


GUILD OF BOOK WORKERS JOURNAL 2010-2011



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GUILD OF
BookWorkers


Anne Bromer on Irresistible Books: A Rare Book Dealer Looks at Modern Design Bindings

Sewn Board Bookbinding More than a Thousand Years Later Gary Frost

Unique Mathematics Books from a Lost Tradition Nerida F. Ellerton and McKenzie A. Clements

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Paper Images for Paper Books: Digitally Cut Illustrations from Handmade Paper in Artists' Books Tatiana Ginsberg

Printed By A Woman: The Declaration of Independence in the Eighteenth and Twenty-first Centuries Mindy Belloff

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Front cover: *The Canterbury Tales of Geoffrey Chaucer. Together with a Version in Modern English Verse*, by William Van Wyck. NY: Covici-Freide, 1930. Two large quarto volumes. Edition of 924 copies signed by the illustrator, Rockwell Kent, who provided twenty-five full-page illustrations and more than fifty smaller decorations. Sculptural binding by Pierre Thielen, who created a cathedral motif for the central part of the two-sided slipcase. Thielen incorporated pointed leather strips of various lengths to signify the spires of Canterbury Cathedral. Between the spires is a gold staff, symbolizing the pilgrimage. The cathedral motif is repeated in both the boards of the slipcases and the bindings. Bromer commission, 1992. Photos by Shannon Struble.

Back cover: *Le Bateau Ivre*, by Arthur Rimbaud. West Stockbridge, NY: Thornwillow Press, 1992. Folio. Edition of 250 copies illustrated with twenty-eight drawings by Thierry Despont, who also designed the book. Printed on heavy rag paper using offset lithography by Susan Medlicott. Binding by Sylvia Rennie in brilliant blue calf. Mounted to the front cover is a three-dimensional design of seven sculptural and curvilinear shapes evoking images of waves and sails. These are bound with polished blue, black, and white calf. Purchased privately, 2008. Photos by Shannon Struble.

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For information about the guild, visit www.guildofbookworkers.org or email us at secretary@guildofbookworkers.org.

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For over forty years, Anne Bromer, of Bromer Booksellers in Boston, has been known throughout the antiquarian book trade for handling fine books in immaculate condition, including miniature books and unique artistic bindings. In this profile and gallery, Anne tells us about some of the unique and groundbreaking books she's commissioned or handled over the years.

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format. Here, the curator of the Yale Babylonian Collection introduces us to Enheduanna, a princess and priestess of twenty-third century BCE, and the literate world's first identifiable author.

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84 *Mary Katharine Goddard, a colonial Baltimore postmistress and newspaperwoman, was entrusted by the Continental Congress with producing the second printing of the Declaration of Independence for distribution to the colonies. Her work inspired printer Mindy Belloff to print a contemporary, gender-neutral facsimile more than two hundred years later.*

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EDITOR'S NOTE

ONE OF THE MOST MARVELOUS THINGS TO ME ABOUT THE BOOK ARTS IS HOW inextricable our history is from our present and future. So many of our tools, materials, and techniques are ancient and yet they can mesh seamlessly with cutting-edge digital methods, forms, and technologies. Even when the ages clash with each other—materials disintegrate, structures reveal flaws, repairs fail—the results can be astounding and enlightening. We produce new work or conserve what's on our shelves, simultaneously invoking ages past, drawing on current possibilities, and exploring the paths of potential.

This issue of the *Guild of Book Workers Journal* spans the history of the book from the birth of inscribed text to movable type, from the earliest sewn board structures to computer-driven technology. We pause in the eighteenth and nineteenth centuries to examine a unique form of handmade book and again in the twentieth to survey the work of one of the longest-lasting independent binderies in the USA. We meet remarkable women: a contemporary bookseller who commissions and inspires incomparable design bindings; a printer of the Declaration of Independence who should by all rights be embraced as the Betsy Ross of the book arts; and a priestess of antiquity known to be the world's first identifiable author.

Our trip through history includes private tours, as it were, through three collections, guided by their caretakers. Bookseller Anne Bromer tells us about some of the highlights among the books she's commissioned and sold; Columbia University librarian Jane Rodgers Siegel shares ten of her favorite books; and Yale curator and professor Benjamin R. Foster gives us a close-up of a special Mesopotamian cuneiform tablet from Yale's Babylonian Collection.

I hope you enjoy these explorations and that they lead you to a richer scrutiny of your own place in the ongoing path of our living book arts history.





Anne Bromer holding her book, *Miniature Books: 4,000 Years of Tiny Treasures*. Photo by Jeanne Schinto. © *Maine Antique Digest* 2013.

ANNE BROMER ON IRRESISTIBLE BOOKS

A RARE BOOK DEALER LOOKS AT MODERN DESIGN BINDINGS

ANNE BROMER WITH ASSISTANCE FROM JAMES
REID-CUNNINGHAM AND CHRISTINA AMATO

PHOTOGRAPHS BY SHANNON STRUBLE

ANNE BROMER HAS BEEN A RARE BOOK DEALER ALONG WITH HER husband, David, for over forty years, selling fine books and bindings at their shop in Copley Square in Boston. Known throughout the antiquarian book trade for handling fine books in immaculate condition, their inventory includes early printed books, children's books from the eighteenth and nineteenth centuries, first editions, fore edge paintings, illustrated books, limited editions, and unique artistic bindings.

A graduate of the library science program at Simmons College, Anne received the Alumni Achievement Award from the Simmons College Graduate School of Library and Information Science Alumnae/i Association in 2008. She writes and lectures frequently about rare books and has been featured in the *New York Times*, *Boston Globe*, and *Christian Science Monitor*. An early member of the New England Chapter of the Guild of Book Workers, Anne hosted many of the chapter's first exhibitions in her shop. Her book *Miniature Books: 4,000 Years of Tiny Treasures*, coauthored with Julian I. Edison and published by Harry N. Abrams in 2007, introduced many people to the provocative, secretive, curious, and fascinating history of miniature books. It received the Best Gift Book award at the New York Book Show in 2008. She curated an exhibition of the same title at the Boston Public Library in 2007. The Bromers' website, www.bromer.com, contains images and short videos of many of their beautiful books.

Anne has a deep love for the arts of the book. She has commissioned bindings by many of the greatest contemporary binders and possesses unique insights into trends in artistic bookbinding. The gallery in the pages that follow, and on the front and back covers of this issue, showcases artistic bindings by modern masters, all books currently or formerly in the Bromers' stock, accompanied by Anne's commentary and observations on these visually striking bindings of extraordinary structural and decorative complexity.



Shannon Struble, who took the photos for this gallery of books, graduated from Smith College with a BA in history and from Simmons College's dual-degree graduate program in history and archives management. She has been the designer and webmistress at Bromer Booksellers since 2007.

James Reid-Cunningham and Christina Amato assisted with this profile. Jim is deputy director of the Boston Athenaeum and was the president of the Guild of Book Workers from 2006 to 2010. Christina is a book conservator at the New York Academy of Medicine's Gladys Brooks Book and Paper Laboratory.

ANNE BROMER ON FINE BINDING



Annabel Lee and Other Poems, by Edgar Allan Poe. London: Sangorski & Sutcliffe manuscript, c. 1928. Unique manuscript on vellum of six poems by Poe, illuminated with five full-page and three half-page paintings by Alberto Sangorski, who also calligraphed the poetry with stylized initials in color and raised gold throughout its thirty-three pages. Jeweled binding by Rivière and Son, c. 1928 (purchased at auction). Quarto.

Annabel Lee represents the highest artistry and craftsmanship accomplished by Rivière and Sangorski and is, I think, among the finest book productions of the ornate Art Deco period of the 1920s. This luscious manuscript is further enhanced with a full morocco binding by Rivière and Son, who studded thirty-five jewels, including pearls, rubies, and amethysts, into the covers. The raised golden eagle atop the author's intertwined initials on the front cover is surrounded by stars and dense floral patterns. The rear cover is equally elaborate and includes the titles of the poems tooled in gilt. Significant pointillé and strapwork are executed on this exquisite work of art, which exhibits lavishness and skilled details that would place it in the category of Fabergé eggs or *plique-à-jour* jewelry by Lalique.



Dents de Lait, Dents de Loup, by Henri Pichette. Paris: Pierre de Tartas, 1959. Illustrated with etchings and color aquatints by Jacques Villon, a leading member of the Cubist movement. One of the very deluxe edition of fifteen copies with additional suites of signed prints. Rotating, wooden paneled binding by Renaud Vernier, 2008 (Bromer commission). Folio.

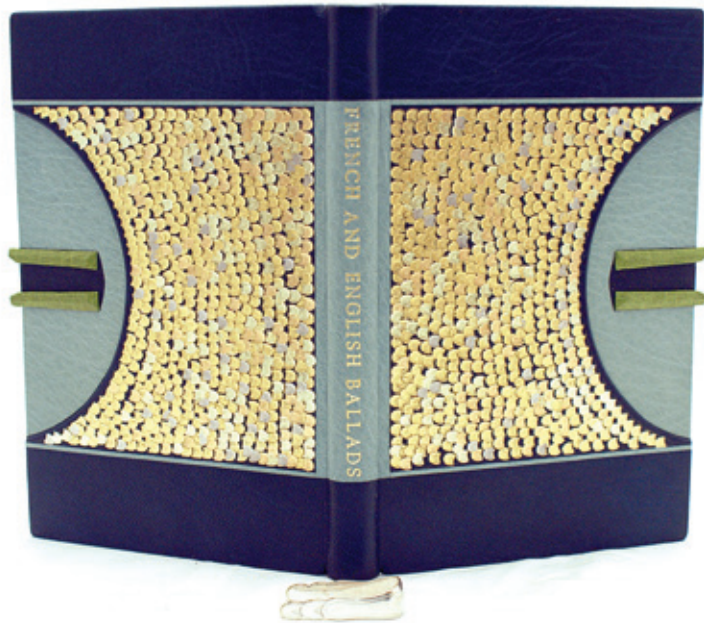
Renaud Vernier, once the apprentice to Pierre-Lucien Martin in Paris, was recognized in France as a living national treasure and awarded the “Maître d’Art” in 2000, the only living bookbinder with this title. Vernier’s innovative binding is dark brown calf with suede endleaves. Both the front and back panels contain a lacquered plaquette of exotic woods (Macassar ebony and French Guyanan wacapou), each of which revolves on a stainless steel axis. Vernier explored the double nature of the title through the panel on the front cover, placing “Dents de Lait” on one side with the lettering in dark Macassar ebony against the lighter French Guyanan wacapou; “Dents de Loup” is given the opposite treatment on the other side of the panel. He completed his design by lettering the author’s name and his own on the rotating panel for the rear cover. Vernier’s modern synthesis of binding and illustration results in a stunning *livre d’artiste*.



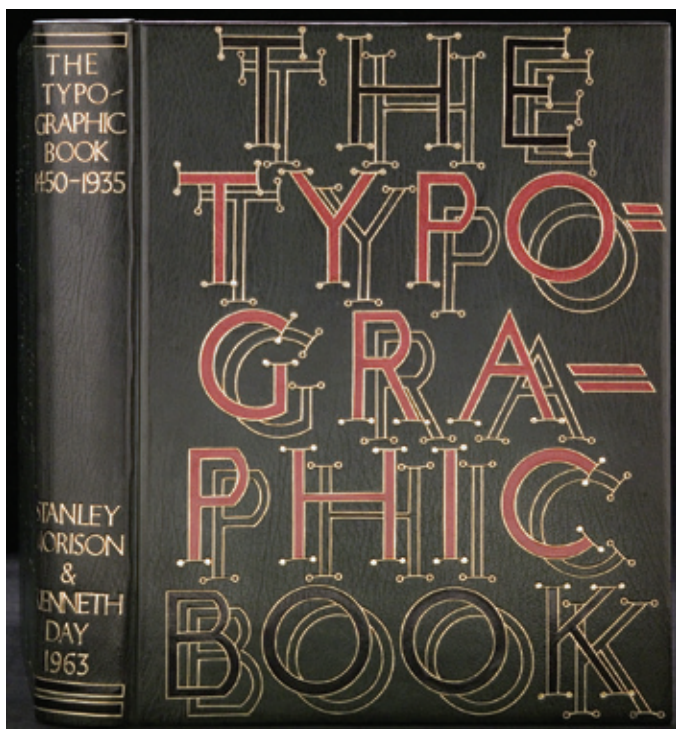
Ubu Roi: Drame en Cinq Actes, by Alfred Jarry. Paris: Dupont-Visat, 1982. Illustrated with eight colored etchings in the style of comic strips and Mayan carvings, and a “pop-up” theater by the Chilean expressionist artist Roberto Sebastian Matta. Relief sculptural binding by Georges Leroux, 1987 (purchased privately). Folio.

Georges Leroux, one of the important twentieth-century French bookbinders, chose vermillion calf as a palette to bind *Ubu Roi*, a landmark work of absurdist and surrealist theater based loosely on Shakespeare’s *Macbeth*. He sculpted relief figures depicting Père and Mère Ubu on the front and rear covers. Modeled after 1950s-style Japanese robots, Leroux incorporated a series of gears, springs, and clock wheels into the chest cavities of both figures. He added multicolored wires, metal widgets, sheet plastic, and marbles to the figures and has Father Ubu’s holographic eyes spinning in his head. Leroux drew on Matta’s bold colors and spiral designs as partial influences for the binding design. This tour de force is accompanied by a reproduction of the battery powered tin toy, “Chief Robotman,” which served as the chief influence for Leroux’s design.

James Brockman used dark blue goatskin as the basis for this binding. There are sunken pale blue leather panels at the fore edge. A dazzling design across both covers attracts immediate attention to the binding. With circular tooling in shades of gold and palladium, Brockman created a striking curvilinear motif, surrounded by muted shades of leather that complement the colors of the frontispiece engraving.



Some Old French and English Ballads, edited by Robert Steele. London: Eragny Press, 1905. Printed by Lucien Pissarro, son of the Impressionist painter, Camille Pissarro, at the Eragny Press. This copy is from an edition of ten on pure vellum. Frontispiece engraving printed in five pastel shades. Binding by James Brockman, 2009 (Bromer commission). Octavo.



Elizabeth Greenhill was the first female member of the United Kingdom's Designer Bookbinders. An annual award for gilding is presented each year in her name. Her binding on *The Typographic Book* shows off her tremendous skill in presenting the letters from the Roman alphabet. The book is bound in slate green Oasis and features red and black onlays forming the letters of the title, surrounded by gold tooling on the upper panel. The letters are then echoed by an outline in gilt. On the lower panel, the gilt outline of the letters is echoed in blind tooling. This binding was featured in the Modern British Bookbinding exhibit of 1985 and was owned by Lord Wardington, a great collector of bindings and a regular patron of Greenhill's work. Bromer Booksellers acquired it in 2006.

The Typographic Book: 1450–1935, by Stanley Morison and Kenneth Day. London: Ernest Benn, 1963. Illustrated with nearly four hundred plates reproducing significant examples of typography from Johannes Gutenberg to Bruce Rogers. Lettered binding in gilt by Elizabeth Greenhill, c. 1966 (purchased at auction). Folio.

ANNE BROMER ON MINIATURE BOOKS

MY INTEREST IN MINIATURE BOOKS BEGAN IN the 1970s with an old wooden tool chest, whose many drawers contained dozens of very small books. I had never seen a miniature book before that encounter in the bookshop of my early mentor and colleague, Samuel Murray of Wilbraham, Massachusetts. I was literally transfixed, and eventually bought every book in the chest. My quest to learn about and pursue books that measure less than three inches in size began that day. Years after Sam Murray died, I had the opportunity to buy the tool chest. It remains at Bromer Booksellers, still filled with Lilliputian volumes.

Nearly every human endeavor has reached the pages of miniature books. They existed at the beginning of writing in the form of miniature cuneiform tablets, which are in the shape of two-inch clay pillows and written in the languages of ancient Sumeria and Babylonia. These earliest pre-miniature books from nearly 4,000 years ago explain why the subtitle to *Miniature Books*, the volume I coauthored with Julian Edison, is “4,000 Years of Tiny Treasures.”

Medieval manuscripts and prayer books were written by scribes using a fine, small script and illuminated with miniature paintings and elaborately decorated initial letters. In the 1470s, printed miniature books appeared. The beginnings of the genre started within twenty years of the printing of the Bible by Gutenberg. The small format was used to train printers’ apprentices in the art of setting small types and binding tiny volumes. Great attention to detail was needed as even a small mistake could be exposed. Through solving the printing problems encountered in miniature books, journeymen printers achieved professional competence in printing books of all sizes.

Historically, the miniature format was used for religious and political publications because the books could be hidden from view, thus protecting the owners. Through the centuries, important examples

of such miniature books have included the first text on birth control; a controversial letter from Galileo, which led to his being charged with heresy by the Catholic Church; and the first book appearance of Lincoln’s Emancipation Proclamation.

Miniature books are intimate objects. I have often thought of them as one-handed books that fit into your palm so that you can feel the elegance of size and binding. Some are so finely designed and ornamented as to be jewel-like. Most are quite readable without a magnifying glass, calling attention to the fineness of print and the clarity of illustrations. The type size in most miniature books is comparable to that in daily newspapers. It is only the microminiatures, measuring about an inch in size, where a magnifying glass is needed to read the text.

I began to commission one-of-a-kind bindings on miniature books in the 1980s as a natural extension of my interest in private press books and designer bindings. I invited the finest binders working at that time to try their hand at this challenging size. In nearly every case, the binder had not worked within a miniature format. Some had never seen a miniature book before the commission. Over the next two years I assembled an international collection of thirty-five designer bindings. These were photographed in color and described in the words of the binding artists. A small square catalogue designed by Gunnar Kaldewey was published and housed in a plastic CD case. The collection itself was sold to a single collector, and subsequently, other clients asked us to build libraries of designer bindings for them. And so, I continued to commission miniature book bindings, marveling at each treasure whenever it arrived in the mail.

Sally Lou Smith, from whom we commissioned a book for the catalogue, wrote, “Binding a miniature book is like binding a normal-size book under a reducing glass. No step is omitted; the materials are the same. But everything is scaled down, except the binder’s fingers.”

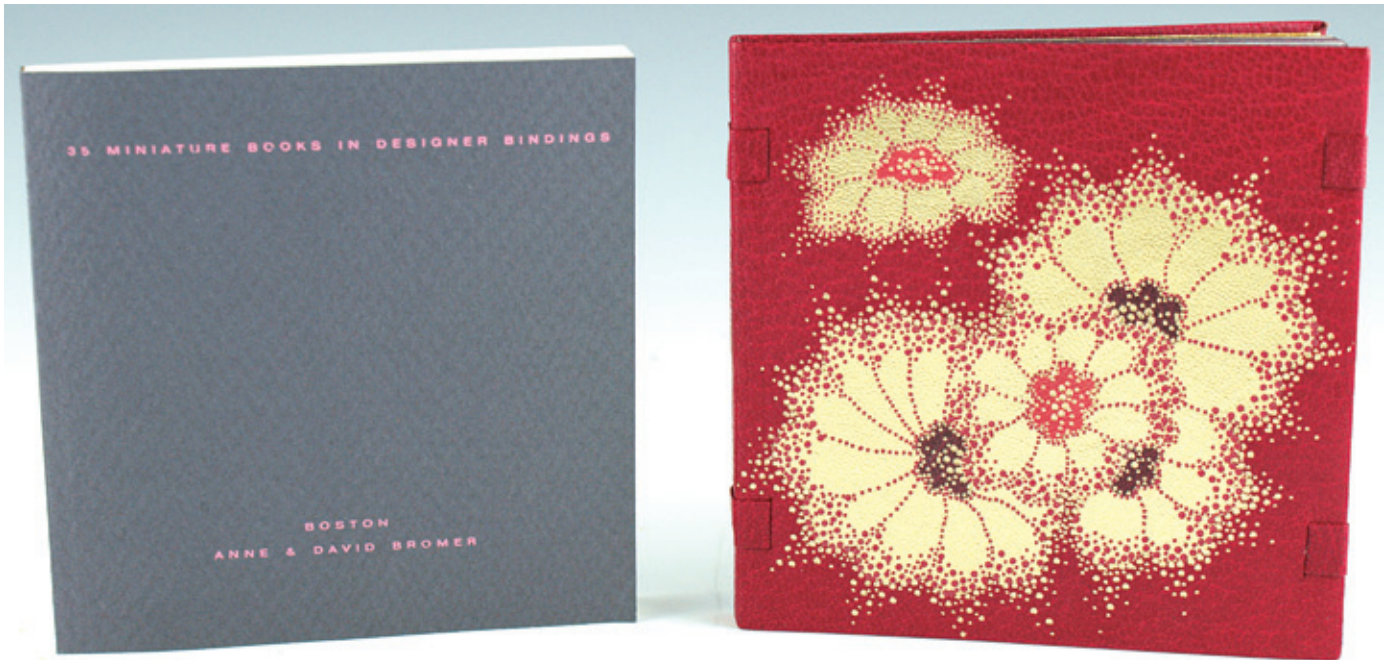
**Nearly every
human endeavor
has reached
the pages of
miniature books.**



Miniature Books: 4,000 Years of Tiny Treasures, by Anne C. Bromer and Julian I. Edison. New York: Harry N. Abrams, in collaboration with The Grolier Club, 2007. The first fully illustrated survey of the history of miniature books, with 260 color photographs of miniature books, most of which are actual size. Abrams printed 7,500 copies of the trade edition. This is one of 250 deluxe copies, which includes a miniature facsimile of the full-sized folio volume. Bindings by Michael Wilcox, 2009; box includes a copy of his design sketches (Bromer commission). Folio. Miniature book measures 3 x 2 $\frac{7}{8}$ inches.

Michael Wilcox creates bindings that tell stories. He is the only binder I've seen to match the level of gold expertise of Sangorski and Sutcliffe earlier in the twentieth century. Their styles differ, as Wilcox has a distinctly modern sensibility. He executed this binding in blue and black morocco leathers with leather onlays and gilt tooling, illustrating aspects of the book from a historical and modern perspective. The front cover of the full-sized volume shows a sixteenth-century French queen holding a miniature book with golden hearts on its covers. She represents the past and a time of simpler thinking, when one might have associated miniature books with fairies and toy soldiers. The rear cover is decidedly modern, with an image of a very presidential-looking gentleman with stars and stripes on his

jacket: President Obama holding a miniature book with the word "HOPE" in gold. Rather than fairies hovering over his right and left shoulders, there are miniature books in the form of satellites. The toy soldier in front of the queen is replaced by a robot on a laptop computer. Surrounding the central oval motifs are colorful miniature books and golden leaves. The miniature version was designed with a background of gold-tooled computer circuitry, which Wilcox designed himself, and a central lozenge of the miniature volumes that the queen and the president are holding on the larger book. Wilcox noted that a secondary theme for the binding was the "Hope and Heart" required to continue all worthwhile endeavors, even ones concerning small things, such as miniature books.



Thirty-Five Miniature Books in Designer Bindings. Boston: published by Anne and David Bromer, 1987. The first compilation of a miniature designer binding catalogue. Designed by Gunnar Kaldewey and featuring internationally acclaimed bookbinders. Awarded a certificate of merit for design from the Printing Industries of America. Special binding by Sylvia Rennie, 1987 (purchased privately). Square 12mo.

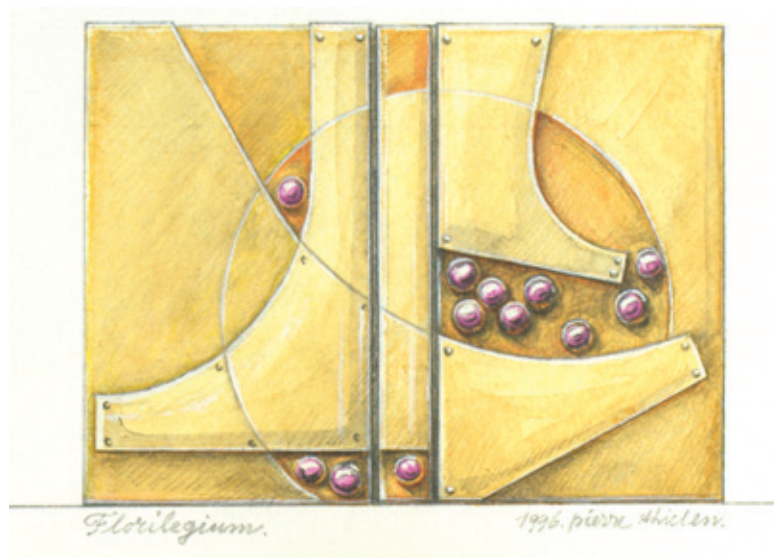
Sylvia Rennie used limp crimson morocco and created large flowers of gold, pink, and maroon onlay, tooled with gold pointillé, to craft the presentation of this collection, which I assembled over several years to showcase designs and techniques by leading

bookbinders on the covers of miniature books. The wedding of an artistic binding on a miniature book first blossomed here and has since become a popular form of binding. The book features dyed and gold-scattered edges and gold foil endpapers.



***Le Chemin de la Ville de Lawn*. Paris: Editions du Capricorne, 2006. French translation by Émile Julis of a Czech poem by Martina Drinek. Illustrated with abstract landscape engravings by Anick Butré, who was also the publisher of this oblong miniature. Binding by Brother Edgard Claes, 2009 (Bromer commission). 1 x 2 inches.**

Brother Claes, a member of the Belgian Order of the Holy Cross, in the Kruisherenklooster (Crutched Friars' Monastery) in Diest, is known for his use of polycarbonate plastic bindings elegantly heightened with automotive paints. Here he used bold geometric shapes and lines in shades of pink and red, with accents in white and gold. These appear against a black background. The spine has three bands of snakeskin separated by pink polycarbonate strips. The matching chemise and slipcase are treated with similar refinement in more muted tones than the book itself. The title is incorporated into the slipcase design, wrapping around the three edges. The lacquer effect of the three parts that form this binding design is smooth and luscious. A soft gray microfiber case completes the presentation.



Florilegium: A Collection of Flower Initials Designed by Maurice Dufrène. Utrecht: Catharijne Press, 1988. A beautiful Art Nouveau alphabet in miniature. Printed on vellum in an edition of fifteen deluxe copies. Illuminated with gold and hand-colored initials. Binding by Pierre Thielen, 1996 (Bromer commission). 2 ½ x 1 ¾ inches.

Pierre Thielen bound this copy in 22-karat gold set with fourteen amethysts. The only contemporary jeweled miniature book in pure gold, it has a very modern sensibility with its linear and industrial design. Geometric and curvilinear features with carefully positioned gemstone onlays are incorporated into the covers. The binding is hinged with flexible vellum, which shows through the slightly separated covers at the spine. The pastedowns are also vellum. Thielen was delighted to use his skills, which are considerable, as both a goldsmith and bookbinder to achieve this exceptional work of art. His original design drawing was included with this binding.



Lotus-Blossom & Moon-Flower. Mill Valley, California: Sunflower Press, 1981. An adaptation of a Chinese folktale written and illustrated by Carol Cunningham of the Sunflower Press, printed in red with a frontispiece design in gold. Binding by Kerstin Tini Miura, c. 1992 (Bromer commission). 2 ½ x 3 inches.

Tini Miura bound the book in deep green morocco with red and black onlays depicting a box within the design of a fan. Gold and silver starlike designs are scattered across both covers, and silver stars are gauffered at the top edge. Miura incorporates strong

design and color statements in her bindings. Having lived in Japan for many years, she has a flair for Asian motifs. Miura's work has been exhibited extensively worldwide. She is a born teacher and also the author and publisher of several lavish volumes about bindings.



Highlights in the History of American Whaling, by Pall W. Bohne. Rosemead, California: Bookhaven Press, 1968. Miniature book, limited to 500 copies. Binding by Peter Geraty, 1999 (Bromer commission). 2 ½ x 2 inches.

Peter Geraty used teal morocco with onlays of various shades of blue to represent ocean depths on this miniature binding. The sun glinting off the water is represented by gilt tooling on the upper front cover. The partial silhouette of the elusive whale, whose history is highlighted in the text, is barely visible on the lower portion of the covers, formed from polished black onlays. In the upper right corner of the front cover, more black onlays hint at the presence of the whaling ship, just out of sight of the viewer but for the shadow it casts on the water.



Opening action of two sewn board bindings

SEWN BOARD BOOKBINDING MORE THAN A THOUSAND YEARS LATER

GARY FROST

IN THE ANTIQUITY OF THE SUMMER OF 1987, A CONFERENCE IN Des Moines called “The Lessons of History and Experience in the Design of Conservation Bindings”¹ could occur without mention of e-books and even without cell phone interruption. Now the interplay of print books with their own screen simulation is a more likely conference topic, while the continuing role of the objects of book conservation is open to popular doubts.

I remember my first discussions about the sewn board binding type at that 1987 conference.² I still have my first model; it is filled with journal entries from a trip I took that year. At first I imagined that I had invented something by sewing a folded card to the text and calling it a board. Later I saw J. A. Szirmai’s description of early Coptic bindings and realized that I was more than a thousand years too late to claim credit for what he described as a “construction in which the boards are soundly integrated with the sewing structure” (1999, 30).

For a thousand years, circa the fifth through fifteenth centuries, sewn board bookbinding flourished and easily navigated the transitions from papyrus to parchment to paper books. The equitable leaf attachment, in which the covers attached to the text as if they were outermost leaves, and the flush three-edge trim are just as characteristic of the modern paper-back as of a Coptic codex. But now, in the late age of print, will the sewn board structure reappear to accompany another transition—papyrus to parchment to paper... to iPad? Will this ancient structure prove itself truly timeless?

WHAT DID THEY KNOW, those itinerates of papyrus books of late antiquity?³ What other design traits distinguished papyrus bookbinding beyond the sewn board trick? One additional trait is grain neutrality. The cross-lay of the papyrus thatch and the square shape of the unfolded papyrus book sheet are grain neutral. This results in sheets free of the constraints and complications of grain direction inherent in modern book materials. Two sheets of papyrus pasted together will dry flat. The papyrus book is also distinctive because both rigid cartonnage (a convenient name for pasteboard made of papyrus) and pliant leaves—that is, both cover and text—are made from exactly the same material.

