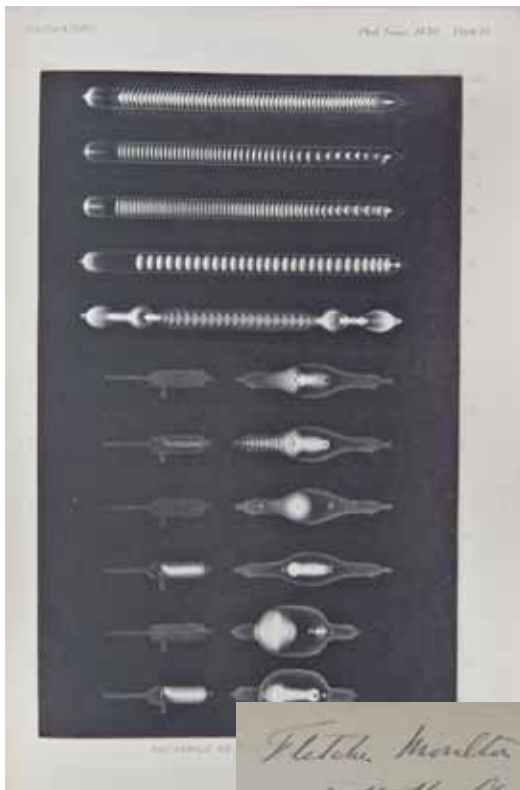
227

HIRN, GUSTAVE ADOLFE. 1815-1890.

Copy-press book of approximately 600 Autograph Letters Signed and Letters Signed, written from Colmar, April 13, 1862 to July 9, 1865, housed in 4to album (280 x 222 mm). Original cloth, suede backstrip with cloth label, paper label to front cover, worn at edges, corners & spine. One or two small tears, otherwise very good internally.

Hirn, a civil engineer, was one of the first to investigate the phenomena of the steam engine, and he made several fundamental contributions to mechanics and thermodynamics, including his *Exposition analytique et expérimentale de la théorie mécanique de la chaleur* (1862), one of the first systematic treatises on thermodynamics. The present album contains copies of approx. 600 letters that Hirn wrote between 1862 and 1865, shortly after the publication of his *Exposition analytique* (the copy-press method of letter duplication involved pressing a freshly written letter against special absorbent paper; only one such copy could be made, so this album is unique). The album almost certainly represents the most complete manuscript archive of Hirn’s scientific thought and activity during this time. Among the letters are several written to François Napoléon Marie Moigno (1804-84), the eminent Jesuit mathematician and physicist; Charles X. Thomas, inventor of the first commercially successful calculator; Other letters in the album relate to Hirn’s interests in climatology and meteorology, or to his business activities as director of the mechanical department of the mill he managed jointly with his brother. It was his connection with this mill that first led Hirn to investigate the mechanics of heat. Aspray et al. *Computing before Computers* p 50.

\$3,000 - 5,000



228

228

CROOKES, WILLIAM. 1832-1919.

Four offprints:

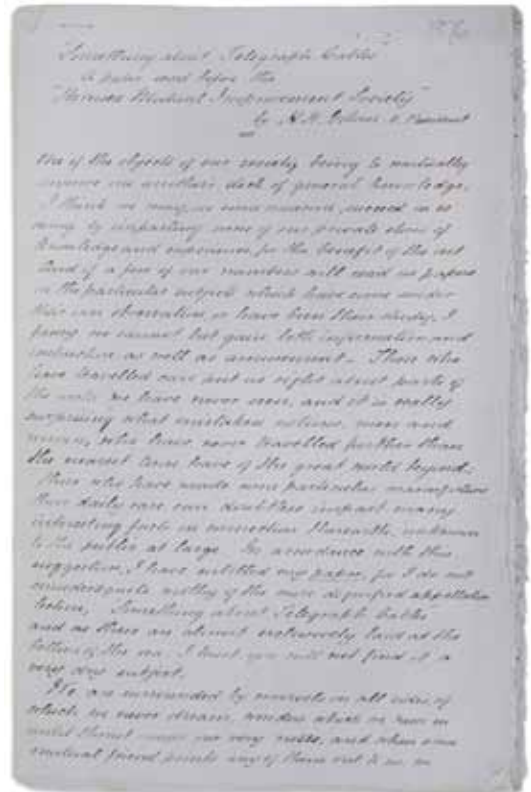
1. "On the Repulsion Resulting from Radiation. Parts III-IV." Offprint from *Philosophical Transactions of the Royal Society of London*, 166 (1876). [325]-376 pp. 2 plates, text illustrations.
2. "The Bakerian lecture. On the illumination of lines of molecular pressure and the trajectory of molecules." Offprint from *Phil. Trans.*, 170 (1879). [2] 135-64 pp. Chromolithographed plate, text diagrams.
3. "Contributions to molecular physics in high vacua." Offprint from *Phil. Trans.*, 170 (1879). [2] 641-62 pp. Text diagrams. Crookes' presentation inscription to John Fletcher Moulton on fragment of front wrapper.
4. "On the viscosity of gases and high exhaustions. With a note on the reduction of Mr. Crookes's experiments ... by Professor G[eorge] G[abriel] Stokes." Offprint from *Phil. Trans.*, (1881). [2] 387-446 pp. 4 plates (3 folding), text diagrams. Crookes' presentation inscription to Moulton on fragment of front wrapper.

Together 4 offprints bound in a single volume with two additional works (see below). 4to (296 x 225 mm). Contemporary half-morocco. Slight marginal browning, binding rubbed, some wear to corners and extremities. *Provenance*: John Fletcher Moulton (bookplate).

FIRST EDITIONS. The first of the offprints listed above deals with Crookes' earlier discovery of what he originally believed to be "light pressure" within a vacuum balance, as predicted by the corpuscular theory of light and Maxwell's electromagnetic theory. This phenomenon led him to invent the familiar four-vaned "light-mill" or radiometer. The remaining three offprints are from the series of research papers that Crookes began in 1878, investigating the possibility that the dark space coating the cathode in low-pressure electrical discharges (later named "Crookes' dark space") was somehow related to the layer of molecular pressure causing movement in the radiometer.

From the library of John Fletcher Moulton (1844-1921), eminent barrister, judge and amateur scientist whose electrical researches had won him a fellowship in the Royal Society. Moulton bound the offprints together with two other scientific works, one of which he co-authored.

\$1,500 - 2,500



229

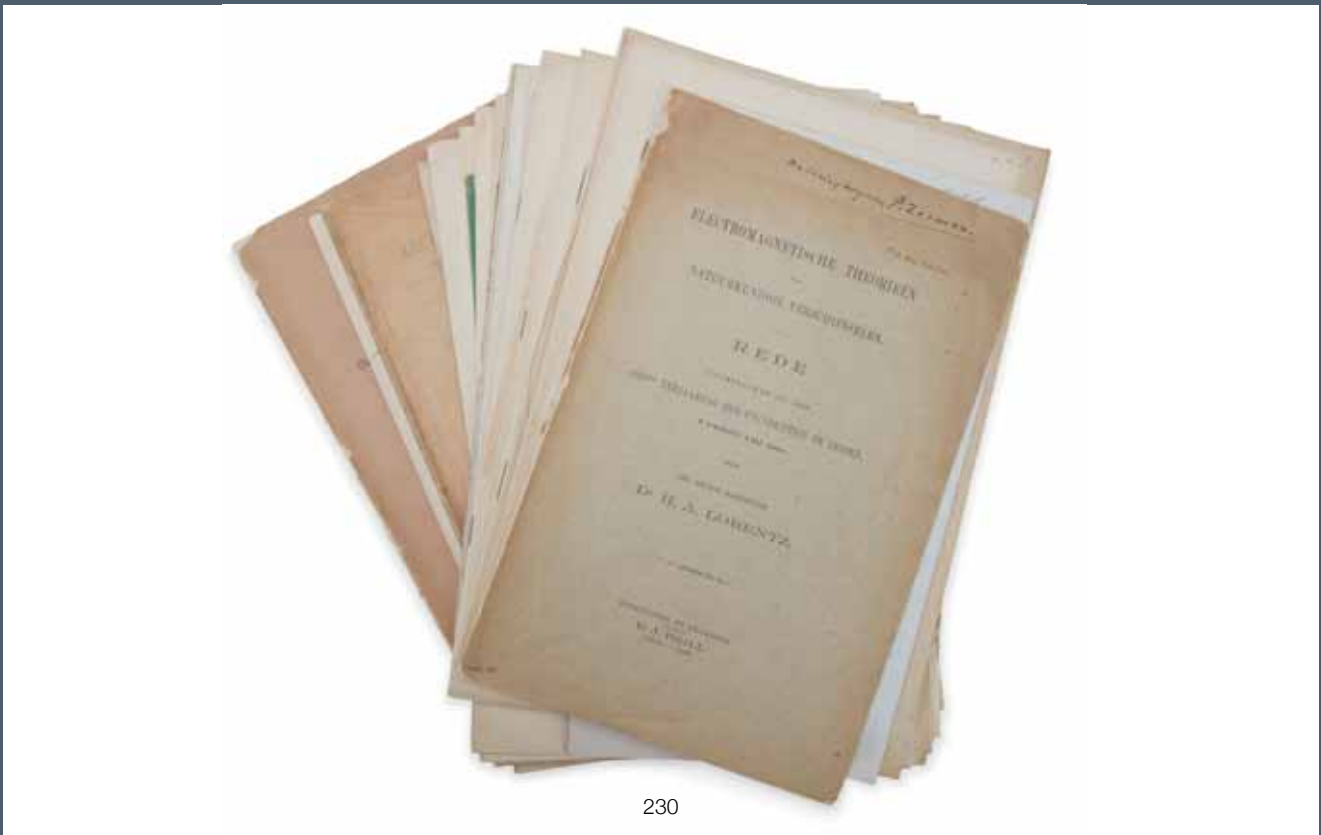
229

GIBSON, H.H.

Autograph Manuscript Signed ("H.H. Gibson. V. President"), entitled "Something about Telegraph Cables" A paper read before the 'Hornsea Mutual Improvement Society', 20 pp rectos only, with occasional notes to versos, folio, n.p., [1876], in brown ink on blue paper in a neat cursive hand. Stapled together at upper margins, right edges frayed (from being pulled out of notebook?), small faint stain touching lower edge.

Gibson was a member of the shipbuilding family that founded the firm of Edward Gibson & Son in Hull, Yorkshire, and was vice president of the Mutual Improvement Society in Hornsea. His manuscript, the text of a lecture he delivered before the Society in 1876, includes his firsthand account of the laying of the 1873 Atlantic cable between Valentia, Ireland and Heart's Content, Newfoundland, undertaken by the Anglo American Telegraph Company seven years after the first successful Atlantic cable was laid in 1866. The 1873 Atlantic cable, like the 1866 and unsuccessful 1865 cables, was laid by the *Great Eastern*, accompanied on this trip by the companion vessels *Hibernia*, *Edinburgh* and *Robert Lowe*. Gibson's manuscript describes the preparations made prior to departure, the features of the *Great Eastern*, the various tasks involved in cable laying (among them being numerous "calculations ... made every few minutes" and tabulated every half hour), the crossing, and the ship's arrival at Heart's Content. Evidence in the manuscript suggests that Gibson was heavily involved in submarine cable laying; e.g. in the raising of the Malta-Alexandria cable (laid in 1868).

\$1,000 - 1,500



230

230

LORENTZ, HENDRIK ANTOON. 1853-1928.

Collection of 79 offprints and extracts. 1880-1926. Various sizes. Offprints in original wrappers, extracts unbound. Housed in 3 cloth clamshells.

Provenance: From the library of Peter Zeeman, who shared the 1902 Nobel prize for Physics with Lorentz (ownerships inscriptions and identifying notes IN ZEEMAN'S HAND?; numerous presentation copies IN LORENTZ'S HAND? and some with Lorentz' brief inscriptions).

FIRST EDITIONS/FIRST SEPARATE EDITIONS. Lorentz was appointed chair of theoretical physics at the University of Leiden at the age of 25, and remained there for almost his entire professional career; Pieter Zeeman was one of his students. The Leiden chair of theoretical physics was the first of its kind in Europe and Lorentz enjoyed a free rein for his incredibly far-ranging and productive research. "It may well be said that Lorentz was regarded by all theoretical physicists as the world's leading spirit, who completed what was left unfinished by his predecessors and prepared the ground for the fruitful reception of the new ideas based on quantum theory" (Nobel Lectures). Because of the historic connection between Lorentz and Zeeman, this collection of materials remains one of the greatest sets of Lorentz's works. A complete listing of items is available upon request.

\$3,000 - 5,000

231

GIBBS, JOSIAH WILLARD.

On Multiple Algebra. An Address Before the Section of Mathematics and Astronomy of the American Association for the Advancement of Science at the Buffalo Meeting, August 1886. Massachusetts: Salem Press, 1886.

8vo (245 x 156 mm). 32 pp. Original printed wrappers. Extremities with some chipping, lower right corner of front wrapper bent and professionally repaired; closed tear to lower portion of spine, lower corners chipped off of back wrapper; internally fine and unopened.

FIRST EDITION of this important offprint, of which only 276 copies were printed. It contains Gibbs' address given while Vice President of the AAAS. "The great merit and power of Grassman's system, as set forth in Gibbs' address, lies in its generality and inclusiveness. It is in the recognition of different kinds of products that Grassman's system differs most radically from the multiple algebras of the others, such as those of Hamilton and Pierce. And it was in connection with this concept of a plurality of multiplications that Gibbs founded his principal contributions to the subject. The development of the dyadic analysis undoubtedly forms Gibbs' most significant contribution to multiple algebra. His recognition of the key position of the indeterminate product in the Grassmanian system and its relation to the theory of matrices as well as his demonstration that both the algebraic and the external of combinatorial products could be derived from the indeterminate product, was an original contribution of great value" (Wheeler, *Josiah Willard Gibbs*, 113).

\$600 - 900



233

232

STRUTT, JOHN WILLIAM, THIRD BARON OF RAYLEIGH. 1842-1919.

Electrical Measurements. Terling Place, Witham, Essex: [for the author], 1886. 4to (292 x 228 mm). Various pagination. Original cloth, worn at spine and corners, spine faded. Light browning, occasional soiling, but very good.

Provenance: Pieter Zeeman (ownership inscription indicating that the book was a gift from the author, and remains of his book-label).

FIRST COLLECTED EDITION of 23 papers written between 1881 and 1885 in connection with Strutt's research program involving the redetermination of the ohm, ampere and volt. The papers consist of both of original offprints from the *Philosophical Transactions* and of revised reprints. The work is rare, with only four copies in North American libraries "Work of this sort had already been started by Maxwell for the British Association for the Advancement of Science. Rayleigh's continuation and development demanded the construction of more precise equipment than Maxwell's, as well as meticulous care and patience in its use. When the investigation was completed in 1884, the results stood the test of time remarkably well" (DSB). This copy was presented by Strutt's son Robert to Nobel Laureate Pieter Zeeman (1865-1943), discoverer of the Zeeman effect.

\$800 - 1,200

233

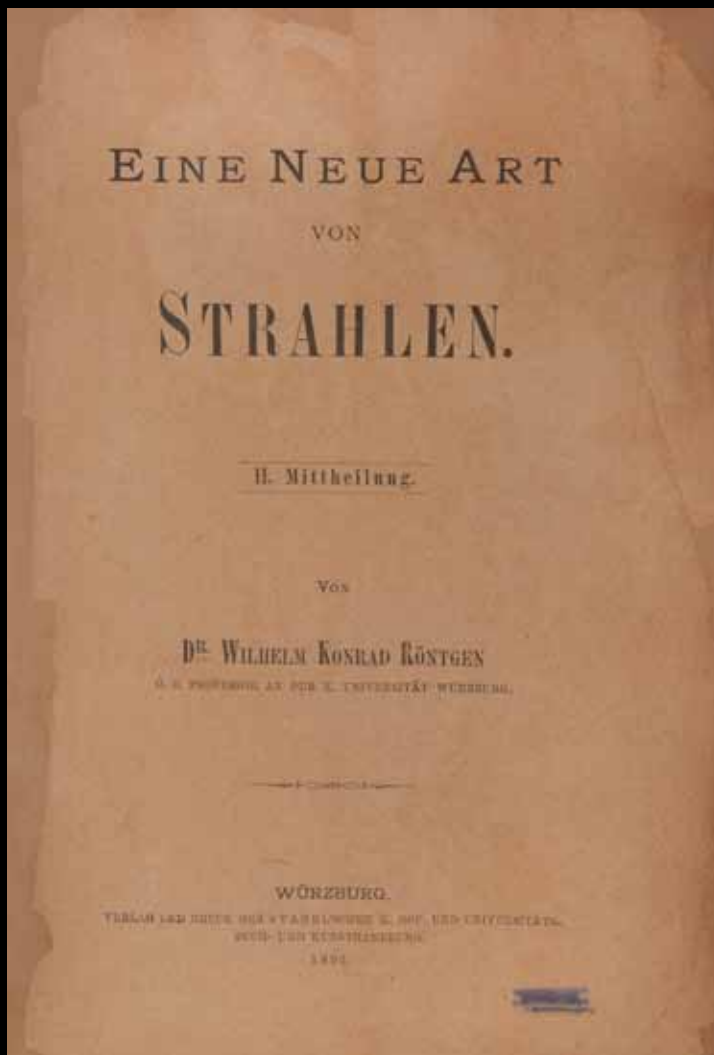
MAGIC LANTERN.

Pettibone New Improved Sciopticon. Cincinnati, Ohio: Pettibone Mfg. Co., c. 1890.

2 part metal magic lantern projector, round metal body with original oil burner approx. 280 x 255 mm, metal and glass lens portion approx. 150 x 127 mm. The two joined together by 10 gold-colored foliate metal legs, to two metal arms with gold-colored acorn end-caps. The whole mounted onto a 510 x 305 mm mahogany base. With original aluminum revolving slide disc with 10 hand-colored glass slides each approx. 75 mm in diameter, depicting a variety of scenes, including the great Pyramids of Egypt, a scholar in his study, a jungle scene with dragons and snakes, and a tropical scene. In the original wood and iron case, case with original manufacturer's operation instructions pasted to inside lid. 2 slides cracked, case worn.

A very attractive example of the popular Pettibone magic lantern projector. Magic lanterns were an early form of the motion picture projector, and were originally developed in the 17th century. They were widely used by traveling showmen known as "Savoyards" who traveled around giving lantern shows projected onto white backdrops, and were also popular parts of magic acts.

\$2,000 - 3,000



234

234

RÖNTGEN, WILHELM KONRAD. 1845-1923.

“Ueber eine neue Art von Strahlen. (Vorläufige Mittheilung).”

WITH: “Eine neue Art von Strahlen. II. Mittheilung.” Offprints from: *Sitzungsberichten der Würzburger Physik-med. Gesellschaft*, no 9, 132-41 & nos 1-2, 11-19. Würzburg: Stahl, 1895; 1896.

Two volumes. 8vo (229 x 151 mm & 218 x 152 mm). 10; 9, [3] pp.

Both in original wrappers. First volume re-backed, paper repair to front wrapper, corners chipped, wrappers lightly soiled with a stain touching front wrapper and first leaf; volume 2 re-backed, paper repairs to both wrappers, text slightly browned and brittle. Half morocco clamshell. *Provenance*: Frida Maier (ownership inscription to volume 1).

FIRST SEPARATE EDITION OF RÖNTGEN'S FIRST ORIGINAL COMMUNICATION OF THE DISCOVERY OF THE X-RAY WITH THE FIRST AND ONLY SEPARATE EDITION OF HIS FOLLOW UP COMMUNICATION. The most important contribution to medical diagnosis in a century, and the key to modern physics, Röntgen's paper was in immediate demand; there were five separate printings, in six issues, in the space of two months. The follow up announcement, published a year later, introduces a scale for measuring X-ray intensity and an improved tube. These original papers are extremely difficult to obtain today. Cushing R 193-94; Dibner 162; [Le Fanu] *Notable medical books* 239; Garrison-Morton 2683; Gernsheim 517-18; Horblit 90; Klickstein *Roentgen* pp 24-30 & entries III.2 & .10; Osler 1700; PMM 380; Waller 8078 & 8083.

\$7,000 - 10,000



235

235

X-RAY PHOTOGRAPHS.

GREEN, JAMES & J.H. GARDINER. Three sciagraphs on cabinet cards from the series *British Batrachians and Reptiles*, London, c.1896, being “No. 7. *Rana Esculenta*”; “No. 9. *Lacerta Vivipara*”; AND “No. 10. *Lacerta Agilis*.” Each card with printed paper label, versos with printed publisher's labels.

An excellent group of remarkably detailed x-ray photographs, or sciagraphs, executed using Röntgen's revolutionary discovery of the x-ray. The photos depict what are surely the first x-ray views of two lizards and one frog. “Messrs. James Green and J.H. Gardiner exhibited a series of sciagraphs of British Batrachians and Reptiles in which the details of the skeleton were very sharply defined, and its relation to the external outline well shown. These sciagraphs ... were taken with a Crookes's tube of the ordinary focus pattern actuated by a powerful induction-coil giving 8-in. sparks and the prints in every case were made from untouched negatives” (*Proceedings of the Linnean Society of London*, Session 1896-97, November 5th, 1896, p 4).

\$800 - 1,200



236

236

[BECQUEREL, HENRI. 1852-1908.]

Collection of 55 offprints, journal numbers, etc. by various authors. Various places: 1898-1915. Various sizes, 8vo to 4to. Original wrappers or without wrappers as issued. Including: Doremus, Charles A. "A Surficial Burn Produced by an Unknown Radiation." Offprint from the *Journal of American Chemical Society*, Vol XXXVII, No 3, March 1915. Presentation inscription. * Beilby, G.T. "Phosphorescence Caused by the Beta and Gamma Rays of Radium," offprint from the *Proceedings of the Royal Society*, vol 74, 1905. Presentation inscription. * Adams, E.P. "The Absorption of Alpha Rays in Gases and Vapors," offprint from *Physical Review*, vol XXIV, no 1, January 1907. Presentation inscription.