Another interesting trait relates to decoration and tooling of the covering leather, which was done prior to installation on the book. This sequence facilitated tooled impressions, tooled creasings, and punchings, which could be supported on a hard surface. The wrapped dicing of the spine in late Coptic work and the striating of the spine on later Armenian



Gary Frost is a book conservator and book arts educator. His career includes faculty positions at Columbia University, the University of Texas at Austin, and University of Iowa. He is conservator emeritus at the University of Iowa Libraries. Gary has been awarded the Banks and Harris Award of the American Library Association, the Lifetime Award of the Guild of Book Workers, and is a fellow of the American Institute for Conservation.



Double cover Coptic model. Bound by Shanna Leino, 2001. 21½ x 31 x 45 centimeters.

work both suggest that the leather was decorated off the book.

A quite strange and provocative trait is a double cover, which is a distinctive feature of the early sewn board book. This design trait raises many possibilities for assembly and cover-to-text attachment.

The wrapping ties are also important, indicating the probability of ritualized methods for the commencement and conclusion of reading, akin to the Judaic *tefillin*: a pair of biblical quotations enclosed in leather boxes with leather straps attached, which are ritually wrapped around the forehead and forearm during recitations. The end lacings encircle the hand in patterns that represent letters. Use of tied wrappings on sewn board bindings also recalls the earlier tying of folded papyrus letters, and thus the transition from scroll to codex formats.⁴

And finally there is the signature-sewn board trait. Of particular interest is the type of cartonnage laminated to the leaves of the outer gathering, producing the cover board from the outermost pages. Sewing technologies were at a high point of refinement during the papyrus book era, and sewn board methods were adapted wherever flexible attachment was needed. Dynastic Egyptian boat and ship construction featured elaborate and functional sewing-together of short hull boards with branching tunnel channels identical to book board tunnels, and such applications lent authority and technique to the sewn board book (see Fabre 2004).

A whole family, indeed a whole legacy, of sewn board structures exists, dating from the very beginnings of bookbinding. The sewn board structure

swept across great empires and a millennium of history, then faded before the advent of printing, surviving only in enclaves such as those of Ethiopic book work.⁵

IN CONSIDERING MODERN adaptations of and possibilities for the sewn board structure, I began by exploring the library binding and production binding. Later, in the 1990s I experimented with limited edition and book conservation applications. On the production front, the “lay flat” types, such as Otabind⁶ and RepKover, showed potential for such adaptation. These industrial paper bindings feature cold emulsion adhesive binding with the cover wrapper seal set back from the fold of the endpaper and the spine free of the paper-lined text back. I did work up a “transfer tape” binding for 8½” x 11” copier books. This double-fan text block has transfer tape bonds, card boards set at the fold of the endpaper, and a colored Tyvek covering.



Examples of transfer tape binding. 20 x 29 x 1½ centimeters.

Perhaps the most advantageous application of sewn board technique is to limited edition hand binding. Here it expresses both a timeless quality and a modern elegance in appearance, detail, and action. I have developed a rather standard structure, down to materials and design proportions, and this standard is used in every instruction session that I provide. Of particular interest to students is the introduction of an “in-boards” type, rather than case construction, to limited edition work. There is also lurking in this specification the weird double cover trait of the papyrus era.

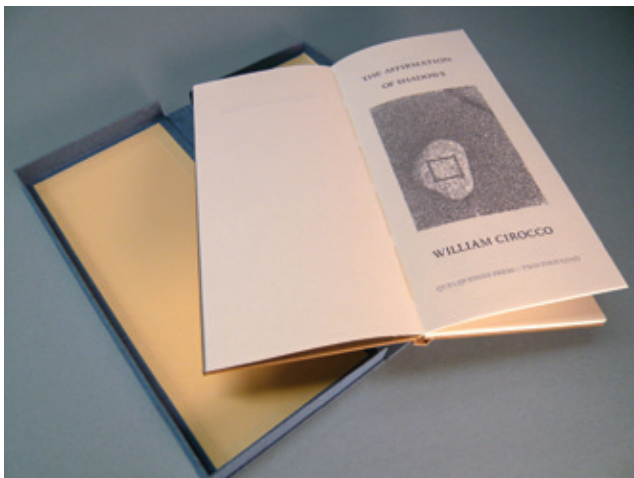
In the last ten years the sewn board structure has been used by printers and binders who are much

more accomplished than I am. Many of the resulting editions depart somewhat from the orthodox model, but not by much. They all exhibit the elegant squares, lightweight boards, and clean, direct presentation of materials that are the intent of this design. And of course they all gracefully open and gracefully close regardless of the page stiffness.



1985—*The Twelve Months* by Walter Hamady. Perishable Press, 1992. Featuring his collaboration with John Wilde and including offset color reproductions of Wilde's paintings. Edition of 130. Binding completed at BookLab in Austin. 20 x 26½ x 1 centimeters. This may be the first trimmed book from the Perishable Press.

The contemporary sewn board form made its début with Walter Hamady's 1985—*The Twelve Months*, bound at BookLab. The sewn board trim provided the very close crop needed in this edition. An extremely elegant edition of elongated shape was created by Quelquefois Press by Mary Risala Laird for *The Affirmation* by William Cirocco. The perfectly spaced,

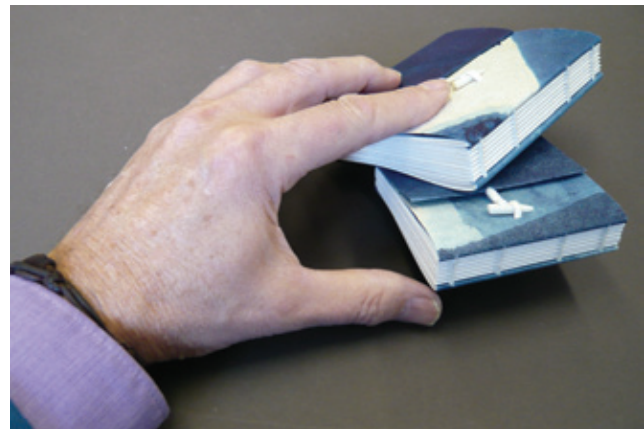


***The Affirmation* by William Cirocco. Quelquefois Press, 2000. Edition of 75. Binding by Mary Risala Laird. Quelquefois Press binding of Cirocco. 21 x 29 x 1½ centimeters.**

paired station link sewing, natural linen spine wrapper, and French Blue filler card revealed at the caps are classic sewn board motifs. The trimming and material handling is flawless.

The most recent sewn board edition that I know of is a magnificent work. It is *Æthelword Etc.* by Russell Maret. Using immaculate materials choice and flawless handling and precision, Craig Jensen has advanced sewn board structure to complete fulfillment. I suggest a visit to Maret's web site for a complete perspective on this great work.⁷

Finally, I will mention that the sewn board structure has also found relevance in popular hand bookbinding. This ancient book type is now fashionably modern on retail shelves where we find handmade journals and diaries.



A selection of blank journals by Ovenbird Bindery, featuring the elegant hand production by Jill Kruse of Winona, Minnesota. Small journals: 7 x 8 x 1 centimeters; large: 9 x 11 x 2 centimeters.

THE ADAPTATION OF THE SEWN board binding to limited edition bookwork eliminates case making and casing-in. Eliminated also are rounding and backing. Components lend themselves to prefabrication, and the final trimming produces a clean edge, which can be colored if desired. The contrasting spine cloth and board cloth, the squareless array of the book edges, and interesting reveal of the board laminations at the visual site of the traditional endband decoration are other attributes of the appearance. The binding has graceful action, which is visually elucidated as the spine wrapper moves off the book during opening and reading.

So, how do you make a sewn board edition binding? A brief sketch of the sequence of construction follows.

GATHERINGS

Gatherings are pierced with paired stations, excepting the outer kettles. The thread links at the paired stations produce a web pattern. This is the same pattern used for link stitching across linen tapes, and it provides quicker stitching and tensioning. The single outer stations, near the head and tail, are used to form the conventional kettle stitch chain.

ENDPAPERS

The endpaper folio can be a colored sheet chosen for coordination with the board covering color. This endpaper folio is tipped to the outermost text gatherings, prior to sewing, with the fold positioned very slightly beyond the fold of the outer gathering to assure freedom of the board opening in the finished binding. A tipped, unsewn endpaper folio provides a clean board opening.

BOARDS

The boards are card folios, which are sewn on first and last as if they were gatherings of the text. Following sewing, an additional two- or four-ply mat board is bonded inside the fold of the card folios by stippling adhesive in the gutter margins. Set the mat board insert down just behind the stitches and then tightly close the folio card. An additional filler card is tipped onto the exterior at the set-back position of the spine wrapper.

PERIMETER BONDING

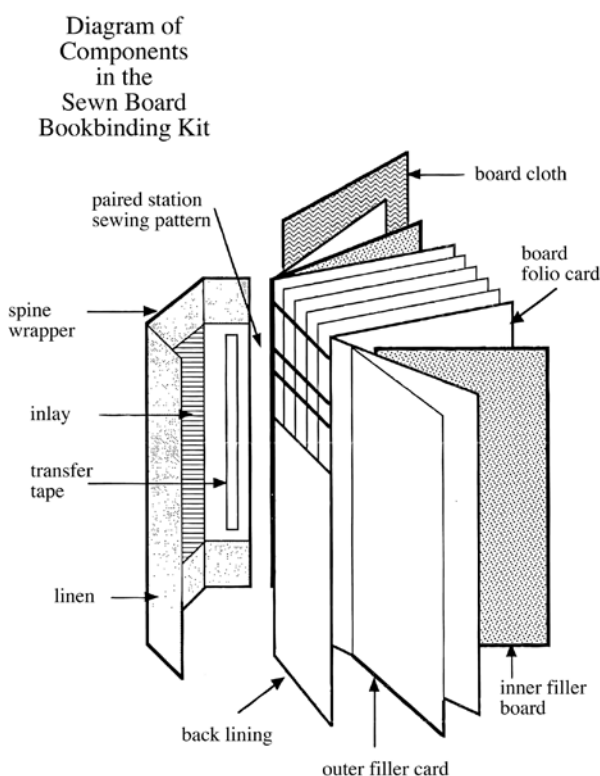
The insert and filler cards are bonded by edge-tipping only. Because the board plies are not bonded together overall, notice that they freely fan when opened from the fore edge. Neither will the board coverings be bonded down except at the gutter margin, and turn-ins and the pastedowns of the endpapers will be bonded down only at their perimeter. This drummed construction assures a flat board, minimizes adhesive application time, and almost eliminates pressing time.

TEXT LINING

The sewn book is jogged flat to the back and square to the head, then carefully positioned in a press for lining. Use a folder to smooth the folds of the gatherings. A paper lining the width of the back is then applied to the spine. This lining should be positioned and rubbed down well. The books can be taken out of the press immediately to form neat stacks.

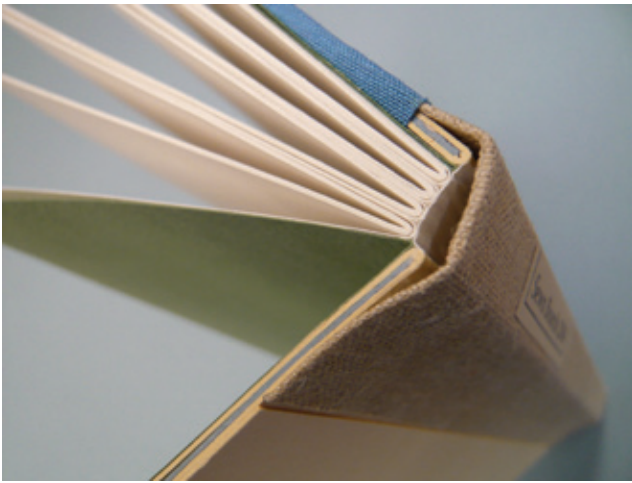
TRIMMING

Trimming is an important step in the production of a sewn board binding. The three edges are trimmed using a guillotine or hand plow. Cut the fore edge first, then trim the head and tail.



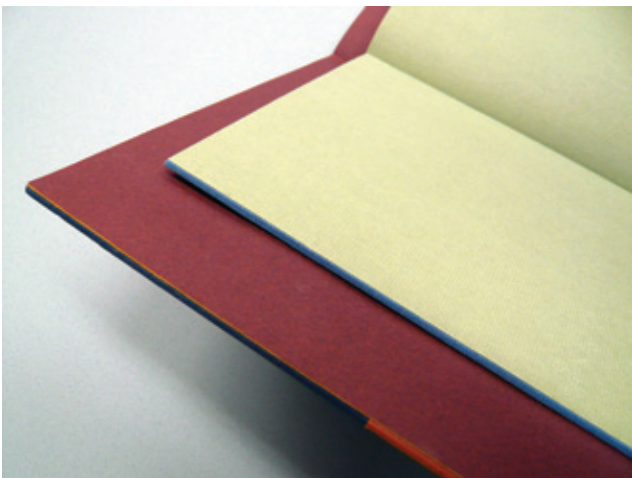
COVERING

The books are now “bound,” and we proceed to covering just as in historical in-boards work. The cloth spine wrapper, with its inlay and turn-ins, is made up as a separate component. Cut the spine inlay slightly less than the width of the back of the book and one millimeter longer than the book height to ease wrapper positioning and assure a visual endcap shadow at the head and tail. Seal the turn-in on either end of



Covered and uncovered sewn board binding. Binding by Gary Frost, 1998. 15½ x 22½ x 1 centimeters.

the inlay while producing a slight downward angle of the turn-in on either side of the inlay. Strips of double-faced tape applied to the underside margins of the wrapper can be used to tack it into position as the spine wrapper is gloved onto the book.



Detail of pastedowns.

The board cloths are tipped on with PVA, setting them away from the joint at a distance equal to or less than the width of the back of the book. A strip of masking tape can be applied to the wrapper as a guide to get the board cloths pitched on evenly. Mount and turn in each board cloth separately. Open the board and apply adhesive to the extended turn-ins, then put them down using simple miters at the corners. Finally, the pastedowns from the endpaper folios are bonded down, using perimeter adhesion only. Close the cover on the pastedown. Put moisture wick sheets in the board openings and pile the books into stacks for drying.

As you open the completed binding you will note something interesting: the linen spine wrapper moves off the underlying sewn board cover, acting as a variation of the double cover papyrus binding of late antiquity.

FINISHING

The spine wrapper can be title-stamped before installation or a paper label applied after. For board panel labels it is necessary to consider the drummed construction. Blind-stamped recesses for a paper board label should be provided, with an underlying swatch of PVA applied to the bare board before covering. The heated recess die will then seal the cloth so that an adhered label will not distort the drummed cloth.

JUST AS PROMISING as the limited edition application is the adaptation of the sewn board structure to book conservation. Following the Des Moines conference, my next sewn board learning opportunity came at another seminar later in 1987: the workshop on conservation binding structures given by Anthony Cains at the Conservation Department of the Harry Ransom Humanities Research Center at the University of Texas in Austin.⁸ Here we practiced the classical structures associated with the rebinding of the great Irish manuscripts. I also took the opportunity to experiment further with sewn board structures. The sewn board model that I made at this workshop provided a square to protect the untrimmed edges of early printed books.



Two conservation sewn board bindings by Gary Frost, 1998. 16 x 23 x 4 centimeters.

The model from the Cains class opened the pathway for adaptation of sewn board technology to book conservation practice, and I constructed other sewn board conservation rebinding models to improve the basic design. Their features were derived not only from the classical Coptic prototypes but also from exemplars in Greek and Armenian tradition. The elaboration of structure in these book cultures was extensive, and their use of vellum and paper texts necessarily modified the papyrus book prototype.



Greek and Armenian models by Shanna Leino, 2001.
Greek model: 15½ x 23 x 6½ centimeters; Armenian model 12½ x 16 x 5½ centimeters.

To advance into the rich resources of sewn board technology, the Preservation Department of the University of Iowa Libraries applied for and received University of Iowa Art and Humanities Initiative funding in support of a field trip and continued model-making. The field trip to the Joseph Regenstein Library, University of Chicago, took place in February 2001. Bindings studied were part of the New Testament Manuscript materials in the Edgar J. Goodspeed Collection. This session, with Anna Embree and Shanna Leino participating, enabled the examination and recording of six Greek and Armenian biblical manuscripts in

their original bindings and dating from the thirteenth to sixteenth centuries. In turn, magnificent models of two of these exemplars—Greek (mss 130/132) and Armenian (mss 996)—were created by Shanna Leino, using her set of handmade finishing tools.

Later Greek and Armenian volumes with vellum text leaves and wooden board covers still echo the features of the papyrus bookbinding. The strange convention of Greek Orthodox Church bindings to feature a furrow in the wooden board edges (Szirmai 1999, 86) may echo a compound double cover. Greek and Armenian work is also remarkable in the elaboration of endbanding carried well onto the head and tail edges of the boards. This feature is accentuated, extending well out of alignment with the profile of the book, and it certainly also augments the transmission of board leverage to the text leaves. Such endbanding is a reminder of the mechanical reinforcement needed with papyrus cartonnage. It has also been suggested that the great elaboration of gutter margining thread bridles, piercing, and crossing over in Greek wooden boards may echo tacket stitch patterns originally used to attach compound outer and inner cartonnage covers (Regemorter 1954 and Szirmai 1999). Subsequently, the outer leather turn-ins of double covers could be trapped under the pliant cartonnage margins. Finally, the methods of sewing on the boards from the primary sewing to secondary stitch loops matches the attachment in Coptic binding.

Of course, the strong linen fabric linings in Eastern Church work can be associated with papyrus bookwork as well, and so can the braided leather fore edge ties. Leather tooling and decoration completed prior to covering may also echo conventions of the early papyrus book, where cartonnage would not have supported tooling after covering. This sequence is evident in Armenian work with spine rulings that could not be easily accomplished after covering.⁹

Taken together, a consideration of relations between papyrus bookbinding and classical Greek and Armenian bookbinding—the echos and influences of the earliest manifestation of sewn boards on later developments of the form—exemplifies both the conveyance and bridging needed for our own application of the sewn board technique to the subsequent, distant practice of book conservation.

Conventionally, adaptation of historical structures to book conservation practice has focused on Western

methods associated with sewing the text block onto supports of cord or tawed thong. More recently, historical case construction has also been adapted to rebinding work. Even more exotic adaptations from Western stationers' trade methods, including a nonadhesive long stitch structure and various types of meeting and pleated guards, have been adapted for book conservation work, but the sewn board structure has not been actively drawn on in book conservation practice. The association of this structure with very early and non-Western binding methods has attracted the interest of book artists and limited edition binders, but the conservation field has generally not recognized useful features or preservation implications of this type.

As we continued work, however, we began to discover how useful and invigorating the sewn board structure is for book conservation practice. The exemplary performance of historical examples is by itself enough to stimulate interest. A closer look reveals numerous features useful for contemporary book conservation, including the docile, flat opening; the secure cover-to-text attachment; and the nondisruptive, nondamaging sewing of both text and boards using equitable stitch chains.

The unsupported, thread-only sewing of the sewn board structure is easily adapted to rebinding texts with pre-existing sewing stations, frequently in the form of saw kerfs. The pliant stitch chains can be applied to a few or all of the various stations that each book presents, and will produce balanced tension from head to tail and from initial to last leaves. Because they lie flush with the text, they provide no barrier or mask to the application of adhesive linings. The resulting "smooth" back of the sewn text also enables the production of various historical covers with an appearance of either laced or cased historical binding.

The sewn board type also features a text block with little or no shouldering, and therefore no damaging or distorting backing of the outermost gatherings. Historical examples are exemplary in the application of a strong, flexible back lining of linen that is carried well over onto the outer surface of the boards. Adhesion

of bias-weave linen linings is reinforced by subsequent endband sewing. The feature of uninterrupted bonding of a textile lining augmented with endband sewing is easily utilized in book conservation text forwarding.

Our use of a sewn card folio board for much of the work in this project is derived from the original, historical use of papyrus cartonnage produced by pasting together the leaves of the outer gatherings of the book. This ingenious solution—integrating flexible leaves and rigid covers, cartonnage and free leaves, into a single book structure—deserves reintroduction into the techniques of book craft generally.

In turn, the folio card foundation can be augmented by adding inserts within and outside the folio. These inserts can be shaped with inner and outer gutter edge bevels designed to accommodate various thread swellings in the text block in order to produce the shoulder-seated fit necessary for work of the wooden board era. This method eliminates the time-consuming construction of lacing paths through the boards in applications when the sewn board design is used in place of a design based on supported sewing.

The flat opening of sewn board, stitch chain construction provides a full gutter reveal and thus greatly facilitates scanning, copying, and exhibition, particularly with modern illustrated reference works. The somewhat squareless or flush size of both cover and text prevents distortion and sagging in upright shelving. The leverage of the boards is directly transmitted to the back of the text, there being no set-back from the folds of the endpapers.

In the course of our work, we considered six general applications of sewn board technique to book conservation practice. Some applications were confirmed as beneficial and practical, while other applications were proven impractical. Essentially all of the types of conservation text block reconstruction, sewing repair, or resewing can be done easily and effectively using the chains of stitches associated with the sewn board prototype. This application alone needs further advocacy, particularly with regard to variations of sewing stations, stitch types, stitch patterns, and endpaper designs that can be accommodated.¹⁰

Bookbinders have such a rich resource of historical structures that any invention is likely to be a reinvention. Turn to the frontis of the classic 1901 publication, *Bookbinding and the Care of Books*. There you will see

A closer look at historical examples reveals numerous features useful for contemporary book conservation.

GARY FROST

the exemplar of the “white pigskin” binding of the early sixteenth century, which Cockerell considered an exemplar of permanence and durability worthy of assimilation into modern work.¹¹ For him, the use of the wooden board prototype exemplified a process in which book conservators readapt historical structures to modern methods and modern problems. The sewn board family of bookbinding structures is equally timeless and renewable today.

NOTES

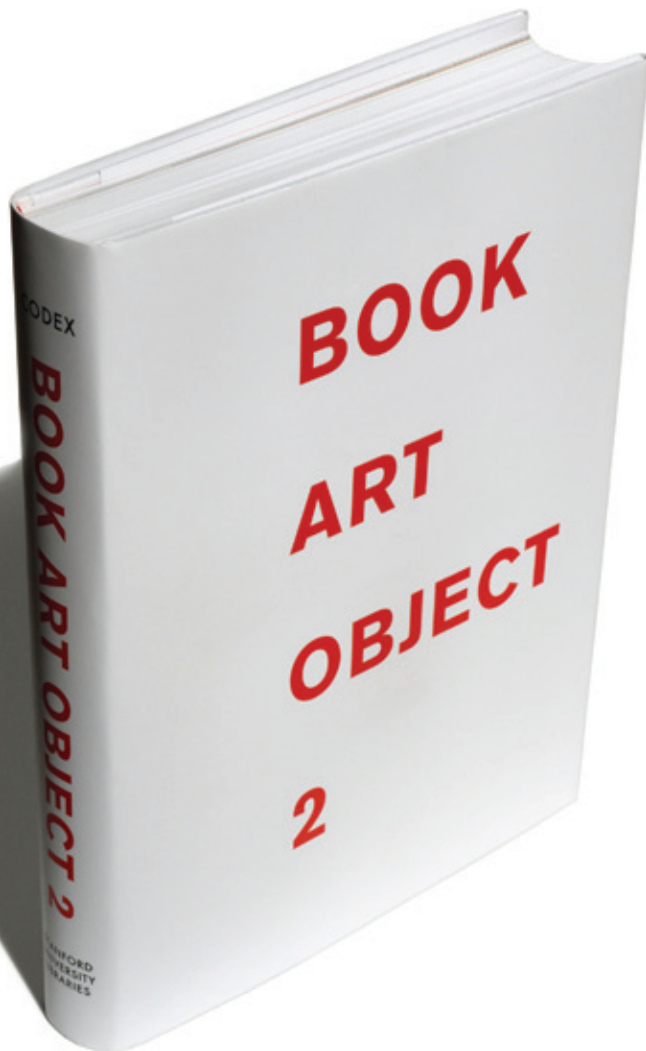
1. “The Lessons of History and Experience in the Design of Conservation Bindings,” sponsored by Library Binding Service. Des Moines, IA, August 9–10, 1987.
2. Although there was no presentation specifically on sewn board binding, it was a topic within a panel discussion.
3. A general introduction to the papyrus book in cultural context is provided by Bagnall (2009).
4. The idea of the folded papyrus letter as a codex precursor is a composite of conjectures in discussions between Roger Bagnall, Chris Clarkson, and me. See Leach and Wartenberg 1995 on folding impositions and tying of papyrus letters, and Kraft 2008 for discussion of precursors of both papyrus and parchment codices.
5. Bookbinders often confuse Ethiopic and Coptic binding. Methods of the Copts are known from ancient, archeological examples of papyrus books, while Ethiopian books of parchment have been collected from African peoples in relatively recent times. Coptic and Ethiopic sewn board bindings differ greatly in materials and structures. For example, in sewing the text to the boards the Coptic form uses loop tacks around the gutter margin, while Ethiopic uses tunnel stitches in the gutter edge. The texts themselves are also distinguished through their use of two different written languages: Greek-letter Egyptian and Ge’ez Ethiopic, the alphabet still used for the Amharic language.
6. A quick search online will bring up binderies producing Otatind.
7. Photos and discussion of the *Æthelword* production are available at <http://russellmaret.blogspot.com/2009/09/thelwold-etc-complete.html>.

8. This eight-week course is described in Etherington (2010).
9. The classic study of Armenian binding is Merian (1993).
10. More detail is provided in my article in the *Book and Paper Annual*, 2004.
11. The Douglas Cockerell Collection at Dalhousie University includes his historical binding exemplars.

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THE CODEX FOUNDATION ANNOUNCES THREE NEW PUBLICATIONS



Following the highly successful and acclaimed *Book Art Object*, published in 2008, *Book Art Object 2* is primarily a record of the third biennial Codex Book Fair and Symposium: “The Fate of the Art,” held in Berkeley, California, 2011. The event showcased contemporary artist books, fine press and fine art editions produced by the world’s most esteemed printers, designers, book artists, and artisans.

This book contains over 1113 images showcasing 300 books by 140 artists/printers. Also presented is a selection of new essays and papers delivered at the 2009 and 2011 symposia:

Paul van Capelleveen, The National Library of the Netherlands: *Changing books: art and the contemporary Dutch private press book.*

Antoine Coron, Head of Special Collections, Bibliothèque Nationale de France: *Publishing artist books in France today.*

Ron King, artist: *History and collaboration: Circle Press.*

Peter Rutledge Koch, Printer: *The third stream: A view from the West back to the East.*

Juan Pascoe, Proprietor, Taller Martín Pescador, Michoacán: *Presses in Mexico.*

Richard Ovenden, keeper of Special Collections and Associate Director, Bodleian Library, Oxford: *The role of the book arts in a 21st-century research library.*

There are also “dispatches” from renowned artists/printers/curators: **Johannes Strugalla** and **Ulrike Stoltz**: *Germany*; **Jason Dewinetz**: *Canada*; **Des Cowley**: *Australia*; **Sarah Bodman** and **Tom Sowden**: *United Kingdom*; and **Sandro Berra**: *Italy.*

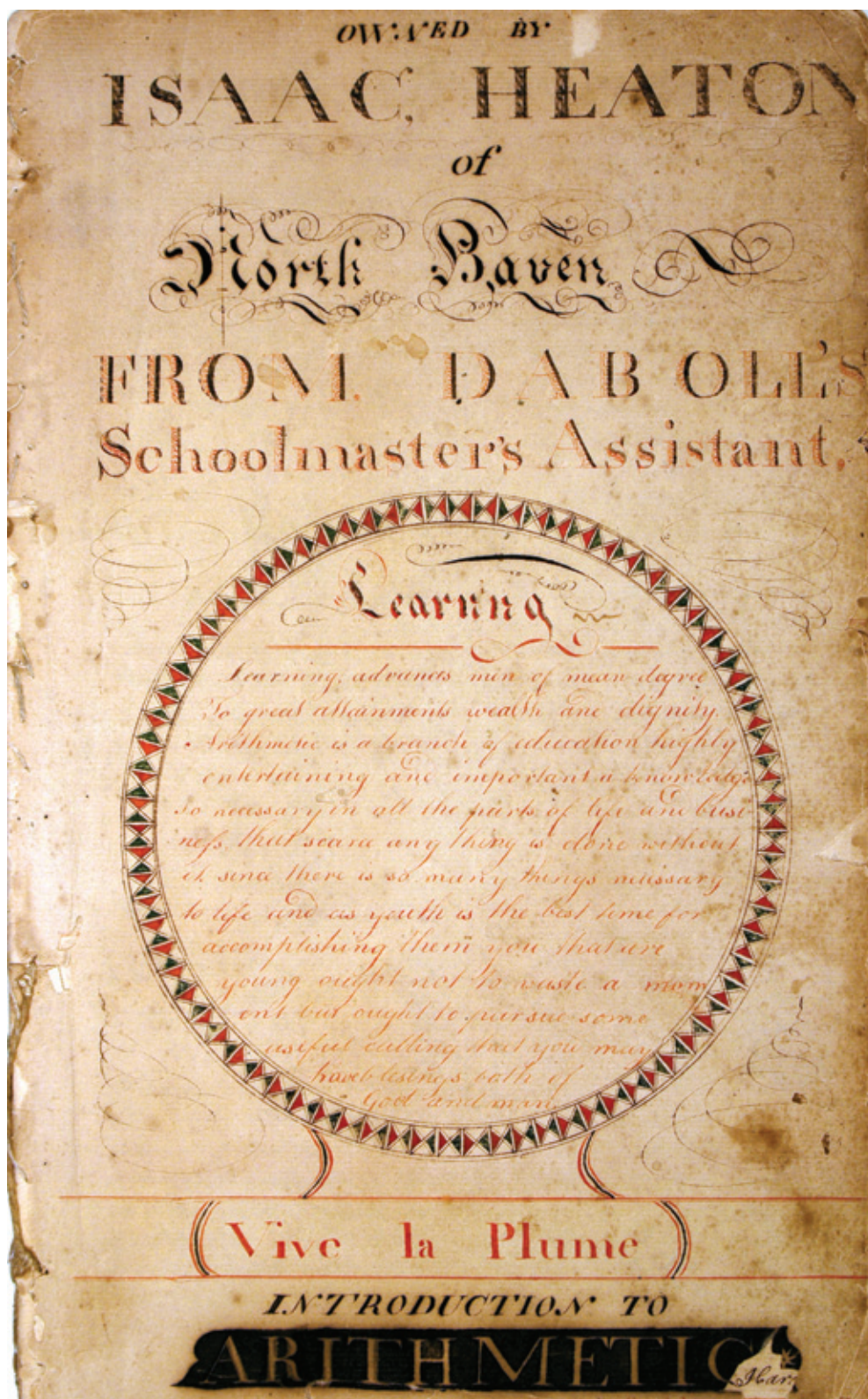
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ISBN: 978-0-911221-50-3



The first two numbers in the second series of CODE(X) Monographs focus on Marinetti’s *Parole in Libertà Futuriste*, one of the supreme artist books of the 20th Century. The first is an essay by **Vincent Giroud**, a noted authority on this particular book and Director of the Beinecke Library at Yale University when they acquired their copy. The second number is a photo-lithographic reproduction of the metal book itself and is presented here as illustration to accompany Giroud’s thoughtful essay.

5.5 x 7.75 inches, 24 & 32 pages, \$25 each.

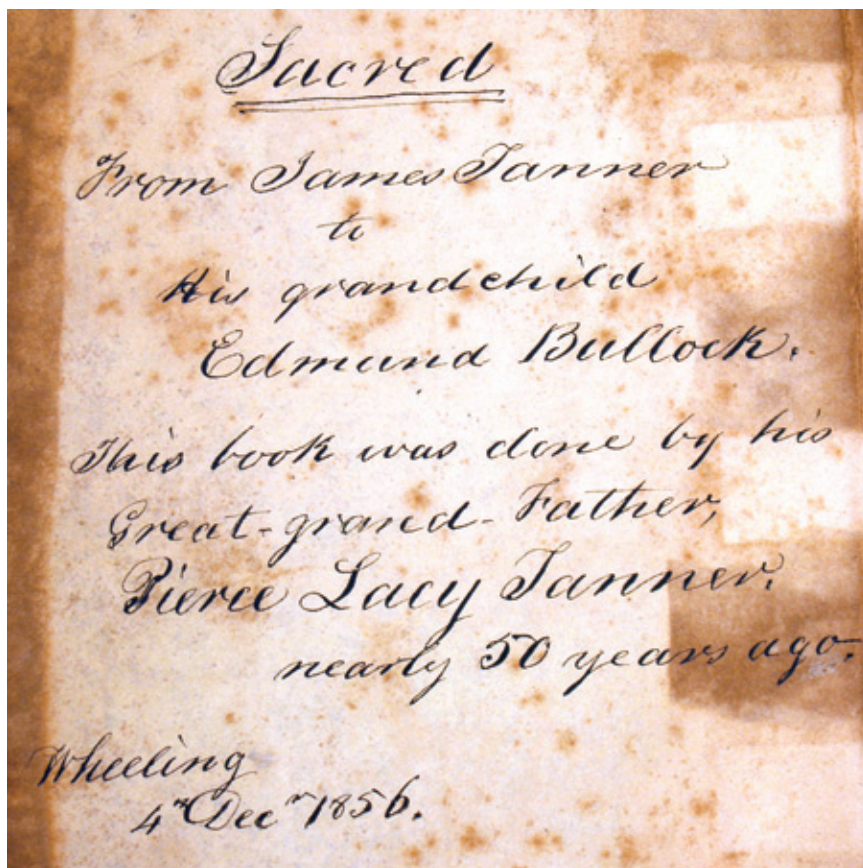
For more information or to order: www.codexfoundation.org (510) 849-0673



The decorative first page of Isaac Heaton's cyphering book

UNIQUE MATHEMATICS BOOKS FROM A LOST TRADITION

NERIDA F. ELLERTON AND MCKENZIE A. CLEMENTS



Inscription in James Tanner's cyphering book

"SACRED; FROM JAMES TANNER TO HIS GRANDCHILD EDMUND BULLOCK. This book was done by his Great-grand Father, Pierce Lacy Tanner, nearly 50 years ago. Wheeling, 4 Dec 1856."

These words appear, handwritten, on the front pastedown of a 460-page manuscript prepared by Pierce Lacy Tanner in Maryland in 1809. The inscription went on to explain that Pierce Tanner had expressly prepared the book for his son James, and made clear that James, who would later become a medical doctor, came to regard this book as something very special. The book features exquisite penmanship and beautiful calligraphic headings throughout.

One might ask: What kind of book could possibly deserve such reverence? The amazing answer is that this was a *cyphering* book, a handwritten manuscript almost totally concerned with elementary arithmetic. A cyphering tradition for school mathematics had been translated from



Nerida F. Ellerton, professor in the department of mathematics at Illinois State University since 2002, holds two doctoral degrees, one in chemistry and the other in mathematics. She has written or edited fourteen books and had more than 150 articles published in refereed journals or books. She is currently studying toward a Diploma in Book Conservation at the American Academy of Bookbinding.

McKenzie A. Clements, professor in the department of mathematics at Illinois State University since 2005, has conducted research in ten nations and has coedited three international handbooks of mathematics education. He has written or edited twenty-five books and more than 200 articles. With Nerida Ellerton, he coauthored a UNESCO book on mathematics education research and also the recent (2012) Springer book *Rewriting the History of School Mathematics in North America 1607–1861*.

The authors may be contacted at nerida@ellerton.net

Europe to North America, and this remained the dominant tradition shaping school mathematics from the early seventeenth to the mid-nineteenth century. Before the nineteenth century, the spelling “cyphering” was most common, but after about 1820 this was replaced (in the United States) by “ciphering.” Sometimes “copybook” was used, but this was a more general term than “cyphering book.” The term “cyphering” was preserved for copybooks that focused on mathematics, especially arithmetic (Ellerton & Clements, 2012).

With the cyphering approach to school mathematics, students were expected to become independent problem solvers by learning to identify and solve problems of various types. No solution was allowed to be entered into a cyphering book until it had been checked by a tutor or teacher, and in the act of copying, exemplary penmanship and calligraphy were required. The handwriting process was not meant to be merely copying—it was to be an accompaniment to thinking. It was expected that students would inscribe into memory what they wrote. Our analyses of over 600 extant cyphering books indicate that about 80 percent of those who prepared cyphering books were males (Ellerton & Clements, 2012).

The Tanner (1809) manuscript is one of 212 cyphering books in our collection, which is the world’s largest collection of US cyphering books, public or private. Of the 212 cyphering books, 191 are concerned exclusively with arithmetic and the remainder focus on geometry, algebra, trigonometry, navigation or surveying. These cyphering books were prepared between 1701 and 1861, and the mathematics education significance of the so-called cyphering tradition, of which the books are emblematic, has been dealt with fully in our recent book, *Rewriting the History of Mathematics Education in North America 1607–1861* (Ellerton & Clements, 2012). In that text we define a cyphering book as a handwritten manuscript with the following four properties:

1. Either the contents were written by a student who, through the act of preparing it, was expected to learn and be able to apply whatever content was under consideration; or the book was prepared by a teacher or parent who wished to use it as a model that could be followed by students preparing their own cyphering books.
2. All entries in the book appeared in ink—either

as handwriting or as illustrations. Headings and subheadings were presented in a decorative, calligraphic style.

3. The book was dedicated to setting out rules and cases associated with a sequence of mathematical topics, with each topic being followed by problems linked with that topic. The problems were in arithmetic, especially business arithmetic, or in one of algebra, geometry, trigonometry, navigation, or surveying. Cyphering books were full of practical problems and their solutions. For any given topic, there would be a short introductory statement; then a rule, followed by different cases for that rule. For each case, a model problem would be stated and solved, and then would follow exercises. We call this the IRCEE (“Introduction, Rule, Case, Example, Exercise”) genre.



A page from Daniel H. Sanford's (1825) cyphering book, illustrating the IRCEE genre

4. The topics covered were sequenced so that they became progressively more difficult. The content also reflected the expectation that, normally, no child below ten years of age would be assigned the task of preparing a cyphering book.

Most of the cyphering books in our collection deal with just one branch of mathematics (usually arithmetic, but occasionally algebra or geometry, etc.). Only rarely does a cyphering book have entries from two or more of these branches. In the eighteenth and nineteenth centuries in North America, cyphering books were usually made up of unlined, rectangular folio-sized paper sheets (in the eighteenth century, rag paper was often used) with dimensions about 12 ½ inches by 8 inches. The completed pages were grouped as sections, and were routinely hand sewn together to form a handwritten book. Sometimes protective covers were added. The first page of a book was, typically, beautifully decorated. The name of the owner as well as the year(s) and location(s) in which the book was prepared were often to be found on this first page, as in Isaac Heaton's cyphering book, shown above on page 28. Some of the diagrams were meticulously drawn, which is not surprising given the expectation that everything in the book should be of a high standard.

The cyphering books with which we are concerned in this article featured handwriting throughout, and not typeset printing. The books were not written with publication in mind. Most were prepared by students between the ages of ten and twenty years, and from the outset each student regarded the cyphering book as "My Book." We see this pride of ownership expressed by Thomas Prust, the author of our second oldest cyphering book. Thomas's wording was simple and direct: "Thomas Prust, his booke, Amen, 1702."



"Thomas Prust, his booke, Amen, 1702."

Similar expressions of pride of ownership can be found in more than half of our cyphering books.

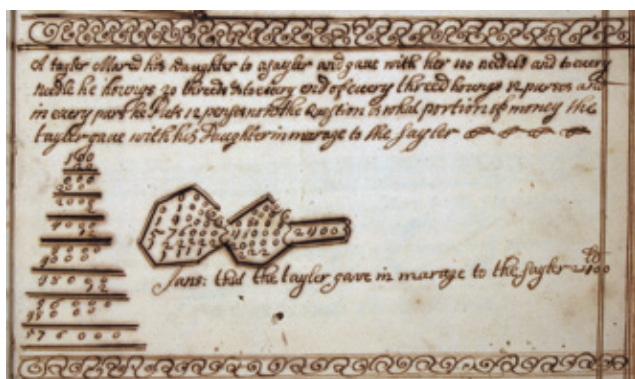
CYPHERING BOOKS WERE INDEED SPECIAL—other than the Bible, and perhaps an almanac, a cyphering book was the only book of any kind that a student might ever own. It was certainly the only book in

Other than the Bible, and perhaps an almanac, a cyphering book was the only book of any kind that a student might ever own.

which the student was expected to write. Of even greater significance than this is the fact that a cyphering book was prepared for a purpose: the idea was that it be retained and consulted by the student for the rest of his or her life. That was the theory, but often cyphering books were passed on to brothers, or sisters, or cousins, or friends who subsequently would study arithmetic.

Thus the oldest book in our collection (see next page) was prepared over a period of more than 150 years by members of the Chichester and Pine families of Long Island, New York. The first page of this cyphering book is clearly dated 1701, and there are subsequent contributions by other family members. The sections all have different dimensions, and there can be no guarantee that the order in which the sections appear in the bound volume is the order in which they were written. Indeed, we suspect that one section (the author of which was not named) was written in the seventeenth century. The writing in that section is of a style we have noticed when we have examined handwritten manuscripts (not cyphering books) prepared in the 1600s. Sometimes cyphering books were sold to those who wished to have a model book for their children, or to teachers who wanted to have a cyphering book when they were teaching. There was a shortage of paper in early colonial America, and that factor contributed to the possibility that cyphering books would be passed on or sold.

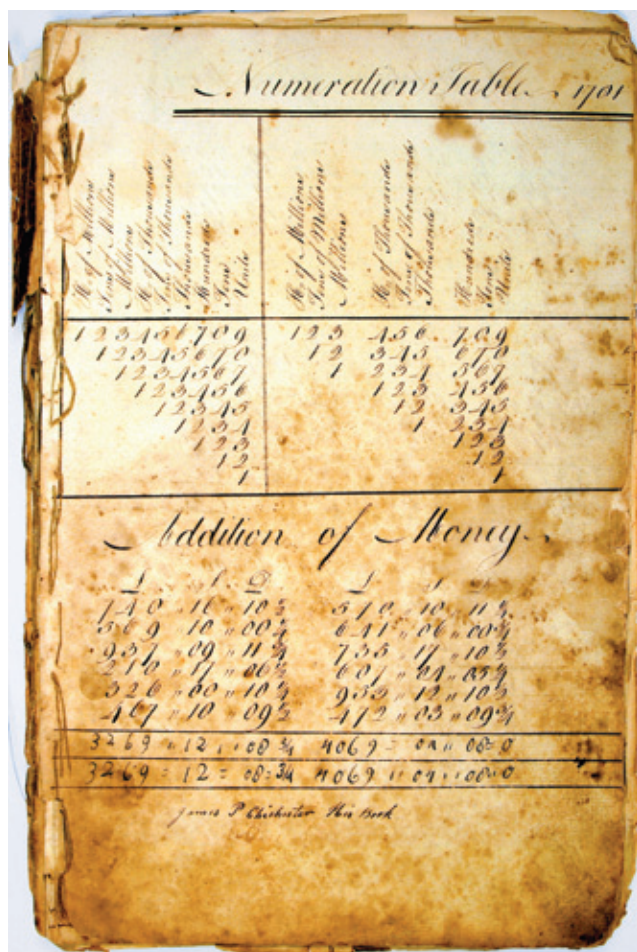
From the above, it should be clear that many of those who prepared cyphering books thought of them as extremely important personal documents that they would use for the rest of their lives. The importance writers attached to "their book" was reflected in the common practice of writing little poems warning of



A problem from Thomas Prust's (1702) cyphering book.

the dire consequences that might befall someone who would dare to steal the book. Thus, for example, in 1837 Thomas Mount, of Maryland, wrote the following rather inelegant ditty on the cover of his cyphering book:

Steal not this book my honest friend,
For fear the gallows will be your end.
The rope is strong, the gallows high,
And your life and soul might die!



The first page of the oldest cyphering book in our collection (1701)

Some of the cyphering books have exquisite penmanship and calligraphy. Here we see a problem from Thomas Prust's (1702) cyphering book. Leaving the original spelling unaltered, the problem states:

A tayler mared his daughter to a sayler and gave her 100 needels and to every needle he houns 20 threeds and to every end of every threed houns 12 purses and in every purs he puts 12 penses. Now the question is, what portion of money the tayler gave with his daughter in marage to the sayler?

The answer is 2400 pounds, which made the tayler an extremely generous father!

Rickey and Shell-Gellasch (2010) have related how, in the first few decades of the nineteenth century, West Point Military College students created their own cyphering books. The problems were taken from Hutton's (1812) *Course of Mathematics*, and graduating students at West Point would lend their recently completed cyphering books to new cadets. Rickey and Shell-Gellasch provided the following delightful quotation from a Professor Albert Church (West Point Class of 1828), who, in 1864, recalled his cyphering-book experiences at West Point:

Of course, the real teachers in these subjects were those cadets who made careful notes, finished their drawings early in the day, made the demonstrations to their classmates, and lent their drawings for copying. Great skill was required in making these copies. A clear and large pane of glass placed on the top of the washstand, a lighted candle underneath the finished drawing on the glass, and the paper for the copy on the top, and every point quickly marked with a pencil (394).

Entries in the same West Point notebooks can be precisely matched with a popular mathematics text (Rickey & Shell-Gellasch 2010). The main point, though, is that those responsible for mathematics education at West Point made sure that every cadet carefully prepared a cyphering book. Because it was expected that a cyphering book would feature fine penmanship and calligraphy, those who taught arithmetic often doubled as writing masters. Fine writing was a high skill that set a person aside, a skill that was important for gaining employment in desirable occupations.

Cyphering books were prepared by children and

apprentices from all levels of society. An apprentice recognized that if he (for it was usually a “he”) could generate a handsome cyphering book, his chance of gaining suitable employment after the completion of his period of indenture was much increased. A similar situation prevailed for college students. Thus, for example, the Houghton Library at Harvard University holds many cyphering books originally prepared by Harvard students in the eighteenth and early nineteenth centuries. The largest public collection of US cyphering books, though, is held by the Phillips Library in the Peabody-Essex Museum, in Salem, Massachusetts. Many of these Phillips Library manuscripts were prepared by boys from prosperous Salem families who looked forward to becoming sea captains or navigators.



A page from Addison Metcalf's (1820–1822) cyphering book.

Above we see a page from Addison Metcalf's cyphering book, prepared between 1820 and 1822. Addison was a student at Bowdoin College, in Maine.

Unlike most boys preparing cyphering books, he had access to numerous printed arithmetics in the Bowdoin Library. Still, Addison copied the material neatly into his book because the prevailing education philosophy was that the act of copying, followed by recitation in which a student demonstrated knowledge and understanding to an usher (tutor), was essential if one wanted to learn well.

Patricia Cline Cohen (2003) has argued that the formal arithmetic covered in cyphering books represented, in the minds of the boys who prepared them, a huge step toward a respectable manhood. Whereas counting, the Hindu-Arabic system of numeration, and the four operations of arithmetic—addition, subtraction, multiplication and division on whole numbers—were usually dealt with in dame schools or in common schools attended by boys in winter months, “formal arithmetic was a far loftier subject, commanding respect, requiring diligence and memory, and signifying manhood in the mastery of it” (Cohen 2003, 43). For the boys, the preparation of a cyphering book was a very significant step towards reaching the upper echelons of better-paid society; the girls who prepared cyphering books were likely to be highly employable by shop owners and captains of industry. Cyphering books were therefore expected to be both beautiful and practical.

So far as mathematics education was concerned, printed texts were less used and less important than cyphering books.

IN CASE IT MAY BE THOUGHT that cyphering books were only important in the minds of their creators, we should add that in our recent book on the history of mathematics education in North America between 1607 and 1861 (Ellerton & Clements 2012), we have argued that published histories relating to the teaching and learning of mathematics in the North American colonies, and during the first

eighty-five years of the United States of America, have overemphasized the role of printed textbooks. We have provided evidence from numerous primary and secondary sources that so far as mathematics education was concerned, printed texts were less used and, from a mathematics teaching and learning perspective, less important, than the cyphering books.

In the seventeenth century the cyphering tradition entered the North American colonies from Western European nations, and it remained the dominant influence on mathematics teaching and learning until well into the nineteenth century. An integral part of this tradition was the so-called *abbaco* curriculum, which propagated forms of arithmetic based on the Hindu-Arabic numerals 0, 1, 2, 3, ..., 9 and the associated place-value system for numeration. This tradition had developed among mercantile communities in Western European city-states from about the thirteenth century onwards. The *abbaco* curriculum was aimed at children aged from about ten years, who were expected to copy rules needed for commercial calculations into cyphering books and then apply these rules by solving standard problems in their cyphering books (Ellerton & Clements, 2012).

In North America throughout the seventeenth and eighteenth centuries, and for part of the nineteenth century, the cyphering-book approach was likely to be used whenever and wherever students were learning “written arithmetic.” We have argued, citing numerous primary sources for evidence, that although the ways in which published textbooks were used in conjunction with cyphering books varied from region to region, context to context, teacher to teacher, and student to student, almost every student over the age of ten who set out to learn a branch of mathematics prepared a cyphering book. Only a minority of students used a commercially-published textbook, and hardly any of them ever owned such a book. There is evidence that, in their later lives, many businessmen consulted the cyphering books that they had prepared when they were students. One such person was Ezra Cornell, the creator of Cornell University (Ellerton & Clements, 2012). The young George Washington prepared a cyphering book, and so did the young Abraham Lincoln.

GIVEN THE UNIQUE PLACE of cyphering books in the lives of many young students and their families in the eighteenth and nineteenth centuries, first in the North American colonies and subsequently in the United States, it is hardly surprising that considerable effort was expended in trying to preserve and protect the books. Although some commercially-produced cyphering books with blank pages and soft covers were used, most cyphering books began as sections of

whatever size the local printer had available. It made sense for students to write on pages from loose sections, since these could be opened easily and laid flat. In the event of major errors or ink blots, it would have been relatively easy to remove a leaf from the section. Paper was scarce in the colonies, so only the paper that was needed would have been purchased.

Once all of the pages in one section had been used, a new section was started—but the new pages were not necessarily the same size as those in the previous section. Paper sizes in cyphering books were typically about 12½ inches by 8 inches, but the longer dimension could vary from 11 inches to 13¾ inches, and the shorter from 7 inches to 8½ inches. Only 32 of the 212 cyphering books in our collection have smaller

Protecting the completed sections during a period of anything between one and eight years of work must have been a challenge for many families.

overall dimensions, the smallest measuring 7½ x 5¾ inches. Smaller books, often of commercial origin and with faintly lined pages, became more common towards the end of the cyphering-book era.

An analysis of dates written on pages of cyphering books suggests that most students in the common schools in mid-eastern regions of North America studied arithmetic during the winter months only. Protecting the completed

sections during a period of anything between one and eight years of work must have been a challenge for many families. Professional binding is rarely seen in North American cyphering books. Instead, sections were sewn separately to a cover, not always in the same chronological sequence in which they were prepared. Sometimes sections were sewn together before a cover was attached. Examples of covers include reclaimed card, leather on reclaimed card, fabric on reclaimed card, newspaper or wallpaper (with or without reclaimed card), and vellum. No endpapers were used in the construction of the book, and covers rarely displayed names, places, or dates on the outside. No formal spine structure was incorporated into any of these home-finished cyphering books.

ALTHOUGH SOME MAY REFER TO cyphering books and their covers as folk art, we believe that the func-

tionality of each cover should be emphasized. Without the efforts of students and their families to create the form of a book within a cover, far fewer cyphering books would have been preserved, and the contents would have been lost for future generations. Of the 212 cyphering books in our principal data set, 71 do not have covers—although some of those 71 may have had covers at some stage. Half of those without covers were written between 1701 and 1819, with the other half between 1820 and 1861. Of the 141 that do have covers, 90 were homemade

and 51 were of a commercial origin. The focus of the remainder of this article is on the homemade covers created by loving hands to protect one or more signatures of rag paper carrying the mathematical content.

No two of the 90 homemade covers are the same. Most covers were created so that they would be considerably larger than the pages they were designed to protect. Almost half of these 90 covers were of light, reclaimed card. The remaining covers were made of simple, everyday materials—newspapers (10 covers), cloth glued to reclaimed card or paper (4 covers), wallpaper (7 covers), brown paper or plain paper (17 covers), and leather (6 covers). Another 3 covers were formed from older, hard commercial covers, and one cover had been formed from vellum.

As we handled these manuscripts—each of which is aged between 151 and 311 years—several structural elements stood out. Although one would expect these elements to differ from those identified by Miller (2010) for historical bindings in her handbook *Books Will Speak Plain*, there are useful parallels. It is worth reflecting on the extent to which these structural elements contributed to the survival of the students' books. We identified the following different structural elements which can be regarded as defining characteristics for these unique covers. Several covers that illustrate these elements will be described.

- Covers were created from available materials such as reclaimed soft card, newspaper, cloth, wallpaper, brown paper, or leather. Endpapers

Homemade covers were created by loving hands to protect one or more signatures of rag paper carrying the mathematical content.

of any sort were rarely used—paper was probably too precious, given the large dimensions (up to 13¾ x 8½ inches) of many of the cyphering books.

- Covers were almost always oversized, thereby protecting the sections.
- Sections were usually sewn individually, directly to the cover, and only when the first section had been completely filled with handwriting. Thus some completed books included sections of different sizes.
- Sometimes the second section was placed inside the last page of the first section and then sewn directly to the cover through the fold, and through this single page of the first section. Subsequent sections were then added immediately behind this section but still inside the back page of the first section. This meant that the back page of the first section appeared to be much narrower from spine to fore edge than the other pages when the book was opened up. Also, although the different sections had not literally been sewn together in a traditional manner, the technique effectively gave rise to a more coherent text body.
- Spines were not specially rounded—the amateur cover-makers would not have understood the technique. An interesting outcome of this, and of the progressive addition of sections sewn individually to the covers, is a natural and literal soft rounding of the card covers.
- Side sewing was sometimes used to join sections. Even though this is regarded as a very strong form of sewing, the openability of the resulting structure is limited (Roberts & Etherington, 2008). Perhaps this explains why side sewing seems to have been rarely used in preparing cyphering books for their covers compared with the simpler strategy of sewing each section individually to the cover—only a few examples of side sewing can be found among our manuscripts. Most of the cyphering books in our collection will lay flat when they are opened.
- A few examples of overcasting were found.

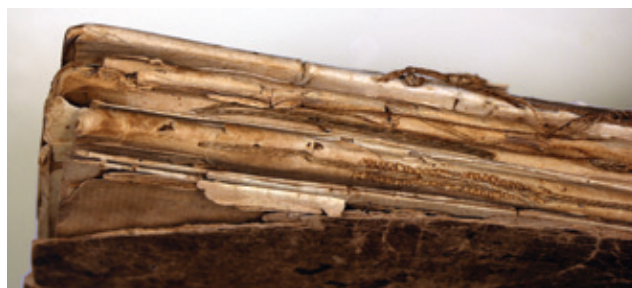
Imagine, for a moment, the home and family contexts in which these covers were created. Paper was still relatively expensive, and most homes had few, if any, books. Paper was usually purchased from the

local printer by the sheet or by sections of about six sheets. If this one section was completely filled with handwriting, and a second or third section needed, then another section would be purchased—but often the paper would be of different dimensions. Sometimes families made their own paper. It was unlikely that anyone in the family had training in bookbinding, so there were few models of how to structure the cover of a cyphering book. But others had walked that path before, so strategies and techniques would have been shared. Needle and thread were readily available and reclaimed card for a cover was relatively inexpensive. But any available material, such as brown paper, newspaper, wallpaper, or cloth, that would help to protect the paper pages was used.

We have already made reference to the Chichester and Pine family cyphering book that was prepared by various people during the eighteenth and nineteenth centuries. The structure of the cyphering book shows seven individual sections organized within a single thin, light, reclaimed card cover. These sections vary in size from $7\frac{1}{8} \times 12$ inches to $8\frac{1}{4} \times 12\frac{3}{4}$ inches, and each comprises twenty or twenty-two leaves. Almost 100 years after the first section of this book was completed in 1701, individual sections were sewn to the center of the reclaimed card cover. Although the sections themselves were not sewn together, a few of the first pages, which had evidently come loose, were stitched to the first section.

Despite the fact that it is unusual for there to be any form of labeling on the covers of cyphering books, the cover of this book was inscribed, in ink, “Arithmetic by James P. Chichester, 1796.” The name and date are interesting since different members of the Pine and Chichester families wrote different sections of the book, with one early section clearly dated as 1701. It appears likely that the book was given to James P. Chichester in 1776, when the family fled to Connecticut from English troops based in Huntington, New York. James would have been seventeen years old then, and such was the import of owning a cyphering book that he claimed full ownership of the book by writing his name several times throughout the book, even on pages that he himself had not prepared.

A later date (1796) on the cover supports the conclusion that the sewing of different sections into a protective cover was done by someone in the family wishing to preserve what had been handed down.



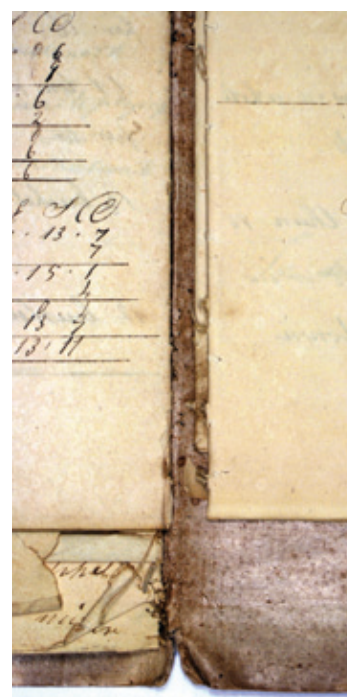
An end view of the Pine-Chichester cyphering book, showing seven sections.

The order in which the sections were sewn into the book was not necessarily the same order as they were written, and it seems to have been the case that the sections were compiled into this book after all of the individual sections had been completed by their various authors. An end view showing the thickness of the finished book (about an inch) and the differently-sized sections is shown above.

In most cases, the cover was attached to a cyphering book *after* the pages had been filled with handwritten mathematical rules, definitions, and examples.

Regardless of whether a cover was added before the child wrote on the pages, only one section was sewn directly through the fold of that section on to the cover. Typically, second and subsequent sections were then added by sewing through each new section directly onto the cover. It appears that each new section was simply placed behind the first section to find the correct spacing. This structure meant that, when the book was opened, the pages would lie relatively flat. Some of the inside of the spine would therefore be visible when the book is opened; we see an example of this here.

Two thicknesses of newspaper were sewn together to form the cover of the two-section cyphering book produced by Stephen B. Carrier of East Kingston, New Hampshire. One of the



Each section in Samuel Arnold's cyphering book (1829-1835) was sewn separately to the card cover. Note the sections were of different sizes, and the cover was made to overhang the sections. The rounded spine of Samuel's book is shown on page 39.



Two different examples of cyphering books protected by newspaper covers, one by a member of the Hough family (left) and the other by Stephen B. Currier (right).

layers of newspaper includes the place and date of the newspaper: "Concord, New Hampshire, Tuesday Morning January 11, 1820." The newspaper had been generously measured so that the edges of the newspaper were larger than the sections they covered. In contrast to this cover, an earlier cyphering book (made by a member of the Hough family in 1795) comprised a single section sewn to a reclaimed card cover to which had been glued to the front page of *Claypoole's American Daily Advertiser* published, on April 15, 1796, in Philadelphia. In this case, the newspaper had been folded over and glued to the top and bottom edges of the reclaimed card cover. Again it is clear that the cover was created and attached after the cyphering book it was designed to protect had been completed.

To the right we see an example of the structure of a cyphering book protected by a wallpaper cover backed by brown paper. The pattern on the wallpaper is raised, giving an unusual appearance. In this cyphering book, completed by Adam Kiser between 1839 and 1841, the first section contained ten leaves and the second twelve leaves. Proper thread was apparently not available so wool was used. The threads have pulled through the outer layer of wallpaper (the photograph shows the thread holes clearly but the clean tears between the holes are obscured). In order to protect the book and its now fragile covers, the cyphering book was placed between two later (nineteenth century) marbled hard covers (not shown), still joined by fabric that had evidently been part of the spine of what we assume was a more recent (but

less valued) commercially-produced book. There is no evidence, however, that the original cyphering book was sewn or even glued at any stage to this more robust cover.