Provenance: Henri Becquerel (hand-numbered labels on front or back wrappers; presentation inscriptions to some).

A collection of offprints from various authors (including 2 Nobel Prize winners) mostly on radioactivity, phosphorescence and related phenomena, from the library of Nobel laureate Henri Becquerel (1852-1908) and his descendants, many with presentation inscriptions.

List of titles available upon request.

\$800 - 1,200



237

237

VOIGT, WOLDEMAR. 1850-1919.

A group of 21 offprints. Various places: 1898-1914. Various sizes, 8vo to 4to. Original wrappers or without wrappers as issued. *Provenance:* Henri and Jean Becquerel (hand-written library labels to wrappers; ownership signatures to a few; presentation inscriptions to a few others).

FIRST SEPERATE EDITIONS. Voigt's most important research centered on the understanding of crystals, the Zeeman effect and the electron theory. His work brought "great orderliness ... to the understanding of crystals. The elastic, thermal, electric and magnetic properties of crystals were ordered in magnitudes of three types: scalar, vector, and tensor. In fact, it was Voigt who in 1898 had introduced the term 'tensor' into the vocabulary of mathematical physics" (*DSB*). In 1887 Voigt discovered the Lorentz transformations, which he published in a theoretical paper on the Doppler principle (not present here); these transformations (which Einstein developed independently of both Lorentz and Voigt) played a crucial role in Einstein's special theory of relativity.

This collection of 21 offprints, representing about one-tenth of the papers Voigt published during his career, is from the library of Nobel laureate Henri Becquerel (1852-1908) and his son Jean (1878-1953), both of whom performed important research on crystals, with the latter's scientific career being primarily devoted to examination of the effect of a magnetic field on a crystal's optical properties. Several of the papers in this collection cite the work of both Henri and Jean. Four of the offprints bear Voigt's presentation inscriptions to either Henri or Jean; see in particular nos. 14 and 15, two copies of the same paper inscribed to father and son respectively. Five of the papers in this collection are cited in the *DSB*'s list of Voigt's major works. *Pais Subtle is the Lord* pp 121-22.

Detailed list of titles available upon request.

\$1,200 - 1,800

238

PLANCK, MAX. 1858-1947.

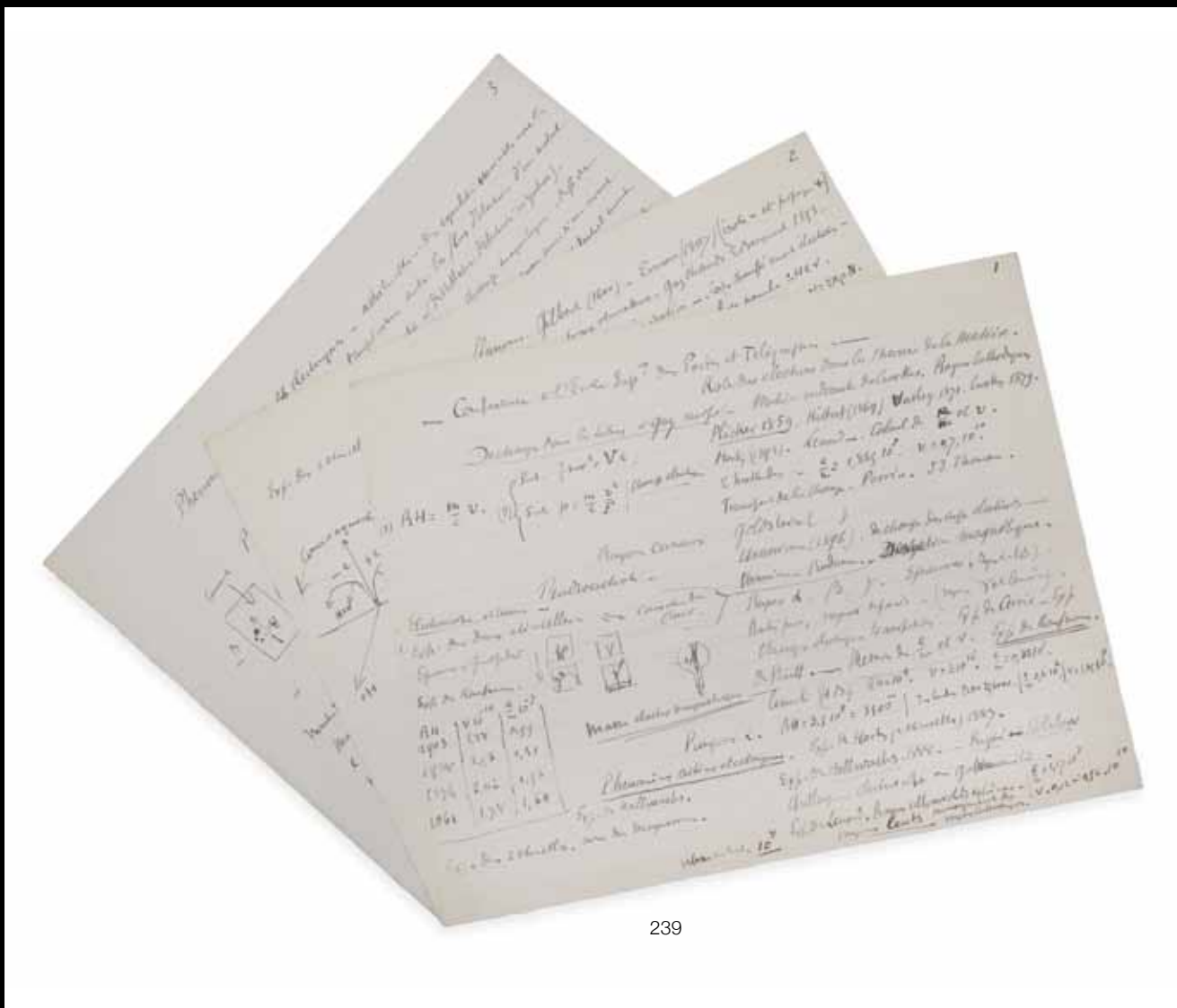
8 papers published in *Annalen der Physik*. Leipzig: Johann Ambrosius Barth, 1900-1916.

6 volumes. 8vo. Library cloth. Overall very good with library markings, some wear to bindings, spine of one volume starting.

Papers include: "Ueber irreversible Strahlungsvorgänge." Band 6 (1900), pp 818-831. * "Bemerkungen zu einer Abhandlung über Thermodynamik des Hrn. K. Wesendonck." Band 1 (1900), pp 621-624. * "Ueber die von einem elliptisch schwingenden." Band 9, pp 619-641.

Complete listing available upon request.

\$700 - 900



239

ILLUSTRATED SCIENTIFIC MANUSCRIPT ON ELECTRONS AND THE THEORY OF MATTER

239

BECQUEREL, HENRI. 1852-1908.

Autograph Manuscript with illustrations, titled "Role des electrons dans la théorie de la matière," 3 pp rectos only, folio half-sheets, [Paris, c. 1900], in gray ink on lined paper, each sheet with a diagram by Becquerel, the first entitled "Radioactivité," the second "Phénomène de Zeeman," and the third "Phénomène de Hall." Vertical creases where previously folded, otherwise very good.

Becquerel's extensive manuscript notes for his lecture on the role of electrons in theories of matter, delivered in 1900 or later at a conference held at the École Supérieure des Postes et Télégraphes. Becquerel, the son and grandson of renowned French physicists, is best known for his discovery of spontaneous radioactivity in 1896, which opened the way to the development of nuclear physics. In the years following, Becquerel continued his researches in radioactivity, identifying alpha rays and electrons in the radiations of radium (1899-1900), publishing the first evidence of a radioactive transformation (1901), and issuing a classic account of his radioactivity investigations in his *Recherches sur une propriété nouvelle de la matière* (1903). In 1903, Becquerel shared the Nobel Prize in physics with Marie and Pierre Curie, whose continuing researches in radioactivity had validated and shown the importance of his pioneering investigations. The lecture cites the work of many other physicists active in this field, including the Curies; the discoverer of radio waves Heinrich Hertz; winner of the 1904 Nobel Prize for his discovery of argon John William Strutt third Baron Rayleigh; and Pieter Zeeman, recipient of a share of the 1903 Nobel Prize for his discovery of the "Zeeman effect," to name but a few. Magill *The Nobel Prize Winners: Physics* pp 55-63.

\$7,000 - 10,000



241

240

LEHMANN, OTTO. 1855-1922.

A group of 29 offprints, pamphlets, etc. Various places: 1901-13. Various sizes, 8vo to 4to. Original wrappers or without wrappers as issued.

Provenance: Henri Becquerel (hand-numbered labels on front or back wrappers of 21 items); Theodore von Karman (catalog stamp and docketing to wrappers of 8 items).

FIRST OR FIRST SEPERATE EDITIONS of several works by the German physicist Lehmann, the discoverer of liquid crystals. Lehmann made his discovery in 1888-89, after the Austrian botanist Friedrich Reinitzer sent him some cholesteric esters which showed two distinct melting points about 30 degrees apart. Lehmann determined "that the cloudy intermediate phase [between the two melting points] contained areas that possessed a molecular structure similar to that of solid crystals, and he called this phase 'liquid crystal' ... Lehmann's work stimulated much research in this area as well as studies to find technical applications of the phenomenon, and these efforts are still continuing" (*DSB*). Lehmann published two important books on liquid crystals (1904 & 1911), as well as about 120 papers in scientific journals; the present collection represents about one-fifth of his output of articles.

Twenty-one of the items in this collection are from the library of Nobel laureate Henri Becquerel (1852-1908) and his family. Becquerel and his son Jean both performed important research on crystals, with the latter's scientific career being primarily devoted to examination of the effect of a magnetic field on a crystal's optical properties.

The remainder of this collection's offprints are from the library of Hungarian physicist Theodore von Karman (1881-1963), who in 1912 co-authored with Max Born the theory of crystal lattices.

Detailed list of titles available upon request.

\$1,200 - 1,800

241

STARK, JOHANNES. 1874-1957.

A collection of 15 offprints and 1 spectrogram. Various places: 1901-8. Various sizes, 8vo to 4to. Most with original printed wrappers. Overall very good condition.

Provenance: Henri Becquerel (labels on front wrappers or first leaves of all but one offprint).

FIRST OR FIRST SEPERATE EDITIONS. A collection of papers from an especially productive period in Stark's career, during which he discovered the Doppler effect in canal rays (1905), a phenomenon he took as confirmation of Planck's quantum theory. Stark received the Nobel Prize in 1919 for this achievement and for his discovery of the splitting of spectral lines in an electric field (1913)—the "Stark effect," which was later incorporated into both quantum and wave mechanics. He was one of the most effective early advocates of quantum theory. Among the offprints in the collection are papers on electrical conduction in gases (Stark's main field of interest), spectroscopy and the Doppler effect in canal rays of both hydrogen and oxygen. A highlight of the present collection is an original hydrogen spectrogram, found laid in to the offprint "Über polarisierte Lichtemission bewegter Atomionen senkrecht zur Translationsrichtung" (1906) present here, labeled by Stark in ink with symbols denoting groups of spectral lines.

The present collection comes from the library of Nobel laureate Henri Becquerel (1852-1908), who may have requested the spectrogram from Stark. At the top of the spectrogram is Becquerel's note "J. Stark Phys. Zeitsch. 7 355-361 1906," a reference to Stark's 1906 paper, "Zur Kenntnis der Bandenspektren" (not included here). *DSB*; *Twentieth Century Physics* I, pp 148, 154. Mehra & Rechenberg *History of the Development of Quantum Theory* I, pp 99-105.

Complete list of titles available upon request.

\$2,500 - 3,000



242

242

PLANCK, MAX. 1858-1947.

“Ueber das Gesetz der Energieverteilung im Normalspectrum.” WITH: “Ueber die Elementarquanten der Materie und der Elektrizität.” AND WITH: EINSTEIN, ALBERT. “Folgerungen aus den Capillaritätserscheinungen.” All in *Annalen der Physik*. Vierte Folge, Band 4, pp 553-568; 564-566; 513-523, respectively. Leipzig: Johann Ambrosius Barth, 1901. 8vo. Whole volume: [2], viii, 856 pp. Library cloth. Light browning to leaves, library stamps and withdrawal markings.

FIRST EDITION of all three papers. “Ueber das Gesetz ...” is a foundational text of quantum physics, one of two papers Planck wrote on “The Law and Distribution of Energy in the Normal Spectrum,” in which he “explained that his resonators began to react only when a definite unit of energy was available, and that acceleration occurred in exact multiples of that unit: not continuously, but in a series of discrete gushes. This unit he called a *quantum* of energy. Here was a revolutionary theory. It contradicted the mechanics of Newton and the electromagnetics of Faraday and Maxwell. Moreover it challenged the notion of the continuity of nature” (PMM). “Folgerungen aus den Capillaritätserscheinungen” represents Einstein’s first published paper.

Printing and the Mind of Man 391(b) (“Ueber das Gesetz”).

\$1,800 - 2,200



243

243

EINSTEIN, ALBERT. 1879-1955.

23 articles authored or co-authored by Einstein, published in *Annalen der Physik*. Vierte Folge. Leipzig: Johann Ambrosius Barth, 1902-16. 11 volumes. 8vo. Library cloth. Overall very good with library markings, mild wear to bindings, heavier to a few.

Articles include: “Ueber die thermodynamische Theorie der Potentialdifferenz zwischen.” Band 8 (1902), pp 798-814. * “Eine Theorie der Grundlagen der Thermodynamik.” Band 11 (1903), pp 170-187. * “Zur allgemeinen molekularen Theorie der Waerme” Band 14 (1904) pp 354-362.

Complete list available upon request.

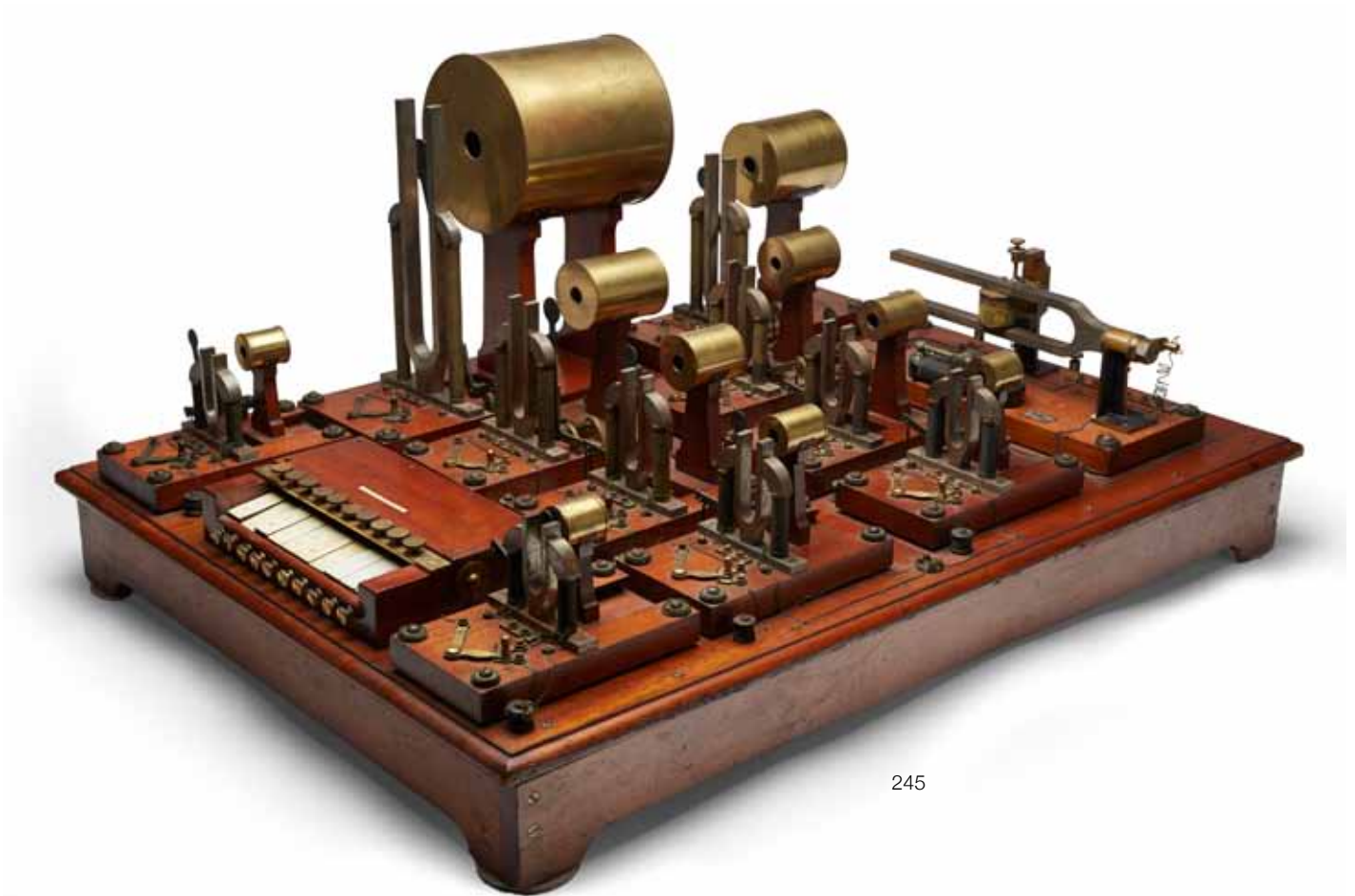
\$1,500 - 2,000

244

LANGEVIN, PAUL. 1872-1946.

Thèses présentées à la Faculté des Sciences de l'Université de Paris ... Recherches sur les gaz ionisés ... Soutenues le [blank] décembre 1902. Paris: Gauthier-Villars, 1902. 8vo (231 x 136 mm). [vi], 207, [1] pp. Diagrams in text. Full maroon morocco presentation binding, spine lettered in gilt, raised bands, a.e.g., silk endpapers, inner gilt dentelles. Cloth slipcase. Provenance: Sir Joseph John Thomson (gilt initials to f.f.e.p.; presentation inscription).

A PRESENTATION COPY, INSCRIBED TO NOBEL LAUREATE SIR JOSEPH JOHN THOMSON. Langevin’s doctoral thesis on the ionization of gases, based on work done under Thomson’s direction at the Cavendish Laboratory in Cambridge. Langevin went on to become France’s leading practitioner and expositor of mathematical physics. The thesis is dedicated to Thomson (1856-1940), who was awarded the Nobel prize in 1906 for his discovery of the electron; Langevin warmly inscribes the copy on the dedication leaf: “En souvenir de l’année délicate que j’ai passé à Cambridge et de l’inoubliable hospitalité que j’y ai reçue, j’offre au Professeur J. J. Thomson cette modeste contribution à l’oeuvre qu’il a, plus que tout autre, contribué à édifier. Bien affectueusement, P. Langevin.” The thesis was published by Gauthier-Villars, who published Marie Curie’s thesis on radioactivity a year later. \$4,000 - 6,000



245

THE EARLIEST ELECTRIC KEYBOARD

245^Y

HELMHOLTZ SOUND SYNTHESIZER.

HELMHOLTZ, HERMANN VON. 1821-1894. Chemnitz: Max Kohl, c.1905.

A wood and brass sound synthesizer built by Max Kohl after the design by Helmholtz. 39½ x 29 inch mahogany base with turned feet, fitted with 11 small wooden platforms, each marked with a number and the words "aus" [from] and "ein" [to], 10 of the platforms fitted with tuning forks and accompanying brass Helmholtz resonators, the tallest measuring 18½ high, each pair ranging in size according to their graduating frequencies, 11th platform fitted with 1 large horizontal master tuning fork. All 11 platforms connected together with wire filaments, which are in turn attached to a keyboard fitted with 10 African ivory keys, each numbered and marked with the tones ut [Do, or C] to 4 octaves, mi [E] to 3 octaves, and sol [G] to 3 octaves. Each key is paired with 2 brass knobs, one each on the wooden panel above the key, and one each on the panel below. Opposite end from keyboard fitted with 2 anodes and 2 cathodes, each with accompanying brass knob.

The Helmholtz sound synthesizer was the first electric keyboard. Specimens of these are extremely rare, with only one similar but smaller apparatus located in a US institution that we know of. We have not seen another as large or finely made as this one. The synthesizer was used to combine timbres of 10 harmonics to form various vowel sounds. The system is driven by an intermittent current provided by a large horizontal master tuning fork on numbered wood base, and was operated by pressing on the various keys which sent the current to the corresponding electrically driven tuning forks. These forks, fitted with Helmholtz resonators tuned to the same frequency, would then reproduce the desired tone.

Helmholtz invented his resonator to identify the various frequencies of the pure sine wave components of complex sounds containing multiple tones, showing that the different combinations made could reproduce vowel sounds. Max Kohl of Chemnitz is perhaps one of the most famous scientific instrument makers of the late 19th and early 20th centuries. His work was distinguished by its exacting craftsmanship, and high quality materials.

\$20,000 - 30,000

[ANNALEN DER PHYSIK.]

5 volumes of *Annalen der Physik*, featuring articles by MAX VON LAUE, KARL FERDINAND BRAUN, MAX BORN, and ARNOLD SOMMERFELD. Leipzig: Johann Ambrosius Barth, 1905-15. 8vo. Library cloth. Internally clean, library markings.

Including: Laue and Knipping. "Interferenzerscheinungen bei Röntgenstrahlen In: *Annalen der Physik*." Vierte folge, band 41 (1914), pp 971-88. * Braun. "Der Hertzsche Gitterversuch im Gebiet der sichtbaren Strahlung." Band 16 (19-5), pp 1-19. * Sommerfeld. "Der Hertzsche Gitterversuch im Gebiet der sichtbaren Strahlung." Band 40 (1915) pp 721-748. * Sommerfeld. "Zur Relativitätstheorie." Band 33 (1910), pp 649-689. * Born. "Die Theorie des starren Elektrons in der Kinematik des Relativitätsprinzips." Vierte folge, band 11 (1909), pp 1-56.