The cloth-covered cyphering book written by Oliver P. Simpson (from Stark County, Ohio) between 1839 and 1840 includes some structural similarities to the newspaper-covered books shown here, which were produced at least twenty years earlier, but several important differences are worth noting. First, the thread used to sew the individual sections is typical of the thread used to sew sections of printed books contemporary to that period, and the style of sewing with large stitches is more professional than that in the earlier books. Second, three sections have been separately sewn, with each being sewn into a cloth-covered soft-card cover. The dimensions of the three sections differ only slightly (two of $7\frac{5}{8} \times 12\frac{1}{4}$ inches and one of $7\frac{3}{4} \times 12\frac{1}{2}$ inches). The number of leaves in these sections was fourteen, twenty-two, and forty-eight. It appears that several pages have been torn from the first section—for example, sewing stitches



Two separately sewn sections of Adam Kiser's cyphering book (1839-1841) in a wallpaper cover lined with brown paper.



The fabric-covered cyphering book created by Oliver P. Simpson in 1839-1840. Right: Enlargement of part of the fabric.

can be seen after the first five leaves, yet there are seven more leaves that follow before the end of that section. Plain fabric was pasted to the inside of the soft card cover but a small-patterned floral fabric was pasted to the outside of the cover. About half an inch of floral cloth was folded over and pasted onto the inside of the cover to give a neat finish to the edges. The result was an attractive yet strong, wrinkle-free finish, with a soft, supple feel.

The fact that the sections used in this book contained more leaves than earlier cyphering books is consistent with changes in the thickness and composition of paper produced towards the middle of the nineteenth century, in contrast to what was available in the eighteenth century when it would have been next to impossible to sew through twenty-four layers of paper. The greater consistency of the dimensions of the sections is also to be expected of paper produced in the middle of the nineteenth century.

A large leather-covered cyphering book produced by Albert Hawkins between 1822 and 1827 contains over 450 pages, with sections having been sewn individually through a calf leather cover supported by light card of approximately the same dimensions as the largest sections. The leather extends over the edges of the sections by about an inch on all sides. Apparently to strengthen the structure, the last eight leaves of the second section were laid flat so that the third and subsequent sections could be inserted



The leather cover of the cyphering book (1822-1827) written by Albert Hawkins. This comprised sections sewn individually to a cover made from leather glued to thin card. Note the stitches through the spine, showing how individual sections were integrated into the structure.

within what was the second section. Within this structure, the third and subsequent sections were sewn individually to the leather and card cover. As a consequence, the last eight leaves are unnaturally narrower in presentation than would be expected. The date and content of the first of these last eight leaves match the date and content of last page of the second section, thus confirming the structure described. The first large section contains eighty-eight leaves measuring $7\frac{5}{8} \times 12\frac{1}{2}$ inches, while the next three sections each contain forty-eight leaves measuring $7\frac{3}{4} \times 13\frac{1}{4}$ inches. A smaller section of twenty leaves measuring $7\frac{1}{4} \times 12$ inches was inserted next, followed by fifteen leaves that matched the largest dimension. The resulting cyphering book was substantial but strong and well protected.

Examples of side sewing and overcasting are shown in the next image, opposite. The natural rounding of the spines formed when soft reclaimed card was used as a cover is also shown. Structural elements such as these attest to the ingenuity and dedication of those who sought to create covers made from basic materials that would help to preserve one of the few books in the family home.

WE HAVE PERSONALLY EXAMINED about 650 cyphering books created in the North American colonies and in the early years of the United States of America, and would estimate that altogether between 1500 and 2000 still exist. The survivors represent a 600-year-old tradition of teaching arithmetic that began in Europe. The tradition disappeared quickly between 1840 and 1861 with the introduction of nor-



Top left shows an example of side sewing in Anrusa Wiggin's (1816) cyphering book. Two sections have been sewn together by side sewing with overcasting (not shown in the photograph) used for extra strength. The double-thickness newspaper covers were attached via the overcasting stitches. Anrusa was from Portsmouth, New Hampshire.

Top right shows rough overcasting through the brown paper cover on Albert Plumer's cyphering book, which was completed in 1831 in Newbury, Massachusetts.

The bottom photograph provides an example of how the spine for a multisection cyphering book (Samuel Arnold, Rhode Island, 1829–1832) became rounded because of the structure in which sections were sewn separately to the cover.

mal schools for educating prospective teachers, and of written examinations, the establishment of grade levels in schools, which could be linked to larger numbers of students attending school, and the greater availability and extensive use of school textbooks.

We are pleased that such a wide variety of examples of cyphering books have survived—thanks in no small way to the ingenuity of students and their families who sought to preserve what were very special books. At the same time, we have been saddened to see the destruction (dare we say desecration?) of some cyphering books by those fascinated by the calligraphy they contain but possessing no sense of the history of the genre.

The examples presented here speak of a past era in school mathematics. From a book construction point of view, they provide a glimpse of some of the structures and techniques used by amateurs of the day, possibly with the help of some professional advice and materials. We hope that this article inspires others to look beyond what might be considered insignificant parts of history—to reclaim what we believe to be an amazing treasure trove of a lost tradition.

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Constructing the Folger Phase Box

THE FOLGER PHASE BOX: A VISIBLE SPINE WRAPPER

J. FRANKLIN MOWERY & SONJA JORDAN-MOWERY

IN THE MID-1970S, THE LIBRARY OF CONGRESS INTRODUCED A NEW preservation agenda and philosophy termed the “phased” approach to collection care. During that period the “phase box” was developed (Waters 1998). Designed and documented, it made its first public appearance in 1982 (Brown, Etherington, and Ogden 1982). This simple construction was intended to house materials with detached or damaged boards or fragile covers until they could be conserved.

Many libraries and conservators were quick to adapt this economic housing not only as a “phased” step before eventual conservation but also as permanent housing. A phase box can provide some protection from poor environmental conditions, especially in circumstances when sustaining optimum conditions is difficult.¹ Boxing collections can protect them from the damaging effects of light, dust, and fluctuating temperatures and humidity.

While the phase box was intended to be a first step toward eventual conservation treatment, for many institutions it has become a permanent solution and a strategic option in collection care. Unfortunately, boxing collections can lead to the unintended consequence of lulling curators and conservators into complacency with regard to future conservation—or, worse, an assumption that materials are safe in their housing. Many libraries routinely box their collections, and it is not uncommon to find out years later, when pulling the box off the shelf, that the box is empty.



Phase boxes, Johns Hopkins University, Sheridan Libraries, Conservation Department

There are advantages to the conservator’s being able to see the condition of materials on the shelf. The visibility of the collection provides quick assessment of collection needs while materials remain on the shelf. As currently designed, most enclosures—clamshell boxes, wrappers, phase boxes—prohibit any view inside the enclosure. While one can remove the box from the shelf, open it, and inspect it, this takes more



J. Franklin Mowery was Head of Conservation at the Folger Shakespeare Library. He served as president of the Guild of Book Workers from 1984–1995 and has taught book-binding and book and paper conservation in the US and internationally. He has published extensively in the field and was the first fine binder to have a one-man show of his fine bindings at the Metropolitan Museum of Art in New York, in 1982.

Sonja Jordan-Mowery is Director of Conservation and Preservation at Johns Hopkins University. A member of GBW, ALA, and IFLA, she has been a leader in advocating for the advancement of book and paper conservation in academic libraries. She has served as consultant in this area both in the US and internationally. Most recently, she has brought material scientists and chemists into book and paper conservation labs at Johns Hopkins University with the first Andrew W. Mellon-funded Heritage Science for Conservation project.



Clamshell box with visible spine

time than browsing the shelf for a quick view of the state of affairs.

Conservators have responded to this limitation by redesigning and fabricating variations of wrappers, phase boxes, and clamshell boxes with visible spines. They have experimented with uncoated polyester of high tensile strength, chemical and dimensional stability, and transparency. These characteristics make polyester an excellent candidate for many preservation uses.² The polyester would typically be secured with Velcro dots, which hold it snugly around loose boards and text blocks. This maintains the visibility of the collection while also holding the book together. Over time, however, the adhesive on the Velcro dots dries out, the wrapper begins to fail, and the book has a tendency to slip out of the wrapper if the wrapper had not been fitted tightly enough.



Folger Phase box with button string ties



In the current version, a polyester tongue replaces the button string tie.

THE TECHNIQUE PRESENTED HERE for a visible spine wrapper was developed at the Folger Shakespeare Library and is known as the Folger Phase Box. This structure went through several modifications, including use of button and string ties, until its final version presented here with a polyester tongue that slips under a flap. This latter design also provides a handy pocket for book slips.

The Folger Phase Box takes only one to two hours to learn initially. Once comfortable with the measurements and design concept, the actual process only takes 30 minutes to complete, excluding the time needed to assemble and prepare materials beforehand. A simple solution to housing, providing access to information on the spine, access to visual inspection of the artifact, and more visually appealing on the shelf, the Folger Phase Box has been shared with other institutions and conservators.

THE FOLGER PHASE BOX: A VISIBLE SPINE WRAPPER

A visible spine wrapper as provided in the Folger Phase Box is a viable and secure construction for any book, whether in an institutional or private collection. It is most often used for books whose dimensions range from 6 x 8 x ½ inches thick to 12 x 10 x 3 inches thick. Larger and heavier books require heavier card stock. As with modifying any standard technique, experimentation and attention to performance are essential.

NOTES

1. Optimal environmental conditions are continually reviewed as institutions are strained to meet set points and are more attentive to going “green.” There is no national standard for climate-controlled storage of paper collections, but the National Information Standards Organization (NISO) technical report entitled *Environmental Guidelines for the Storage of Paper Records* (NISO-TR01-1995) provides suggested values for temperature and relative humidity for storage of paper records (see Morris 2007).

2. The polyester film used for this construction is a 5 mil Melinex. (Melinex is the trade name for Dupont Teijin Films.)

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CONSTRUCTING THE FOLGER PHASE BOX

Materials

3–5 mil Melinex 516 (5 mil is better)

20 point card stock that is acid free and lignin free

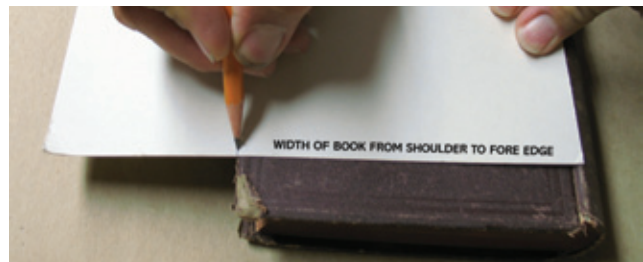
1” wide 3M 415 double-sided tape

Teflon folder, ruler, scissors, and scalpel (or other sharp cutter)

Card Stock Piece 1: Head to Tail Wrap

1. Identify the grain direction of your card stock.

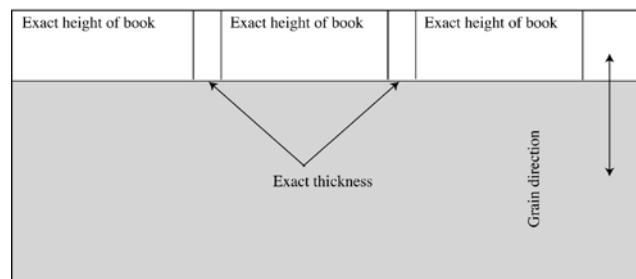
2. Setting the grain parallel to the width of the book, measure and mark the width from shoulder to fore edge, as illustrated below.



3. Cut the full length of the card stock to the marked width. For height, cut 3x the height and 2x the thickness, plus a little more than needed, just to be on the safe side.

4. Starting at one end of this long strip, which is now the width of the book, measure and mark the *exact height of the book*, then below that, the *exact thickness*. Below that on the strip again measure the height, then again the thickness, and lastly measure the height again. If there are variations in height, use the largest measurement.

5. Trim the strip so it is now 3x height of the book plus 2x the thickness. If you are working with a tall volume you may need two pieces of card stock to accommodate the needed length. *Remember, this long strip is now grain short, i.e., it folds more easily across the width than along the length.*



6. With a T-square, score at right angles at each of the marks made.



7. Crease where you have scored with a folder.



8. Fold at crease lines and again sharpen the creases.



9. When this is complete, fold the section over the height of the book and check the fit.

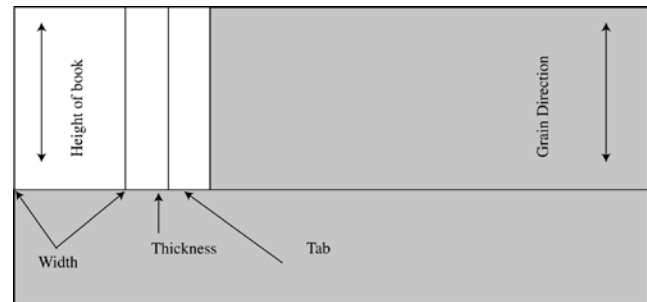


Card Stock Piece 2: Tab Side

1. Find the grain direction of the card stock again.

2. With the grain running parallel to the book's spine, mark the height of the book.

3. Cut a strip that is equal to or just longer than the width of the book, plus the thickness of book, plus 1¼ – 1½ inches for a tab.



4. Repeat as above, creasing, scoring, and sharpening the creases of this section.

5. The two pieces should fit together like this:



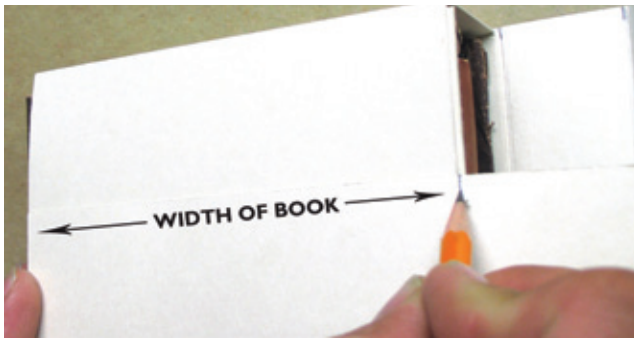
Card Stock Piece 3: Front Flap

1. Identify grain direction again.

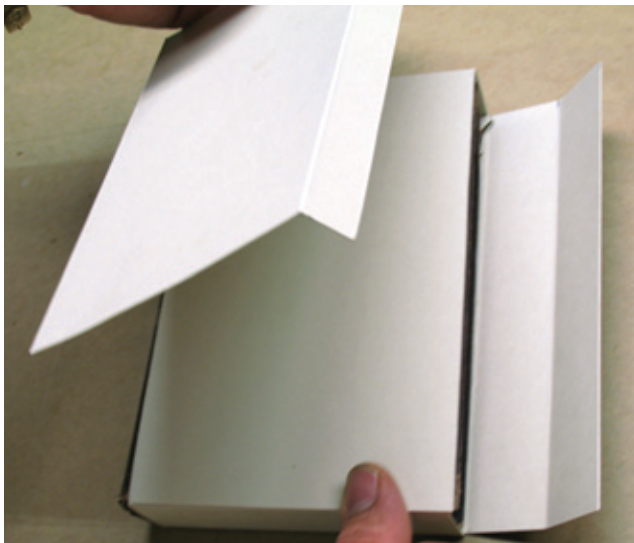
2. With grain direction running parallel to the book's spine, measure and mark the height of the book.

THE FOLGER PHASE BOX: A VISIBLE SPINE WRAPPER

3. Measure and mark the width of the book and then measure $\frac{1}{2}$ the thickness of book.



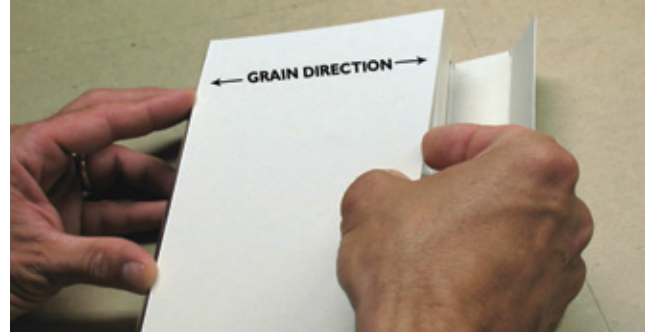
4. Cut the card stock along the markings.
5. You have just created this piece:



Card Stock Piece 4: Covering Flap

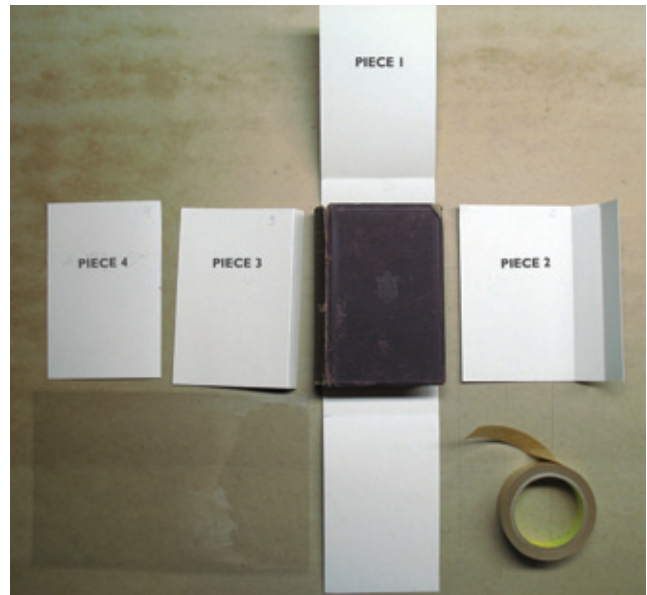
1. Identify grain direction.

2. With the grain going along the book's width, as with the first long strip, cut a strip to the exact height of the book and the width plus $\frac{1}{4}$ ".



Assembling the parts

All four pieces of card stock that go into assembling the visible spine wrapper have now been cut. The parts, laid out as shown, show how the box will come together. Note the placement of the book on the second height-high section of the long strip in the figure below.



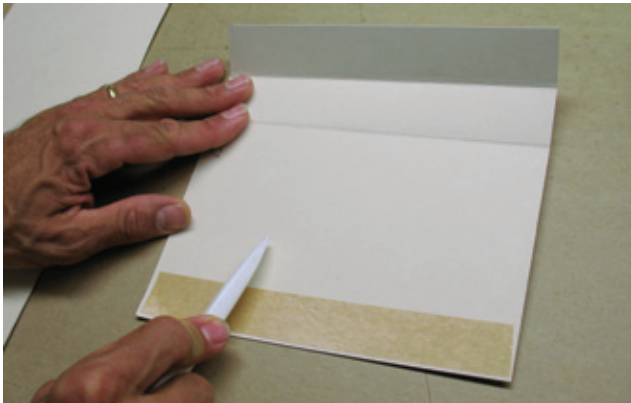
J. FRANKLIN MOWERY & SONJA JORDAN-MOWERY

1. Cut a piece of Melinex to the height of card stock piece 2.

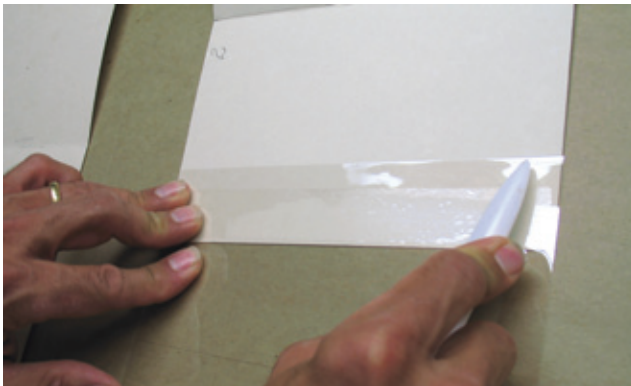
2. Then cut the width of this piece to equal the width of the spine plus 3" (minimum).



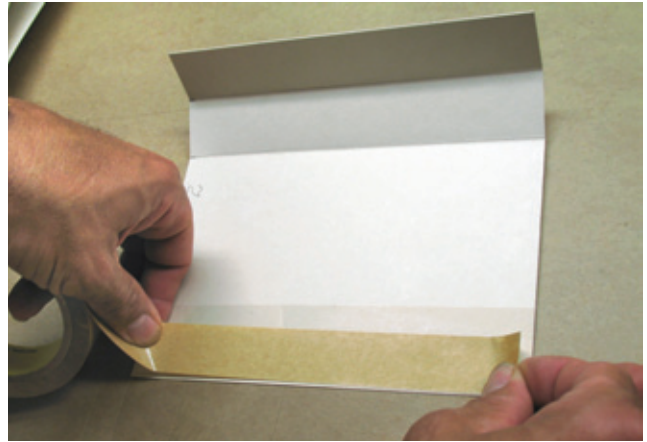
3. Apply a strip of double-sided tape along the front edge of piece 2 and bone the tape so it is securely adhered.



4. Apply the Melinex you just cut over the double-sided tape, so it protrudes beyond the edge of the card stock, and bone well.

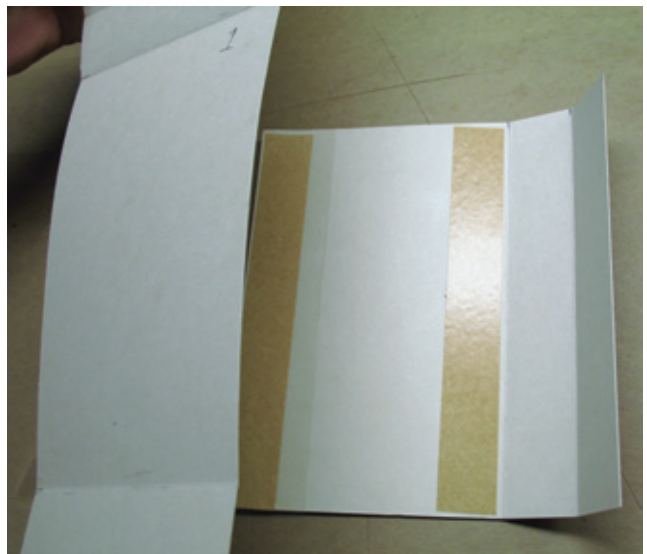


5. Apply another piece of double-sided tape over the Melinex just applied, directly above the first piece of tape.



6. On piece 2, add a second strip of double-sided tape along the other side of the book-width panel. There are now two strips of tape on this panel, one running along each height-sized edge.

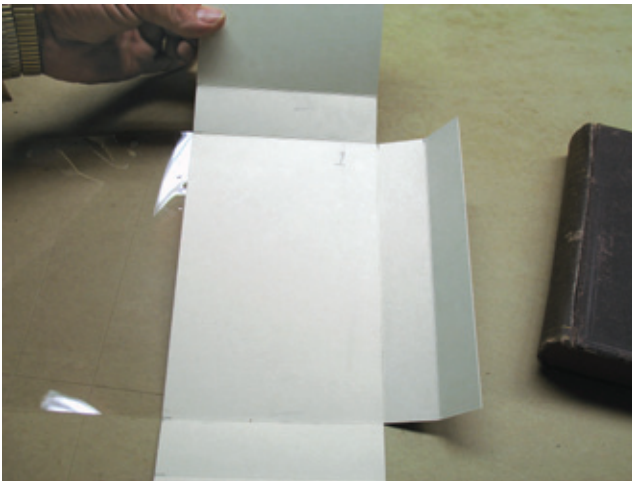
7. Now place piece 1 over piece 2 with the center height-sized panel of the long strip over the panel with the strips of tape.



8. For ease of assembly and to ensure that piece 1 is squarely placed over piece 2, remove the carrier from only one of the tape strips first, align piece 1 over 2, adhere, and bone.

THE FOLGER PHASE BOX: A VISIBLE SPINE WRAPPER

9. Next, remove the second double-sided tape carrier and bone well.



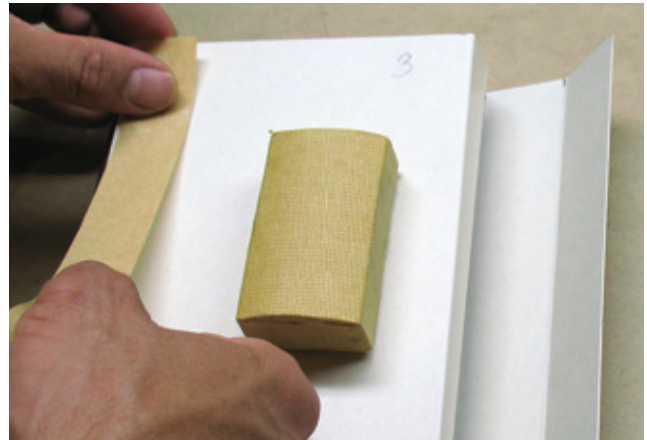
10. Close top and bottom flaps of piece 1 over book.



11. Place piece 3 over the flaps and hold down with weight. Make sure width of Melinex will reach across the spine and about $\frac{1}{3}$ – $\frac{1}{2}$ to center of piece 3.



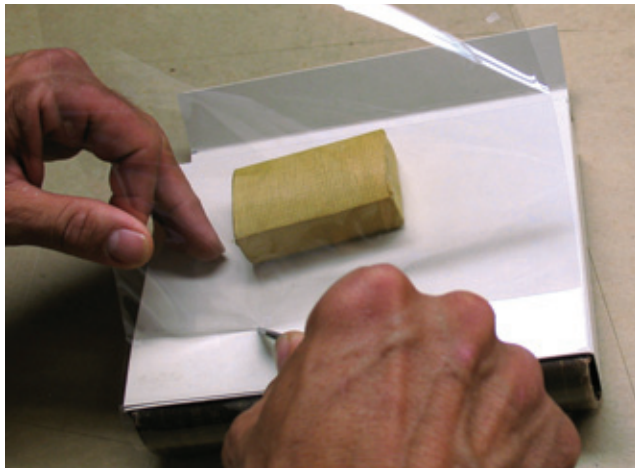
12. When this has been done, add double-sided tape to piece 3 along the edge nearest the Melinex and bone to securely adhere the tape.



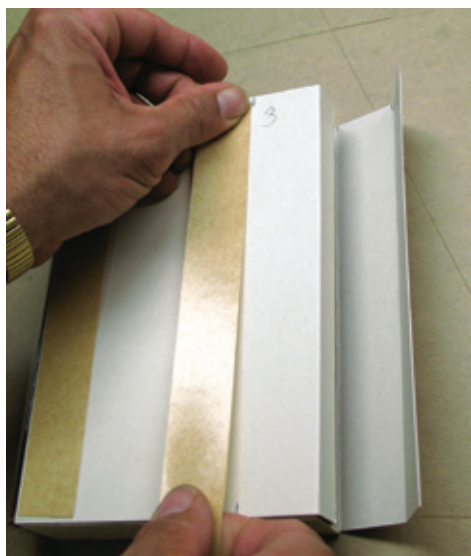
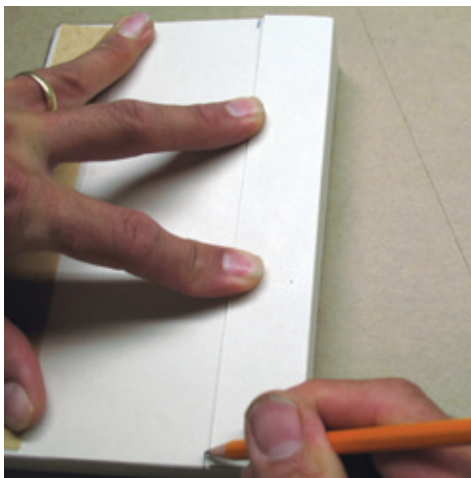
13. Remove the carrier from the double-sided tape you have just placed on piece 3, turn the Melinex across the spine, and secure to tape using bone folder.



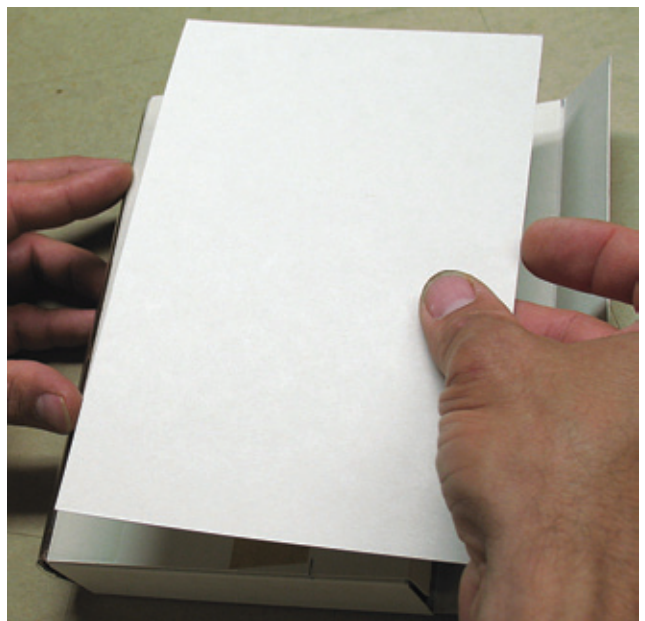
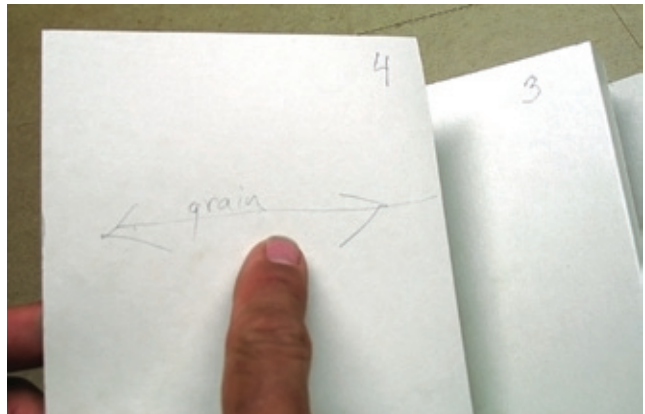
14. Trim off excess Melinex.



15. Turn the fore edge flap up and over piece 3, and pencil in where the edge of the flap stops. This will indicate the outer edge of the second piece of double-sided tape. Place the second piece of double sided tape at the pencil marking.