\$400 - 600

EINSTEIN, ALBERT. 1879-1955.

"Eine neue Bestimmung der Moleküldimensionen" [and] "Zur Theorie der Brownschen Bewegung," in *Annalen der Physik* Vierte Folge, Band 19 (1906), pp 289-306, 371-381 respectively. Leipzig: Johann Ambrosius Barth, 1906. 8vo. Whole volume: viii, 1080 pp. Plates. Contemporary half-roan. Some pencil annotations, binding worn, a signatures starting.

EINSTEIN'S DOCTORAL THESIS. "Eine neue Bestimmung..." represents the First Edition in journal form of Einstein's doctoral thesis on molecular radii and Avogadro's number, revised for publication here. "Zur Theorie der Brownschen Bewegung" is the First Edition of Einstein's second paper on Brownian motion.

\$1,000 - 1,500

EINSTEIN, ALBERT. 1879-1955.

14 articles published in *Annalen der Physik*. Vierte Folge. Leipzig: Johann Ambrosius Barth, 1906-12. 8 volumes. 8vo. Most library cloth. Overall very good with library markings, some wear to bindings, cloth of one volume separated from backstrip.

Articles include: "Über die vom Relativitätsprinzip geforderte Trägheit der Energie." Band 23 (1907) pp 371-384. * "Zur Theorie der Lichtezeugung und Lichtabsorption." Band 20 (1906) pp 199-206. * "Das Prinzip von der Erhaltung der Schwerpunktsbewegung und die Trägheit der Energie." Band 20 (1906) pp 627-633.

Complete list available upon request.

\$800 - 1,200



246



247



248



249

249

AYRTON, HERTHA. 1854-1923.

Collection of manuscript, typescript and printed materials, consisting of the following:

1. 27-page typescript, with extensive manuscript corrections and additions, of Ayrton's lecture "Sand ripples and oscillating water" [1911?]. Creased along folds, some soiling.
2. 2-1/2 page manuscript critique, by an anonymous Royal Society referee, of Ayrton's paper "On some new facts connected with the motion of oscillating water" (1911). Creased along folds, some soiling, a few tears.
3. 12-page typescript, with holograph corrections, of Ayrton's paper "Primary and residual vortices in oscillating fluids--Their connection with skin friction," left unpublished at her death. Dated "ca. 1915" in pencil on the first leaf. Creased along folds, minor soiling.
4. 2 partially filled notebooks concerning her research on fans, 1918-23. Quarter leather and quarter cloth, hinges weak.
5. *Proceedings of the Royal Society*, Series A, vol 96, no A 676 (1919), containing Ayrton's paper "On a new method of driving off poisonous gases." Orig. printed wrappers; sheet of Ayrton's manuscript notes, on United Suffragists stationery, laid in.
6. Collection of 7 mimeographed and carbon typescripts, on legal-size paper fastened with brads, pertaining to the claim made by Ayrton's estate for an award for the Admiralty's use of her negative carbons (1924). A few leaves loose, creased along folds, some soiling & chipping. 2 of the documents bear the pencil signature of C. E. Greenslade, Ayrton's research assistant.
7. *Hertha Ayrton: A Memoir*, by Evelyn Sharp. London: Arnold, 1926. 8vo. xiv, 304 pp. 5 plates. Orig. cloth, shaken, some leaves loose.

Ayrton (born Sarah Phoebe Marks) was a British physicist and electrical engineer who made important contributions to the study of electric arcs and of the physics of waves in water with obstacles and boundaries. "Her research on electricity demonstrated a deep understanding of the non-intuitive characteristics of electricity conducted in arc discharges and led to significant improvement in the operation of arc lighting systems. ... Her later research about the characteristics of wave motion in liquids and about how the wave motion influences the contours of underwater surfaces have withstood the passage of time" (Grolier Club *Extraordinary Women in Science & Medicine* p 44). Ayrton's research on the properties of electric arcs led to her being the first woman elected to the Institution of Electrical Engineers, and her monograph *The Electric Arc*, published in 1902, remained the standard textbook on the subject until the 1920s. She was the first woman to read a research paper at a Royal Society meeting, and the first (and still only) woman to receive the Society's Hughes Medal, awarded for original discoveries relating to the generation, storage and use of energy.

This collection of original manuscripts and typescripts documents 3 of Ayrton's major areas of research: the formation of sand ripples under water by ripple-forming vortices (nos 1-3); the creation of satisfactory specifications for the carbons used in searchlight projectors, as requested by the Admiralty (no 6); and the invention of the Ayrton Fan for dispelling clouds of poison. The work for which Ayrton is perhaps best known is her Ayrton Fan, a simple hand-held device she invented during the First World War to repel clouds of poison gas. This device, adopted by the British armed forces only after much delay and prevarication, was still responsible for saving many lives. Grolier Club *Extraordinary Women in Science & Medicine* pp 42-46. Ogilvie *Women in Science* pp 32-34.

\$4,000 - 6,000

250

EINSTEIN, ALBERT. 1879-1955.

“Die Grundlage der allgemeinen Relativitätstheorie.” In: *Annalen der Physik*, Vierte Folge, Band 49, 1916, pp 769-822. Leipzig: Johann Ambrosius Barth, 1916.

8vo. Whole volume: viii [- i/ii, half title], 1000 pp. Library cloth. Internally clean, library stamps and withdrawal markings.

FIRST EDITION OF THE GENERAL THEORY OF RELATIVITY. “This paper was the first comprehensive overview of the final version of Einstein’s general theory of relativity after several expositions of preliminary versions and latest revisions of the theory in November 1915. It includes a self-contained exposition of the elements of tensor calculus that are need for the theory” (Sauer *Landmark Writings in Western Mathematics 1640-1940* p 802). A pamphlet edition with newly set type was issued later in the same year. *Printing and the Mind of Man* 408.

\$2,000 - 3,000

251

EINSTEIN, ALBERT. 1879-1955.

Autograph Postcard Signed (“Einstein”), in German, 12mo, July 8, 1920, Berlin, to Philipp Frank, browning, a few repairs and some smearing of ink, matted and framed.

EINSTEIN TO HIS BIOGRAPHER. Einstein writes his friend and biographer Dr. Philipp Frank (1884-1966) to say he is pleased at the prospect of a visit from Frank, but that he will be lecturing in Hamburg on the 12th and 18th of July. He also writes that he is very curious about Frank’s new ideas. Frank’s *Einstein: His Life and Times* (1947) was one of the earliest biographies of Einstein.

The postcard was written a little over a year after Eddington proved Einstein’s General Theory of Relativity, and a month before the notorious Anti-relativity lectures held in the Berlin Philharmonic Hall on August 24, 1920.

\$2,500 - 3,500

252

KÖNIGSBERGER, LEO. 1837-1921.

German manuscript on paper, entitled “*Höhere Algebra. Akademische Vorträge*,” 735 pp recto and verso, 4to, Heidelberg, 1891-92, title in black letter, manuscript in a neat cursive hand. Bound in contemporary half morocco and mottled boards, light wear, one corner bumped. *Provenance:* Heinrich Hilleg (ownership inscription and penciled marginal notations).

A unique record of the academic work of Königsberger, one of the most famous mathematicians of his time, being a transcription of Königsberger’s lectures on higher algebra given at Heidelberg during the academic year 1891-92; it was most likely prepared by the mathematics student who inscribed his name in the volume. The lectures were never published. Königsberger spent most of his career at the University of Heidelberg, where he taught mathematics. He contributed to several fields of mathematics, most notably analysis and analytical mechanics.

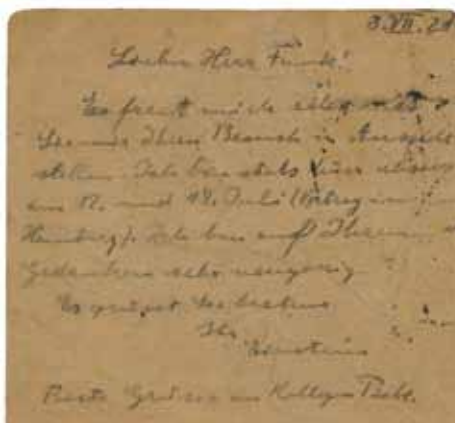
“Königsberger ... was extremely skillful in treating material from the Riemannian point of view, as can be seen from his textbooks on elliptic functions (1874) and hyperelliptic integrals (1878). In addition he worked intensively on the theory of differential equations ... Königsberger was the first to treat not merely one differential equation, but an entire system of such equations in complex variables (*Dictionary of Scientific Biography*).

While at Heidelberg Königsberger became close friends with the chemist Robert Bunsen and physicists Hermann Helmholtz and Gustav Kirchhoff; these contacts provided him with the stimulation for his series of works on the differential equations of analytical mechanics. He also published some notable historic works, including an account of his teacher Weierstrass’s first lecture on elliptic functions (1917) and a biography of Helmholtz (1902).

\$1,200 - 1,800



250



251



252



253

253

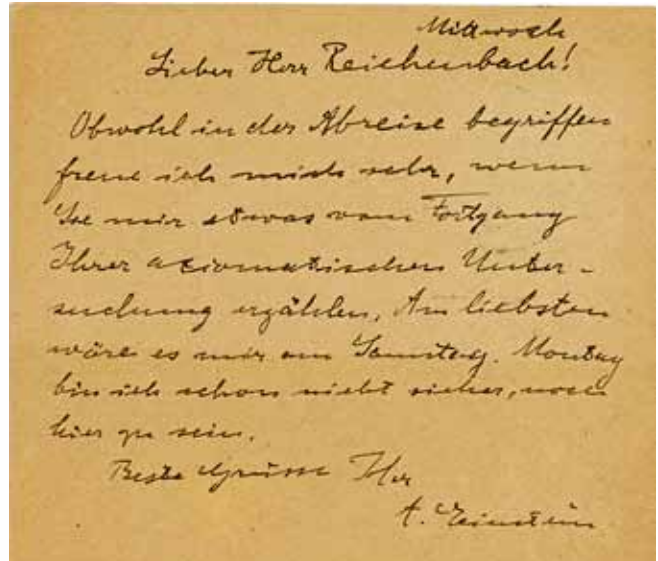
MAGNAVOX CO.

Magnavox Audio Frequency Amplifier. Oakland, Ca: The Magnavox Co., ca. 1921.

Type AC 2, Model C. No. 539, 13 x 5¼ inches. Wood, metal, plastic and glass. 2 A battery and 2 B battery knobs (- and +), 2 field knobs, and 2 each input and output knobs, 2 increase dials, first and second toggle switches, 2 universal 201-A-type metal coated glass bulbs with 4 prongs, signed "The Magnavox Co, Oakland Ca, USA." Magnavox Co. lion head logo printed to front in black, brown and gold. Paper label to bottom, partially effaced, some scratches to wood, but overall, in very good condition.

An Early audio frequency amplifier.

\$1,000 - 1,500



254

254

EINSTEIN, ALBERT. 1879-1955.

Autograph Postcard Signed ("A. Einstein"), in German, 12mo, postmarked September 20, 1922, Berlin, verso addressed in holograph "Dr. Hans Reichenbach. Josefinenstr. 6III bei F[ischle?] Leipzig," toned, two-hole punch at bottom margin.

Einstein writes his colleague and friend Dr. Hans Reichenbach (1891-1953) inquiring about his manuscript on relativity. In full (translation): "Dear Mr. Reichenbach, / Although I am at the point of leaving, I would be very pleased if you told me a little about the progress you are making in the axiomatic analysis. On Saturday would be most preferable to me. On Monday I am not sure anymore whether I shall still be here. / Best regards, yours, / A. Einstein."

Reichenbach was at work on an axiomatic analysis of relativity theory, which would be published as *Axiomatik der relativistischen Raum-Zeit-Lehre*

(Axiomatics of the Theory of Relativistic Space-time. Braunschweig: Vieweg, 1924). The postcard was published as Doc 336 in *The Collected Papers of Albert Einstein*, Vol 13, p 518 of the Documentary Edition, and p 288 of the Translation edition, Princeton University Press, 2012.

We are grateful for the assistance of Dr. Diana Kormos Buchwald, general editor of the Einstein Papers Project, in cataloging this lot.

\$2,000 - 3,000



255

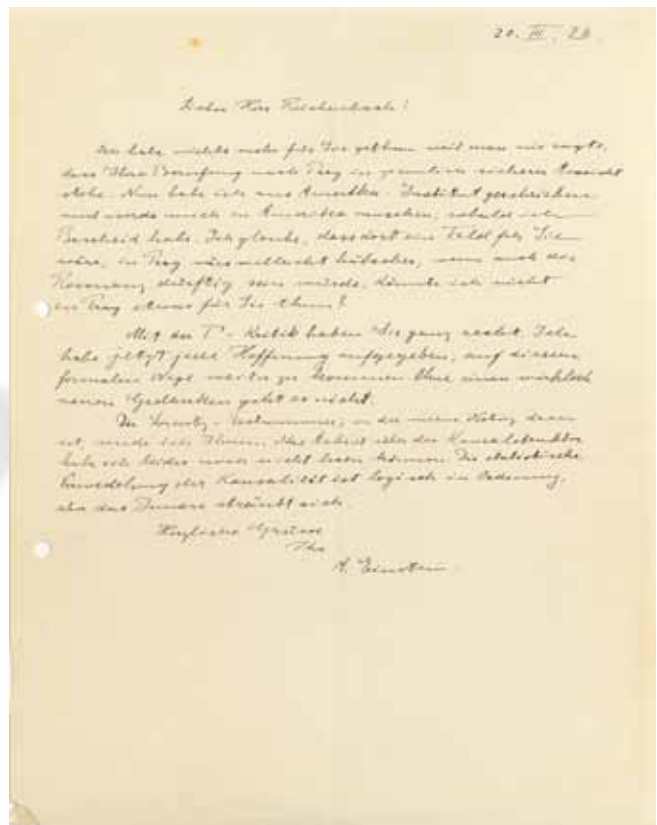
255

STERLING TELEPHONE & ELECTRIC CO.

Audio Frequency Power Amplifier. London: Sterling Telephone & Electric Co., Ltd., ca. 1922.
G.P.O. Regd. No. 3188. 13¼ x 9½ inches. Metal, plastic, wood and glass. First and second toggle switches, 2 each HT knobs, field knobs, increase dials, LT knobs, Grid Batt knobs, output knobs, and 2 RB BBC metal coated glass bulbs mounted into plastic double socket. The whole built into a wooden case with lid, 2 brass side handles and round silvered clasp. Inside of lid with gold circular logo of the BBC, reading "Type Approved by Post Master General. BBC." This was manufactured under license with Motorola. A few scratches to wood, otherwise very good.

A early power amplifier, an important piece in the development of the modern telephone.

\$1,000 - 1,500



256

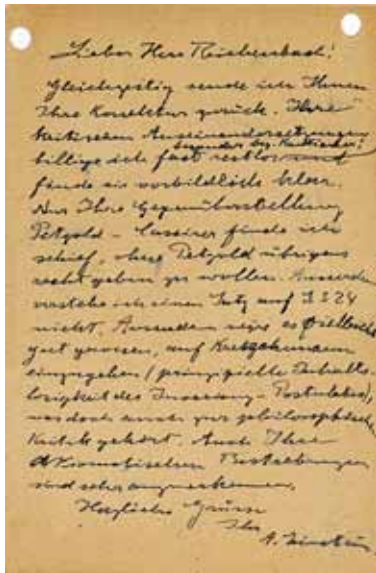
256

EINSTEIN, ALBERT. 1879-1955.

Autograph Letter Signed ("A. Einstein"), in German, 1 p, 4to, March 20, 1926, n.p., to Hans Reichenbach, folding creases, chip to bottom corner, slight toning, two-hole punch to left margin.

"I HAVE NOW GIVEN UP ALL HOPE OF SIGNIFICANTLY ADVANCING ON THIS FORMAL PATH." Einstein writes to his friend and colleague, the philosopher of science Dr. Hans Reichenbach (1891-1953), who had two years earlier published an axiomatic analysis of the theory of relativity. In the first paragraph Einstein updates Reichenbach on his efforts to help his friend find a position: "... I believe that there would be a field of activity for you [in America], in Prague it might be prettier, even though the interest might be lacking. Couldn't I do something for you in Prague?" In the remainder of the letter he addresses a critique Reichenbach had evidently made on aspects of Einstein's work: "With the T[ensor]-criticism you are entirely correct. I have now given up all hope of significantly advancing on this formal path. Without a really new idea it doesn't work. I am sending you the Lorentz anniversary issue, in which my note is included. Unfortunately I have not yet been able to read your paper on causal structure. The statistical [?] of causality is all right, but the inner fiber bristles at it."

We are grateful for the assistance of Dr. Diana Kormos Buchwald, general editor of the Einstein Papers Project, in cataloguing this lot.
\$5,000 - 8,000



257

257

EINSTEIN, ALBERT. 1879-1955.

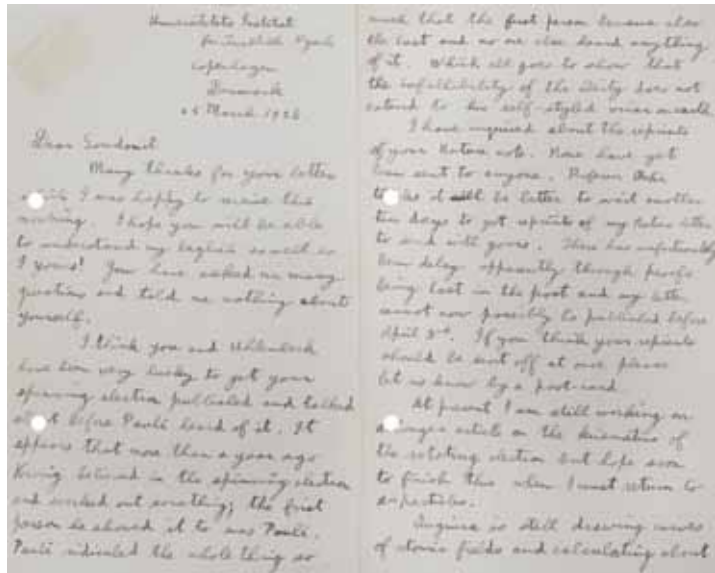
Autograph Postcard Signed ("A. Einstein"), in German, 12mo, postmarked March 27, 1922, Berlin, verso addressed "Herrn Dr. Hans Reichenbach Physikal. Institut Technische Hochschule Stuttgart" in holograph, toned, some blearing to ink including signature, two-hole punch at top.

EINSTEIN ADDRESSES A COLLEAGUE'S MANUSCRIPT ON RELATIVITY. The postcard is written to Einstein's friend and colleague, Dr. Hans Reichenbach (1891-1953), then *Privatdozent* at the Technical University of Stuttgart. Einstein had received a proof of Reichenbach's paper "Der gegenwärtige Stand der Relativitätsdiskussion. Eine kritische Untersuchung" (The Current State of Discussions on Relativity. A Critical Investigation), and in the postcard he provides a few critical notes. Translation, in full: "Dear Mr. Reichenbach, / At the same time, I send your correction proofs back to you. I agree almost entirely with your critical argumentation, particularly in re. Kantians! and find it exemplarily clear. I just find your opposition to Petzoldt-Cassirer lopsided, without intending to concede the point to Petzoldt. Nor do I understand a sentence on p 324. Additionally, it would perhaps have been good to discuss Kretschmann (fundamental vacuousness of the invariance postulate), which also really does merit philosophical criticism. Your axiomatic endeavors are very laudable as well. / Cordial regards, yours, / A. Einstein."

The postcard was published as Doc 119 in *The Collected Papers of Albert Einstein*, Vol 13, pp 214-215 of the Documentary Edition, and p 122 of the Translation edition (Princeton University Press, 2012).

We are grateful for the assistance of Dr. Diana Kormos Buchwald, general editor of the Einstein Papers Project, in cataloging this lot.

\$2,500 - 3,500



258

258

ELECTRON SPIN.

THOMAS, LLEWELLYN HILLETH. 1903-1992. Autograph Letter Signed three times ("LH Thomas," "LL H Thomas," and "Llewellyn H Thomas") 5 pp, 8vo, Universitetets [sic] Institut for Teoretisk Fysik, Copenhagen, Denmark, 25 March 1926, discussing electron spin. Creased where previously folded, sheets punched for 2-hole binder in left margin, affecting a few words, staple-holes in upper left corner, small fold in upper left corner of first sheet reinforced with tape.

Thomas's earliest recorded letter to Goudsmit, discussing electron spin, written one month after Thomas had supplied the missing factor 2 ("Thomas factor") essential to Goudsmit and Uhlenbeck's calculation of electron spin. "Thomas noted that earlier calculations of the precession of the electron spin had been performed in the rest frame of the electron, without taking into account the precession of the electron orbit around its normal. Inclusion of this relativistic effect reduces the angular velocity of the electron (as seen by the nucleus) by the needed factor 1/2" (Pais *Inward Bound* p 279). The letter reads in part: "I think you and Uhlenbeck were very lucky to get your spinning electron published and talked about before Pauli heard of it. It appears that more than a year ago Kronig [i.e., American physicist Ralph Kronig, an earlier collaborator of Goudsmit] believed in the spinning electron and worked out something; the first person he showed it to was Pauli. Pauli ridiculed the whole thing so much that the first person also became the last and no one else heard anything of it. Which all goes to show that the infallibility of the Deity does not extend to his self-styled vicar on earth."

\$2,500 - 3,500

259

EINSTEIN, ALBERT. 1879-1955.

Letter Signed ("A. Einstein"), in German, 1 p, 4to, January 25, 1929, Berlin, to Hans Reichenbach, on personal letterhead, text in the hand of Elsa Einstein, postmarked 26 January 1929, 8am, light creasing, two hole punch at left margin.

EINSTEIN REBUKES A COLLEAGUE. Einstein dictates an indignant letter to the editors of the newspaper *Vossische Zeitung*, sending this copy to his friend and colleague Dr. Hans Reichenbach (1891-1953), with whom he maintained an otherwise cordial and professional relationship. Written in the hand of Elsa Einstein, the letter reads, in full (translation): "To the Editorial office of the *Vossische Zeitung* / Dear Sir, / It has surprised me that your usually so distinguished newspaper deigned to favor a colleague's tactless behavior toward me. Mr. Dr. Reichenbach has asked me to inform him about my latest work, and I gladly provided him with the details. Subsequently, without awaiting the publication of the paper, and without asking me or even informing me, he reported to the public about it, which entirely contravenes the normal customs. You should not have lent a hand to this. / Respectfully yours, / A. Einstein."

We are grateful for the assistance of Dr. Diana Kormos Buchwald, general editor of the Einstein Papers Project, in cataloging this lot. **\$3,000 - 5,000**

ALFVÉN, HANNES. 1908-1995.

Collection of 12 offprints on astrophysics, 1931-37, including:

1. "Cosmic Radiation as an intra-galactic phenomenon." Offprint from: *Arkiv För Matematik, Astronomi Och Fysik*, vol 25B, no 29. Uppsala: 1937.
2. "Origin of Cosmic Radiation." Offprint from: *Nature*, vol 131, p 619 (April 29, 1933).
3. "Another Double Star Process Giving Very Fast Particles." Offprint from: *Nature*, vol 139, p 245 (February 6, 1937).

Original wrappers or without wrappers as issued.

Provenance: American physicist Raymond T. Birge, chair of the Physics department at UC Berkeley (many with his signature, some with UC Physics Dept. stamp).

FIRST SEPARATE EDITIONS. Alfvén received a share of the 1970 Nobel Prize in physics for his investigations into the effects of magnetic fields on collections of charged particles (plasmas), which form the bulk of the matter in the universe. He was the first space physicist to receive a Nobel Prize. "In the world of specialized science, Alfvén was an enigma. Regarded as a heretic by many physicists, Alfvén made contributions to physics that are today being applied in the development of particle beam accelerators, controlled thermonuclear fusion, hypersonic flight, rocket propulsion, and the braking of reentering space vehicles. At the same time, applications of his research in space science include explanations of the Van Allen radiation belt, the reduction of the earth's magnetic field during magnetic storms, the magnetosphere (a protective plasma envelope surrounding the earth), the formation of comet tails, the formation of the solar system, the dynamics of plasmas in our galaxy, and the fundamental nature of the universe itself.

"Alfvén was the first to predict (in 1963) the large scale filamentary structure of the universe, a discovery that confounded astrophysicists in 1991 and added to the woes of Big Bang cosmology. Hannes Alfvén has played a central role in the development of several modern fields of physics, including plasma physics, the physics of charged particle beams, and interplanetary and magnetospheric physics. He is also usually regarded as the father of the branch of plasma physics known as magnetohydrodynamics" ("Hannes Alfvén 1908-1995," <http://public.lanl.gov/alp/plasma/people/alfven.html>).

The present collection, which dates from the early part of Alfvén's scientific career, includes his doctoral dissertation on ultra-short electromagnetic waves (no 4), and several papers on cosmic radiation (nos 2, 9, 10), including his important 1937 paper postulating the existence of a galactic magnetic field (no 12). This last paper, originally dismissed by scientists, now forms the basis for the field of cosmic magnetism, one of the fastest-growing areas of research in astrophysics.

\$1,000 - 1,500

261

SCHRÖDINGER, ERWIN. 1887-1961.

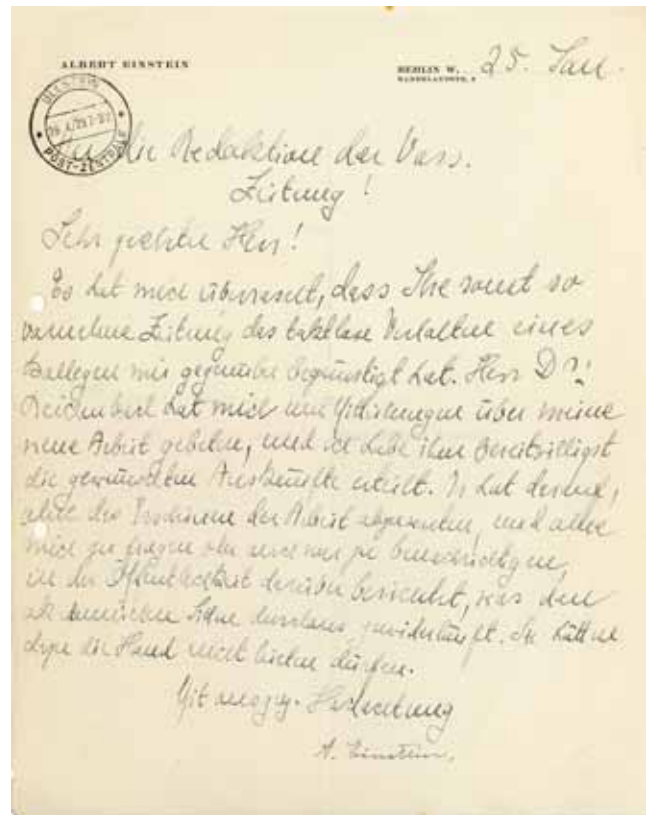
Collection of 24 offprints from the *Proceedings of the Royal Irish Academy*. Dublin: Hodges, Figgis & Co., 1940.

4to. Original wrappers. Very fine copies.

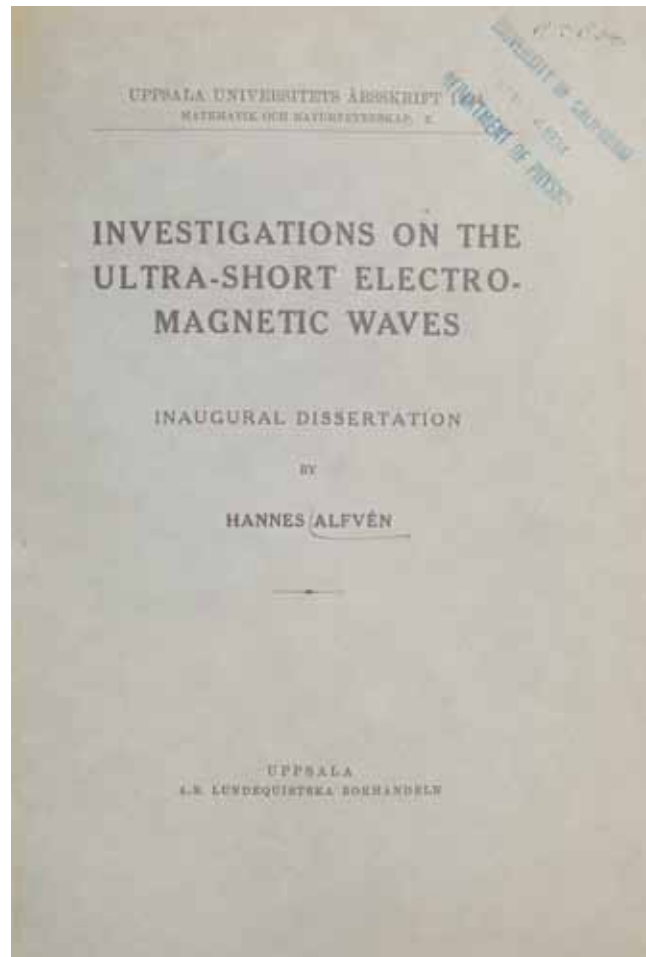
FIRST SEPARATE EDITIONS. After being dismissed by the Nazis from his academic post at the University of Graz, Schrödinger found his next permanent academic appointment with the Dublin Institute of Advanced Studies, where he served as senior professor of physics from 1940 to 1956. During this "very, very beautiful time" (quoted in *DSB*), Schrödinger published a number of papers on various aspects of physics, including the application and statistical interpretation of wave mechanics (the invention of which had earned Schrödinger a share of the 1933 Nobel Prize for physics), the mathematical character of the new statistics, Born-Infeld electrodynamics, questions of general relativity, and the expansion of Einstein's theory of gravitation into a unified field theory. Schrödinger's biographer Walter Moore, in *Schrödinger: Life and Thought*, cites and discusses thirteen of these Irish papers, twelve of which are in the collection of near-pristine offprints on offer here.

List of titles available upon request.

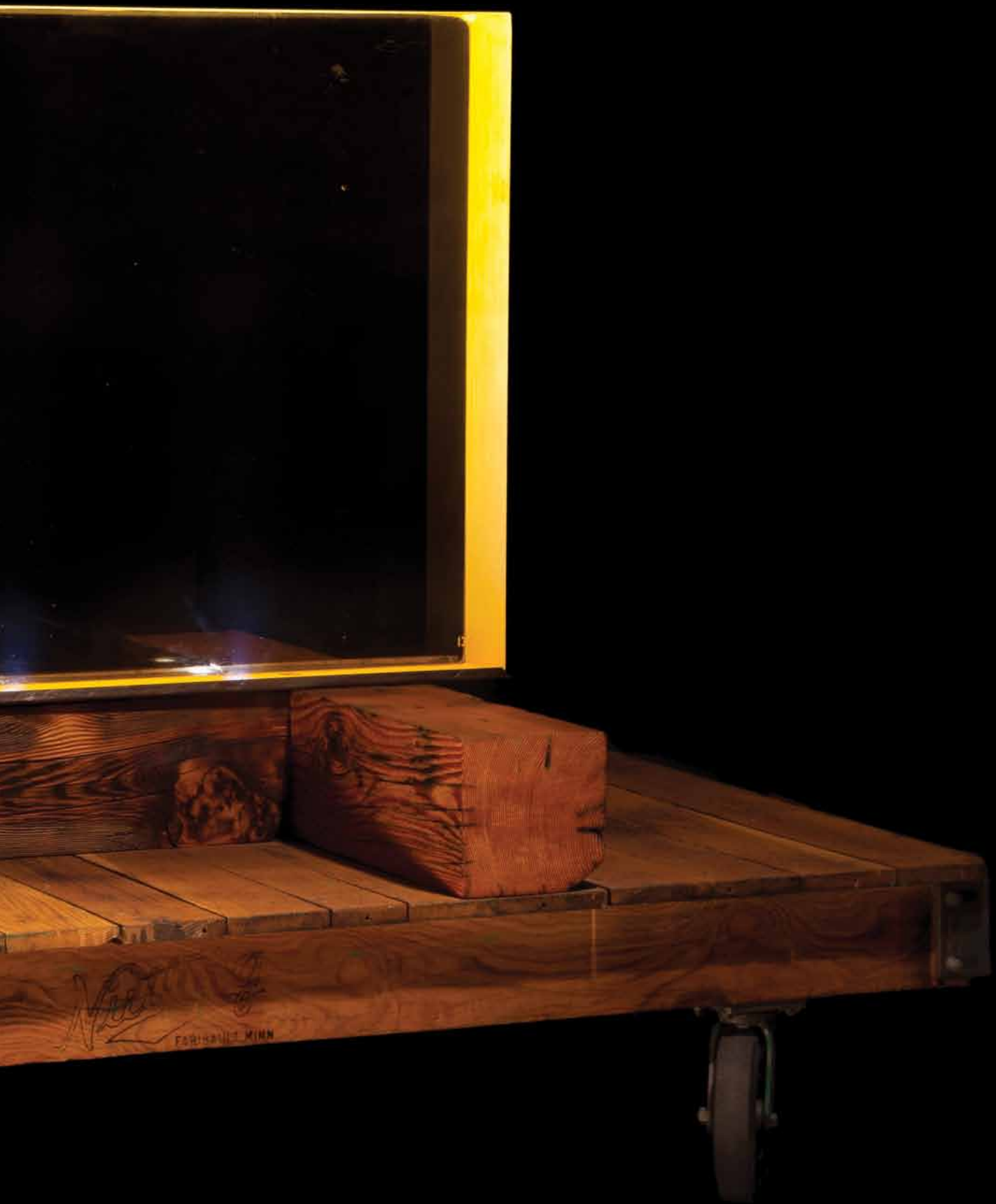
\$2,500 - 3,500



259 (previous page)







262

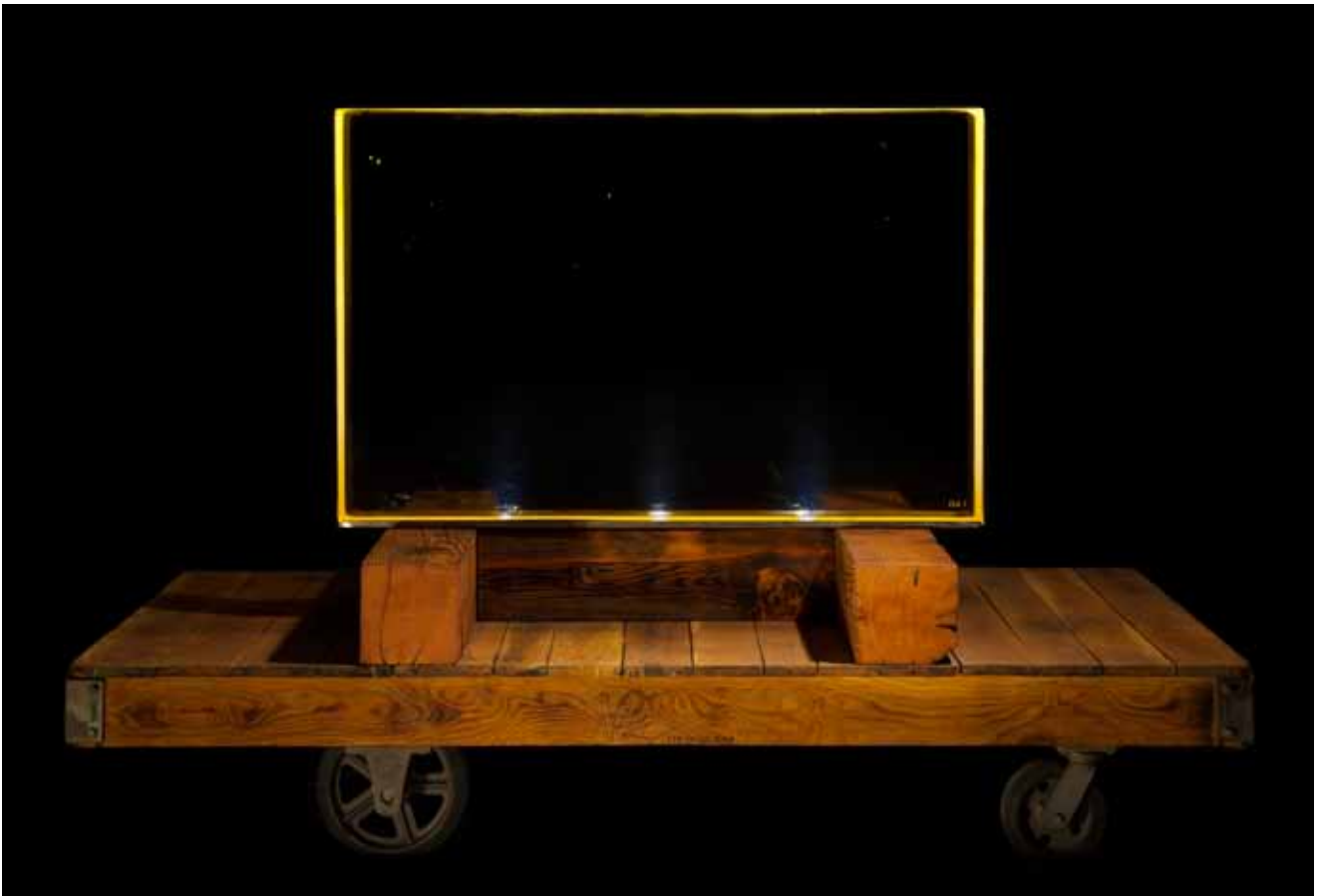
MANHATTAN PROJECT VIEWING WINDOW.

An approximately 54 x 36 inch rectangle of heavily leaded glass, 6 inches thick, approximately 1500 lbs, on custom antique wooden cart, glass illuminated from below with 3 custom LED lights. This high-tech glass specimen is composed of a high percentage of lead oxide, 70%, producing its deep yellow color. Specifications for this heavily leaded, extraordinarily clear glass were highly exacting as many layers were needed to protect scientists from radiation. Due to its high lead content, it reacts more like a metal than a glass, crumbling when ground or cut, and sweating like ice when heated. Emitting an eerie yellow glow, it evokes the material's atomic origin. Despite the material's provenance, the glass is not radioactive.

An original viewing window employed in the production of plutonium by the Secret WWII Manhattan project bomb program, which developed the Atomic Bomb Little Boy, the Trinity Test, and the first ever Hydrogen Bomb, as well as the Fat Man, dropped on Nagasaki, Japan on August 9, 1945. The original viewing windows were used at the Manhattan Project's Hanford Site, located in Southeastern Washington. Subsequently purchased from the federal government by salvage operator Emory Stubblefield for its metal window casements, the glass passed through the hands of a collector and into the hands of the present owner.

The Manhattan Project is known as the most ambitious weapons program in human history, with J. Robert Oppenheimer as its scientific director, and a team of some of the greatest scientific minds of the 20th century working in nearly 40 laboratories, including Albert Einstein, Richard Feynman, Enrico Fermi and Harold Urey to name but a few. Recognizing its historical significance and contemplating its continued influence on our world remain central to our understanding of the evolution of the human species and the dual nature--both destructive and creative--of human ingenuity.

\$150,000 - 250,000





263

263

LAUE, MAX VON. 1879-1960.

Collection of letters, as follows:

1. 2 Typed letters signed ("M. v. Laue") in German on letterhead of the *Fritz-Haber-Institut der Max-Planck-Gesellschaft*, 1 p recto, and 1 p recto and verso, folio, Berlin, 12.6.54; 19.7.54, being to his assistant Rolf Hosemann, the first commenting on a paper submitted for review.
2. Typed letter signed ("M.L.") in German, 3 pp recto and verso, folio. Berlin, n.d., being a draft of a letter to the *Stiftenverband für die Deutsche Wissenschaft* regarding Hosemann's research.
3. Document signed ("M.v.Laue") in German on letterhead of the *Fritz-Haber-Institut der Max-Planck-Gesellschaft*, 1 p, folio, Berlin, 3.5.1952, being a circular letter concerning an agreement between the Institut and the *Deutschen Forschungshochschule Berlin-Dahlem*.
4. Card signed ("Dr. M.v.Laue"), 1 p, 8vo with integral leaf, Berlin, 9. Oktober 1953, being a printed thank you card with photograph of Laue tipped in.

Max von Laue received the Nobel Prize for physics in 1914 for his discovery of the diffraction of x-rays in crystals, a discovery that Einstein called one of the most beautiful in physics. In April 1951, at the age of 71, Laue took over the directorship of the *Fritz-Haber-Institut der Max-Planck-Gesellschaft*, a post he occupied until his death nine years later. Two letters are from Laue to Rolf Hosemann, his chief assistant at the *Fritz-Haber-Institut*. Hosemann had submitted a paper to Laue for review, and in the first of his letters to Hosemann, von Laue critiques it thoroughly. In part:

"I have gone to a lot of trouble with the second section of your work, "Lorentz-invariant deduction of Hamiltonian mechanics, Maxwellian electrodynamics and Schrödinger wave mechanics from the so-called general wave equation. Clarification of the wave-particle dualism." I have objections in many places. . . .

What do you want to do in this second section? The fact that you present the reader the mechanics of the mass point, which are well known to him, in a peculiar and most unpleasant notation, in my opinion, is rather superfluous. You want to begin with Equations (36) and (28), which are known to lead to the Hamiltonian equations of mechanics. What is the rest for?...?"

Weber, *Pioneers of Science*, pp. 49-50

\$4,000 - 6,000

264

BROGLIE, LOUIS DE. 1892-1987.

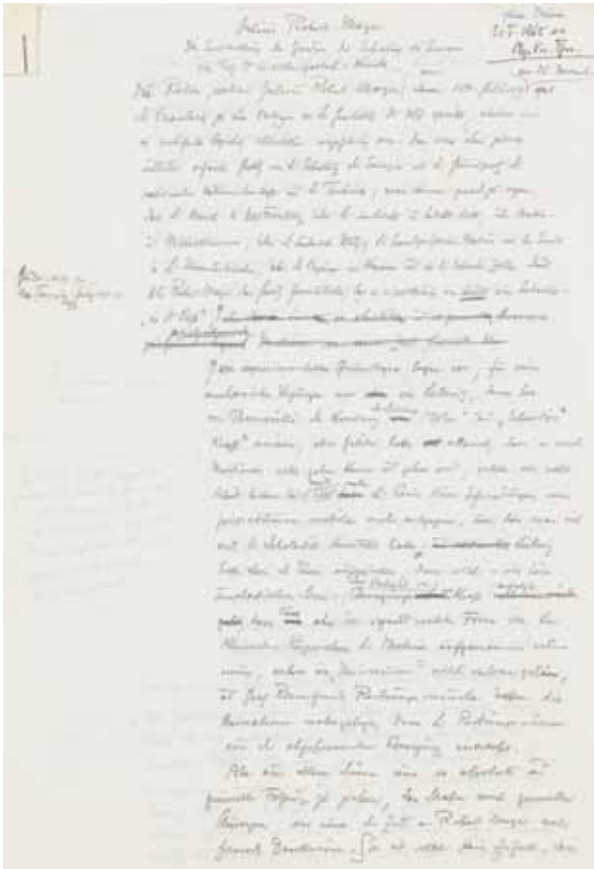
Recherches sur la Théorie des Quanta. Paris: Masson & Cie, 1963.

8vo (231 x 163 mm). [4], 127, [1] pp. Stiff printed wrappers in the original glassine; a fine, unopened copy, with just some light chips to the lower panel of the glassine.

Provenance: Raymond Jancel, 1926-2011 (presentation inscription).

PRESENTATION COPY, inscribed by Broglie on the title: "*À Monsieur Jancel / en hommage cordial / Louis de Broglie.*" Jancel was a physicist who worked under De Broglie at the University of Paris. Second edition of de Broglie's doctoral thesis of 1924, in which he introduces the concept of wave-particle duality, now known as the de Broglie Hypothesis. This research of course, led to de Broglie's being awarded the Nobel prize for Physics just five years later.