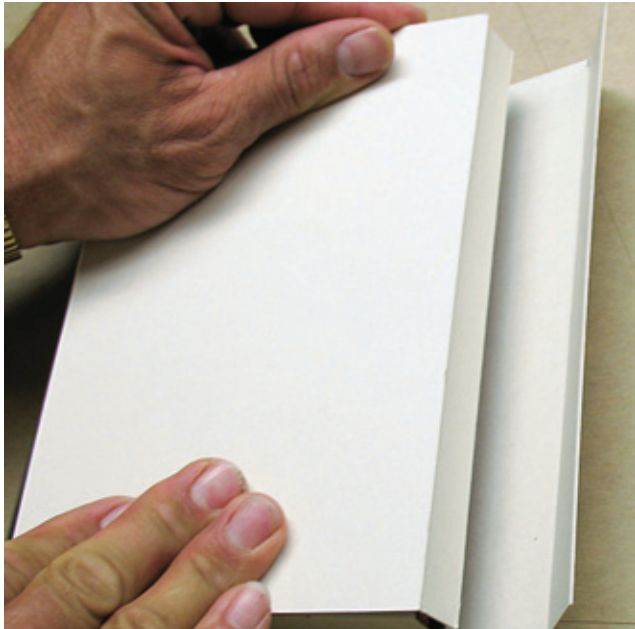
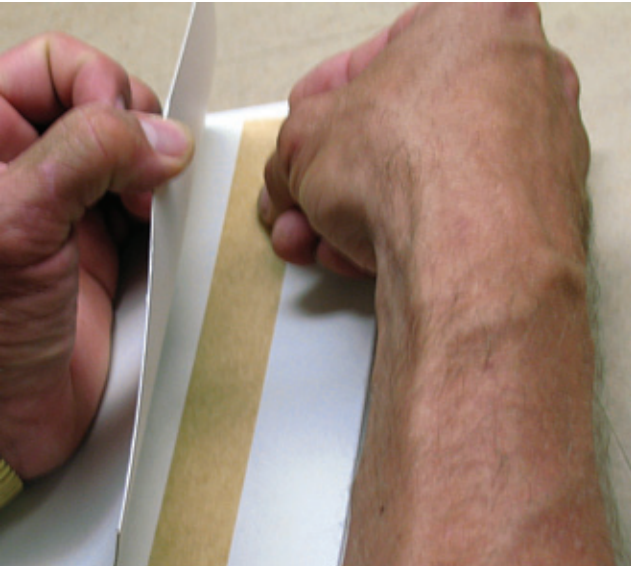


16. Double-check to be sure piece 4 was cut with the grain going along the width of the card stock. Remove the tape carrier from the first strip of tape laid down along the spine edge of piece 3. Position piece 4 squarely over piece 3 and secure.



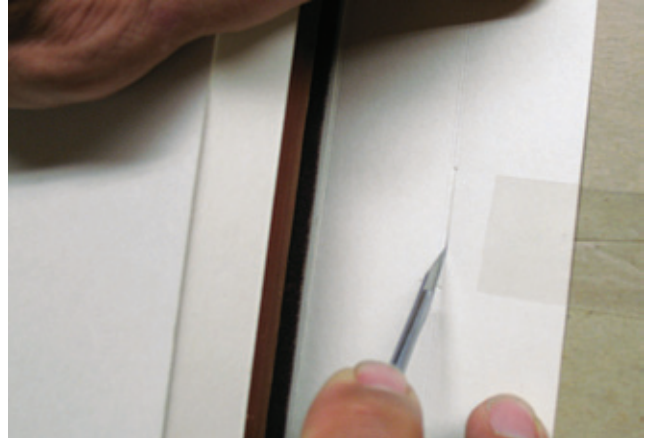
THE FOLGER PHASE BOX: A VISIBLE SPINE WRAPPER

17. Gently lift piece 4 at the fore edge, remove the second tape carrier and secure piece 4 over piece 3.

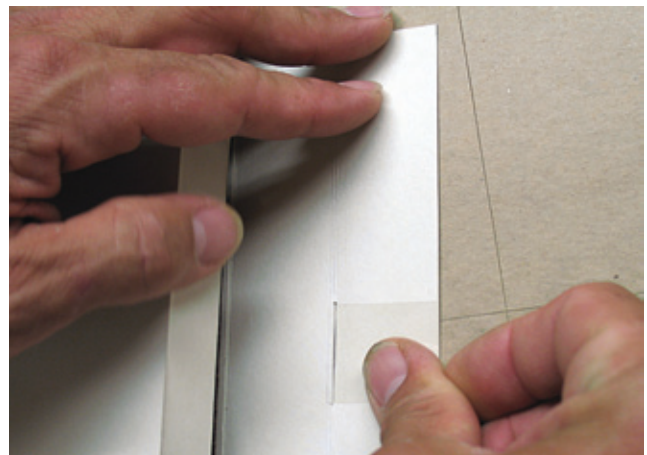
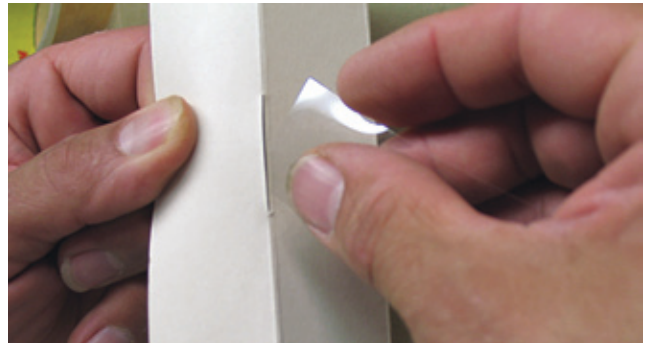


18. At this stage, an open edge will have been created. This will allow the folded flap of piece 2 to be wrapped around the fore edge of the box and tucked between pieces 3 and 4. All we need to do now is to cut a strip of Melinex or Tyvek to create a pull tab.

19. Having cut a strip for the tab approximately 1" wide x 3" long, use the edge of the strip as a template. Mark with the width of the tab slit with the point of the scalpel directly into the crease of the fore edge flap and cut a slit between the marks. Place a strip of double-sided tape between the slit and the edge of the flap.

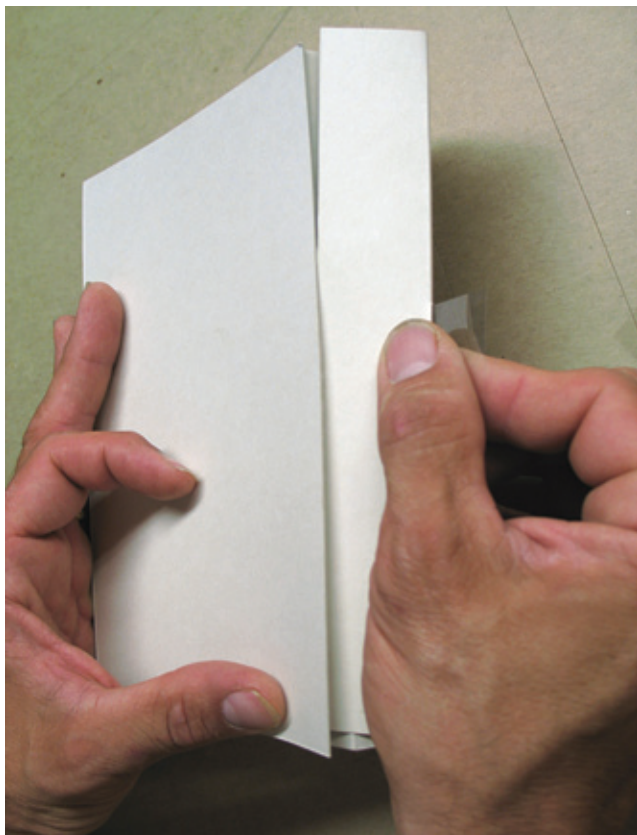


20. Feed the tab through the slit from the outside to the inside and crease it back toward the edge of the flap. Remove the carrier from the double-sided tape, secure the strip to the tape, and bone.



J. FRANKLIN MOWERY & SONJA JORDAN-MOWERY

21. Trim the tab length to approximately 1", leaving enough length for ease of grasping and pulling the tab.



22. Assembly of the Folger Phase Box (Visible Wrapper) is now complete and the enclosed book may be placed on the shelf.





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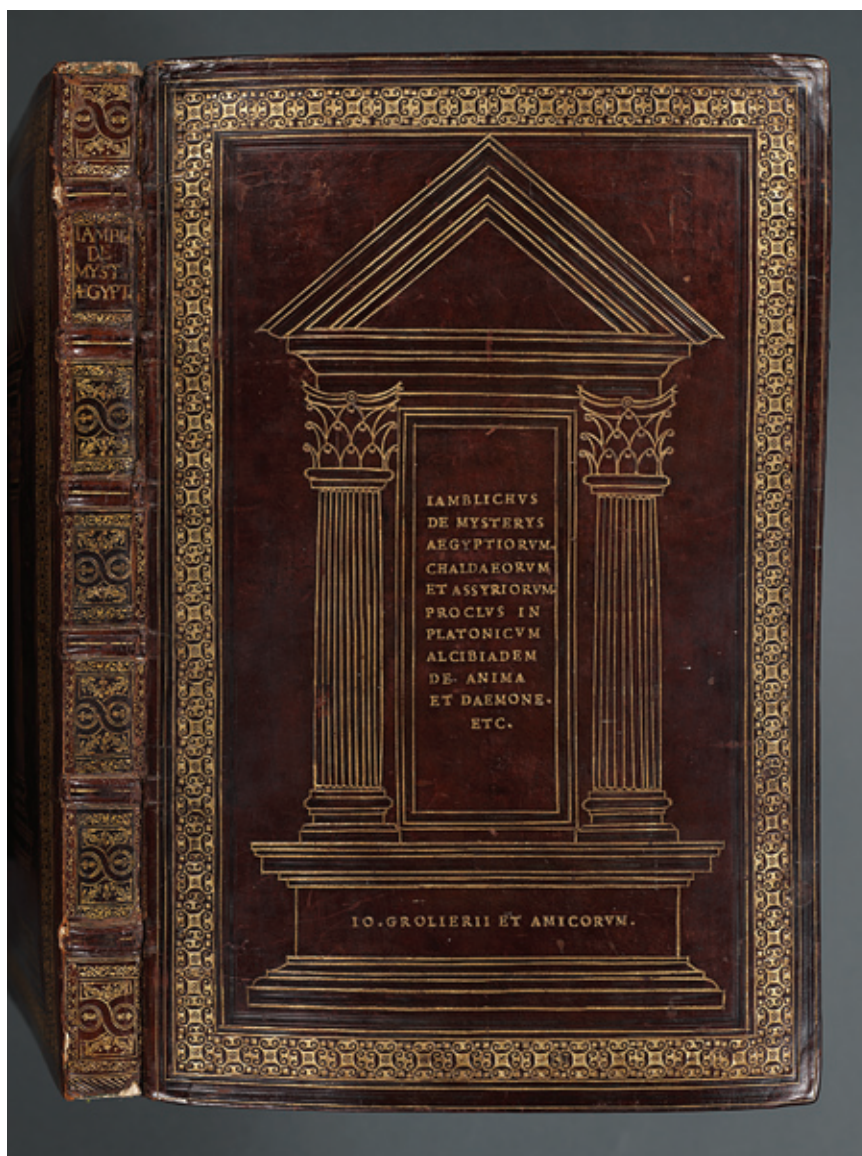
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Iamblichus, *De Mysteriis Aegyptiorum*. Venice: Aldus et Andreae Soceri, 1516 (Phoenix P017.6lt G89 1516l) 12¾ x 8½ inches.

A CURATOR'S THOUGHTS ON THE BOOK AS AN ARTIFACT

JANE RODGERS SIEGEL

WHEN PEOPLE ASK ME “WHAT IS A RARE BOOK?” MY REPLY IS THAT a book is in Columbia’s rare book library if it is interesting as an object in addition to being a carrier of text. Considering just printed books, we include books of the hand press period, say, anything before 1820, almost all letterpress-printed and handbound; modern firsts with dustjackets or inscriptions or a place in the history of a text we’re interested in tracking (Joyce’s *Ulysses* comes to mind); fine press and artists’ books and the like; unbound pamphlets, broadsides, portfolios and other formats too persnickety for the general stacks; and more.

Katherine Reagan (2009) has pointed out that in this world where digitized content (and other factors, including approval plans and pressured budgets) are homogenizing college and university libraries, administrations have learned to emphasize the unique aspects of their libraries’ collections. This is good for special collections but not necessarily so for rare books. Books, once the apple of the special collection’s eye (possibly because easier for us to manage), have lost pride of place to an increased emphasis on manuscripts and archives, more clearly “unique” and “special.” With that change of emphasis go resources such as acquisition funds and staff time.

But I believe G. Thomas Tanselle, who has spent a lifetime reminding us that every copy of every book ever printed is an historical document which needs to be preserved. To survive, individual libraries must limit our universe with our mission statements and collection development policies. At Columbia, for example, we place an emphasis on objects that support research and teaching.

The rare book community has long been trying to define the artifacts under our care as material culture requiring both physical preservation and scholarly interpretation as objects—from the early bibliographers, such as Fredson Bowers (1949), to the MLA’s “Statement on the Significance of Primary Records” (first published in 1995) to contemporary blog posts on the future of the physical book in the e-book era. We spend more and more time not just collecting and managing books but interpreting their stories and teaching others how to do so, with augmented cataloging including format and genre terms, exhibitions, classes, lectures, blogs, and articles like this one.

If we rare book folk play our cards right, and if the scholarly gods are with us (and certainly the emergence of “The History of the Book” as a



Jane Rodgers Siegel is the Rare Book Librarian at the Rare Book and Manuscript Library, Columbia University, where she has celebrated her Silver Jubilee year.

strong academic discipline has been quite gratifying), the increasing numbers of digitized books will only increase scholarly interest in the physical attributes of containers of those texts—bookbindings, paper, type, and design. In printed books, these attributes play out in a four-dimensional world attractive to anyone jaded by too much e-exposure (I say “*four dimensional*” to call attention to time—the lived process of paging through a book—as an important part of the experience). Because they are physical things, a variety of senses are critical in appreciation of book objects: sight, of course, but also touch and hearing—both especially useful in assessing paper, for example—and less often but sometimes critically, smell, particularly in diagnosing problems like mold. (On the other hand, as a rare book librarian, I really can’t recommend tasting books to anyone.)

Interpreting aspects of a particular copy—its production (binding, paper, typography, printing) as well as provenance (annotations, ownership, extra illustration, and uses unrelated to the text)—are primary sources for grander conclusions about printing, bookbinding, and paper history; about bibliography, reading, and reception; the book trade; and economic and social history on a broad scale.

Further, we’ve broadened our collecting interests. Rare book librarians have learned over the last fifty years to be interested not just in first editions and beautiful high points in printing history but in less exalted things such as pirated editions, homemade books, grotty pamphlets, and ephemera. We still wrestle with our inner book collector’s aesthetic—will this pristine copy provide information or inspiration that a beat-up copy won’t? Does an author’s signature on the title page in fact tell us anything useful about the history of the book? We are interested in books that show use (annotations, rebindings) and books that can be used (they used to call it “destructive bibliography” for a reason). Humble and grand, all help us gain our real goal of documenting human endeavor (in Mark Dimunation’s choice phrase).

If we rare book folk play our cards right, the increasing numbers of digitized books will only increase scholarly interest in the physical attributes of the containers of those texts.

But engaging with the object also means appreciating and appraising books based on their aesthetics. We are still interested in beautiful high points in printing history and amazing craft in typography and binding. I also have the pleasure of collecting modern book arts for Columbia, on a broad continuum from fine press to artists’ books. I’ve had art students looking at prints in books for inspiration, and art historians looking at books as art. I include artists’ books with other, subject-based class presentations precisely because book artists think so hard about using the physicality of the book to tell their story; the resulting object catches attention and can cause people to think about the book as a medium. And of course, I’d be happy to inspire students to start their own book collections.

Wonderfully, I get paid to collect and curate books for Columbia University. The items that follow are a few of my favorite objects, mostly printed books, which are nonetheless unique objects with interesting stories—or which ask interesting questions.

GROLIER BINDING

We start with a traditional treasure, shown on the first page of this article: a book owned by the early 16th century book collector Jean Grolier (1479–1565), who is famous for the bookbindings he commissioned and the motto “Io. Grolierii et Amicorum” (For Jean Grolier and his Friends) he had tooled on them. There has been a lot of scholarly interest in Grolier’s library and the bindings he commissioned, and as this is one of the less common architectural-style bindings, it has a particularly well documented existence. It is currently thought to have been bound between 1538 and 1547 by Jean Picard.

The book was bequeathed to Columbia by the book collector Stephen Whitney Phoenix (1839–1881). Phoenix’s own note in the book says he bought it for £43 at the sale in London, on July 25, 1862, of the library of Guglielmo Libri (1803–1867), the well known mathematician, bibliophile, and book thief. Libri popularized the collecting of Grolier bindings in England—and, unfortunately, was also known to have faked a number of them. I was quite reassured to find, therefore, that this particular binding is documented in the collection of Antoine-Augustin Renouard (1765–1853), the bibliographer of Aldus (the printer of the volume shown here) as far back as

1819, before Libri started his fakery. Later, I learned that it is also documented as one of eight Groliers in the library of Charles-Henry, comte de Hoym (1694–1736), and also probably belonged to J. J. Charron, the marquis de Menars (1644–1718); the latter attribution based on the non-Grolier spine decoration, which matches other volumes in the marquis's library.

Unfortunately, Renouard reported in 1834 that his book went missing sometime between 1824 and 1834. Could Libri have been involved with this disappearance? We may never know, though the volume did drop out of sight until its appearance in Libri's sale in 1849.

Although Libri sold the book in 1849, he purchased it back in 1862 in order to photograph it and include it in his *Monuments inédits ou peu connus*. "After making a facsimile for the *Inedited Monuments*, and having the binding properly repaired, it has been again immediately submitted for sale," he writes in his 1862 sale catalog description. It is this repair that seems to have been responsible for the bowing apparent in the boards, due to the endpapers having been glued down inappropriately. It also was apparently Libri's habit to remove evidences of earlier ownership, even on books he owned legitimately, so there are no traces of Renouard and the other earlier owners left in place, except de Menars's spine decoration. (For an interesting and balanced account of Libri's varied career, see Maccioni Ruiu and Mostert 1995.)

FRAME BINDING

This unusual binding came to my attention when a scholar studying another work by the same printer asked me what I could tell her of the binding. I admitted to being somewhat nonplussed: I've seen many quarter, half, even three-quarter bindings, but I'd never seen a leather frame surrounding a marbled panel like this. I have since found one other, on a book published in London in 1825. Our conservator, Alexis Hagadorn, found a similar binding on a nineteenth-century Indian book, and a post from Nicholas Pickwoad on the SHARP listserve on September 1, 2009, suggested the term "frame binding." I showed the book to the Dutch binding expert, Jan Storm van Leeuwen, as an oddity, and much to my surprise, he readily identified the bindery that made it, the Crevenna Bindery (fl. ca. 1784–ca. 1800; for more on this workshop see Storm van Leeuwen 2006, 709–716). The reason for the unusual style remains a



Giovanni Angelo Canini, *Images des Héros et des Grands Hommes de l'Antiquité*. Amsterdam: B. Picart & J. F. Bernard, 1731 (Rare Book B886 C15). 10 $\frac{7}{8}$ x 9 $\frac{1}{4}$ inches.

rather lovely mystery, although it does make economical use of small pieces of leather.

SYLVAN BEAUTY

I love this book. It looks at first like a good modern version of a fifteenth-century binding on a traditional fine press book, a series of pages of text about twenty-five trees, with illustrations of the wood of the trees. But looking closer we see that the trees are all from Gaylord Schanilec's farm; one of each was cut down and the wood of the tree (both a crosswise and a lengthwise sample) used to make the color illustrations in a reduction wood engraving process. There is a text about each tree variety surrounded by text about the process of making the text and the illustrations. The layers of text are paralleled by the layers of illustration and self-commentary, which stack up to a very modern, even postmodern, experience. And it's a beautiful, beautiful object. The quarter leather laced wooden board binding is made from quarter-sawn oak (the wood from one of the trees making up the project), carefully crafted into a perfectly seductive shape. I show it to classes in part for the sheer pleasure of holding it; and I usually insist on other people holding it too (see overleaf, bottom).



Ben Verhoeven & Gaylord Schanilec. *Sylvæ: Fifty Specimens Printed Directly from the Wood with Historical Anecdotes & Observations*. [Stockholm, Wis.]: Midnight Paper Sales, [2008] (Book Arts Z232 M58 2008 V58). 15 $\frac{1}{8}$ x 10 $\frac{1}{2}$ inches.



G.D., *Directions for Writing*. London, Printed for J. Stafford, 1656 (Plimpton 092 1656 D11). 4 $\frac{1}{4}$ x 6 $\frac{3}{4}$ inches.

WELL USED BOOK I

Published, the title page tells us, “for the benefit of poore [that is, impecunious] schollers,” the woodcut illustrations, poor paper, and small size of the work make for an affordable introduction to handwriting for would-be clerks. It is an extremely humble book, which has clearly been very well used. There are ink stains and pen trials throughout which suggest that it functioned properly and often as a penmanship manual, although these “imperfections” were cleaned up when W. Lewis at the Cambridge University Press published a facsimile edition based on this copy in 1933. My pleasure, and the interest of the object, is enhanced by the fact that it hasn’t been bound; it remains a simple stitched pamphlet as it was issued.

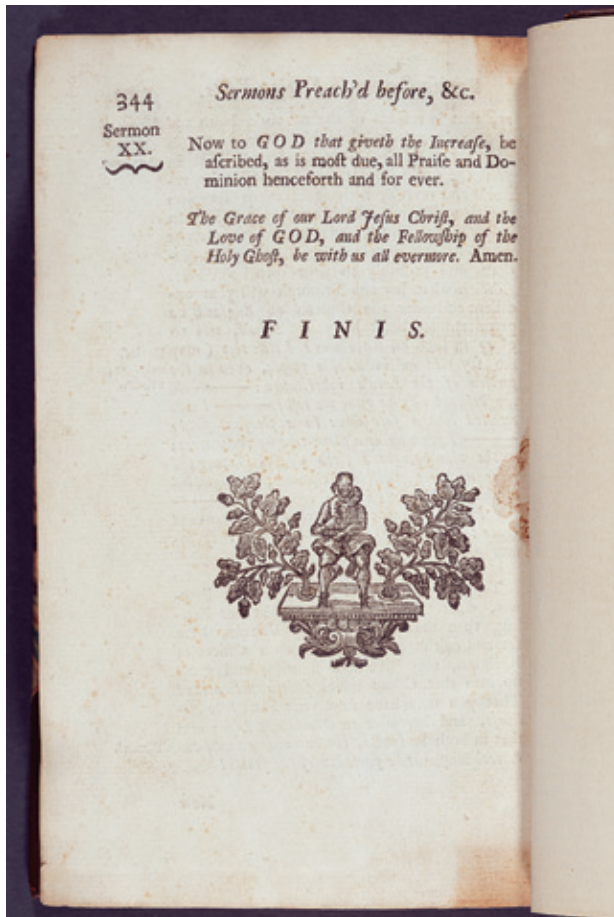


[Derashot] [Hebrew manuscript on paper, 256 leaves, 17th century] (X893 D448). 12 $\frac{3}{4}$ x 8 $\frac{3}{4}$ inches.

WELL USED BOOK II

This is another book that shows loving use, a bound manuscript of the seventeenth century, which was, unfortunately, extensively damaged. What fascinates about this, though, is that the current binding, which was obviously made to fit the damaged book—the oblique part of the covers have turn-ins to match the rest—is itself quite worn. As part of the text is missing, the continued use of the book suggests that the text exerted a more than ordinary appeal. Yoram Bitton, who cataloged our Hebrew manuscripts, told me that this is the author’s manuscript, and the text is not otherwise known. Clearly, this commentary on the Torah was frequently consulted, even in its imperfect condition.

NAUGHTY WOODBLOCK



Basil Kennett, *Twenty Sermons Preached on Several Occasions to a Society of British Merchants in Foreign Parts*. The third edition. London: Printed for D. Browne without Temple-Bar, C. Davis in Holborn, Sam. Baker in Russel-street near Covent Garden, J. Whiston at Mr. Boyle's-Head, and L. Davis at Lord Bacon's Head, both in Fleet-street, 1749 (University Archives CN9 K39). 8 x 5 inches.

I'm very interested in what went on in printing shops. We have mostly anecdotal evidence of the relations between the commissioner of a text and the printer, and it's clearly a relation that differs in different places and times, and under different types of publishing. How much input into design does the commissioner have vis-à-vis the printer; and how much control does the actual compositor have? Here we have what seems to be a run-of-the-mill collection of sermons, popular enough to have reached a third edition, but the costs and risks of publication were shared by a small consortium of publisher-booksellers.

I came across the volume during a recataloging project, getting the remnants of Columbia's earliest library collection (what wasn't dispersed during the British invasion of 1776) into the online catalog. Why

did I take a closer look at that ending vignette while I was handling this volume? I was a little surprised—and amused—when I did. I don't want to know what exactly is going on there, but do you think this naughty image was chosen by the Reverend Kennett or by some beer-soaked London journeyman who had composed his way through to the end of a 350-page collection of sermons? And to think that this book was given to King's College, as Columbia was known then, by the Society for the Propagation of the Gospel in Foreign Parts.

A DO-IT-YOURSELF BOOK



Breviary. Paris: Bertholdus Remboldt, 1512. [Printed book with manuscript sections added] (X096.C286). 7¼ x 5 inches.

I had out a book with leather tabs on the fore edge, which an early owner had used to mark the beginnings of each of the various texts making up the volume, and showed it to my colleague, Consuelo Dutschke, our Curator of Medieval and Renaissance Manuscripts. She duly admired those tabs but said I should take a look at the volume pictured here. And indeed, these woven leather buttons on the fore edge are even cooler than the other volume's flat tabs. The book's makeup is also more interesting. It looks like a Frankenstein book because the sixteenth-century owner gathered together various bits of printed and manuscript texts, the latter both in formal book hands and something a little less professional. It seems rather random, but it's not: together all these bits add up to a usable Franciscan breviary, a book in fact created by its owner as a do-it-yourself project.

AN UNINTENTIONAL ARTIST



Nicholas Cirier. *L'Apprentif administrateur, pamphlet pittoresque(!), littéraire-typographique-bureaucratique, pouvant intéresser toute personne employée, employable, ex-employée par quelqu'un de cette dernière catégorie*. Paris: Chez l'Auteur, 1840 (Typographic LL-6-48). 9 x 6 inches.

A year or two ago I noticed in the American Type Founders Library (acquired by Columbia in the 1940s) two volumes produced by a gentleman named Nicholas Cirier. He went to work as a proofreader for the Imprimerie Royale in 1828 but, twice passed over for promotion, he quit in 1836 and in 1839 published his satire *L'Oeil Typographique*. In 1840 Cirier published this more elaborate work, *L'Administrateur Apprentif*, a series of harangues in which he airs his grievances and makes accusations of incompetence at the men he held responsible for them at the Imprimerie Royale. He used a variety of technical means: typography, lithography, woodcuts, and handwork. He added to the pages of the book as he thought of more and better complaints, pasting slips in and over the main text, employing colored papers and hand coloring. This *tour de force* was published in an edition of 100 copies. From the first it has struck me as a kind of involuntary artist's book, in which the structure, with its additions and paste-ons, models the author's increasing obsession with his topic as he turns his grievances over in his mind.

EXTRA-EXTRA-ILLUSTRATED I



Alice Williams, *The Children*. Boston: Samuel E. Cassino, 1886 (Book Arts NC239 H76 1886 C43). 8 x 6 inches.

The Children, a compilation by Alice L. Williams of poetry on the subject of children, was published in 1886 without illustrations. The illustration shown here was added by Irene Jerome (1858–1945), an illustrator and painter. In fact, she extra-illustrated just about every page of the book and added a hand-sewn binding. Jerome has added illustrations in black and white, in color, in gold, and with photographs (but I think not family photographs), and has made this book into a very personal document, a gift for a beloved sister and her adored nieces and nephews.

EXTRA-EXTRA-ILLUSTRATED II



John Masefield, *Reynard the Fox, or, The Ghost Heath Run*. London: W. Heinemann, 1919 (Rare Book B825M377 V534 1919 c.2). 9½ x 6 inches.

John Masefield was poor when he married Constance de la Cherois-Crommelin in 1903, and it was around

the time *Reynard* was published, 1919, that he finally was becoming financially secure. The book, a long poem celebrating the fox hunt, was issued in a special limited edition (250 copies for sale and 25 copies for presentation), of which this is no. 1, but I love the fact that its being the first copy wasn't enough for Masefield. Although the text of the book is his, he decided to personalize this copy as a special present for his wife. Every page of the book, from pastedown to pastedown, is hand-decorated by Masefield himself with scenes from his text.

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Tablet YBC 7169, inscribed with lines 102 through 153 of a poetic work by Enheduanna. Reproduced with permission of the Yale Babylonian Collection. Photo by Elizabeth Payne.

THE FIRST AUTHOR

BENJAMIN R. FOSTER

COMPOSITIONS IN THE SUMERIAN LANGUAGE OF ANCIENT MESOPOTAMIA stand at the beginning of world literature. Hymns of praise, proverbial wisdom, and poetic narratives copied out on clay tablets in cuneiform (“wedge-shaped”) writing four and a half millennia ago bear witness to a rich and sophisticated tradition in prose and verse that was preserved in the earliest book format.

The Babylonian Collection at Yale University houses the largest assemblage of cuneiform inscriptions in the United States, and one of the five largest in the world. The bulk of the inscriptions consist of clay tablets in all sizes and shapes. There are also a number of inscribed monuments on stone and other materials, some of considerable artistic interest, including a large collection of stamp and cylinder seals. In addition, the Collection maintains a complete library in the fields of Assyriology (the study of ancient Mesopotamia), Hittitology (ancient Anatolia, roughly equivalent to modern Turkey), and Near Eastern archaeology.

The education of scribes in ancient Mesopotamia included preparation of cuneiform tablets such as those in the Babylonian Collection. (Though there is some small evidence that women were scribes, all compositions about Sumerian schools involve only men, so we generally speak in terms of “he” when talking about scribes.) Fine clay was collected and saved in a large vat. When a scribe made a tablet, he laid out a thin slab of moist clay, then folded it in thirds, right and left thirds over the middle. Next he smoothed off the edges so the seams were no longer visible. Writing was done with a stylus, often made of reed but sometimes of wood or metal.

There were many conventions of writing; for example, there always had to be signs at the beginning and end of each line. Sometimes tablets have a colophon that may include the line count, the name of the scribe who made the copy, comments about its preparation, and pleas not to make off with it.