\$400 - 600



265

265

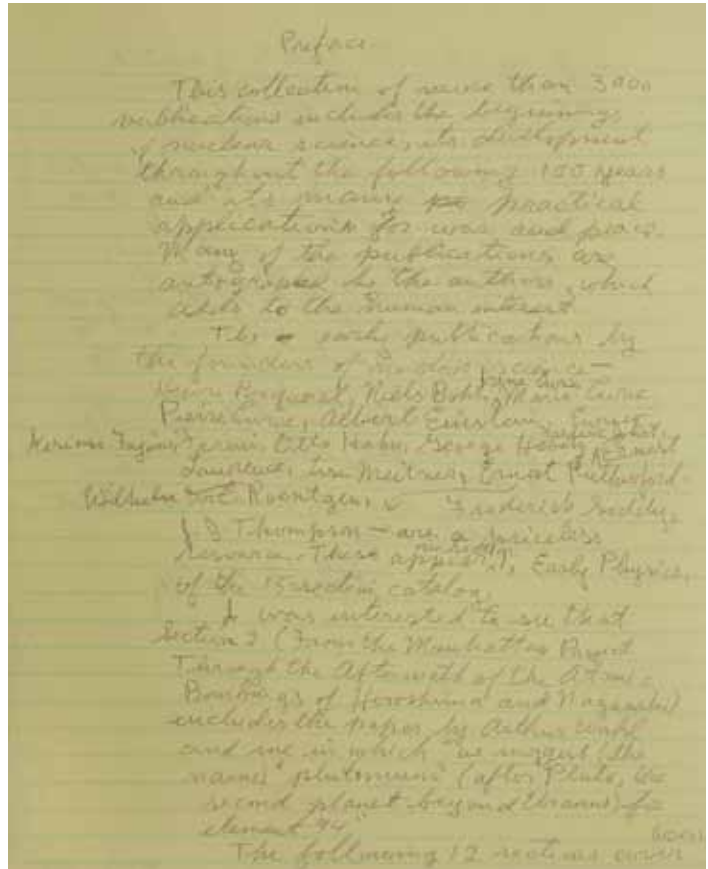
GERLACH, WALTHER. 1889-1979.

Autograph Manuscript Signed ("Walther Gerlach"), entitled "Julius Robert Mayer: Die Entdeckung der Erhaltung der Energie," [Julius Robert Mayer: The Origin of the Law of Conservation of Energy], in German, 5 pp recto only, folio, 1965, in pencil with a few ink annotations and signature in ink, stapled at upper left, horizontal folding crease at center.

ORIGINAL MANUSCRIPT OF A LECTURE ON JULIUS ROBERT MAYER AND THE CONSERVATION OF ENERGY. Gerlach discusses the historical role Mayer (1814-1878) played in the articulation of the first law of thermodynamics. "The role played by Julius Robert Mayer ... in the history of natural science appears to me in many respects to be simply unparalleled. The law of conservation of energy, first understood empirically by him, is the fundamental principle of rational natural science and technology..." (Complete translation available upon request.) Gerlach is best known for his work with Otto Stern in discovering spin quantization in a magnetic field, the so-called Stern-Gerlach effect.

WITH: Mittasch, Alwin. *Kraft - Leben - Geist eine Lese aus Robert Mayers Schriften*. Halle: 1942. 8vo. Original wrappers.

\$1,000 - 1,500



266

266

SEABORG, GLENN & LINUS PAULING.

Autograph Manuscript Signed ("Glenn T. Seaborg"), 2 pp recto and verso, folio, np, c.1994, being an autograph draft of Seaborg's preface to Laudamus and Krishnamurty's bibliographic catalog of the atomic energy collection at Oregon State University, in black ink on yellow lined paper. Creases where previously folded. Near fine.

WITH: LAUDAMUS, LEIF & RAMESH KRISHNAMURTY. *The History of Atomic Energy Collection at Oregon State University: A Catalogue of Holdings*. New York: James Cummins, 1999.

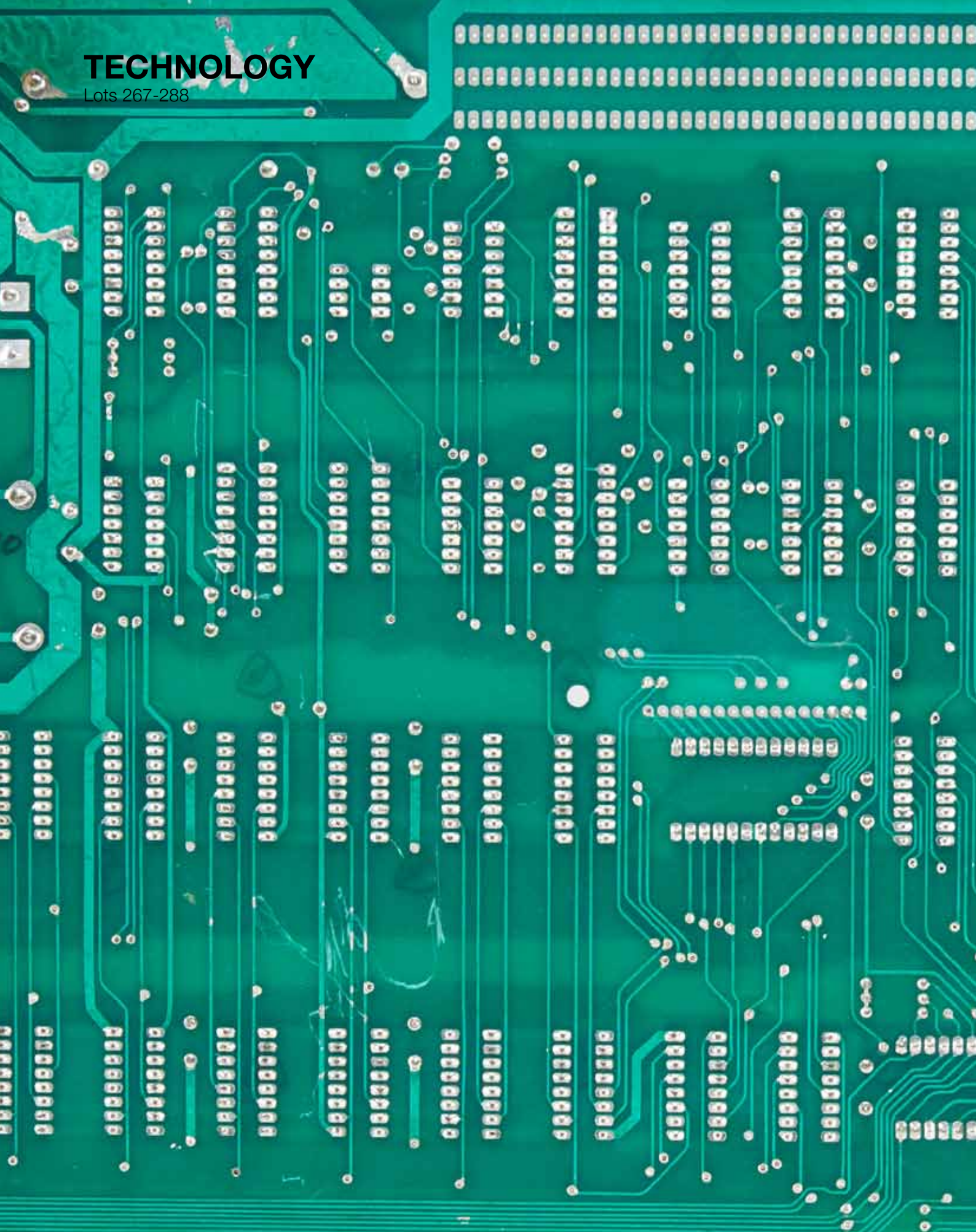
8vo (254 x 170 mm). xvi, 472 pp. Text illustrations. Half morocco & cloth.

FIRST EDITION, COPY "O" OF 26 COPIES LETTERED AND SIGNED BY SEABORG AND LINUS PAULING.

\$1,200 - 1,800

TECHNOLOGY

Lots 267-288





267

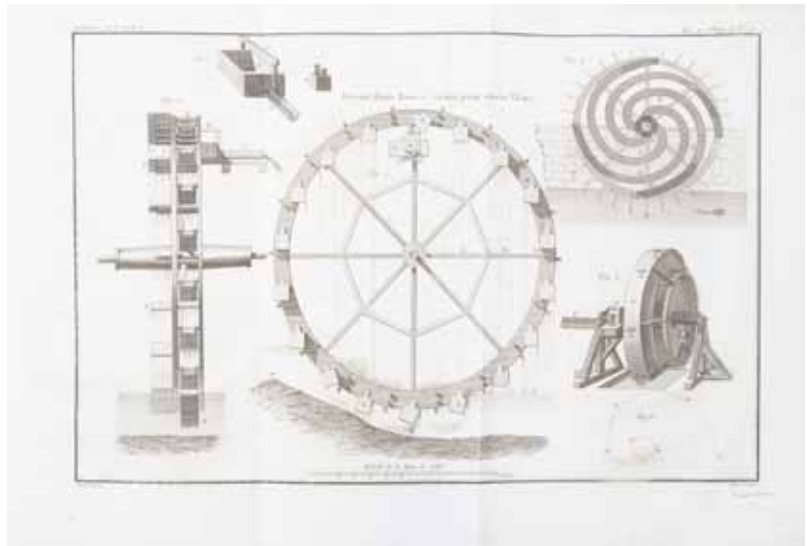
267

PERPETUAL MOTION MACHINE.

DUBREUIL, CLAUDE JOSEPH. 1693-1757. Autograph Letter Signed ("Dubreuil"), in French, 4 pp, folio, May 18, 1747, New Orleans, some uneven browning and light spotting, old folding creases.

PROPOSAL FOR A PERPETUAL MOTION DEVICE FROM AN ORIGINAL SETTLER OF NEW ORLEANS. Dubreuil emigrated with his wife and children to Louisiana in 1718 where he became one of the region's wealthiest planters. As royal engineer, contractor to the King, Dubreuil was a crucial figure in the establishment of New Orleans, constructing the city's first levee and canal systems. The present letter is entrusted to a Mr. Prat, physician of New Orleans, and a Mr. Fleuriua, Attorney General of colonial Louisiana, to deliver to the Academie Royale. In it Dubreuil writes of his plans for creating a perpetual motion device and seeks the approval of the Academy. Attempts to create machines which could operate perpetually without an energy source date back to at least the 12th century, with luminaries such as Da Vinci, Kircher, Robert Fludd, and numerous other putting their minds to the task. Modern science would ultimately demonstrate the impossibility of the creation of such a machine, as the idea violates the laws of thermodynamics. Manuscript material from early New Orleans is scarce, as is any scientific material from colonial North America.

\$3,000 - 5,000



268

268

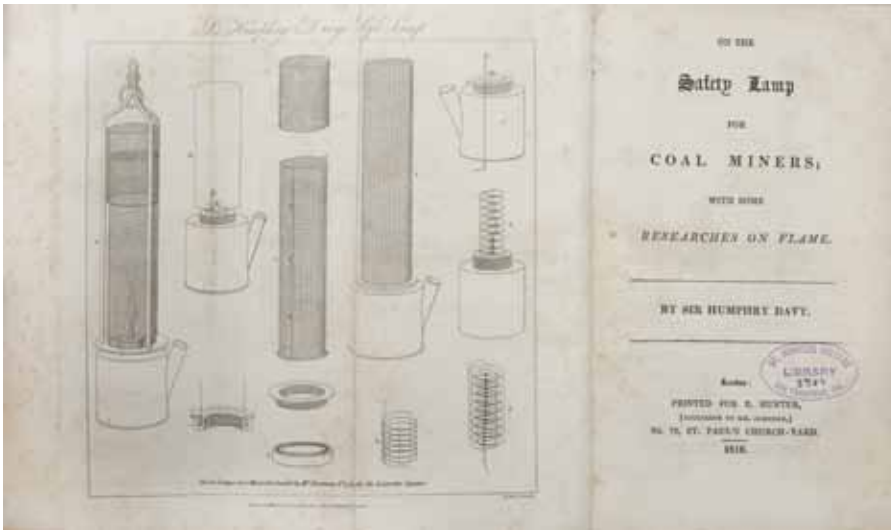
BÉLIDOR, BERNARD FOREST DE. 1785-1836.

Architecture hydraulique, ou l'art de conduire, d'élever, et de ménager les eaux pour les différents besoins de la vie. Paris: F. Didot, 1810-19. 4 volumes. 4to (289 x 211 mm). Engraved frontispiece portrait in vol I, 230 engraved folding plates. Contemporary tree sheep, spines gilt. Sheep rubbed, spine of vol 3 repaired, some scattered foxing and light browning.

Provenance: Verne Roberts' *Bibliotheca Mechanica* (book plate).

First Navier Edition of Bélidor's *Architecture hydraulique*, first published in 1737-39. Bélidor, a military engineer, taught mathematics at the artillery school at La Fère, where he authored several textbooks. Seeking to introduce mathematics into practical engineering, Bélidor wrote *La science des ingénieurs* (1729) and *Architecture hydraulique*; it was with these two works that Bélidor "entered into the science of mechanics proper with a summons to builders to base design and practice on its principles" (DSB). Both of these works served as engineering textbooks for nearly a century. In the 1810s, Bélidor's two works were issued in revised and expanded editions by Claude-Louis Navier, who edited the works of the great French engineer Emiland Gauthey. By 1813 Navier had completed this task, and had also issued a revised and expanded edition of Bélidor's *La science des ingénieurs*. "Navier's success as editor of Bélidor's *Science des ingénieurs* and of Gauthey's works led their publisher, Firmin Didot, to invite him to prepare a revised edition of Bélidor's *Architecture hydraulique*. Navier sought to correct the errors found in this work and to give it a mathematical sophistication that would make it useful to the graduates of the École Polytechnique" (DSB). Navier's contributions to the *Architecture hydraulique* are confined to the first volume, which contains notes and commentary equal or surpassing the original text in length. Navier is best remembered to day as one of the authors of the Navier-Stokes equations for fluid dynamics, which can be used to model both non-turbulent and turbulent flow. These equations are of fundamental importance in the science of aerodynamics.

\$2,500 - 3,500



269

269

DAVY, SIR HUMPHRY. 1778-1829.

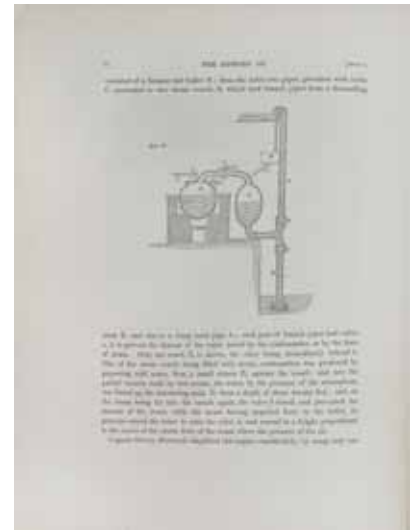
On the Safety Lamp for Coal Miners; with some Researches on Flame. London: for R. Hunter, 1818

8vo (207 x 127 mm). viii, 148 pp, complete with folding engraved frontispiece, but wanting half-title. Contemporary half-calf and cloth, front joint just starting but sound, some light marginal foxing (heavier to title and frontispiece).

Provenance: St Ignatius College Library (book stamp).

FIRST EDITION OF THE FIRST FULL ACCOUNT OF THE WIRE-GAUGE SAFETY LAMP, an invention which revolutionized safety standards for coal miners. Davy was asked to investigate the growing problem of coal mine explosions, and found, along with his assistant Faraday, that contrary to previously belief, the responsible gas was not hydrogen, but methane. When mixed with oxygen at high temperatures, it would explode. Davy's answer was to devise a lamp containing tubes which cooled the gases, and contained a cylinder of wire gauze which enclosed the flame. This gauze acted as a fire detector, as when it became too hot, it became white. The invention saved the lives of thousands of miners. Partington IV, pp 61-70.

\$1,200 - 1,800



270

270

TREDGOLD, THOMAS. 1788-1829.

The Steam Engine: Its Invention and Progressive Improvement ... A new edition ... Edited by W. S. B. Woolhouse. London: John Weale, 1838.

2 volumes (text and atlas). 4to (298 x 233 mm). xix, [1], 500, 250, [2] pp, plus 16-page publisher's catalog; vi, [2] pp. With engraved frontispiece portrait in each volume and 123 engraved plates in atlas (plate CXVI, not present in the plate numeration, was never issued, as noted in the text). Original cloth-backed boards, rebound with original spines laid down. Scattered minor foxing and light toning, a few small edge tears to plates, mild wear and soiling to boards, original paper spine labels worn to near illegibility.

Provenance: [Thomas] Henry Maudslay (bookplate and signature in each volume); E. & F. N. Spon (bookseller's ticket).

Second edition, revised and expanded considerably from the one-volume first edition of 1827. Tredgold's work on the steam engine was long considered the best and most complete work of its kind. "Few details of engine design escaped Tredgold's attention . . . his book is a curious combination of fact, theory, and speculation, and its author uses every opportunity to display his mathematical knowledge. Yet it undoubtedly was a notable contribution to steam engine design and theory in its day" (Finch *Engineering Classics* pp 104-110).

This copy is from the library of [Thomas] Henry Maudslay (1792-1864), son of the engineer Henry Maudslay (1771-1831), inventor of the screw-cutting lathe and numerous other machines, and founder of the firm Maudslay and Field, manufacturer of marine engines. The younger Maudslay took over his father's business and ran it very successfully; Maudslay's company is mentioned several times in the present edition of Tredgold's work.

\$800 - 1,200



A LA MEMOIRE DE J. M. JACQUARD.

At a Glance by Didier Petit et Cie, 1839.

Woven in the workshop of J.M. Jacquard.

By Didier Petit et Cie.

271

271

WOVEN SILK PORTRAIT OF JACQUARD.

À la Mémoire de J.M. Jacquard, Né à Lyon le 7 Juillet 1752, Mort le 7 Août 1834. Lyon: Didier Petit et Cie, 1839.

Woven portrait on silk, 762 x 622 mm (woven image 330 x 432 mm), framed and glazed. Some light spotting to margins, a few small imperfections to silk, edges soiled and slightly unraveled at edges where affixed to board, some small wrinkles to silk near image. Overall a beautiful wide-margined example.

A rare and important portrait of Jacquard, executed in 1839 on the programmable Jacquard loom by Didier Petit et cie, Lyon after the painting by C. Bonnefond. The portrait depicts Jacquard seated in a workshop interior, with a model of his loom with loose punch cards, tools and measuring drums arranged on racks behind, with a view through the musket-ball broken window of a town. When examining the birth of the programmable computer, the medal usually gets awarded to Charles Babbage (1791-1871), a man who, against the modest technology of the day, designed on paper the world's

first difference engine capable of handling 200dp of information at the same time. Joseph-Marie Jacquard's close connection to the mill industry may be seen as a distraction for those who are not informed as to the sheer cleverness of his mind. Seeing row upon row of manually operated looms weaving multi-tone sheets and fabrics, he stumbled upon an idea of making a semi-automatic tone-selection device, integrated onto the loom, for quicker and more complex patterns. Using Jacquard's definition of 40,000 punched-cards for each 'line' per 20-inches of weave, the system worked just as a modern fax machine does today. Each punch in the card directed either a black or a white coloured thread into the headstock of the loom, pin-pointing the desired thread into place. It was also tried in colour-combinations, such as red and yellow, blue and green, although these examples are extremely rare. See James Essinger *Jacquard's Web. How a Hand Loom Led to the Birth of the Information Age* (2004).

\$20,000 - 30,000

Diagram for the completion by the Engines of the Numbers of Bernoulli. See Note A1. (page 722 of orig.)

272

272

[LOVELACE, AUGUSTA ADA BYRON, COUNTESS OF, TRANSLATOR.] MENABREA, LUIGI FEDERICO.

“Sketch of the Analytical Engine invented by Charles Babbage ... with notes by the translator.” Pp 666-731. Folding table and text tables. IN: *Scientific Memoirs*, Richard Taylor, ed. London: 1843. Vol 3. (Vols 1-2 & 4-5 also included.)

8vo. Near-period brick-red cloth, recased with later endpapers. Minor rubbing to cloth, light chipping to flyleaves; overall in excellent condition and the table very clean and well-margined. *Provenance*: WILLIAM WHEWELL, 1794-1866 (offset image from his removed bookplates to flyleaves); B.C. Gregory (ownership inscriptions to front pastedowns).

FIRST EDITION, JOURNAL ISSUE, OF THE MOST IMPORTANT EARLY PAPER IN THE HISTORY OF DIGITAL COMPUTING. “Countess Lovelace’s notes ... stand as one of the first thorough studies of the nature and power of digital computers, written a hundred years before any working computer existed” (Ceruzzi, *The Reckoners* p 56).

“In the fall of 1841, after eight years of work, Babbage described his landmark Analytical Engine at a seminar in Turin. Although the Engine was never constructed, there is no doubt that in conception and design, it embodied all of the essential elements of what is recognized today as a general-purpose digital computer. L.F. Menabrea, an Italian military engineer who attended the seminar, reported the presentation the following year in an obscure Swiss serial, and Babbage urged Ada Lovelace to translate the report into English. In fact, Lovelace undertook a far larger task: adding to her translation a series of important explanatory ‘Notes’ substantially longer than Menabrea’s article” (Grolier *Extraordinary Women* p 122).

The collaboration “between Byron’s celebrity daughter and Babbage is one of the more unusual in the history of science ... Ada’s translation of Menabrea’s paper, with its lengthy explanatory notes, represents the most complete contemporary account in English of the intended design and operation of the first programmable digital computer. Babbage considered this paper a complete summary of the mathematical aspects of the machine, proving “that the whole of the development and operations of Analysis are now capable of being executed by machinery.” As part of his contribution to the project, Babbage supplied Ada with algorithms for the solution of various problems. These he had

had worked out years ago, except for one involving Bernoulli numbers, which was new. Ada illustrated these algorithms in her notes in the form of charts detailing the stepwise sequence of events as the hypothetical machine would progress through a string of instructions input from punched cards (Swade 2000, 165). These procedures, and the procedures published in the original edition of Menabrea’s paper, were the first published examples of computer ‘programs.’

“Ada also expanded upon Babbage’s general views of the Analytical Engine as a symbol-manipulating device rather than a mere processor of numbers. She brought to the project a fine sense of style that resulted in the frequently quoted analogy, ‘We may say most aptly that the Analytical Engine weaves algebraic patterns just as the Jacquard-loom weaves flowers and leaves.’ She suggested that ... ‘Many persons who are not conversant with mathematical studies, imagine that because the business of the engine is to give its results in numerical notation, the nature of its processes must consequently be arithmetical and numerical, rather than algebraical and analytical. This is an error. The engine can arrange and combine its numerical quantities exactly as if they were letters or any other general symbols; and in fact it might bring out its results in algebraical notation, were provisions made accordingly’ (p 713)” (OOC).

Lady Lovelace signed these notes “A.A.L.,” masking her class and gender in deference to the conventions of the time. Their authorship remained a mystery until Charles Weld credited them to “a lady of distinguished rank and talent” in his *History of the Royal Society*, 1848. He adds in a footnote: “I am authorized by Lord Lovelace to say, that the translator is Lady Lovelace.” A copy of this 2-volume work is included with the lot.

The present set is of particular interest as having once been owned by Babbage’s friend and sometime philosophical adversary, William Whewell. Whewell was an Anglican priest and historian of science at Trinity College, Cambridge. He was chosen over Babbage to write a *Bridgewater Treatise* and his contribution was warmly rebutted by Babbage in his *Ninth Bridgewater Treatise*. *Extraordinary Women in Science & Medicine* (Grolier Club 2013) 112; *Origins of Cyberspace* 62; Van Sinderen 1980, 55.

\$18,000 - 25,000

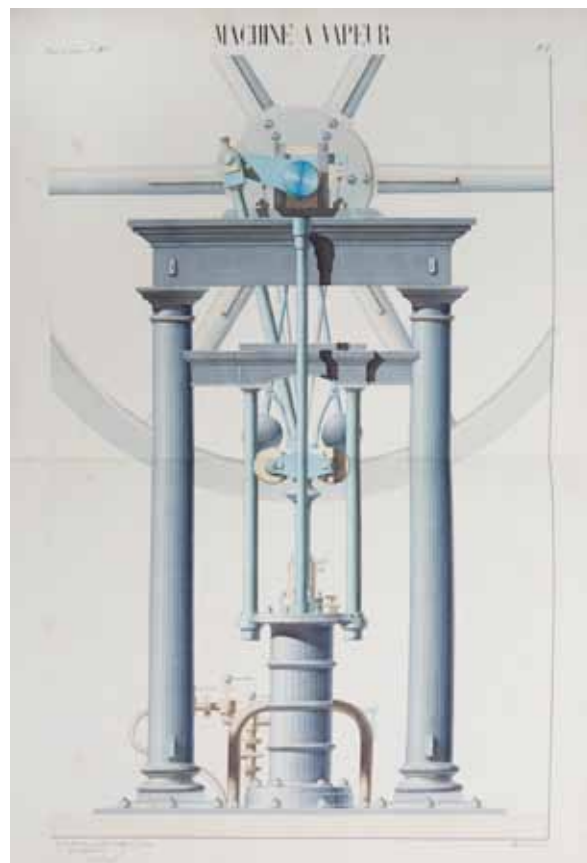
273

CLEMENT, MICHEL. FL.1857-60.

Manuscript in French on paper, [caption title] "*Cours de Dessin - École Impériale d'Arts et Métiers d'Aix*," 70 double page exceptionally detailed pen-and-ink drawings, some enhanced with ink wash or watercolor, folio, Aix-en-Provence, 1857-60, bound together in contemporary sheep-backed marbled boards. Boards rubbed, upper right corner of front cover worn away. Very good apart from a little light soiling and a few scattered fox-marks.

An excellent album of extremely fine and detailed drawings executed by a student at the École des Arts et Métiers at Aix, so carefully drawn that they appear to be engravings. They afford a fascinating glimpse into the type and extent of the skills required of graduates of French technical schools of the mid-nineteenth century. Executed over a three-year course of design taught at the École Impériale d'Arts et Métiers d'Aix., each drawing bears the artist's name and a professor's signature, with 4 different signatures in all. The period of training at the École des Arts et Métiers was set at three years, with the first year devoted to arithmetic, geometry and drawing, the second year to descriptive geometry, trigonometry and mechanical drawing (of both stationary and moving parts), and the third year to industrial mechanics and advanced drafting techniques. The album offered here provides examples of drawing from all these fields of instruction, and is an extremely rare example of mid-nineteenth century French technical instruction. Subjects drawn include ornaments, architecture, geometrical figures, machine parts, topography, tools, steam machines, and hydraulic machines, to name but a few.

\$1,200 - 1,800



273

274

BALLOONING.

TISSANDIER, ALBERT. 1839-1906. Original illustration, pencil with white highlights on paper, 177 x 251 mm, 1869, showing the crew of the balloon *Pole Nord* at rest beneath the propped-up gondola, signed lower right "A Tissandier," annotated in pencil on verso "*Ascension du 'Pole Nord,' La sieste sous la nacelle, 28 Juin 1869,*" matted.

ORIGINAL ILLUSTRATION BY AN AVIATION PIONEER. The balloon "Le Pole Nord" was co-designed by Tissandier's brother Gaston (seated at center of the illustration) for the planned expedition to the north pole by Gustav Lambert. Its spectacular maiden flight took place on June 27, 1869 at the Champ de Mars. The outbreak of the Franco-Prussian War postponed the expedition, then dashed it altogether when Lambert was killed in battle. Aside from an accomplished career as an illustrator Tissandier went on, with Gaston, to complete the first electric-powered flight in 1885 by attaching an enormous battery-powered motor to a dirigible. They also founded the scientific journal *Le Nature*.

\$1,200 - 1,800



274

275

RAILROADS-MEXICO.

BAZ, GUSTAVO ADOLFO, and EDUARDO L. GALLO. *History of the Mexican Railway ... with scientific, historical and statistical notes.* Mexico: Gallo & Co., 1876.

Folio (375 x 257 mm). [4], 9-211 pp. Illustrated with additional chromolithographed title and 32 tinted lithographed plates, folding lithographed map. Original brown cloth stamped in gilt, neatly rebacked with morocco, spine titles gilt. Some marginal spotting and soiling to plates, lower corner creased throughout, wrinkling at edge of map, tiny marginal tear and chip to panorama of Mexico City.

FIRST ENGLISH LANGUAGE EDITION of this treatment of the railway system of Mexico, including notes on the geological, agricultural, manufacturing and commercial aspects of the country. Illustrated with striking lithographed views of railway bridges (complete and under construction), stations, and towns, including a Mexico City panorama.

\$1,500 - 2,500



275



276

276

EDISON, THOMAS ALVA. 1847-1931.

Autograph Letter Signed ("Thomas Edison"), 1 p, 4to, Menlo Park, New Jersey, June 28, 1879, to Egbert A. Smith of Napa, CA, on Edison Laboratory stationery light creasing and age toning. WITH: small 3 x 3 inch card featuring 3/4 inch samples of platinum and iridosimine.

EDISON SOURCES MATERIAL FOR LIGHTBULB FILIMENTS. After acknowledging receipt of the correspondent's letter, Edison asks about mining in the area and indicates that he is enclosing a small "sample Card of Platinum and Iridiosimine," which is included with this letter. Platinum wire figured significantly in Edison's development of the electric light bulb, which he would publicly demonstrate for the first time on December 31st of that year.

\$1,500 - 2,000

277

EDISON, THOMAS ALVA. 1847-1931.

Photograph Signed ("Thos A Edison"), 7 3/8 x 9 3/8 inch albumen print a seated portrait of Edison in his laboratory by C.C. Langill, dated 1887 in lower margin, photographer's blindstamp at lower right, mounted to card, unevenly trimmed at edge, tiny nick to bottom edge, captioned at top edge of mount in red ink, inscription and clipping to verso of mount.

EDISON POSING WITH PHONOGRAPH. A little known image of Edison seated in his laboratory and dictating into a phonograph, taken a decade after the invention of the device that would first make him famous.

\$1,500 - 2,500



277

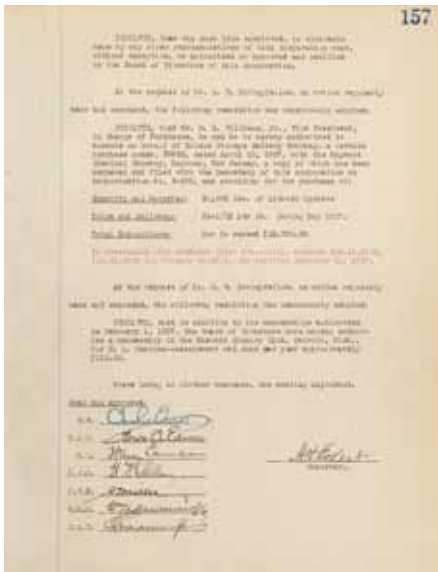
278

EDISON, THOMAS ALVA. 1847-1931.

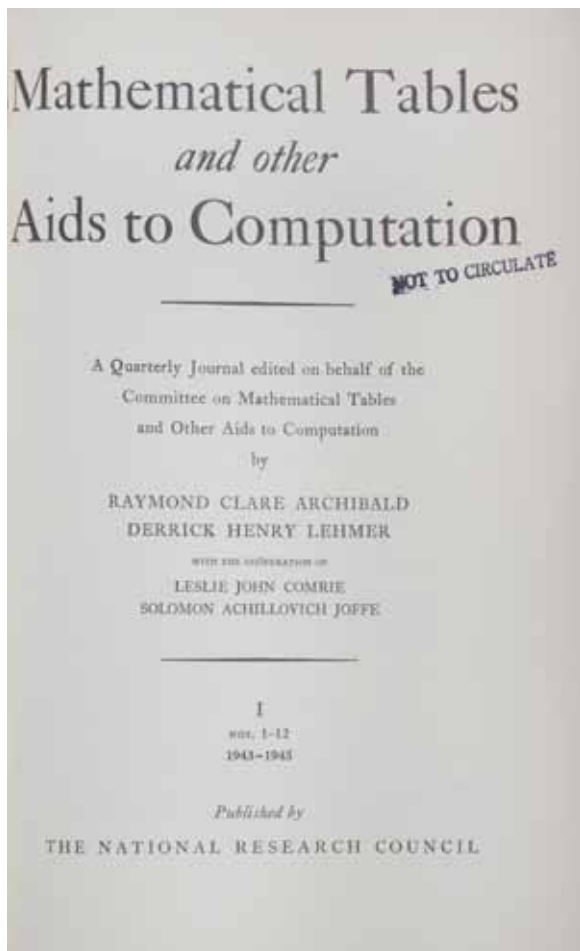
Document Signed ("Thos A Edison"), 3 pp, April 27, 1927, West Orange, New Jersey, titled "Minutes of a Meeting of the Board of Directors of the Edison Storage Battery Company," additionally signed by Charles Edison and six other senior members of the board, sheets numbered 155-157 in blue ink stamp in upper right corners, slight toning and wrinkling, binding mounts at left edge.

Signed by Edison and his son Charles Edison. The typed minutes of a board meeting of the Edison Storage Battery Company, assigning duties and positions to various board members, authorizing purchasing power for others, etc.

\$1,000 - 1,500



278



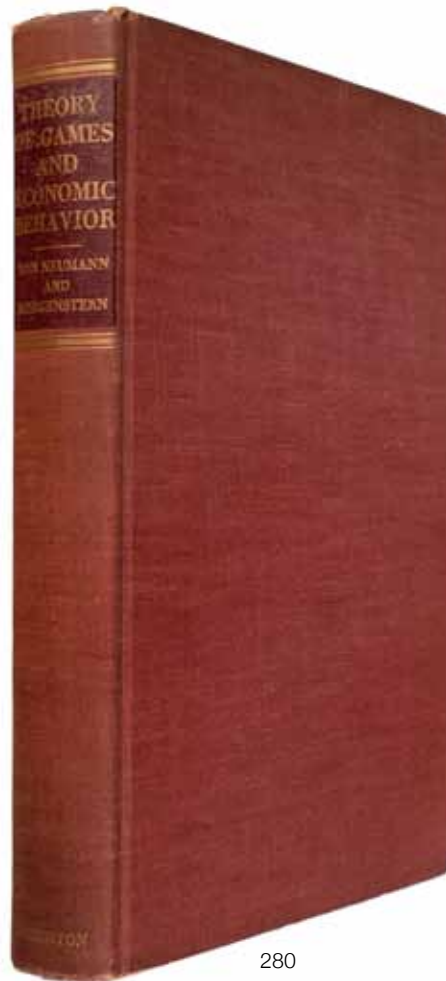
279

279

MATHEMATICAL TABLES AND OTHER AIDS TO COMPUTATION.

Mathematical Tables and other Aids to Computation. Washington, D.C.: National Research Council, [1943-60]. Volumes 1-14. 8vo. Volume 12 in original printed wrappers, remaining volumes in buckram. Library stamps, else excellent. *Provenance:* Jeremy Norman.

FIRST EDITION of the first 14 volumes of the first journal devoted to computing. A quarterly journal published by the NRC's committee of the same name, *MTAC* was founded by the committee's chairman, Raymond C. Archibald, professor of mathematics at Brown University. The journal appeared under the above title until 1960, when, reflecting the obsolescence of mathematical tables caused by the development of electronic digital computers, the name was changed to *Mathematics of Computation*. *MTAC* is a primary periodical source of information on the electromechanical and electronic digital computers designed and built during the late 1940s and early 1950s, as well as on the scientific uses of punched-card machines, mechanical desk calculators, etc. Among the more notable papers published in the journal are A.D. Booth's "Development and A.P.E. (X.) C." (1954); Comrie's "Application of Commercial Calculating Machines to Scientific Computing" (1946); Goldstine & Goldstine's "The Electric Numerical Integrator and Computer (ENIAC)" (1946), containing the first widely published description of that machine; Huskey's "Characteristics of the Institute for Numerical Analysis Computer" (1950), describing the SWAC computer; Rajchman's "The Selectron - a Tube for Selective Electrostatic Storage" (1950); Alt's "A Bell Telephone Laboratories Computing Machine" (1948), describing Stibitz's Model V relay computer; and Lyndon's "The Zuse Computer" (1947), containing the first widely distributed description of Zuse's Z4 machine. **\$2,000 - 3,000**



280

280

VON NEUMANN, JOHN, AND OSKAR MORGENSTERN.

Theory of Games and Economic Behavior. Princeton University Press, 1944. 8vo. Illustrated with figures. Original red cloth. Modest sunning, light shelfwear, tips just showing. Corrigenda slip present.

FIRST EDITION OF THE FOUNDATIONAL DESCRIPTION OF GAME THEORY. Von Neumann first wrote seriously about games in a 1928 paper, but it was not until this collaboration with Oskar Morgenstern that game theory was presented as an econometric tool. "The method of von Neumann and Morgenstern has become the archetype of later applications of game theory. One takes an economic problem, formulates it as a game, finds the game-theoretic solution, then translates the solution back into economic terms" (New Palgrave). However, "it would be doing the authors an injustice to say that theirs is a contribution to economics only. The scope of the book is much broader. The techniques applied by the authors in tackling economic problems are of sufficient generality to be valid in political science, sociology, or even military strategy. The applicability to games proper (chess and poker) is obvious from the title. Moreover, the book is of considerable interest from a purely mathematical point of view..." (Hurwicz in *World of Mathematics*, vol 2, p 1267 ff). Also, in the words of two Nobel Prize winning economists, "a landmark in the history of ideas" and a seminal work in mathematics and economics, which "has had a profound impact on statistics" (Dorfman, Samuelson & Solow *Linear Programming and Economic Analysis* pp 417, 445). *Origins of Cyberspace* 953. **\$1,200 - 1,800**



281

281

BURKS, ARTHUR W., HERMAN H. GOLDSTINE, AND JOHN VON NEUMANN.

Preliminary Discussion of the Logical Design of an Electronic Computing Instrument. [Princeton: Institute for Advanced Studies, September 1947.]

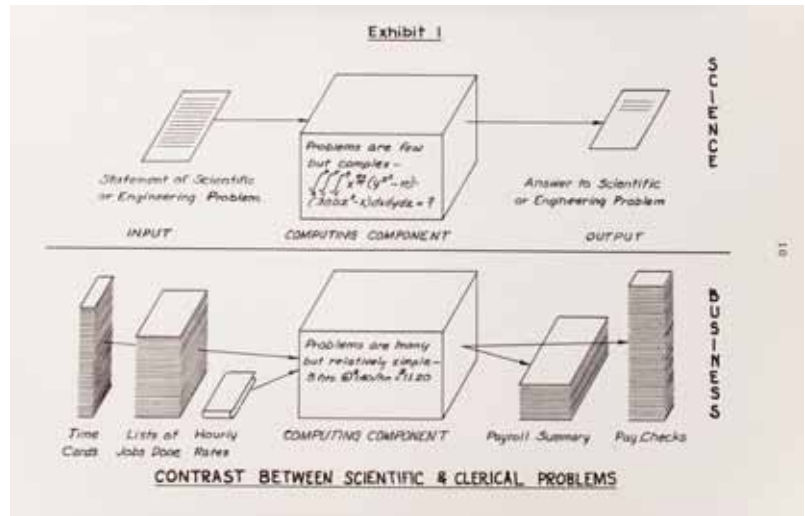
4to (277 x 204 mm). [6], 42 ll. Reproduced typescript. Original buff printed wrappers. Backstrip repaired, few scuffs to front cover.

Provenance: H.F. De Francesco (ownership inscription to front wrapper).

THE FIRST MAJOR PUBLICATION ON THE DESIGN ARCHITECTURE FOR STORED-PROGRAM COMPUTERS, also known as the von Neumann or Princeton architecture and *THE FOUNDATION FOR MODERN GENERAL-PURPOSE DIGITAL COMPUTING*, second edition. This paper was preceded by Von Neumann's "First Draft of a Report on the EDVAC" but the present is the first regularly distributed work, albeit still in mimeograph form. The "stored program concept" is the notion that instructions, just like data, can be reduced to numerical format and stored in the internal memory of the computer. It has been called the single largest innovation in the history of the computer; among other things, this critical breakthrough: greatly simplified the preparation and revision of computer programs; permitted ready use of standard "subroutines" or packages of calculations; and accommodated complex problem solving by allowing the interim results of the ongoing processing of data to determine what course the program would follow, in a sense, allowing the computer to "modify its own program." The innovation is described here in disarmingly simple language: "1.3. Conceptually we have discussed above two different forms of memory: storage of numbers and storage of orders. If, however, the orders to the machine are reduced to a numerical code and if the machine can in some fashion distinguish a number from an order, the memory organ can be used to store both numbers and orders." The first edition of this paper appeared in July 1946; this edition contains an expanded account of the arithmetic processes and a report of further experiments. Following the *Preliminary Discussion*, Goldstine and Von Neumann wrote the three-volume companion, *Planning and Coding of Problems for an Electronic Computing Instrument*. These four papers together were the only source on this topic available until 1950 and 1951 with the distribution of Wilkes, Wheeler and Gill's *Preparation of Programs for an Electronic Digital Computer*. *Origins of Cyberspace* 959.

\$2,000 - 3,000

282



282

ELECTRONIC BUSINESS MACHINES.

APPEL, RICHARD W., et al. *Electronic Business Machines: A New Tool for Management.* Boston: [for the Harvard Graduate School of Business Administration], June, 1953.

4to. [6], 63 ff. Library binding.

Provenance: Mathematisches Institut Darmstadt (inkstamp, spine label).

WITH: HARRISON, PAUL F. *Electronic Computers and Possible Applications to Bank Accounting.* [For the Graduate School of Business Administration, New York University], 1955. 4to. Numerous original banking forms laid in. Metal-strip binding in paper covers.

"PROBABLY THE FIRST PUBLISHED INDEPENDENT REPORT WRITTEN BY PEOPLE OUTSIDE THE COMPUTER INDUSTRY ON THE APPLICATION OF ELECTRONIC COMPUTERS TO BUSINESS NEEDS" (OOC sale), being a Harvard M.B.A. thesis from 1953. "When this report was published, no electronic digital computer had been delivered to an American corporation (the first UNIVAC I delivered to a private rather than governmental customer was serial number 8, sold to General Electric in 1954) ... [This] report discusses the necessity of modifying both computers and business procedures to take advantage of the great computing power and speed offered by the new machines. Chapter VI, titled 'Business machines in 1970,' attempts to predict the future evolution of business machines 'as they relate to manufacturing companies, department stores, insurance companies, banks and public utilities' (p. 37)" (OOC). *From Gutenberg to the Internet* 10.4; *Origins of Cyberspace* 428. Accompanied by an NYU thesis on *COMPUTING AND BANKING* from 1955. This thesis unknown in the literature.

\$1,500 - 2,500

283

FORTRAN.

[BACKUS, JOHN. 1924-2007. *Fortran Introductory Programmer's Manual*, etc. New York: I.B.M., March-May, 1957.]

8 items bound together. 4to. Reproduced typescripts. Black cloth, spine gilt-lettered, laminated.

Provenance: Institut für Praktische Mathematik, Technische Hochschule, Darmstadt (inkstamp, call no on spine).

EXTREMELY EARLY AND RARE USER'S MANUALS FOR FORTRAN, THE DOMINANT COMPUTER LANGUAGE OF THE 1950s and the first which would be widely supported across a variety of computer architectures. This set of manuals is contemporaneous to the first release of FORTRAN in April of 1957 and the first title page states that this precedes the forthcoming Introductory Programmer's Manual "to permit its early use for teaching purposes ... The goal of the FORTRAN project was to enable the programmer to specify a numerical procedure using a concise language like that of mathematics and obtain automatically from this specification an efficient [IBM] 704 program to carry out this procedure. It was expected that such a system would reduce the coding and debugging task to less than one-fifth of the job it had been" (p 2, 4th item).