Since Sumerian works were normally referred to by their opening words, no indication of their authorship remains. One group of poetic compositions, however, represented here by tablet YBC 7169, is a striking exception to this pattern. These are works ascribed in antiquity and today to a woman, Enheduanna. An identifiable historical personality of the twenty-third century BCE, she actually named herself in the text, and by this evidence may be deemed the first author in history to whom specific, surviving works can be ascribed. This manuscript preserves lines 102 through 153, the end of the poem.



*Benjamin R. Foster is Laffan Professor of Assyriology and Babylonian Literature and curator of the Yale Babylonian Collection. His research interests focus on two main areas: Mesopotamian, especially Akkadian, literature and the social and economic history of Mesopotamia. In the area of Akkadian literature his publications include *Before the Muses* (1993, 1996, 2005), an anthology of annotated translations from Akkadian poetry and prose of all periods. He translated the Akkadian Epic of Gilgamesh for the Norton Critical Editions series (2001) and is author of *Akkadian Literature of the Late Period* (2007) as well twenty-five or more studies on various aspects of Akkadian literature.*

To judge from its writing, this particular tablet, YBC 7169, was made by a fully trained, expert scribe, probably near the end of his study of Sumerian literature. Based on the form of the writing and the modernized grammar and spelling of the text, it may be dated to the 18th century BCE, long after the death of Enheduanna. It may have been copied from another tablet or taken down from dictation. Tablets were retained in private collections at home, and it was the custom for each succeeding generation in an educated family to copy the family tablets in order to show their mastery of the scribal art.

Some families owned very large collections of literary and scholarly works. Palaces and temples sometimes built up libraries, of which the most renowned is that of Assurbanipal, king of Assyria, formed in the seventh century BCE, though many others are known. YBC 7169 was purchased from an Iraqi antiquities dealer some time in the early twentieth century, so we do not know where it was found, and thus cannot surmise where it might have been made or originally have been held.

ENHEDUANNA WAS DAUGHTER of a king, sister to two more, aunt and great aunt to yet another two. Her long career spanned a period that saw the formation of the first great empire of antiquity. It was a time of radical social change, enormous prosperity, exceptional violence and cruelty, expanded horizons, and artistic, intellectual, and conceptual innovation, presided over by a royal family whose names were to remain legendary in Mesopotamian historical consciousness for two thousand years. Proud, highly educated, strikingly original in her thought and expression, Enheduanna grew up in the tumultuous formative years of this great human enterprise, known as the Sargonic Empire after her father, its founding ruler, Sargon of Akkad.

Enheduanna witnessed her father's and brothers' conquests and their efforts to transform Mesopotamian society. She saw, with anger, her father's conquests challenged by his restive subjects, especially in Sumer, and was to learn of both her brothers' deaths

She belonged to a generation that considered Sumerian the standard medium for formal expression and the language of the gods.

in court conspiracies. While new styles of sculpture, clothing, adornment were familiar to her, and though her mother tongue was Akkadian, a Semitic language related to Arabic and Hebrew, as a member of the ruling elite she had mastered the idiom of Old Sumerian culture and belonged to a generation that considered Sumerian the standard medium for formal expression and the language of the gods. King Sargon appointed her high priestess of the moon-god, Nanna-Suen, at his great Sumerian sanctuary at Ur. Nanna-Suen was one of the eight leading deities in the Mesopotamian pantheon of this period. As high priestess of the god, Enheduanna lived in a special compound within the temple complex.



Limestone disk of Enheduanna. She is the second figure from the left. Courtesy of the Penn Museum, image #150424.

Further, Enheduanna is the only royal woman identifiable by name in third-millennium Mesopotamian art. A badly damaged plaque found at Ur shows her clad in the elaborate garb of a priestess in the course of making an offering to her god. Her face, stance, and physical presence suggest a woman of dignity, presence, confidence, and strength of character, used to authority and presiding over ceremonies, and these traits emerge in her writings as well.

THE MOST FAMOUS OF ENHEDUANNA'S WORKS is a poem in praise of Inanna, goddess of procreation,

fertility, and warfare, and a patron deity of her dynasty. Noteworthy for its difficult language and unusual expressions, it is set in a moment of crisis in Enheduanna's life, when rebellions had broken out against her family's rule, including one at Ur in which Enheduanna herself felt threatened:

*Yes, I took up my place in the sanctuary dwelling,
I was the high priestess, I, Enheduanna.
Though I bore the offering basket, though I chanted
the hymns,
A death offering was ready, was I no longer living?
If daylight approached, it lit up something vile beside
me,
If shade approached, it shrouded me in swirling dust.
A slobbered hand was laid across my honeyed
mouth,
What was fairest in my nature was turned to dirt.*

She prayed to the Moon-god, whom she had served for her entire adult life, but he did nothing to help her:

*Am I to die for my sacral song?
Me? My moonlight has no care for me!
He lets me perish in this place of hopes deceived.
He, the silver nighttime orb, has spoken no judgment
for me.
If he spoke it, what then? If he spoke it not, what
then?*

Then she prayed to Inanna:

*My lady! This country will bow down again at your
battle cry!
When the trembling human race has found its right-
ful place before you,
Midst your awe-inspiring, overwhelming splendor,
—For of all the cosmic powers you hold those most
terrible,
And at your behest the storage house of tears is
opened wide—
They will have walked the pathway to the house of
deepest mourning,
Defeated, ere the battle had begun.*

In her time of trial, Enheduanna was horrified to discover that her powers of creativity had forsaken her and she was no longer able to express herself as

she knew she could. But, with the goddess's intervention on her behalf, her fortunes were restored and, once again, she felt a poem stirring deep inside her, like a child in her womb. In a deeply private struggle, she gives agonized birth to her poem, then sees her creation as something public, no longer hers alone.

*This fills me, this overflows from me, Exalted Lady,
as I give birth for you!
What I confided to you in the dark of night, a singer
shall perform for you in the bright of day!*

The poem then changes to the third person, depicting Enheduanna as redeemed:

Inanna's sublime will was for her restoration.

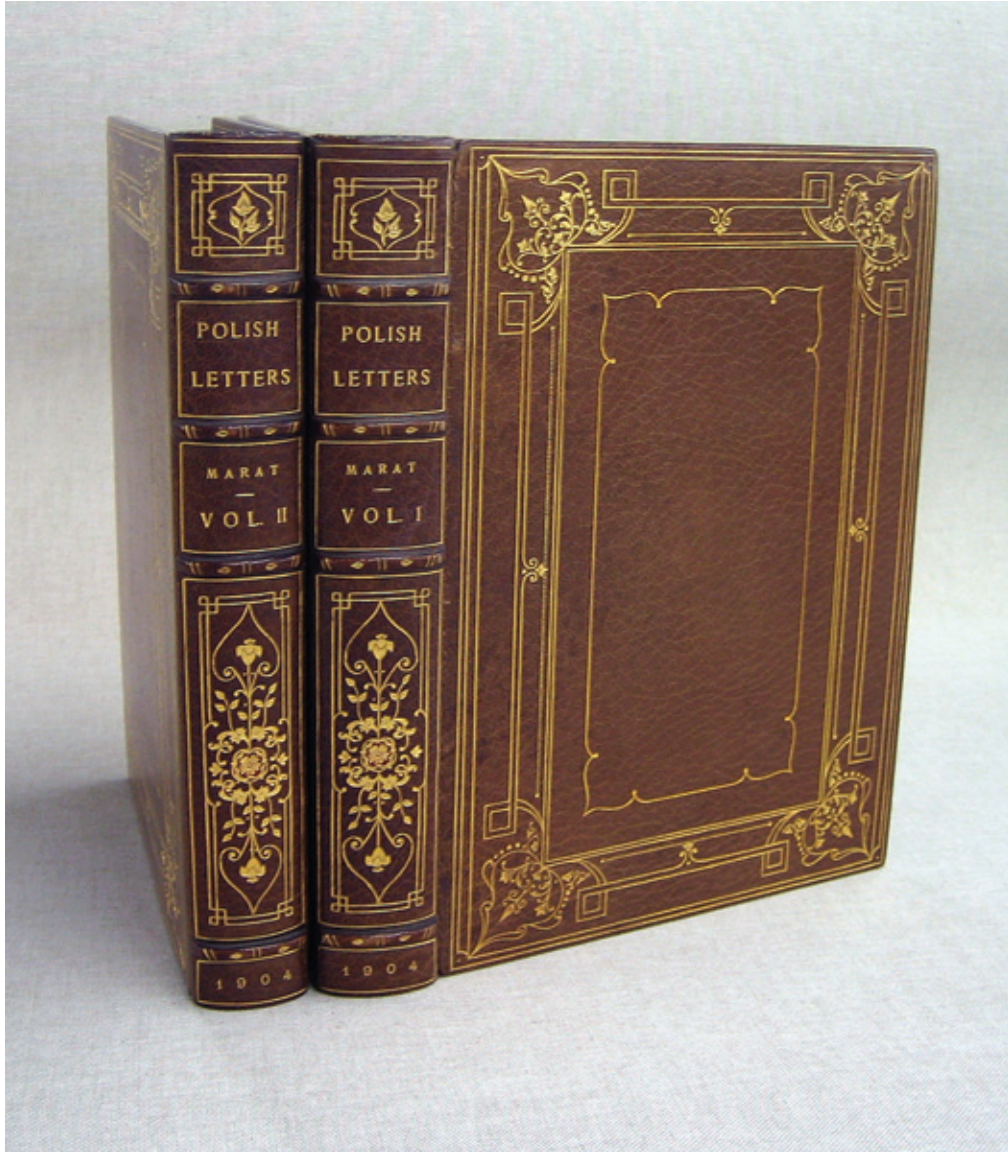
*It was a sweet moment for her, she was arrayed in
her finest, she was beautiful beyond compare,
She was lovely as a moonbeam streaming down.*

SUGGESTIONS FOR FURTHER READING

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Jean Paul Marat, *Polish Letters*. Boston: Bibliophile Society, 1904. Bound at The Harcourt Bindery.

THE HARCOURT BINDERY

EARLY LEATHER BINDINGS, 1900–1910

SAM ELLENPORT

FROM THE EARLIEST DAYS OF THE HARCOURT BINDERY, BINDER, publisher, and bookseller worked together very closely. This relationship seems a logical one. A successful bookseller or publisher, especially when the one serves also as the other, can profit by having an in-house binding operation, since this can ensure better control of on-time delivery and better oversight of design and decoration. It would seem that there are also financial advantages for many booksellers and publishers to have their own binderies. Historically, however, logical as it seems, this advantage has proved to be elusive and its successes short-lived. The Harcourt Bindery of Boston, founded in 1900, was just such a case in point.

From its beginnings the Harcourt Bindery specialized in producing fine leather bindings by hand, and it has continued to do so into the twenty-first century. The initial owner was an established bookseller in Boston, Frederick J. Quimby.¹ He and Harry L. Chatman were listed in the *Boston Directory* of 1900 as doing business under the name of Frederick J. Quimby and Company, “Publishers and Importers, Rare Books and Fine Bindings.” Later that year, a partnership was formed under the name of Huegle, Quimby & Co. The bookbinding firm worked from premises at 17 Harcourt Street, southwest of Copley Square. The bookbinder in the firm was Leopold A. Huegle, whose son, John, was also involved with the enterprise. In 1902 the *Boston Directory* had an advertisement for the firm in which the phrase “Proprietors Harcourt Bindery” was added.

Leopold Huegle and John both died in 1906 and thus were spared when Quimby became embroiled in one of the many “deluxe edition” scandals of the time. These were schemes whereby wealthy widows were particularly targeted and encouraged to pay enormous sums for “limited edition” sets of the classics, extravagantly bound and illustrated but hardly worth the tens of thousands of dollars paid for them. One of the editions was a fifty-volume set of the works of French author Paul de Kock, in full leather with silk flyleaves and leather doublures, bound by Harcourt Bindery. The quality of the workmanship was undoubtedly up to the standards of the day. However, Quimby’s marketing methods were at best questionable—and the courts agreed. Few volumes ever reached the hands of the purchasers (Wright 1975–1976).

Quimby’s idea of creating a bindery, giving it work, and sharing in the profits was briefly successful. However, in addition to the “deluxe edition” scandal, Quimby and his firm were pressured by the severe economic depression of 1907–8. In 1909 Quimby moved from Boston to Long Island,



Sam Ellenport, owner of the independent Harcourt Bindery from 1971 until 2007, trained as an historian and began bookbinding in the 1960s. He has taught, lectured, and written about the craft in the US and the UK. His work has ranged from exhibition bindings to booklets for his granddaughters.

where he promoted the Tangiers Manors Corporation, a land development scheme on the Fort George estate at Mastic, which proved to be unsuccessful (see <http://www.spoonercentral.com/2005/Tangier.html> for a colorful recounting of this story, accompanied by scans of numerous contemporary news clippings and advertisements). By 1910 Quimby's name had disappeared from the *Boston Directory*, though the name "Harcourt Bindery" continued.

Fortunately for the firm, its immediate future was assured when the bindery was purchased by Oakes and William H. Ames of North Easton, along with Gilmer Clapp of Waltham, who incorporated it in 1911. They were not bookbinders or booksellers. They were wealthy businessmen who were also patrons of the arts, supporting a craft in the best tradition of the day. Their efforts and the impulse behind them can be compared to those of Robert Hoe, who earlier had established the Club Bindery with its New York Grolier Club connections, or to those of Judge Vickery, who brought that bindery to Cleveland, where it became associated with The Rowfant Club.

The Harcourt Bindery's initial practice of combining bookbinding with bookselling was reinstated through Thomas Best, a Boston publisher and bookseller who became the new owner when he bought the bindery in the 1920s. Best's business as a bookseller dealt with handmade leather bindings as well as rare books. The business model of binding for one's own stock became even more appealing after the Great War. Heading into the 1920s, there was somewhat less competition among American hand binderies when several competing bookbinding firms in the US closed their doors. The better book dealers continued to rely on European, especially British, bookbinderies for their supply. Yet while the quality of foreign binders was superb and pricing comparable to American binders, booksellers faced long delays in getting books from abroad. Best tried to manage both binding and selling. His tactic of combining in-house binding with bookselling worked well through the prosperous 1920s, but his efforts succumbed to the Great Depression and he was forced to

**By 1910
Quimby's name
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continued.**

sell the bindery. He sold it in 1931 to two employees of the company: Walter Johnson, the head finisher of the firm, and Frederick Young, a forwarder who had been employed in the shop since 1918.



Harcourt Bindery staff in 1907

A PHOTOGRAPH TAKEN IN 1907 shows a thirteen-member staff. (There are no pictures of the women sewers who added to the number of employees). To maintain such a staff, an impressive amount of work must have been produced. Frederick Young, who sold the bindery in 1971, mentioned that there were approximately fifteen staff members when he joined the firm in 1918, at the end of World War I. This seems a proper number given the quantity of books that were produced, and lets us estimate the amount of books produced by the staff in 1907 as well as in 1918.

For example, a file of rubbings made of full leather bindings show the work completed between March and July of 1915. Listed are fifty-four multivolume sets, including several where the number of volumes is known, e.g., *Motley* (nine or nineteen volumes), *Oriental Papers* (ten volumes), and other authors including Dickens, Shakespeare, Turgenev, Sterne, Defoe, Smollett, Scott, Twain, Hugo, Shaw, Stevenson, and Fielding. If an average set has ten volumes, there would have been 540 full bindings produced in

THE HARCOURT BINDERY: EARLY LEATHER BINDINGS

five months, or between twenty-five and thirty full leather, decorated bindings each week. There would have been any number of quarter and half leather bindings as well.

Given the layout of the bindery, which, according to Mr. Young, had not changed from at least 1918 to 1986, there were four or five finishers at work. (The shop's equipment included three finishing stoves plus a separate area for three Imperial Arming Presses used in die stamping.) It is probable that an equal number of forwarders would have been at work, plus several sewers, a gilder, and some general staff. Harcourt currently employs two finishers, three forwarders, two sewers, and one foreman who also does bench work. The firm is the largest for-profit hand bookbindery in the US. In 2007 it was sold to Acme Bookbinding Company of Charlestown, Ma, but it continues to be run as a distinct division within the larger firm.



Harcourt Bindery premises, 1976



Harcourt Bindery interior, 1976



The office at Harcourt Bindery, 1976



The author at an Arming Press, 1979

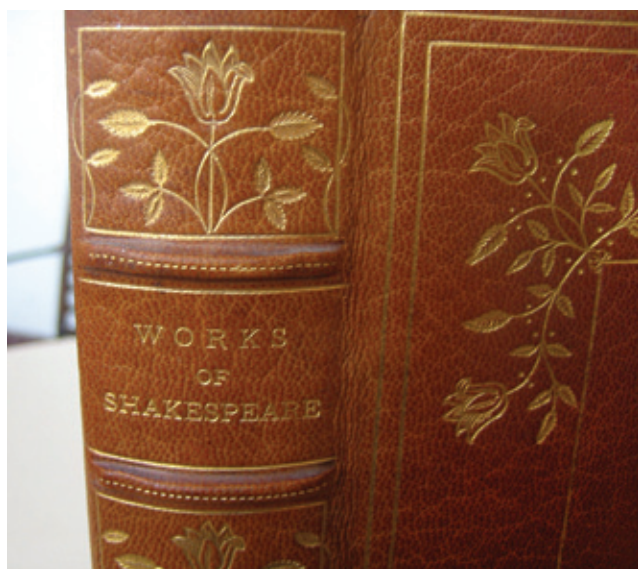
FROM ITS BEGINNINGS the Harcourt Bindery competed at a very high level of the bookbinding craft. The earliest clients included Dana Estes, a Boston publisher who had been a partner since 1872 with Charles Lauriat. Before the firm was dissolved in 1898, they enjoyed a dynamic and successful partnership as both booksellers and publishers (Kilgour et al 1957). The same year, Estes started a new firm bearing his

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name, Dana Estes and Company, which was, like the former partnership, both a bookseller and a publisher. Estes & Co. was one of the first clients of the nascent Harcourt Bindery: in 1900 Estes commissioned a twenty-volume set of Shakespeare to be bound in three-quarter navy morocco with marbled boards.

Estes had a penchant for publishing authors' works in sets. His aim was to generate sales for the tastes and pocketbooks of the full spectrum of the buying public. To this end, he cut costs by routinely using the same type and plates for different editions, simply changing paper quality, page size or margins, binding styles, and artwork, perhaps adding a photogravure frontis. Through the early years of the 1900s, Estes published several editions of Shakespeare, including the Harcourt Edition and the Cambridge Edition.

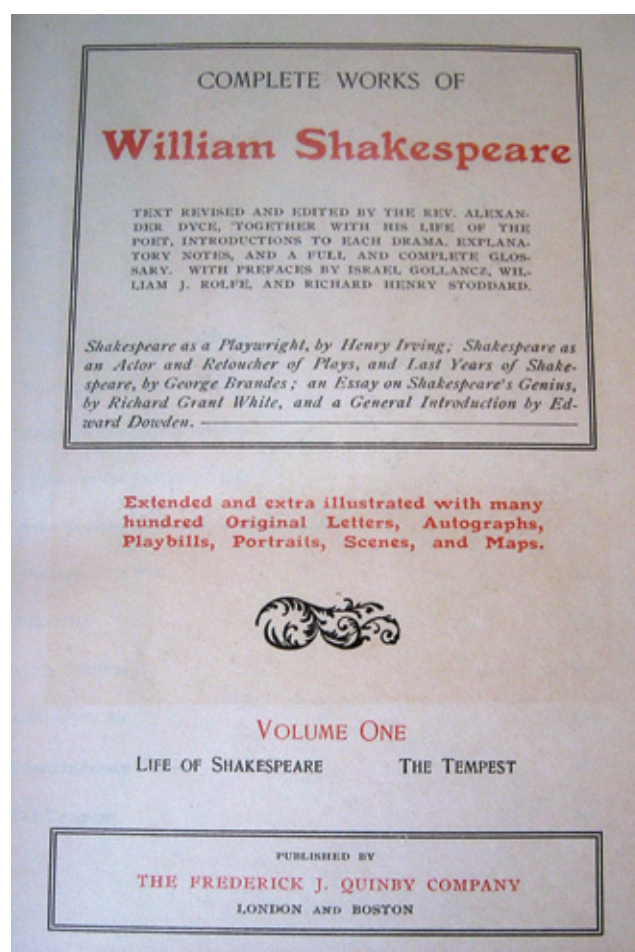
An unsigned edition, probably bound shortly after it was printed, was sold through the firm of Dana Estes and Company just after the turn of the century. The tooling is neat and crisp, and the leather is of good enough quality to have lasted over one hundred years. The marbled paper on the boards, a German lithographed paper in a Spanish Drag pattern, was very popular from the late nineteenth century into the 1920s. While the bindings do not bear the Harcourt Bindery name, there are several reasons to conclude that they were bound by Harcourt. There is the evidence of the typeface, a Bell type that Harcourt still possesses (and uses) in its finishing area, and which



William Shakespeare, *The Tempest*. Boston: The Frederick J. Quinby Company, n.d. Volume one of an edition of Shakespeare bound in full morocco with leather doublures. Detail of tooling on front cover and spine. (Images provided by a private collector.)

seems to have been the house face from the company's earliest days. The marbled paper also provides evidence: Harcourt's inventory still includes marbled, lithographed, and other decorative papers, many of which date to the turn of the twentieth century. These older papers include sheets of the same blue lithograph paper with its Spanish Drag pattern used on this Shakespeare set. Additionally, the headbands are sewn by hand, a common practice at the Harcourt Bindery, and which I have seen on every Harcourt book from this period. Only later did the company switch to a machine-made headband. Such evidence may be somewhat circumstantial, yet it seems overwhelming.

Another edition of Shakespeare, this one produced by Quimby (whose name appears here in its alternate spelling, "Quinby"), was bound in full morocco. The title page attests to a London office as well as one in Boston. While the design of the title page was relatively straight forward, the bindings were elaborate. The volumes had full leather doublures and the name



Title page of Quinby [Quimby] Shakespeare

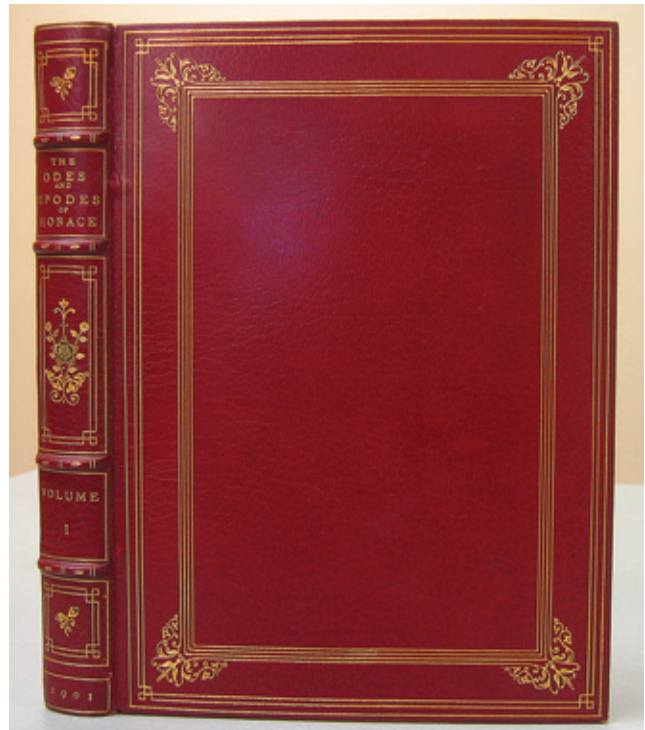
of the bindery was stamped in the center, near the bottom of the inside cover, as was typical in the early years of the shop. However, it was unusual for the Harcourt Bindery to sign the majority of its bindings, apparently because so many were bound for booksellers who wanted their own name in the books. Leather bindings for private clients were often signed with the Harcourt Bindery name but booksellers such as Lauriat and Co., Scribner's, Marshall Fields of Chicago, Putnam's, Brentano's, and Inman of New York insisted that their name be put into commissioned bindings. The bindery's tool collection still contains many of these company names.

WHILE THE FIRM'S WRITTEN RECORDS and rubbings are nonexistent until the second decade of the twentieth century, it is clear from other evidence that several well established publishing firms and booksellers used Harcourt Bindery, as did private clients. In the Harcourt archives there are rubbings of bindings that were executed as early as the 1910s. Many of these are for repeat clients, and it is logical that several of these clients had a relationship with Harcourt Bindery before 1910.

Between 1901 and 1904 the Bibliophile Society of Boston produced a handsome set, *The Odes and Epodes of Horace*, published for Society members only. There were 467 sets produced and each set comprised eight volumes published in ten.² The Latin text was edited by Clement Lawrence Smith, a Harvard professor of Latin, with an introduction by Bishop Ireland and a lovely title page engraved by the renowned artist



The Odes and Epodes of Horace. Boston: Bibliophile Society, 1901. Engraved by M. Pyle. Bound in full morocco.



The Odes and Epodes of Horace, spine onlays and detail of gold on front cover.



Decorated flat endcap and lines on board edges of *The Odes and Epodes of Horace*.



Harcourt Bindery name stamped on the doublure of *The Odes and Epodes of Horace*.

M. Pyle. The books were handsomely letterpress-printed with wide margins by Houghton Mifflin and Company at the Riverside Press in nearby Cambridge. Attention was paid to the smallest detail, as even the paper was watermarked with the name BIBLIOPHILE SOCIETY running vertically on the fore edge of each page. The printer kept the deckle on the fore edge of the books as well as at the tail, with the binder cutting only the top edge for gilding. The beautiful and impressive publication of these books reflects a statement Bishop Ireland wrote in the Preface: "No writer of antiquity has taken a stronger hold upon the modern mind than Horace."

While the entire edition was published in cloth, the set shown here (#252) was produced at Harcourt in full morocco for a client as a commission. The books were bound uniformly in rich crimson leather with onlays, and are now in the Special Collections Division of University of Miami's Richter Library in Coral Gables, Florida. The decorative style of flat endcaps seen on this set was used consistently at Harcourt Bindery, as was the style of decorating the edges of the covers, which were rolled with a fine single or double line. This required a steady hand and great skill, unlike the hatched designs cut into rolls wider than the board thickness, which were common on more pedestrian bindings. Decoration of endcaps and lines on the board edges continued as a standard practice on almost all Harcourt full leather bindings produced through the late 1970s.

(It is worth noting that leather bindings from the beginning of the twentieth century show that the work done at Harcourt Bindery was technically of very high quality. However, as with most of the larger hand binderies specializing in leatherwork at this time, design was somewhat staid and predictable.)

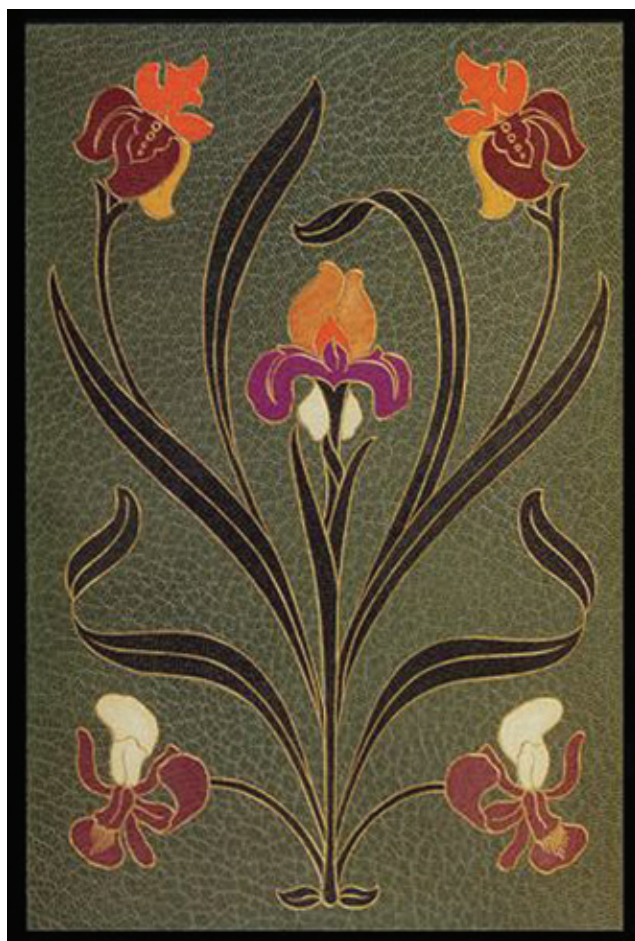
An equally ambitious project was one mentioned earlier: the multiple editions of *The Works of Paul de Kock*, published by Frederick J. Quimby and Company. The publishing history of this set is quite complex and mirrors the type of publishing efforts made earlier by Lauriat and Estes, where a popular author would be chosen and many editions of the same text would be packaged in different ways to appeal to the many tastes of different clients.

By 1902 Quimby was ready to begin publishing several editions of *The Works of Paul de Kock*, and announced six different editions as forthcoming

(Collins n.d.):

King Rene Edition (only one set), \$150,000;
Bibliomaniac Edition (10 sets printed on vellum),
\$50,000 per set;
Romainville Edition (25 sets), \$11,250 per set;
Passy Edition (50 sets), \$3,125 per set;
St. Martin Edition (100 sets) \$1,500 per set;
Memorial Edition, (250 sets), \$750 per set;
St. Gervais Edition (500 sets), \$375.00 per set.

Quimby also published unannounced cheaper sets in twenty-five volumes (eighteen titles), each of 1,000 numbered copies. All of these sets used the same printing forms, and all copyrights date from 1902 to 1904: the Gregory Edition, Artists' Edition, and Author's Edition. Apparently, when an edition sold out, Quimby would invent a new edition name and put the texts in a different binding. There seems to have been an arrangement by which the C.T. Brainard Publishing Company published an Edition De Luxe



Charles Paul de Kock, *The Works of Charles Paul de Kock*. The Frederick J. Quimby Company, 1902. Bibliomaniac edition. Close-up of front cover gold and onlay decoration. Image from the William Doyle catalogue.

THE HARCOURT BINDERY: EARLY LEATHER BINDINGS

of de Kock, using the translations and illustrations commissioned by Quimby. And, riding the coattails of Quimby's success, in 1903 George Barrie's Sons of Philadelphia published a twenty-volume set of *The Masterpieces of Charles-Paul de Kock*. Printed on Japan vellum, it was limited to 1,000 sets.