The individual items comprise: "FORTRAN introductory programmer's manual. Section I. New York: Programming Research Department, IBM, March 20, 1957." * "FORTRAN introductory programmer's manual. Section II. New York: Programming Research Department, IBM, April 10, 1957." * "FORTRAN introductory programmer's manual. Section III. New York: Programming Research Department, IBM, June 7, 1957." * "Preliminary operator's manual [for] the FORTRAN automatic coding system for the IBM 704 EDPM." New York: Programming Research Department, IBM, April 8, 1957. * BACKUS et al. "The FORTRAN automatic coding system." N.p, n.d. [1957]. * BACKUS. Photocopy of a Typed letter signed to John Greenstadt. New York, April 24, 1957. * BACKUS. Photocopy of a Typed letter signed to Franz E. Ross. New York, May 7, 1957. * FNEDT1. "FORTRAN editing program. New York: Programming Research Department, IBM, May 8, 1957." *Origins of Cyberspace* 447. **\$700 - 1,000**



283

284

MACHTRONICS.

MV-11 Recorder. Mountain View, Ca: Machtronics, ca. 1963. 24¼ x 13 x 11 inches. Metal and plastic with removable lid, video and audio-in knobs, audio bias and phase dials, on/off toggle switch on drop-open panel, fast forward, rewind, play, and record buttons in white plastic, stop button in red plastic, 3-digit number dial, sides with metal carrying handles, original detachable power cord. With the original *MVR-11 Operation and Service Manual* and *MVR-11 Service Manual Supplement*, and original letter dated June 7, 1963 from the Machtronics Manager of service engineering. Housed in the original Machtronics shipping crate.

\$2,000 - 3,000



284

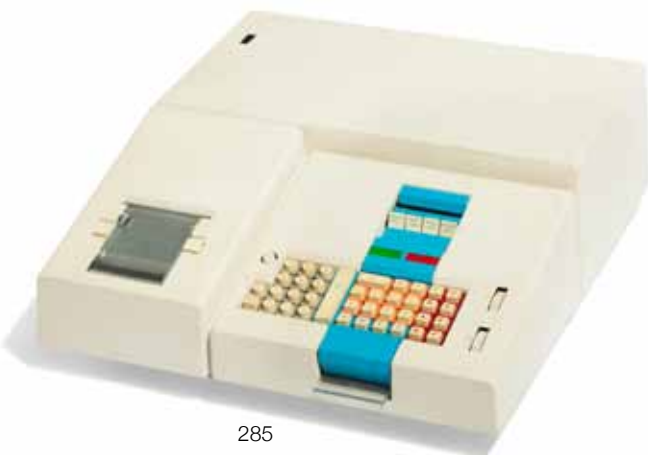
285

OLIVETTI.

P 602 Microcomputer. Italy: Olivetti, ca. 1971. A desktop microcomputer, 18½ x 20¼ inches, 7¼ inches tall in back, sloping to 5¼ inches tall in front. Putty colored plastic & metal with grey, red, pink and turquoise button panels, 4 large turquoise switches reading "Record Prog", "Print Prog", "Single Step", and "Second Side", number pad with 12 buttons, small round reset button, small square "KB CL" and "KB REL" buttons, 23 small round mathematical function buttons, 2 number dials, larger rectangular "Start S" button, printer paper output panel. 2½ crack to rear panel, otherwise very good. With manuals.

An early microcomputer.

\$2,000 - 3,000



285

C

C



7404
(6800 ONLY)



7.5K
7.5K
7.5K
7.5K
7.5K



2519



74157 PC
F 7547

Apple Computer 1

Palo Alto, Ca. Copyright 1976

B

B



10/7410
CF7630

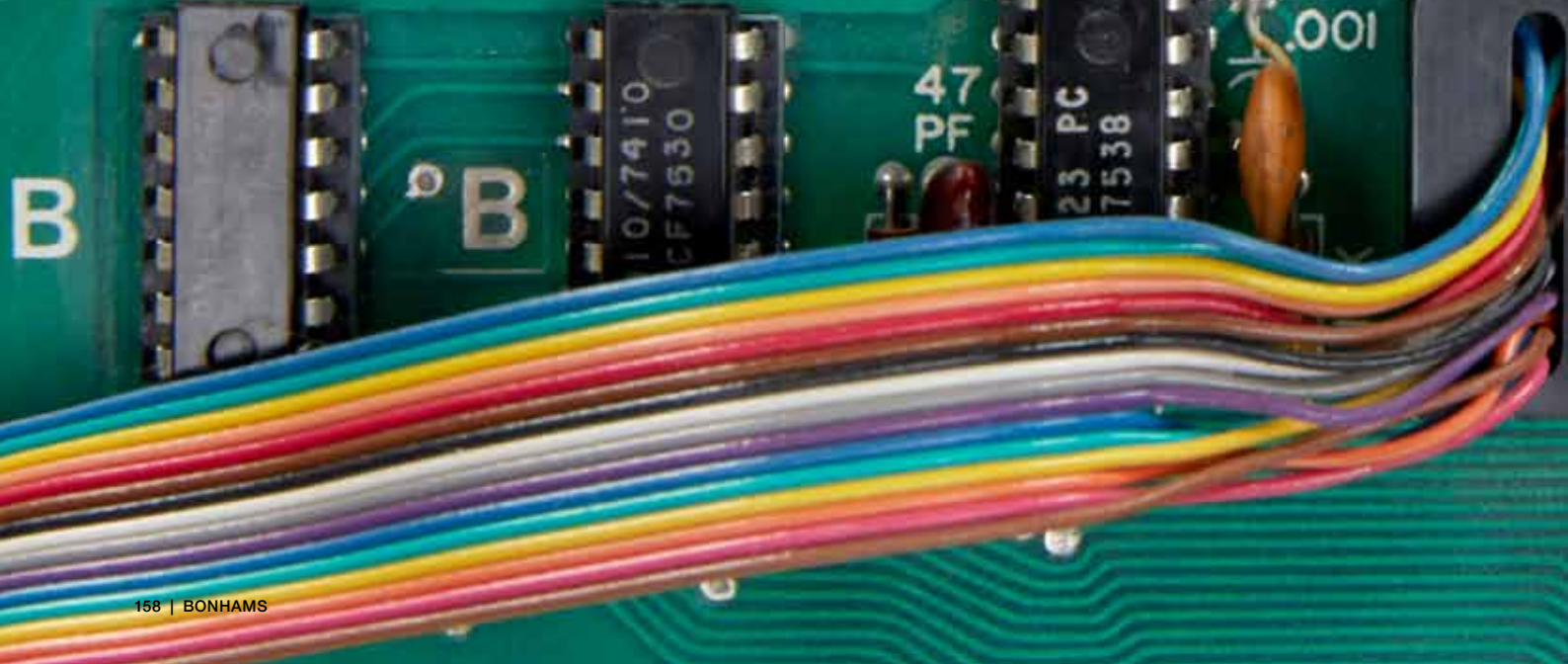
47
PF

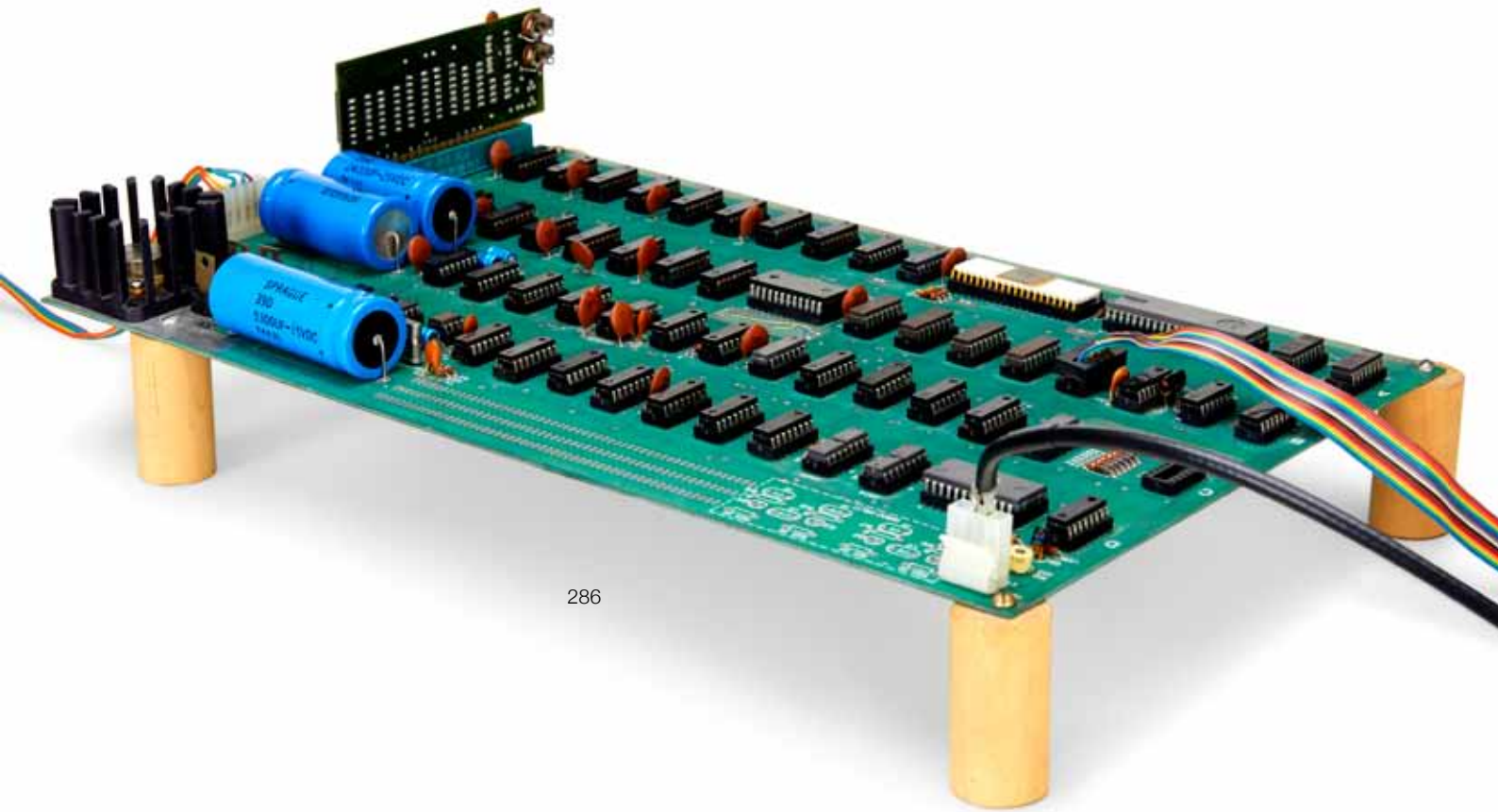


23 PC
7538



1000





286

APPLE-1 COMPUTER WITH EXCEPTIONAL PROVENANCE AND IN BEAUTIFUL, WORKING CONDITION.

286

APPLE 1 COMPUTER.

Apple 1 Motherboard, with label "Apple Computer 1 / Palo Alto. Ca. Copyright 1976." Includes circuit board with four rows A-D, and columns 1-18; MOS Technologies 6502 microprocessor, labeled MCS 6502 1576; keyboard interface and connector; 8K bytes RAM in 16-pin 4K memory chips; 4 power supplies including 3 capacitors; firmware in PROMS (A1, A2); low-profile sockets on all integrated circuits; inked "01-0070" on underside; heatsink; expansion connector; cassette board connector; and original cassette interface, labeled *Apple 1 Cassette Interface Copyright 1976* with "G" lettered in triangle on reverse, overall approximately 15 x 9 x 2 1/2 inches, on four corner wooden pedestals.

WITH: vintage keyboard with pre-7400 series military spec chips; Sanyo monitor model no VM4204; custom power supply in wooden box. Lot also includes two vintage tape-decks; facsimile owner's manual, schematic and BASIC tape; and a small quantity of 1970s-1980s AppleSiders ephemera as detailed below.

Computer was operational as of September 2014; a video of that operation is linked to the online description of this lot at www.bonhams.com/video/17458. It was examined and powered up by Corey Cohen, Apple-1 expert and member of the Board of Directors for Mid-Atlantic Retro Computing Hobbyists Museum at the InfoAge Science Center in NJ. Mr. Cohen notes the Apple-1 is in "superb overall condition: the motherboard with no apparent modifications performed or removed and the breadboard in very clean state; even the screws on the power regulators are not heat cycled; every chip on both board and ACI were tested and only a single date-correct replacement chip was needed. The vintage power supply and the keyboard both had minor repairs performed including a date-correct replacement chip to the keyboard."

Provenance: John Anderson, the Founder of the Cincinnati AppleSiders.



Still from demonstration video with the vintage components, September 2014



Steve Wozniak at the 1980 Apple-Vention (still from included VHS tapes)

The Apple-1 computer is the first pre-assembled personal computer to come to market, heralding the dawn of the personal computer revolution. The story of its production and sale has become one of the most potent legends in 20th century history. Indeed, the story is perhaps just as famous now as the one that inspired the company name: Newton theorizing gravity under the apple tree.

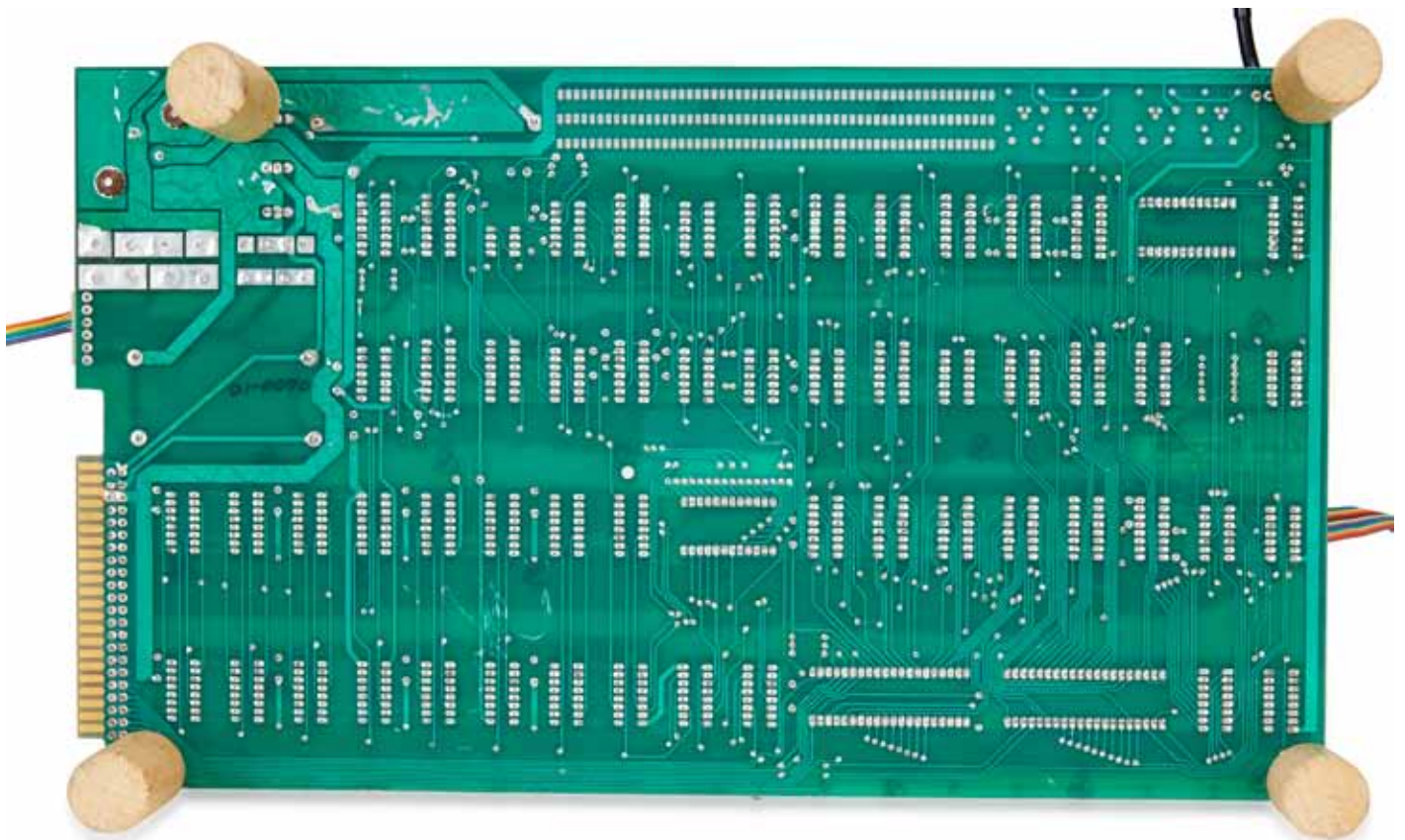
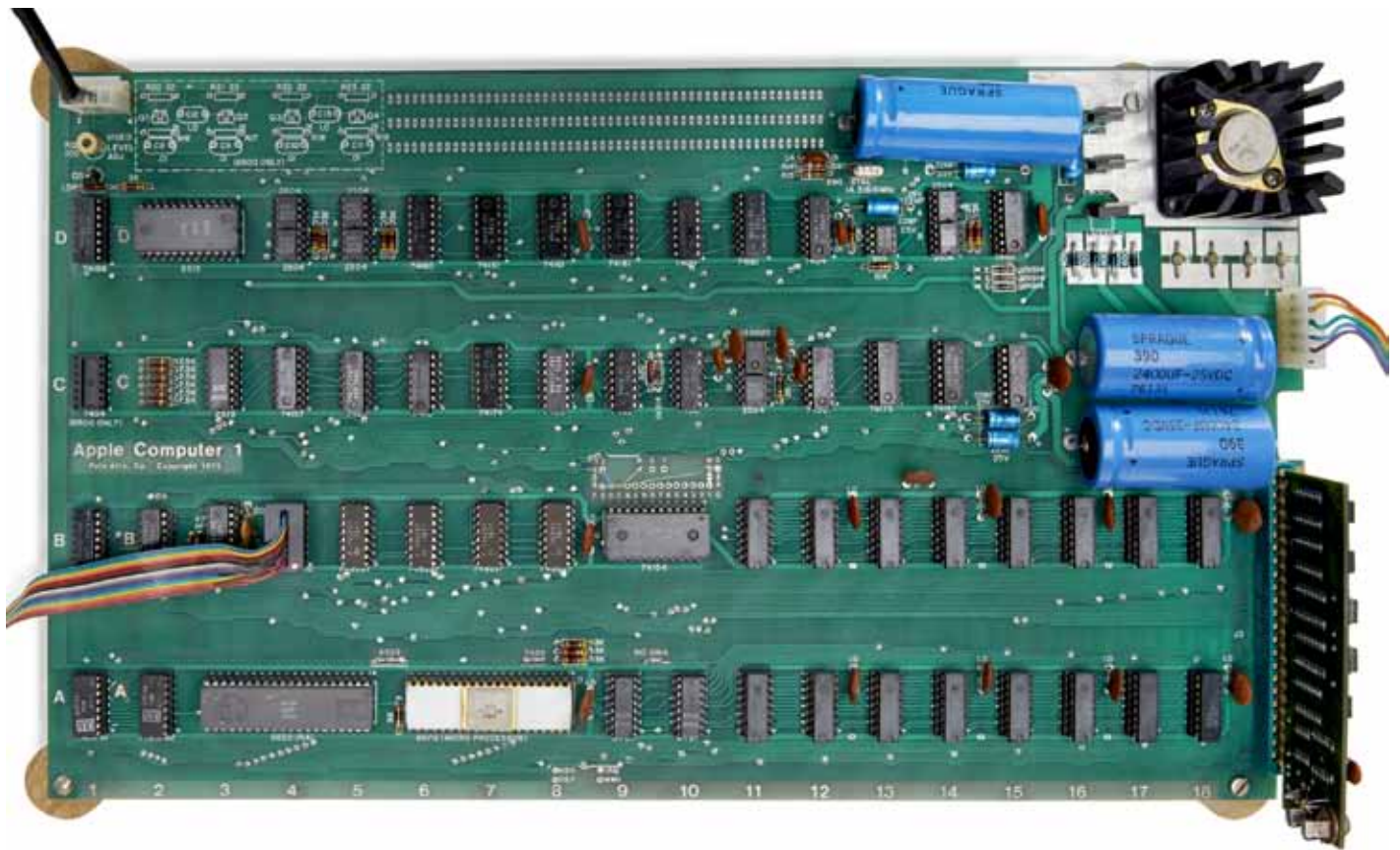
Steve Wozniak had demonstrated his breakthrough design at the Homebrew Computer Club in Palo Alto and, with his high-school buddy Steve Jobs, obtained an order from Byte Shop owner, Paul Terrell, for 50 assembled boards to be delivered in 30 days. The Apple-1 was built by Wozniak in the Jobs' family garage (or possibly Jobs' sister's bedroom). Approximately 200 units were eventually made, but this is thought to be one of the first batch of 50 with the PCB manufacturer unidentified on the front copper layer of the board. It also bears the inked number "01-0070" on the reverse, of unknown significance, though once conjectured to be a Byte Shop inventory number. Only 63 surviving authentic Apple-1's are listed in Mike Willegas's Apple 1 Registry as of January, 2014. We are informed by Mr. Willegas that this example will be added to the registry shortly. Of those 63, only 15 are documented as having been successfully operated since 2000. Although the first Byte Shop order sold extremely well (at a retail price of \$666.66), there were at least some remainders from the additional 150 and many of these were recycled into Apple II's. Additionally, at least some of the Apple-1 first users sent them back for conversion to Apple II's or modified them on their own. In this context, the state of preservation of this example is particularly remarkable. Of the approximately 15 other working boards, it is not known if any of those

are in as excellent condition as this one. In particular, note the nearly pristine state of the motherboard's underside where modifications or prior modifications are typically visible. According to Corey Cohen, the condition of the present example is significantly better than any of the operating units that have come up for public sale in the past 4 years.