OF THE EDITIONS QUIMBY ANNOUNCED to be published in leather, the Bibliomaniac Edition proved to be an incredible undertaking. Each of the ten sets was to consist of 100 volumes, a total of 1,000 books if completed. Published between 1902 and 1904, each page was printed on real vellum, which was an all-time record of printing on vellum. The *New York Times*, in a brief mention on June 1, 1908, reported that the vellum used in each book cost \$200. This set was bound at Harcourt.

On May 3, 2000, the William Doyle Gallery in New York sold a set of the Bibliomaniac Edition as Lot 19 in their rare book sale. The catalogue description read as follows:

KOCK, CHARLES PAUL DE.

The Novels, Tales, Vaudevilles, Reminiscences and Life of. Translated into English by Many Hanford Ford. Vols. I–XXIII, XXVI–XLI, XLIV, LI–LIV, LXXI–LXXII and two unnumbered. Together 48 volumes. Illustrated with more than 250 original watercolors, pen and ink drawings and etchings by John Sloan, William Glackens and other artists, most signed in pencil by the artist. 8vo, bound in full green crushed levant morocco, gilt, the covers and spines richly decorated in floral patterns of roses, irises and other flowers, intricately executed in vari-colored morocco inlays and morocco fly leaves, gilt all in the Art Nouveau taste, uncut and unopened, by the Harcourt Bindery. Each volume laid in silk-lined, full green crushed levant morocco, the spines with morocco inlays, paneled and gilt with metal clasps, a few clasps lacking, otherwise in untouched condition. Boston, F.J. Quimby Co., 1902.

The Bibliomaniac Edition limited to ten sets printed on vellum.

The commentary on Lot 19 continued:

The set was projected to include 100 volumes, but it was apparently never completed and only these 48 volumes were published. Throughout the volumes are initial letters, head and tail pieces and decorative borders painted or illuminated by Helen S. Patterson and Ellen G. Brown. Full page plates, five to ten in each volume, include watercolors, black and white drawings and etchings. Major contributions were made by John Sloan, whose work appears in twenty volumes (numbers XLI, LI–LIV are entirely illustrated by him) and William Glackens, whose illustrations occur in 17 volumes (numbers XXXI, XXXVII–XL containing only his work). Est. \$20,000–\$30,000

The set sold for over \$80,000, probably because of the value of the artwork in the texts by the Ashcan Artists Glackens and Sloan.

The Memorial Edition, 250 sets of fifty volumes each, for a total of 12,500 volumes, was produced between 1902 and 1908. The edition was bound by Harcourt Bindery, although it is not known whether all sets were bound. Each volume was bound in three-quarter blue morocco with unusually tall raised bands; the spines had onlaid morocco floral designs of two alternating designs, lettered in gilt.



The Works of Charles Paul de Kock, St. Louis Edition. Contemporary binding by the Harcourt Bindery. Photo shows books on the shelf Phillip Pirages, bookseller, in McMinnville, Oregon.

The St. Louis Exposition Edition was prepared for 1904, when Quimby exhibited there and also demonstrated hand printing on vellum. That edition was bound in three-quarter red morocco with marbled boards. The spines were decorated in a style similar to that of the Memorial Edition with its alternating floral central motif.

In the archives of The Harcourt Bindery is a sample volume of the St. Martin's Edition, whose one hundred sets of fifty volumes each totaled 5,000 volumes. The binding is 9¼ inches high by 6¼ inches wide. The paper itself is watermarked "St. Martin" across the top and "Limited 100 Sets" on the fore edge. With the signature of Chas. Paul de Kock at the bottom of the page, it is an impressive display of expensive attention to detail. The copyright page shows the date of 1904 and the title page lists the publisher Frederick J. Quimby of New York, London, Paris, and Boston. The same floral onlay die was used on the spines of the St. Martin Edition as was used on the Memorial and the St. Louis Exposition Editions, but the banding has been altered so that there are only three raised bands on the spine. The upper and lower covers each have a floral onlay in the corners.



The Works of Charles Paul de Kock, St. Louis Edition, front cover doublure. Note the position of the Harcourt Bindery stamp, which appears in gold at the bottom center.

The doublures for the St. Martin Edition were elaborate, using another floral onlay as their theme. They were produced by a system that employed some mass production techniques. While the interior rectangle of the full leather doublure was inlaid by hand, the gold-work for the border frames was done with brass plate



Dies and punches for the floral onlays on the St. Louis Edition doublures. These dies and punches are in the possession of the bindery today; the floral die is 5 inches high.

dies (see Ellenport 1983). The floral centerpiece of the doublure was comprised of onlays, not inlays, which were cut quickly by using punches; there was no hand cutting of the onlays. The stamping die was set up on the press, and a blind impression of the complete design was stamped onto the doublure. Meanwhile, the cutting die was used to punch out thinly pared leather shaped to the outlines of the stamping die. Individual punches made of steel corresponded to each of the decorative elements. These were placed atop the pared leather and struck with a hammer to produce one or many leather pieces. This was especially useful when there were many small items, such as leaves, to be placed onto a large impression.

The small pieces of leather were pasted and put in place on the doublure, within the outlines of the die's impression. Gold leaf was laid and the doublure was struck again with the heated brass die. The stamping process sealed all the edges of the onlays and produced a gold outline of the design. This method was very quick, though care was needed to insure that one did not double the image, as there were two impressions (blind below and gold above). One can understand the need for several Imperial Arming Presses, as both the die setup for the doublure's border dies and the central floral decoration had to be left on the press until the run was over, or at least until one of the finishers could set the blind impressions, wait for the pasted leather to dry, and then restamp. The key was in the skill of the finisher who set the dies in place and did the make-ready on the press; the other work required care but no exceptional skill.

THE HARCOURT BINDERY: EARLY LEATHER BINDINGS

ALSO BOUND IN THE FIRST DECADE of Harcourt's existence is a two-volume set of books, *Polish Letters*, published in 1904 by the Bibliophile Society. Most likely a private commission, the set was bound in full light brown morocco with lavish tooling and onlay work both on the covers and doublures. The handwork in producing these bindings is excellent, both in the forwarding and finishing. The outer covers have a delicate gold-tooled pattern, combining both die and handwork.



Jean Paul Marat, *Polish Letters*. Boston: Bibliophile Society, 1904. Spine shows tooling with the floral onlay, done by hand using individual brass tools in combination to produce the larger designs.



Jean Paul Marat, *Polish Letters*. Detail showing endcaps and hand sewn endbands. (The headcap design of a double line alternating with a dot was a standard feature on Harcourt bindings through the 1980s.)

The doublures on this set are quite striking, and clearly were executed with extreme care. The central design motif is created using Harcourt's Imperial Arming Press for stamping the brass onlay die. From the archives of the Harcourt Bindery's collection of rubbings, it is evident that this same brass die was used into the 1920s. Apparently it was a favorite, for it also appears on several rubbings in Harcourt's collection of books bound during that time. One group of bindings using that die was done in the 1920s on publications of the London-based Navarre Society, including a three-volume set of Lawrence Sterne's *Tristram Shandy*.



Left: Jean Paul Marat, *Polish Letters*. Front cover doublure. Right: Lawrence Sterne, *Tristram Shandy*. London: Navarre Society, circa 1920s. Contemporary binding.

The bookseller Phillip Pirages of McMinnville, Oregon, had for sale a great number of Navarre publications by a variety of classic authors, all of them bound uniformly by the Harcourt Bindery. One of the differences between these bindings and those done earlier in the century is in the positioning of the imprint "Harcourt Bindery." In all earlier full leather bindings the bindery's name appears consistently in gold on the inside front cover below the leather doublure or paste-down. By the 1920s, the Harcourt imprint is often placed in the upper left corner inside the flyleaf, stamped in carbon black on many of the full bindings. All quarter- and three-quarter bindings also have the imprint stamped in black in this position.

As the century progresses, imprints of other established booksellers and publishers appear instead of the Harcourt signature, including those of Scribner's, Brentano's, Lauriat's, Marshall Fields, and Maurice Inman.

Another signed binding from this early period, however, is on *Child Christopher and Goldilind the*



William Morris, *Child Christopher and Goldilind the Fair*. Portland, Maine: Mosher Press, 1900. Front doublure with Harcourt Bindery stamp at the bottom center. This book is in the private collection of Philip Bishop of Mosher Books. Illustration used here with permission.

Fair by William Morris. Like the Shakespeare set, this copy is one of the earliest bindings produced by the shop, possibly done within the first two years of business. The book was published by the Mosher Press in Portland, Maine, in 1900. Its covers have a distinct flavor of Morris' designs, with unequal border margins; there are larger border margins on the fore edge as well as on the bottom of the front cover. As in many books Harcourt produced at this time, the headbands are hand sewn silk of multiple colors (red, green and white), usually on a double cord. In fact, the headbands of this set and the set of Polish Letters show the same double-corded headbands, most easily seen on the larger books.

The floral motif of the covers of the Morris book is carried onto the doublures, which surround a panel of a "cloudy" marbled paper in purple and green that was popular at the time and was used by Harcourt Bindery through the 1920s. The Harcourt Bindery stamp is centered on the bottom panel of the doublure inside the front cover, as it is on the Horace volumes and *Polish Letters* volumes. Bindery stamps such as this

usually appear without dates. Yet it is probable that the binding was completed at or near the time of publication, circa 1900–1905, as the decoration certainly shows the influence of the Kelmscott border designs.



Napoleon: Thoughts on Love and Life. London: The Royal Library, 1908. Belles Lettres series. Bound circa 1908. Photo by Dr. Philip Maddock.

A final book worthy of attention is *Napoleon: Thoughts on Love and Life* [London, 1908], a small octavo published by The Royal Library in its Belles Lettres series. If this was not bound in 1908, it was probably bound shortly thereafter. As with other books already shown, the quality of the goldwork is very high and the tools are crisp and clean, showing little wear. The cover onlay work is done with a die still in Harcourt's collection, as are the punches for dinking out the small and irregular shapes of multi-colored leathers for the flowers and leaves. The raised bands on the spine, like those on the de Kock volumes, are very high, and the tooling on the spines is delicate.

What also helps date this binding is the placement of "The Harcourt Bindery" stamp centered inside the



Napoleon: Thoughts on Love and Life. Note the Harcourt Bindery stamp on the inside front cover and exposed joint showing laced-in cords. Photo by Dr. Philip Maddock.

THE HARCOURT BINDERY: EARLY LEATHER BINDINGS

front cover. The endleaves are a fine silk, which has worn over the years in the joints. The exposed joints show a glimpse of the laced-in cords, the standard technique used during Harcourt's early days.

OUR DESCRIPTION OF HARCOURT'S early bindings ends here. There are no rubbings of bindings in the archives from this first decade, nor are there any extant records of payroll, invoices, material purchases, or other items which could shed further light on the activities of the bindery.

In summary, the bindings from 1900–1910 show a very high level of workmanship. Building on that accomplishment, by the 1920s the Harcourt Bindery had gained national recognition and admiration. The firm had already established a reputation so that its work was stocked and sold through a variety of high-end booksellers. These earliest books are still in fine condition today. They remain a source of pride, and their quality is the foundation upon which the reputation of the firm is based.

NOTES

1. Quimby's name is alternately spelled "Quinby," an anomaly that is difficult to understand. Frederick J. Quimby is listed in several Boston directories through 1906 as being a publisher. It is known that in 1900 he was a partner in the founding of the Harcourt Bindery. Yet early publications bound by Harcourt, the Shakespeare set and the more elegantly bound works of Paul de Kock, list the publisher as "Quinby." I cannot find the reason for this.

2. Meaning, eight distinct volumes comprising ten books, because some volumes include several books.

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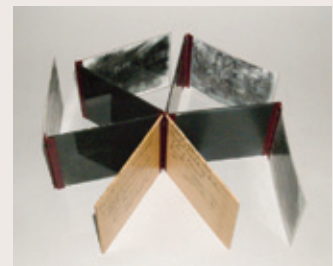
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Nettles and Burrs. Short story by Theodore Gachot, 5¾ x 9 inches. Edition of 12, 2009. The paper stickers are used to create a show-through effect, where the images build on the pages before and after.

PAPER IMAGES FOR PAPER BOOKS

DIGITALLY CUT ILLUSTRATIONS FROM
HANDMADE PAPER IN ARTISTS' BOOKS

TATIANA GINSBERG

MANY OF US WHO APPRECIATE THE TACTILE BEAUTY OF HANDMADE books find ourselves initially suspicious of attempts to incorporate current technologies into traditional book forms. New technologies may call attention to themselves in such a way as to create dissonance with the traditional aesthetics of handmade books. Or worse, we might fear they would run the risk of quickly looking dated, like a futuristic city in an old *Star Trek* episode. But any tool used well has creative potential, and the trick is perhaps in adapting the technologies to suit one's own aesthetic and practices. As someone who went to Japan to study thousand-year-old techniques of coloring paper with natural dyes, I can certainly be a stickler for tradition. But as an artist I like to keep my options open.

When I lived in Japan from 2003–2005 I learned to cut traditional *katazome* stencils for paste-resist dyeing. *Katazome* stencils are cut with a knife or a punch, and usually a fine mesh is attached to one side with lacquer to keep the details in position during use with paste resist. (For more on their history and the techniques used in cutting them, see *Carved Paper: The Art of the Japanese Stencil* by Susanna Kuo [Santa Barbara: Santa Barbara Museum of Art, 1998].) Made of layers of persimmon-tanned paper, these beautiful tools are ideally suited to the process of stencil-dyeing fabrics and are now appreciated as an art form in and of themselves. While studying the process, I had the idea of using *katazome* stencils for an artists' book. It seemed like a nice combination: using paper stencils to make images on paper.

The inspiration was a short story, *Nettles and Burrs*, that my husband, Ted Gachot, wrote in 2002 when we lived in Iowa. I loved the story and had a vision of using silhouettes of botanicals as images to accompany it, so I cut a series of stencils by hand. While the images turned out as I imagined, the *katazome* process was much trickier on paper than on fabric, and I did not like the inconsistent results. I opted instead for direct stenciling (rather than stenciling a resist, then dyeing), and made a single copy in that way. Although the book had good qualities I wasn't completely satisfied. I thought I would like to do another version, but I needed a new technique. As it turned out, the final version of *Nettles and Burrs* still combines paper and paper, only with the aid of some digital tools and the inspiration of Harry and Sandra Reese at Turkey Press.



Artist, dyer, and papermaker Tatiana Ginsberg studied at the University of Iowa Center for the Book and spent two years in Japan on a Fulbright research grant investigating naturally dyed Japanese papers before completing her MFA at the University of California, Santa Barbara. Incorporating drawing, stitching, book structures, print, and sculptural forms, her work integrates traditional skills with contemporary techniques. She currently teaches as a visiting artist at Mount Holyoke College. www.tatianaginsberg.org

For an edition of *The Sea Gazer* (2007), the Reeses were faced with a similar problem. Harry had made a series of monoprints from hand-cut pieces of clear vinyl (a flexible 10 mil material, similar to heavyweight shower curtain liners) and used them to accompany a poem by Michael Hannon. They liked the unique book so much that they decided to edition it. But monoprints can lose their spontaneity when you are making seventy-five copies, and the clear vinyl pieces would be hard to position repeatedly. How to keep the freshness of the original prints yet simplify the editioning?

The solution came from a seemingly unlikely place—a Roland plotter/cutter designed to draw plans and cut vinyl signage. The art department at the University of California, Santa Barbara, where Harry teaches, happened to have one. When I arrived at UCSB as a graduate student in 2005, I was immediately interested in seeing if this machine would cut stencils. However, it is designed to cut materials attached to a backing, not to create windows. My few attempts failed to result in anything but a mess of damaged paper. I gave up thinking the cutter could be used for anything other than vinyl.



Partly weeded sheet of images for *The Sea Gazer*. Photo by Harry and Sandra Reese.

The Reeses, however, saw other possibilities. Working with print lab manager Joel Sherman, they began to experiment with the idea of backing papers with a cold-mount adhesive suitable for bookwork. After much experimentation, they found the pH-neutral double-sided adhesive Gudy O (#870), manufactured by the German company Neschen, to be an ideal backing material. Available in twelve- or twenty-four-inch rolls, Gudy has a silicone release paper backing,



Sandra Reese applying a paper sticker. Photo by Harry and Sandra Reese.

so laminating paper to the exposed adhesive creates a three-ply material similar to commercial vinyl. The Reeses used *kitakata* paper printed on a Vandercook in solid colors and a wood-grain pattern, and found that the printing ink impregnated the paper and made it cut more smoothly (otherwise the long fibers had a tendency to tear). The triple-ply sheets were run through the cutter just as vinyl would be, incising vector line drawings in the shapes of Harry's original prints. The result was an edition of elegant, cleanly cut paper stickers, ready to be permanently applied to the text pages. I was impressed by their crisp character and appealing surface—at once contemporary and classic. I began to see possibilities in the vinyl cutter again.

Rather than stenciling natural dyes onto the text pages for *Nettles and Burrs*, I decided to hand dye individual sheets of paper, put them through the cutter, and affix the paper stickers to the text pages. Dyeing separate sheets for application rather than the text paper directly gave me more freedom—I could dip or brush dye the sheets without fear of bleeding into

the text. The cutter would give me the crisp edges that are hard to maintain in stencil dyeing, allowing the delicacy of the botanical forms to be preserved. Additionally, I would not need any of the “bridges” (areas that are left joined to avoid having the center of the pattern detach and fall through) necessary in a stencil. And last, but not least, it would be much easier to edition, as the vinyl cutter would tirelessly trace the same complex forms into my handmade and dyed sheets as many times as I wished.

I scanned my original hand-cut stencils and converted them in Illustrator to vector files. I created paths with the pen tool, but you can often get good results using Live Trace, which takes only seconds. A vector drawing is infinitely scalable, with no loss of quality if you increase or decrease the size. This is a tremendous design advantage. For example, if you cut a stencil by hand and decide the image really should have been an inch smaller you would have to start from scratch. With an Illustrator file resizing takes seconds, and you can tweak to your heart's content. I scaled the images to work with the new page layout I had done in InDesign, then arranged them to be cut from as few sheets of paper as possible. Like placing gingerbread cookies onto a baking sheet (only better, since paper stickers don't spread), I was able to get all the designs onto two 12- x 20-inch files, yielding images for all pages of one copy from each pair of sheets. Once the files were ganged up I was ready to start cutting—that is, once I had the paper.

Choosing or designing handmade paper to go through the cutter is of course more challenging than buying commercial vinyl. The vinyl cutter is designed for a very consistent material. Evenly milled to precise specifications, vinyl comes in a wide array of colors and finishes, rated as to how many years it will last in outdoor use (with, of course, no mention of how many centuries it will survive in a landfill). For a handmade paper to go through a machine designed for vinyl, I needed it to be as even as possible. At the same time, I wanted it to have the human character that vinyl lacks. I first tried making hemp paper, since I liked the flecked look of the shive (dark bits of fiber). But it proved too uneven as a material, causing the cutter to

drag and tear whenever it got to one of the darker bits, ruining the design.

Recognizing the problem, I decided to work with abaca fiber instead. Abaca is many a papermaker's standard fiber for a reason: it is almost infinitely malleable. Beat it briefly and you have a light, fluffy sheet, somewhat prone to lumps. Longer beating produces increasingly crisper, firmer, even sheets. And with overbeating the fiber becomes translucent, brittle, and shrinks dramatically. Since my goal was a homogenous and docile sheet, I found that a medium-length beating time of an hour and a half to an hour and three quarters in a Valley beater was ideal.

The vinyl cutter could tolerate slightly thicker or thinner sheets as long as they were relatively even in caliper throughout. Most cutters have adjustments for cutting speed and pressure (so you can cut thicker or thinner materials). Slowing the speed (allowing the

Abaca is many a papermaker's standard fiber for a reason: it is almost infinitely malleable.

blade to dwell more in each area) and adjusting the pressure make it possible to cut a range of paper thicknesses, but I wanted to avoid having a raised surface where the stickers lay on the book pages, so I formed the sheets as thinly and evenly as possible.

I extracted dye from black walnut hulls for the sticker paper and enjoyed applying it somewhat unevenly. Such natural color variation would never be possible with vinyl. The sheets were dyed and allowed to air dry; then a mordant was applied and the sheets were allowed to dry again before applying another round of dye. I added a little bit of *funori* (a type of seaweed, *Gloiopeltis* genus) sizing to the dye and mordant liquids, which made the sheets slightly crisper and easier to cut. To make sure they were as flat as possible, I ironed the sheets before laminating them to the Gudy. Then I ran them through the plotter, following the same procedure as for cutting vinyl. Once the designs were cut, I removed the excess material from the silicone release backing, leaving only the desired designs. This is known as “weeding,” which seemed particularly appropriate for my botanical images.

The Sea Gazer imagery consists of fairly solid shapes, so the Reeses were able to apply the images to the text paper as you would most stickers: by removing some of the backing, positioning them, and then



“Weeding,” or peeling excess paper from around the edges of the images.

pressing them down. But because of their fine, thin lines my images were trickier. To avoid distorting the shapes in the process of placing the stickers, I found it best to use some of the low-tack “application tape” that is commonly used to apply vinyl lettering. I further reduced the tack of the application tape by sticking it to my palm a few times before laying it over the face of the paper and lightly burnishing it down. With the application tape holding the design in a stable position, I removed the silicone release paper from the back of the sticker, exposing the sticky side. I positioned the sticker correctly while holding it by the translucent application tape. Since the tape is far less sticky than the Gudy, I could lightly burnish and then slowly release the application tape, leaving the sticker in place on the text paper. As long as I was careful, I could apply the sticker without damaging the dyed surface of the paper or distorting any of the fine areas. After burnishing, the stickers bonded quite well to the paper surface.

I made the text pages to which the stickers were affixed from hemp linter, resulting in a white sheet with more crispness than cotton, but which could still be put through a laser printer. I briefly considered letterpress printing the text, but as I was planning only a small edition, and the text, cover, and sticker papers were labor intensive, a laser printer proved a good choice. The text printed cleanly, and I further ensured that the toner was well fused to the paper by heating the printed sheets in a dry mount press (another trick from the Reeses). I also attached paper stickers to the sheets of translucent, well-beaten abaca that wrapped each of the two text signatures, creating a break in the middle of the story. (The cover paper is a thicker

abaca, beaten for a shorter period of time, letterpress printed in transparent base with wood type.) In position, the stickers retain crisp edges and fine detail, yet have a variegated surface and the unequalled richness of natural dyes. This contemporary solution appeals to me as one in which technology not only made my job simpler but also sparked a new and in no way aesthetically inferior technique that has the additional benefit of belonging specifically to the time in which the book was made.



Paper stickers on the pages of *Nettles and Burrs*.

One potential concern with using new materials and technologies is that they have not been tested over a long duration. For example, when the first book + digital content packages came out they included such elements as large-format floppy disks, which have become practically unreadable as the technology has become obsolete. Similarly, new adhesives are always looked at with suspicion by collectors and conservators, often with good reason. Remember when everyone thought it was a good idea to repair torn pages with Scotch tape? Despite the fact that Gudy O is pH neutral I wondered about its longevity. This came up in conversation with Daniel Kelm (whose insights I particularly appreciate as he is both a bookbinder and a chemist). Daniel had not used Gudy before, though he has experience with other pressure-sensitive films. Later I sent him a sample and asked him for some initial speculations over email. Here are some excerpts from his reply:

The pH 7.0 is good as is the fact that it is an acrylic film, but reversibility only with organic solvents makes it fall a little short of ideal reversibility (as with all of the pressure sensitive tapes).

The film doesn't feel like it has a very aggressive tack. When rubbed down onto photocopy paper, it rolls up off the paper easily at first, which may indicate that it won't resist peel very well. The technical info indicates an increase in bond strength after 24 hours.... Good resistance to peel is tough for pressure sensitive adhesive films, but so is resistance to sheer force. The manufacturers say that the film will not dry out, but this means that it will stay soft. If it is soft it may creep when sheer forces are applied to the lamination. The films that are worst at resisting creep are thick and soft, the best are thin and hard (relatively).

The 3.0 mil thickness of Gudy O is a good working thickness...for mounting thin materials consistent thickness is important—you don't want to see undulations in the laminated surface, which is due to uneven thickness in the adhesive film. It seems to be the thin, hard films that are most consistent in thickness. Gudy O appears suitable for laminating thin materials.

The one statement that makes me a little wary in the technical information concerns product life. It states: "depending on the material product is affixed to, generally speaking several years." This doesn't indicate a great expectation for longevity.

None of this surprises me much. It seems very similar to other pressure sensitive adhesive films (PS) that I have used. I always use PS selectively—I don't expect it to be as durable as adhesives that cure or dry. If it has to be sticky to maintain an adhesive bond I feel that it has a high possibility for failure, so I use this in ways that are easily repaired when they fail (December 28, 2010).

Daniel also mentioned that it might be worth looking into some other thin mil adhesives, such as the ones made by 3M. Clearly more research is needed in this area. But in the meantime, the first tests that the Reeses and I had done, which are at least six years old, show no evidence of the adhesive creeping out or the stickers shifting. I have sent copies of *Nettles and Burrs* around the world through the mail, buried them under stacks of books, subjected them to climatic extremes, and left them in the sun, with no ill effects. And because in most collections artists' books are



Hand cut half title page

unlikely to be treated so violently, with proper storage I expect them to remain stable for a good long time.

But what if one wants to incorporate cut paper alone, not a sticker? For example, to create windows in the half title page of *Nettles and Burrs* (revealing the title page underneath), I cut them by hand with a scalpel. But if I had access to a laser cutter, such as was used to produce Olafur Eliasson's artists' book *Your House* (New York: Museum of Modern Art, 2006, edition of 225 copies), I could easily have made the incisions. These are expensive tools, well beyond most artists' means, so unless you are lucky enough to work in an institution or atelier that has one, the process might seem prohibitive. However, there are companies with laser cutters that do custom work, and opportunities for artists to use them are growing. For example, Danish book artist Mette-Sofie D. Ambeck produced a laser cut edition of her wonderful book *Steam, Salt, Milk* with the help of Tom Sowden at the Center for Fine Print Research in Bristol, UK (an edition of 10 copies in 2010, based on a one-of-a-kind hand-cut version from 2000).

I later learned that vinyl cutters can be made to cut out freestanding pieces. Some are even marketed for that, with the ability to read registration marks and cut out printed designs precisely. The material to be cut is secured to a backing sheet while it is run through the machine, and then the cut pieces can be detached individually from the backing. This has terrific potential for bookwork, as artists can make shaped pages, pop-ups, and inserts. Some of these cutters will also score lines rather than cutting through the media, allowing for complex constructions to be

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designed in programs such as Illustrator or AutoCAD and folded into origami shapes.

While the larger format sign cutters can be expensive, smaller models designed for high end home use are within an individual artist's reach (the current prices for 15-inch tabletop models made by Graphtec and Roland hover around a thousand dollars, with smaller and simpler machines designed for scrapbooking for a quarter of the price). Book artist Shawn Sheehy uses a tabletop CraftROBO cutter for making his pop-up books. I asked him by email about how he uses it:



Pop-up for the *Hand Papermaking* portfolio “Paper in Motion.” Photo by Shawn Sheehy.

I do a great deal of paper cutting in my work—pop-up books created exclusively of handmade paper. After putting in many long, long days (years!?) at my work table with an X-ACTO knife, I decided to invest in a plotter/cutter. I felt that the dramatic shortening of cutting time would quickly make up for the investment. I’ve been wanting to increase the complexity and edition size of my pop[-up] books, and the cutter helps make that possible. I’ve now had the machine for three years and wouldn’t want to do another production project without it.

I participated in *Hand Papermaking* Magazine’s “Handmade Paper in Motion” portfolio, which features pop-up work made with handmade paper. Each participant contributed 150+ copies of a pop-up work. I decided to contribute an animated pop-up frog. Each of my frogs has 16 parts, so there were 2400+ total parts to be cut. I would not have been able to complete this project on deadline (in fact, I would probably still be working on it now!) without the cutter (October 15, 2010).



The tabletop CraftROBO cutter in action. Photo by Shawn Sheehy.



Pop-up frog pieces ready for assembly. Photo by Shawn Sheehy.

Clearly the CraftROBO cutter was a great investment for Shawn’s production work, and his books are evidence that the machine can handle a wide range of handmade paper thicknesses and types.

Many book artists have become comfortable with using InDesign for page layout, making photopolymer plates from digital negatives for letterpress printing, and printing with laser or inkjet printers or even uploading files directly to online press services such as Blurb and Lulu. So perhaps the idea of using a plotter designed for cutting vinyl signage to make images in handmade paper need not seem odd. And there are many other commercial technologies with potential for book arts just waiting for the adventurous to discover them.

RESOURCES

Copies of *The Sea Gazer* are available from Turkey Press:
www.turkeypress.net

For copies of *Nettles and Burrs*, visit:
www.tatianaginsberg.org

Daniel Kelm's work and information on workshops can be found at www.garageannexschool.com.

Shawn Sheehy's pop-up work and artists' books can be seen at www.shawnsheehy.com.

To order *Hand Papermaking's* limited edition portfolios, see www.handpapermaking.org.

Gudy O (#870) is available from Talas:
www.talasonline.com



IN CONGRESS, JULY 4, 1776.

THE UNANIMOUS
DECLARATION
OF THE
THIRTEEN UNITED STATES OF AMERICA.

WE hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty, and the Pursuit of Happiness.—That to secure these Rights, Governments are instituted among People, deriving their just Powers from the Consent of the Governed, that whenever any Form of Government becomes destructive of these Ends, it is the Right of the People to alter or to abolish it, and to institute new Government, laying its Foundation on such Principles, and organizing its Powers in such Form, as to them shall seem most likely to effect their Safety and Happiness. Prudence, indeed, will dictate, that Governments long established, should not be changed for light and transient Causes; and accordingly all Experiences have shown, that Mankind are more disposed to suffer, while Evils are sufferable, than to right themselves by abolishing the Forms to which they are accustomed. But when a long Train of Abuses and Usurpations, pursuing invariably the same Object, evinces a Design to reduce them under absolute Despotism, it is their Right, it is their Duty, to throw off such Government, and to provide new Guards for their future Security. Such has been the patient Sufferance of these Colonies; and such is now the Necessity which constrains them to alter their former System of Government. The History of the present King of Great Britain is a History of repeated Injuries and Usurpations, of having (in direct) Opprobrium the Liberties of the Colonies; to journey over these Issues.