The superlative rarity of an Apple-1 in this condition is corroborated by this machine's early history. The first known owner is John Barkley Anderson, the Founder and first President of the Cincinnati AppleSiders. This users group began in 1978 and is still holding regular meetings. Anderson started the group's newsletter, "Poke-Apple" in February, 1979 and he organized the first Apple-Vention in October, 1979. For the second Apple-Vention in 1980 he secured Steve Wozniak as the keynote speaker. Family tradition is that Anderson acquired this machine circa 1980 at the time of the second Apple-Vention. Anderson understood very early on its incredible historical importance. According to the family it has been carefully stored in a custom Plexiglas vitrine since August of 1989. The vitrine is included with the lot; it comfortably houses the computer, power supply and keyboard). Present also are 3 issues of "Poke-Apple" from 1979-1984 including the very first number and a special Macintosh issue from February, 1984. There are also programs from the first two Apple-Ventions (October 1979 and October 1980) and two VHS tapes documenting the 1980 event including Wozniak's keynote speech.

For an excellent discussion of the history of the Apple-1 see the documentary: *Steve Jobs: The Lost Interview* (2012).

\$300,000-500,000





287

287

APPLE COMPUTER, INC.

An original European headquarters flag, approximately 76½ x 75 inches, ca 1996.

Sturdy high-quality white polyester flag with rainbow apple logo, strung with medium wight white cord with wooden handle at one end.

A FINE EXAMPLE OF THE FLAG FOR APPLE'S EUROPEAN HEADQUARTERS, located in Les Ulis, France, the long-time location for both the French and European headquarters of Apple before they relocated to London in the mid 2000s. The first Apple Computer, Inc. logo was actually a sketch of Isaac Newton sitting under a tree, an apple dangling above his head. Less than a year after its introduction, the Newton sketch was replaced by the Rainbow Logo, commissioned at Steve Jobs' request. Jobs appreciated the simplicity of the apple (with a bite taken out of it, so that no one would confuse it with a tomato), and also insisted on the use of colors to "humanize" the company. The Rainbow Logo was in service from 1976 until 1997, when it was revised into the monochromatic version in use today.

This was the last remaining European headquarters flag, and is in such fine condition as it was the back-up flag kept on reserve for visits from VIPs. The other flags, which were flown on a daily basis, were weathered and torn from the elements.

\$1,500 - 2,500



288

288

[GATES, WILLIAM HENRY III. B.1955.]

Original painting, oil on canvas, 39 1/2 by 29 1/2 inches, signed ("Michael Del Priore,") 2000, being a portrait of Bill Gates, framed, excellent condition.

A fine portrait of the co-founder of Microsoft by noted portraitist Michael Del Priore for the November 2000 *Wired Magazine* cover and also the cover of John Heilemann's *Pride before the Fall*, published in October 2003. Del Priore depicts Gates as formal and polished, transforming him into what one would expect of an American business magnate 50 or 100 years earlier.

\$700 - 900

END OF SALE

Auction Registration Form

(Attendee / Absentee / Online / Telephone Bidding)

Please circle your bidding method above.

--	--	--	--

Paddle number (for office use only)

General Notice: This sale will be conducted in accordance with Bonhams Conditions of Sale, and your bidding and buying at the sale will be governed by such terms and conditions. Please read the Conditions of Sale in conjunction with the Buyer's Guide relating to this sale and other published notices and terms relating to bidding. Payment by personal or business check may result in your property not being released until purchase funds clear our bank. Checks must be drawn on a U.S. bank.

Notice to Absentee Bidders: In the table below, please provide details of the lots on which you wish to place bids at least 24 hours prior to the sale. Bids will be rounded down to the nearest increment. Please refer to the Buyer's Guide in the catalog for further information relating to instructions to Bonhams to execute absentee bids on your behalf. Bonhams will endeavor to execute bids on your behalf but will not be liable for any errors or non-executed bids.

Notice to First Time Bidders: New clients are requested to provide photographic proof of ID - passport, driving license, ID card, together with proof of address - utility bill, bank or credit card statement etc. Corporate clients should also provide a copy of their articles of association / company registration documents, together with a letter authorizing the individual to bid on the company's behalf. Failure to provide this may result in your bids not being processed. For higher value lots you may also be asked to provide a bankers reference.

Notice to online bidders: If you have forgotten your username and password for www.bonhams.com, please contact Client Services.

If successful

- I will collect the purchases myself
- Please contact me with a shipping quote (if applicable)
- I will arrange a third party to collect my purchase(s)

Please mail or fax the completed Registration Form and requested information to:

Bonhams Client Services Department
 580 Madison Avenue
 New York, New York 10022
 Tel +1 (212) 644 9001
 Fax +1 (212) 644 9009
 Automated Auction Results
 Tel +1 (415) 503 3410

Bonhams

Sale title:		Sale date:	
Sale no.		Sale venue:	
General Bid Increments:			
\$10 - 200by 10s		\$10,000 - 20,000by 1,000s	
\$200 - 500by 20 / 50 / 80s		\$20,000 - 50,000by 2,000 / 5,000 / 8,000s	
\$500 - 1,000by 50s		\$50,000 - 100,000by 5,000s	
\$1,000 - 2,000by 100s		\$100,000 - 200,000by 10,000s	
\$2,000 - 5,000by 200 / 500 / 800s		above \$200,000at the auctioneer's discretion	
\$5,000 - 10,000by 500s		The auctioneer has discretion to split any bid at any time.	
Customer Number		Title	
First Name		Last Name	
Company name (to be invoiced if applicable)			
Address			
City		County / State	
Post / Zip code		Country	
Telephone mobile		Telephone daytime	
Telephone evening		Fax	
Telephone bidders: indicate primary and secondary contact numbers by writing ① or ② next to the telephone number.			
E-mail (in capitals) _____			
By providing your email address above, you authorize Bonhams to send you marketing materials and news concerning Bonhams and partner organizations. Bonhams does not sell or trade email addresses.			
I am registering to bid as a private client <input type="checkbox"/>		I am registering to bid as a trade client <input type="checkbox"/>	
Resale: please enter your resale license number here _____ We may contact you for additional information.			

SHIPPING	
Shipping Address (if different than above):	
Address: _____	Country: _____
City: _____	Post/ZIP code: _____

Please note that all telephone calls are recorded.

Type of bid (A-Absentee, T-Telephone)	Lot no.	Brief description (In the event of any discrepancy, lot number and not lot description will govern.) If you are bidding online there is no need to complete this section.	MAX bid in US\$ (excluding premium and applicable tax) Emergency bid for telephone bidders only*

You instruct us to execute each absentee bid up to the corresponding bid amount indicated above.

* Emergency Bid: A maximum bid (exclusive of Buyer's Premium and tax) to be executed by Bonhams **only** if we are unable to contact you by telephone or should the connection be lost during bidding.

BY SIGNING THIS FORM YOU AGREE THAT YOU HAVE READ AND UNDERSTAND OUR CONDITIONS OF SALE AND SHALL BE LEGALLY BOUND BY THEM, AND YOU AGREE TO PAY THE BUYER'S PREMIUM, ANY APPLICABLE TAXES, AND ANY OTHER CHARGES MENTIONED IN THE BUYER'S GUIDE OR CONDITIONS OF SALE. THIS AFFECTS YOUR LEGAL RIGHTS.	
Your signature: _____	Date: _____

INDEX

ACHLEITNER, OSCAR.....	86	ELECTRICITY.....	219	LESLIE, JOHN.....	220	RITEHEY, GEORGE WILLIS.....	58
ALFVÉN, HANNES.....	260	ELECTRON SPIN.....	258	LESSON, RENÉ PRIMEVÈRE.....	73	RITTENHOUSE, DAVID.....	49
ANTOMMARCHI, FRANCESCO.....	156	ELECTRONIC BUSINESS MACHINES.....	282	LEWIS, E.B.....	205	RIVIÈRE, LAZARE.....	101
APPEL, RICHARD W.....	282	ELEPHANTIASIS.....	198	LIEBERKÜHN, JOHANN NATHANAE.....	120	ROBERT, NICOLAS.....	69
APPLE COMPUTER.....	286, 287	ELLIOTSON, JOHN.....	175	LINDEN, JEAN-JULES.....	79	RÖNTGEN, WILHELM KONRAD.....	234
ARETAEUS.....	99	ENTOMOLOGY.....	87, 90	LIZARS, JOHN.....	153	ROUSSELOT.....	124
ASTRUC, JEAN.....	116	EULER, LEONHARD.....	209	LONGET, FRANÇOIS ACHILLE.....	180	RÜDINGER, NICOLAUS.....	185
ATELIERS R. MAILHAT.....	59	FABRICIUS AB AQUAPENDENTE.....	106	LÖNNBERG, EINAR.....	89	RUFFUS.....	99
AYRTON, HERTHA.....	249	FALCONRY.....	66	LORENTZ, HENDRIK ANTOON.....	230	SAINT-ANGE, GASPARD JOSEPH MARTIN.....	173
BABBAGE, CHARLES.....	272	FONTANA, FELICE.....	133	LOUIS XIV, KING OF FRANCE.....	64	SCHLEIDEN, MATTHIAS JAKOB.....	174
BACKUS, JOHN.....	283	FORTRAN.....	283	LOVELACE, AUGUSTA ADA BYRON, COUNTESS OF.....	272	SCHRÖDINGER, ERWIN.....	261
BALLOONING.....	274	FREUD, SIGMUND.....	199, 201	LUDWIG, CARL FRIEDRICH WILHELM.....	192	SEABORG, GLENN.....	266
BARTHOLIN, THOMAS.....	102	FRIES, BENGT FRIEDRICH.....	76	LUNAR MANUSCRIPT.....	49	SEEBOHM, HENRY.....	84, 85
BAZ, GUSTAVO ADOLFO.....	275	GALEN.....	92	LURIA, S.E.....	205	SEMMELEWIS, IGNAZ PHILIPP.....	186
BAZIN, ANTOINE-PIERRE-ERNEST.....	171	GALLO, EUDARDO L.....	275	MACEWEN, WILLIAM.....	200	SERRES, ETIENNE RÉNAULD	
BEADLE, G.W.....	205	GALVANI, LUIGI.....	215	MACHTRONICS.....	284	AUGUSTIN.....	164
BECQUEREL, HENRI.....	236, 239, 241	GARDINER, J.H.....	235	MACMICHAEL, WILLIAM.....	159	SHARPE, RICHARD BOWDLER.....	85
BÉLIDOR, BERNARD FOREST DE.....	268	GATES, WILLIAM HENRY III.....	288	MAGIC LANTERN.....	233	SIAMESE TWINS.....	164
BELL, CHARLES.....	145, 148	GAUSS, KARL FRIEDRICH.....	222	MAGNAVOX.....	253	SIMON, GUSTAV.....	193, 195
BERGSTRÄSSER, JOHANN ANDREAS		GAUTIER D'AGOTY, ARNAULD-ELOI.....	128, 129, 130, 131, 132	MALGAINÉ, JOSEPH.....	179	SMITH, ROBERT.....	214
BENIGNUS.....	210	GENETICS.....	202	MALPIGHI, MARCELLO.....	67	SNELL, GEORGE D.....	205
BERRY, ALEXANDER.....	60	GERLACH, WALTHER.....	265	MANCINI, CESARE.....	66	SOUBEIRAN, EUGÈNE.....	162
BETT, JOHN.....	18	GIBBS, JOSIAH WILLARD.....	231	MANHATTAN PROJECT VIEWING WINDOW.....	262	SOUND SYNTHESIZER.....	245
BIGELOW, HENRY JACOB.....	178	GIBSON, H.H.....	229	MASCAGNI, PAOLO.....	156	SPECTRUM ANALYSIS.....	53
BILLROTH, C.A. THEODOR.....	188	GIFFARD, WILLIAM.....	118	MATHEMATICAL TABLES.....	279	STARK, JOHANNES.....	241
BLANDIN, PHILIPPE FRÉDÉRIC.....	168	GLISSON, FRANCIS.....	100, 105	MATTHEW, PATRICK.....	75	STRUTT, JOHN WILLIAM, THIRD BARON OF RAYLEIGH.....	232
BLASIUS, ERNST.....	165	GLOBES.....	1-43	MAYER, JULIUS ROBERT.....	265	SUMNER, JAMES B.....	205
BOHN, JOHANN.....	111	GNUDI, MARTHA TEACH.....	206	MEDICO, GIUSEPPE DEL.....	146	SUNDEVALL, CARL JACOB.....	76
BONNET, AMÉDÉE.....	176	GOLDSTINE, HERMAN H.....	281	MENABREA, LUIGI FEDERICO.....	272	SWAN, JOSEPH.....	166
BOURDET, ETIENNE.....	135	GRAAF, REGNIER DE.....	103	MICHELL, PIER ANTONIO.....	70	SYDENHAM, THOMAS.....	108
BOYLE, ROBERT.....	68	GRAEFE, CARL FERDINAND VON.....	151	MICHELL, JOHN.....	51A	SYLVESTER, CHARLES.....	152
BRIGGS, WILLIAM.....	109	GRASSI, JUNIO PAOLO.....	99	MONARDES, NICOLÁS.....	94	TAGLIACOZZI, GASPARE.....	161
BROGLIÉ, LOUIS DE.....	264	GRAY, GEORGE ROBERT.....	77	MOREHOUSE COMET.....	62	TATUM, E.L.....	205
BROWNRIIG, JONATHAN.....	190	GREEN, JAMES.....	235	MORGAN, THOMAS HUNT.....	204, 205	TELEGRAPH DOCUMENTS.....	225
BUDAN DE BOISLAURENT, FERDINAND.....	221	GREW, NEHEMIAH.....	65	MORGENSTERN, OSKAR.....	280	THEOPHILUS.....	99
BUFFON, GEORGES, COMTE DE.....	72	GRIMAUD DE CAUX, GABRIEL.....	173	MORSE, SAMUEL F.B.....	225	THIERSCH, CARL.....	197
BUNON, ROBERT.....	119	GROBEL, LARRY.....	207	MORTON, WILLIAM T.G.....	184	THOMAS, LLEWELLYN HILLETH.....	258
BURKS, ARTHUR W.....	281	HALLER, ALBRECHT VON.....	123, 125	MOUCHEZ, ERNEST.....	56	THOMSON, JOSEPH JOHN.....	244
CALMEIL, LOUIS FLORENTIN.....	158	HEISTER, LORENZ.....	121	MULLER, H.J.....	205	THORBURN, ARCHIBALD.....	88
CANT, ARENT.....	117	HELMHOLTZ, HERMANN VON.....	245	NAIRNE, EDWARD.....	51	TIEDEMANN, FRIEDRICH.....	154
CARDANO, GIROLAMO.....	93	HERSCHEL, JOHN F.W.....	52	NEWTON, SON & BERRY.....	11	TISSANDIER, ALBERT.....	274
CELSUS, AULUS CORNELIUS.....	122	HIPPOCRATES.....	95, 99	OFFORD, J. MILTON.....	60	VALLES DE COVARRUBIAS, FRANCISCO.....	95
CHAVASSIEU-D'AUDEBERT.....	218	HIRN, GUSTAVE ADOLFE.....	227	OLIVETTI.....	285	VIMERCATO, GIOVANNI BATTISTA.....	46
CHIARUGI, VINCENZO.....	137	HOBSON, BENJAMIN.....	181, 183	PALEONTOLOGY.....	78	VINKELES, REINIER.....	219
CLAVIUS, CHRISTOPHER.....	47	HODGKIN, THOMAS.....	169	PALLADIUS.....	99	VISHNIAC, ROMAN.....	90
CLEMENT, MICHEL.....	273	HOWARD, JOHN.....	138	PASTEUR, LOUIS.....	182	VOIGT, WOLDEMAR.....	237
CLOQUET, JULES GERMAIN.....	157	HUGGINS, WILLIAM.....	53	PAULING, LINUS.....	207, 266	VOLTA, ALESSANDRO.....	216, 217
COHN, FERDINAND.....	196	HUMBERT, FRANÇOIS.....	167	PÉAN, FRANÇOIS RENÉ.....	140	VON NEUMANN, JOHN.....	280, 281
COLLAPSIBLE GLOBE.....	18	HUNTER, JOHN.....	127	PERCY, PIERRE FRANÇOIS, BARON.....	147	VON SCHOENBERG, ALBRECHT.....	151
CONFEDERATE SURGEON'S ARCHIVE.....	190	ISON, CECIL H.....	91	PERPETUAL MOTION MACHINE.....	267	WALKER, SARAH BENNETT.....	86
COOK, JAMES.....	50	JACQUARD, JOSEPH MARIE.....	271	PETIT, JEAN LOUIS.....	114	WALLICH, NATHANIEL.....	74
COOPER, ASTLEY PASTON.....	150, 155	JACQUIER, M.N.....	167	PINEL, PHILIPPE.....	144	WARREN MASTODON.....	78
CORVISART, LUCIEN.....	189	JONES, JOHN.....	97	PIROGOV, NICOLAI IVANOVICH.....	191	WEBER, ERNST HEINRICH & WILHELM EDUARD WEBER.....	223
COSSALI, PIETRO.....	212	JOULE, JAMES PRESCOTT.....	224	PLANCK, MAX.....	238, 242	WEBSTER, JEROME PIERCE.....	206
COWPER, WILLIAM.....	112	JUPITER.....	61	PLASTIC SURGERY.....	142, 151	WERNER, JOHANN.....	45
COYTARD DE THAIRE, JEAN.....	96	KAEMPFER, ENGELBERT.....	115	PLATTER, FELIX.....	98	WILLIAMS, CARROLL MILTON.....	90
CROOKES, WILLIAM.....	228	KEPLER, JOHANNES.....	48	PORTAL, PAUL.....	110	WILLIS, THOMAS.....	104, 107
DAIGNAN, GUILLAUME.....	136	KLINGER.....	16	PREYEL, ADAM.....	63	WITHERING, WILLIAM.....	134
DARWIN, CHARLES.....	80-83	KNOOP, JOHANN HERMAN.....	71	PRIESTLEY, JOSEPH.....	211	WOLF, MAXIMILIAN FRANZ JOSEPH CORNELIUS.....	57
DAVIS, DAVID D.....	170	KÖNIGSBERGER, LEO.....	252	PROCLUS, DIADOCHUS.....	44	WOOD, JOSEPH.....	77
DAVY, SIR HUMPHRY.....	269	LAGRANGE, JOSEPH LOUIS.....	213	PSEUDO-ARISTOTLE.....	141	WRIGHT, MAGNUS, WILHELM, AND FERDINAND VON.....	89
DEEP SPACE PHOTOGRAPHY.....	57, 60	LANGEVIN, PAUL.....	244	QUÉNISSET, FERNAND.....	62	WRIGHT, WILHELM VON.....	76
DENTISTRY.....	119	LATTRE, JEAN & RIGOBERT BONNE.....	36	RADIUS, JUSTUS.....	160	X-RAY PHOTOGRAPHS.....	235
DIEFFENBACH, JOHANN FRIEDRICH.....	177	LAUE, MAX VON.....	263	RAILROADS.....	270, 275	ZEIS, EDUARD.....	187
DODART, DENIS.....	69	LAVATER, JOHANN CASPAR.....	139	RAMAZZINI, BERNARDINO.....	113		
DODSON, JAMES.....	208	LE CHARLES, L.....	87	RAVATON, HUGUES.....	126		
DUBREUIL, CLAUDE JOSEPH.....	267	LECLERC, SÉBASTIEN.....	64	REIL, JOHANN CHRISTIAN.....	143		
DUPUYTREN, GUILLAUME.....	172	LEDERBERG, JOSHUA.....	205	REIS, JOHANN PHILIPP.....	226		
DUTERTRE, PIERRE.....	149	LEHMANN, OTTO.....	240	RICE, NATHAN PAYSON.....	184		
ECONOMICS.....	280	LENOIR, ADOLPHE.....	194	RICHE, CHARLES.....	203		
EDISON, THOMAS ALVA.....	276-278						
EINSTEIN, ALBERT.....	242, 243, 247, 248, 250, 251, 254, 256, 257, 259						

INVITATION

BONHAMS' BOOKS AND MANUSCRIPTS DEPARTMENT CORDIALLY INVITE YOU TO A LECTURE AND RECEPTION

Saturday October 18
From 3pm to 5pm

KINDLY RSVP BY OCTOBER 16

+1 (212) 644 9143
events.us@bonhams.com

Forging the Moon, Or, How to Spot a fake Galileo

by Nick Wilding, Associate Professor of Early Modern,
History at Georgia State University

New forgeries of seventeenth-century books are nearly perfect. How were they made, and how can we detect them? Focusing on the supposed illustrated proof-copy of Galileo's *Sidereus Nuncius* (Venice, 1610), we will examine the tests that these forgeries can pass and describe new ones that, for the time being, fail.



Bonhams

NEW YORK

bonhams.com/books

INSTRUMENTS OF SCIENCE AND TECHNOLOGY 1550-1950

Tuesday 4 November 2014
Knightsbridge, London

AN IMPORTANT SINGLE SHEET EUROPEAN UNIVERSAL ASTROLABE

not signed or dated, engraved
by two hands, the first working
in the mid- to late 15th century,
the second in the third quarter (or
slightly later) of the 16th century,
diam. 28.85 cm. (11.375 in)

£80,000 - 120,000
\$130,000 - 200,000

VIEWING

New York
19 - 22 October

Knightsbridge, London
2 - 4 November

ENQUIRIES

+44 (0) 20 7393 3872
scientific@bonhams.com



Bonhams

**SCIENTIFIC
INSTRUMENTS**

May 2015, New York

Consignments now invited

**A GEORGE ADAMS
ARMILLARY SPHERE**

English, late 18th century.

Sold for \$211,867

INQUIRIES

+1 (212) 461 6531

cassandra.hatton@bonhams.com



Bonhams

NEW YORK

bonhams.com/books



⌘ 1793

Bonhams

580 Madison Avenue
New York, New York 10022

+1 212 644 9001

+1 212 644 9009 (fax)