He has refused his Assent to Laws, the most wholesome and necessary for the public Good.
He has forbidden his Governors to pass Laws of immediate and pressing Importance, unless suspended to their Operation till his Assent should be obtained; and when suspended, he has utterly neglected to attend to them.
He has refused to pass other Laws for the Accommodation of large Districts of People, when these People would relinquish the Right of Representation in the Legislature, a Right inalienable to them, and fatal to Tyranny only.
He has called together Legislative Bodies at Places unusual, uncomfortable, and distant from the Depository of their public Records, for the sole Purpose of fatiguing them into Compliance with his Measures.
He has dissolved Representative Houses repeatedly, for opposing with manly Firmness his Invasions on the Rights of the People.
He has refused for a long Time, when such Dissolutions, to count others to be elected; whereby the Legislative Powers, incapable of Annihilation, have returned to the People at large for their exercise; the State remaining, in the mean Time, exposed to all the Dangers of Invasion from without, and Convulsions within.
He has endeavored to prevent the Population of these States; (for that Purpose obnoxious the Laws for Naturalization of Foreigners; refusing to pass others to encourage their Migration hither, and raising the Conditions of new Appropriations of Lands.
He has obstructed the Administration of Justice, by refusing his Assent to Laws for establishing Judiciary Powers.
He has made Judges dependent on his Will alone, for the Tenure of their Offices, and the Amount and Payment of their Salaries.
He has established a Militia of new Officers, and sent hither Swarms of Officers to harass our People, and eat out their Substance.
He has kept among us, in Times of Peace, Standing Armies, without the Consent of our Legislature.
He has affected to render the Military independent of and superior to the Civil Powers.
He has combined with others to subject us to a Jurisdiction foreign to our Constitution,

and unacknowledged by our Laws; giving his Assent to their Acts of pretended Legislation:
For quartering large Bodies of Armed Troops among us;
For granting them, by a mock Trial, more Punishment for any Murders which they should commit on the Inhabitants of these States;
For imposing Taxes on us without our Consent;
For depriving us, in many Cases, of the Benefits of Trial by Jury;
For transporting us beyond Seas to be tried for pretended Offences;
For abolishing the free Trade of English Laws in neighboring Provinces, establishing therein a military Government, and enlarging its Boundaries, so as to render it at once an Example and an Incentive for introducing the same chaotic Rule into these Colonies;
For taking away our Charters, abolishing our most valuable Laws, and altering fundamentally the Forms of our Government;
For suspending our own Legislatures, and declaring themselves invested with Power to assume for us in all Cases whatsoever.
He has abdicated Government here, by declaring us out of his Protection, and waging War against us.
He has plundered our Seas, ravaged our Coast, burnt our Towns, and destroyed the Lives of our People.
He is, at this Time, transporting large Armies of foreign Mercenaries to complete the Works of Death, Destruction, and Tyranny, already begun with Circumstances of Cruelty and Rapidity, cruelly murdering the most defenceless, and totally overthrowing the Head of a civilized Nation.
He has confined our Fellow-Citizens, taken Captive on the high Seas, to render Arms against their Country, to become the Executioners of their Friends and Brethren, or to sell themselves by their Hands.
He has excited domestic Insurrections amongst us, and has endeavored to bring on the Inhabitations of our Frontiers, the merciless Indian Savages, whose known Rule of Warfare, is an undistinguished Destruction, of all Ages, Sexes, and Conditions.
In every Stage of these Oppressions we have Petitioned for Redress in the most humble Terms: Our repeated Petitions have been answered only by repeated Injury. A Prince, whose Character is thus marked by every Act which may define a Tyrant, is unfit to be the Ruler of a free People.
Now, know we know we have no choice in our British Brethren. We have warned them, from Time to Time, of Attrocities by their Legislature to extend an unnecessary Jurisdiction over us. We have reminded them of the Circumstances of our Emigration and Settlement here. We have appealed to their native Justice and Magnanimity, and we have conjured them by the Ties of our common Kindred to disavow these Usurpations: Our repeated Petitions have been answered only by repeated Injury. A Prince, whose Character is thus marked by every Act which may define a Tyrant, is unfit to be the Ruler of a free People.
We, therefore, the Representatives of the UNITED STATES OF AMERICA, in GENERAL CONGRESS assembled, appealing to the Supreme Judge of the World for the Rectitude of our Cause, do, in the Name, and by the Authority of the good People of these Colonies, solemnly Publish and Declare, That these United Colonies are, and of Right ought to be, FREE AND INDEPENDENT STATES; that they are absolved from all Allegiance to the British Crown, and that all political Connection between them and the State of Great Britain, is, and ought to be, totally dissolved; and that as FREE AND INDEPENDENT STATES, they have full Power to levy War, conclude Peace, contract Alliances, establish Commerce, and to do all other Acts and Things which INDEPENDENT STATES may of Right do. And for the Support of this Declaration, with a firm Reliance on the Protection of DIVINE PROVIDENCE, we mutually pledge to each other our Lives, our Fortunes, and our sacred Honor.

John Hancock.

GEORGIA, Butler Culbert, James Hall, Geo. Walton.	VIRGINIA, George Wythe, Richard Henry Lee, Geo. Taylor, Rufus Spotswood, Theobald Wolfe, Francis Lightfoot Lee, Center Brevint.	DELAWARE, Casper Bailey, Geo. Read, Geo. Ford.	MASSACHUSETTS, Saml Adams, John Adams, John Peter Palm, Eldridge Gerry.
NORTH-CAROLINA, Jno. Raper, Nathl. Hanes, John Penn.	PENNSYLVANIA, Edw. Rutledge, Theobald Wolfe, Francis Lightfoot Lee, Center Brevint.	NEW-YORK, Phil. Livingston, Francis Lewis, Lewis Morris.	CONNECTICUT, Roger Sherman, Saml Huntington, Jno. Williams, Oliver Wolcott.
SOUTH-CAROLINA, Edward Rutledge, Theobald Wolfe, Francis Lightfoot Lee, Center Brevint.	PENNSYLVANIA, Edw. Rutledge, Theobald Wolfe, Francis Lightfoot Lee, Center Brevint.	NEW-JERSEY, Rufus Spotswood, Theobald Wolfe, Francis Lightfoot Lee, Center Brevint.	NEW-HAMPSHIRE, Nathl. Hanes, John Penn.
MARYLAND, Samuel Chis, Jno. Penn, Theobald Wolfe, Francis Lightfoot Lee, Center Brevint.	PENNSYLVANIA, Edw. Rutledge, Theobald Wolfe, Francis Lightfoot Lee, Center Brevint.	NEW-JERSEY, Rufus Spotswood, Theobald Wolfe, Francis Lightfoot Lee, Center Brevint.	NEW-HAMPSHIRE, Nathl. Hanes, John Penn.

IN CONGRESS, January 18, 1777.

ORDERED,
THAT an authenticated Copy of the DECLARATION of INDEPENDENCY, with the Names of the MEMBERS of CONGRESS, subscribing the same, be sent to each of the UNITED STATES, and that they be desired to have the same put on RECORD.
By Order of CONGRESS,
JOHN HANCOCK, President.

Letterpress printed by MARY A. BELLART, India Press, New York, NY, July 4, 1976, as designed & printed by MARY KATHARINE GODDARD, BALTIMORE, MD, January 18, 1777.

The Declaration of Independence, contemporary rewriting (2nd version). Printed by Mindy Belloff, New York, July 4, 2010. Based upon the design and printing by Mary Katharine Goddard, Maryland, January 18, 1777. 21 x 16 inches. Photo by Curtis Eberhardt.

PRINTED BY A WOMAN

THE DECLARATION OF INDEPENDENCE

IN THE EIGHTEENTH AND TWENTY-FIRST CENTURIES

MINDY BELLOFF

DURING OUR COUNTRY'S INFANCY, CONGRESS ORDERED TWO OFFICIAL printings of the Declaration of Independence. On July 4, 1776, the text of the Declaration was formally adopted by the Second Continental Congress in session in Philadelphia. The authenticated copy was signed by John Hancock and attested to by Charles Thomson. It was authorized that day to be printed by John Dunlap of Philadelphia and distributed to several assemblies, committees, commanding officers, and army heads of each of the new United States (Goff, 1976, 4). Titled "A Declaration," the Dunlap printing resembles the written document, with seventy-six lines running across the page in a single column length.

On January 18, 1777, Congress convened in Baltimore and ordered a new printing of the Declaration in an edition of thirteen, one for each of the colonies. This edition is outstanding as the very first to publicly reveal the names of the fifty-four members of the Second Continental Congress and as the only printing with the title "The Unanimous Declaration of the Thirteen United States of America" (*unanimous* after New York had finally cast its vote to form the thirteenth state).¹ Also unique about the edition is the printress, a highly respected presswoman, Mary Katharine Goddard: typesetter, printer, writer, editor, publisher of weekly newspapers, and postmistress of Baltimore.²

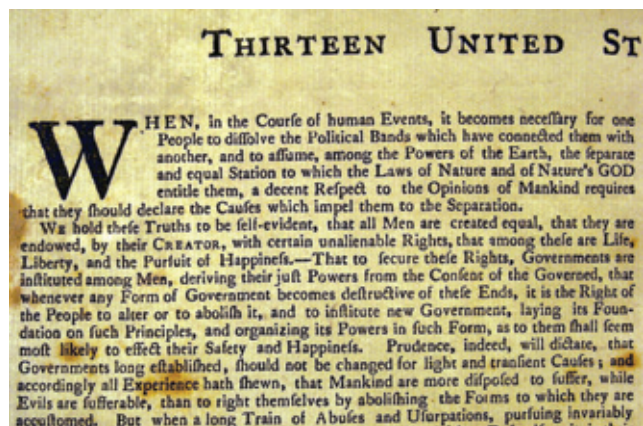
MARY KATHARINE GODDARD'S PRINTING of the Declaration of Independence is a noteworthy national treasure. I first saw the Goddard Broadside with my graduate students in July 2008 in a small exhibition of early printings of the Declaration at the New York Public Library. Of the works on display, the Goddard stood out aesthetically, with its main text designed in two columns and lower portion of signatories laid out in four sections. The colophon at the bottom read "Baltimore, in Maryland: Printed by Mary Katharine Goddard." This public announcement put her at risk for treason along with the Founding Fathers. Had the British prevailed and arrested Mary, she could have been sentenced to death or, at the least, had her voice censored and her print shop shut down. By her actions and life choices, Mary Katharine Goddard was clearly a courageous woman and true proponent of the right to free expression.³

Such principles were penned in the Declaration of Independence. A summation of ideals on individual liberties is expressed in the opening two paragraphs, and a justification for separating from Great Britain is listed in the body of the text, with the majority of the writing enumerating



Artist Mindy Belloff produces fine printed artist's books and broadside editions at Intima Press in New York City. She holds a Master of Arts degree from New York University in studio arts. Mindy teaches the art of the book and letterpress printing at her print and design studio and area universities. Her work is held by numerous special collections including the Library of Congress, the National Museum of Women in the Arts, the British Library, and the Victoria & Albert Museum. www.intimapress.com

offenses attributed to King George III. The document declares the rights of the colonies to be “Free and Independent States” in the closing paragraph. It can be argued that the colonies’ revolutionary struggle to break from Great Britain and the rule of the crown was founded on natural rights. Basic liberties and the pursuit of happiness were clearly at the forefront of the political, social and ethical issues of the day. An individual’s right to freedom and equality was critical to the lives and fate of *all the People*, particularly to those enslaved and to women.



Detail of Goddard Broadside showing the first lines of the text.

As a woman, I could not help but wonder, while setting each letter of the text “all *Men* are created equal,” how Mary would have felt being entrusted with the printing of a world-changing proclamation. My immediate response was to pay tribute to this extraordinary woman printer by recreating Mary Goddard’s 1777 design, while breathing new life into one of our country’s sacred documents with gender-inclusive language. As I began to learn more about her, it became clear that the Goddard Broadside was too often overlooked in the historical record.⁴ I therefore began my tribute with a hand-set, historically accurate reproduction of the Goddard Declaration of Independence printing, along with information about Mary Goddard. I then printed a new Declaration, still following the Goddard composition but substituting the word “People” for “Men” in two places in the opening text.⁵ Both versions are accompanied by a large printed sheet of essays addressing some of the political and social issues of the revolutionary period. My recreation of this significant, iconic eighteenth-century document in the twenty-first century was an artistic and cultural endeavor for me as well as an informative historical exercise.⁶

MARY KATHARINE GODDARD was born on June 16, 1738, in the British colony of Connecticut, to Sarah Updike Goddard and Dr. Giles Goddard, a distinguished member of the New London community who served as physician and postmaster (Natnl Postal Mus, Ch 1). Her brother, William, was two years younger. Mary and William were homeschooled by Sarah, an educated woman with knowledge of Latin and literature.⁷ The Goddards likely planned for their son to run his own printing establishment, as he was sent from the ages of fifteen to twenty-one to apprentice with James Parker, newspaper printer and postmaster of both Woodbridge, New Jersey, and New Haven, Connecticut, who was known for excellence in press work. In addition to the New Haven press, Parker ran a larger printing office in New York, where William gained further experience in postal matters and learned the skills required to gather and print news (Miner 1962, 12–13).

In 1762, a few years after Dr. Goddard died, Sarah helped William set up a printing office in Providence, Rhode Island, by financing the type, press, and paper costs, and she and Mary moved there to assist him (National Women’s History Museum [NWHM]). Although not the first printer in Rhode Island, William did start its first newspaper, and he also held postmaster duties in Providence (Miner 1962, 19). William’s political pursuits kept him traveling to different colonies, and included taking a firm stand against the Stamp Act and “setting up an intercolonial postal system in opposition to the official British one” (49, 112).

Within a few years, William left Rhode Island for New York while Sarah and Mary remained in Providence, running the shop and printing the weekly newspaper. They published the *Providence Gazette* and issued an *Almanack* [sic] as “Sarah Goddard & Company.” The firm included Sarah, Mary, and a few journeymen and apprentices. Sarah and Mary made the business profitable as Mary took a greater role in typesetting, letterpress printing, and editing, clearly not the usual hobbies of a twenty-four-year-old young woman of the eighteenth century. Sarah wrote an entertainment column in the *Gazette* reflecting her wit and literary knowledge, and also published books (56–7).

In 1766, William moved to Philadelphia to open another print shop. At this time Philadelphia, the largest city in the colonies, with a population of 30,000,

was an economic and political center (59). William sold the business in Rhode Island to John Carter Brown, Sarah's partner since September 1767, and in November of 1768 Sarah and Mary reluctantly joined William in publishing the *Pennsylvania Chronicle* (84–5). Although William's *Chronicle* had competitors, the Pennsylvania paper flourished and had the largest circulation in all the colonies (72). After Sarah Goddard's death in January 1770, Mary kept the shop running throughout William's absences and his public bickering with business partners over politics and finances, disagreements often detailed in their newspapers.

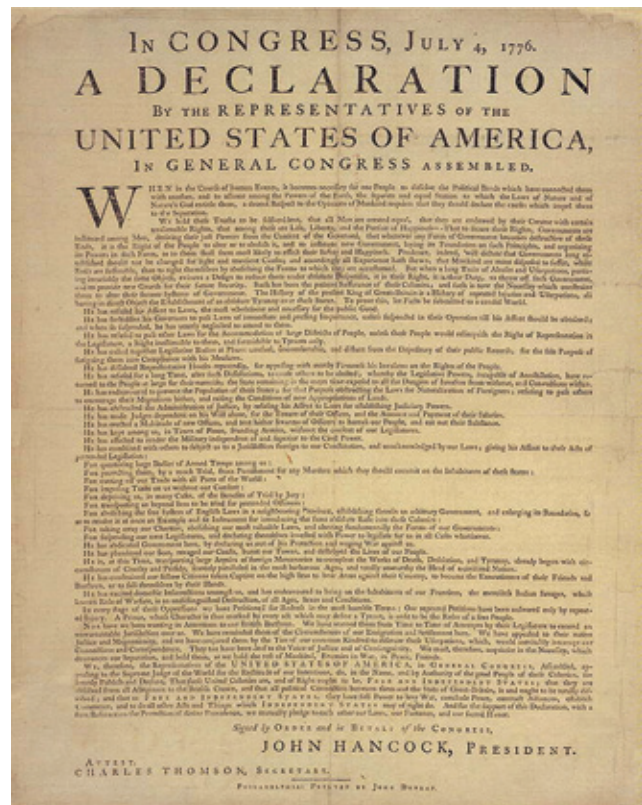
In August of 1773, seven years after the start of the Philadelphia venture, William began *The Maryland Journal*, the first newspaper of Baltimore. Mary soon followed and again took charge of her brother's newspaper. As Lawrence Wroth wrote, she “was ready always to take up the tasks of her erratic brother where he had pleased to drop them, and... to assume the consequences of his indiscretions. Hers was no small accomplishment” (Wroth 1922, 144). Miner concurred, writing that “Mary Katherine's [sic] methods as a newspaper editor contrast with those of her brother. She was dependable and he brilliantly erratic” (Miner 1962, 181). Mary soon became the sole editor and publisher of the *Maryland Journal and Baltimore Advertiser*, and finally printed “Published by M.K. Goddard” on the masthead in May of 1775 (NWHM).

That fall, the Continental Congress gave Benjamin Franklin the title “Postmaster General of the United Colonies.” William Goddard had hoped to be second in command, but instead Franklin offered him a low-paying surveyor job, which required that he travel to check on postal routes (Miner 1962, 147). It was also at this time in 1775 that Franklin appointed Mary Goddard the first female postmaster in colonial America.⁸ Given her roles as journalist, publisher, and postmistress, Mary's shop must have been a hub of activity and center of information, especially as newspapers were becoming such essential means of communication among the colonists. Her *Journal* was one of the first newspapers to report the battles at Lexington and

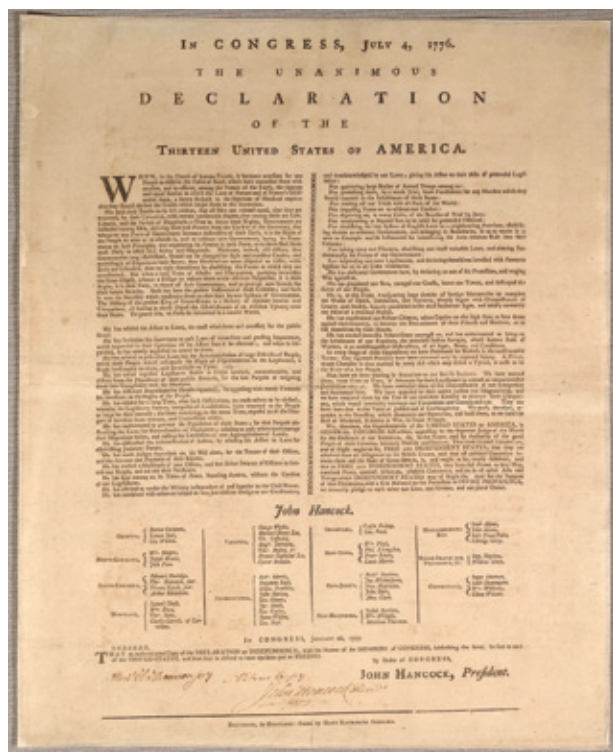
**In 1775
Benjamin Franklin
appointed Mary
Goddard the
first female
postmaster in
colonial America.**

Concord that marked the beginning of the American Revolution in April 1775 (NWHM). On July 10, 1776, the *Maryland Journal* published the text of the Declaration of Independence, announcing, “The Thirteen United States of America Have Declared Independence” (Maryland State Archives [MSA], Biographical Series).

The Continental Congress moved from Philadelphia after threats from the British and reconvened in Baltimore on December 20, 1776 (National Archives [NARA]). On January 18, 1777, having decided it was time to reveal their names even if they were to face reprisals from the British, the Continental Congress ordered, as printed below the text of the Declaration itself, “That an authenticated Copy of the DECLARATION of INDEPENDENCY, with the Names of the MEMBERS of CONGRESS subscribing to the same, be sent to each of the UNITED STATES, and that they be desired to have the same put on RECORD” (emphasis in original).



“In Congress, July 4, 1776, a Declaration by the Representatives of the United States of America, in General Congress Assembled.” Printed by John Dunlap, Philadelphia [1776]. Also known as: the Dunlap Declaration of Independence. 18½ x 15 inches. Library of Congress, Rare Book and Special Collections Division, Continental Congress & Constitutional Convention Broadside Collection.



Declaration of Independence, “In Congress, July 4, 1776. The unanimous declaration of the thirteen United States of America.” Printed by Mary Katharine Goddard, Baltimore, in Maryland. Set in Caslon. 21.3 x 17.3 inches. Library of Congress, Rare Book and Special Collections Division, Continental Congress & Constitutional Convention Broadside Collection.

While I have not found a document written by the Continental Congress on its selection of Mary Katharine Goddard as printer of the Unanimous Declaration, it is clear that Mary was well known and highly regarded. She was the logical Baltimore printer from whom to request this second printing of the Declaration, as was John Dunlap in Philadelphia for the first printing. Isaiah Thomas, a contemporary of Mary Goddard’s and a Massachusetts newspaperman, described Mary as “an expert and correct compositor, doing good printing besides fine work with copperplates” (Barton 1976, 30). Historian Lawrence Wroth wrote, “Her service to Baltimore throughout the Revolution was of a high order, her patriotism unquestioned” (Wroth 1922, 145). The Smithsonian National Postal Museum states that Goddard was “an accomplished Postmaster” and adds, “Recognizing the excellence of her paper, Congress granted Goddard the honor of publishing the first copy of the Declaration of Independence with all the signatories listed, in 1777” (Smithsonian National Postal Museum [SNPM]. n.d., b).

Mary Goddard was known to have an objective and professional tone in her writing. She ran the *Maryland Journal* through January of 1784, producing the weekly newspaper and printing a variety of broadsides, pamphlets, and forms, common job work at a colonial press. While running the *Journal* for nine years she never missed an edition of the paper. This is especially impressive during the years of the American Revolution, when print shops such as the *Maryland Gazette* in Annapolis could not produce their newspapers due to rising costs and paper shortages (Miner 1962, 165). The success of the *Journal* suggests that William and Mary operated their own local paper mill, likely beginning in April 1777, although linen rags continued to be in short supply.⁹ In addition to Mary Goddard’s newspaper and post office commitments, she printed ads in the *Journal* announcing a new book and stationery store and offering fine copperplate printing. *The Maryland Journal* had the best publication record of any wartime newspaper, and in March of 1783, she added a second edition, publishing the paper twice a

Mary’s *Journal* had the best publication record of any wartime newspaper.

week. Mary accepted payment in cash or “country produce,” including tanned sheepskins for bookbinding (Miner 1962, 165–7).

Mary kept the Goddard press running and financially secure for years while William traveled, was jailed for debts, was called into question for political actions, aired grievances with foes in their newspaper, and formed and broke multiple partnerships. Additional strains between the brother and sister became more apparent in 1781, when William and his latest partner, Eleazer Oswald, put pressure on Mary to relinquish the Baltimore press. On April 3 of that year, Mary wrote an article “To the Public” informing her readers that another press in Baltimore planned to start a newspaper “in Opposition to hers with a View to diminish her Business, and compel her to quit the same.” The firm of Goddard and Oswald abandoned their plans of setting up a press, as confirmed in a printed notice that they would have “no Concern with any News-Paper, nor any Profit therefrom; for they...wish the Printress of the *Maryland Journal*, & c. may meet with that Encouragement from the Public, which her Assiduity and Care shall

merit.” Three years later, however, in January 1784, the colophon of the *Maryland Journal* read “Published by William and Mary Goddard,” and in less than a week Mary’s name was omitted. There are no surviving letters, diaries, or personal notes of Mary Goddard’s describing what had transpired, though a rift in the sibling relationship was evident. Court records in 1785 show that Mary filed five lawsuits against her brother in one day (178–80).

In 1789, a new Postmaster General, Samuel Osgood, ordered Mary Goddard’s removal as postmistress and replaced her with John White, a man with no postal experience (University of Virginia [UVA]). Osgood stated that the position would require “more traveling...than a woman could undertake” and appointed his political ally to take over operations (SNPM, n.d., a). Mary refused to give up her post without a fight and received the support of 230 Baltimore merchants (Goddard 1789). The petitioners wrote that Miss Goddard gave “universal Satisfaction to the community” and they were “praying in the most earnest manner that she be restored” (SNPM, n.d., a).

In a detailed letter to George Washington dated December 23, 1789, Mary requested her reinstatement, reminding the president of her years of loyalty. The letter is written in the third person and outlines the “unrewarding” position, personal risks, and financial sacrifices she made in order to have kept the post office running for fourteen years. President Washington responded unsympathetically in a letter dated January 6, 1790, and deferred to the Postmaster General (Washington 1789). Mary then petitioned the United States Senate and House of Representatives for reinstatement and financial compensation but was unsuccessful (UVA). With her postmaster appointment revoked, she continued to run a stationery store and dry goods business (SNPM, n.d., b), and she maintained her bookstore in Baltimore until 1802 (Wroth 1922, 145).

According to the Maryland census of 1810, Mary Katharine Goddard was living with one female slave in her household, Belinda Starling. Mary died at the age of 78 on August 12, 1816. She willed all of her personal possessions and property to Belinda and granted her freedom: “all the property of which I may die possessed, all which I do to recompense the faithful performance of duties to me” (MSA, Baltimore County Register of Wills).

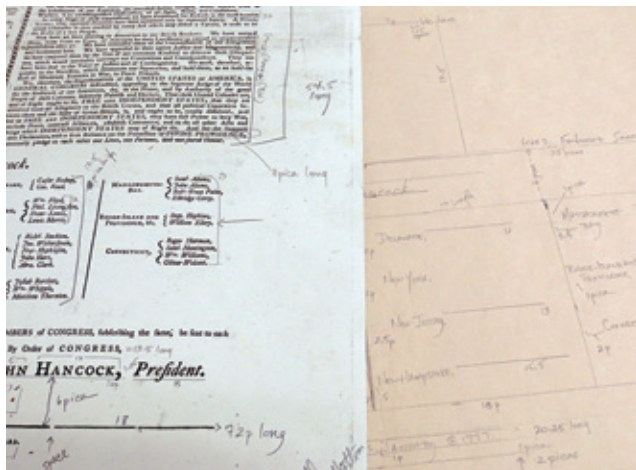
IF HER LIFE CHOICES are an indication, Mary Goddard likely shared the sentiments of many colonial women who, in such tumultuous times, thought intensely about their role in the new republic (Kerber 1980, xi)—notably Abigail Adams, who on March 31, 1776, during the drafting of the Declaration wrote to her husband, John Adams, to “remember the ladies” in the new laws and give them “voice” and representation (Evans 1975, 6).¹⁰ As most colonial women married and were relegated to a difficult life of domesticity, they were also bound legally under coverture, by which a woman’s identity became submerged, or covered, giving the husband total control over his wife and their children (Kerber 1980, 120). Single women, like Mary Goddard, were able to conduct business, keep their earnings, make purchases, and inherit and will property (Evans 1975, 4). They were, however, still excluded from the political sphere.¹¹

When we think of the Declaration of Independence today, it is the essence of the second paragraph, stating an individual’s undeniable right to live freely, that most Americans can recite from memory: “We hold these truths to be self-evident, that all Men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the Pursuit of Happiness.” This is the heart of the document that resonates strongly, even today. I believe most people intuitively understand “all Men” to mean that *all* are created equal—all men and women, all mankind, all people. Peter Onuf (2008, ix) agrees in his essay on the Declaration of Independence that “We now take these principles to be ‘self-evident.’ But what did they mean in 1776, when an objective observer might more accurately conclude that all men were created *unequal*...?”

Whether or not Thomas Jefferson intended *Men* to be understood as *men only* (white men and African men), *white men only* (men who had the privilege of owning land and the right to vote), or all of *mankind* is not definitively known. It was, however, clear to me that an unambiguous and all-inclusive edition proclaiming “all *People* are created equal” was necessary, and that after more than two centuries it was well past time to set the record straight.

NINE KNOWN COPIES of the Goddard Declaration of Independence exist today. I have handled two: one at the Library Company of Philadelphia and another at

the Library of Congress.¹² I visited both libraries, pica ruler in hand, to study the typeface and point sizes in detail, and carefully measured heights and lengths of letters, words, headers, paragraphs, spacing, ornaments, and signer text. I recorded these pencil annotations on a full-scale newsprint mock-up.



Copy of the Goddard Declaration with pencil annotations of pica measurements.

I was permitted to feel the paper and check the impression of the printing. The Goddard Broadside at the Library of Congress had a deep impression whereas the Library Company of Philadelphia copy did not. Jim Green attributed this to conservation cleaning in the past, noting that the pressing of sheets is not in practice today by library conservation departments.

To recreate the historic paper I obtained samples from papermakers but did not find a match for the shade of white or texture I was looking for. I was eventually led to papermaker Katie MacGregor, in Maine, who specializes in eighteenth-century conservation papers. We had numerous phone conversations and mailed color samples of white papers back and forth. I had chosen to lighten the color from the yellowing one currently sees on the aged document so the sheet would be closer to what the original paper may have looked like in 1777.¹³ To match the fibers as closely as possible, Katie mixed a batch of paper with cotton and muslin pulp and added a special reserve abaca so the off-white color would not be too pink or too yellow, as I had specified.

In late July 2009 I received a few small sample sheets from Katie and ran proofs on my Vandercook press. The paper took letterpress beautifully. The sheets are laid, with chain lines and four deckle edges, 21 inches high by 16 inches wide, the same as the original.¹⁴ The

custom paper is as close to being historically correct as possible, with the exception that I asked Katie to pull the sheets slightly thicker than the original text weight so the type would create a lovely impression.¹⁵ I chose not to include a watermark on the paper, as it is not clear if the sheets Mary Goddard used for her printed edition came from one consistent batch of paper or one particular mill. I did not see a watermark on the Library of Congress copy, which was mounted onto another sheet. However, there was a watermark with the initials “W.H.” on the broadside at the Philadelphia library. The first papermaker in Maryland was William Hoffman, who built his mill in 1775 in Baltimore County near Gunpowder Falls, a perfect location for the large amount of water necessary for making paper (HMdB). (Hoffman’s W.H. watermark can also be found on the currency that the Continental Congress adopted in September 1776.)

Another William, William Caslon, is credited with designing the font most popular in Britain and widely used in Colonial America. The Caslon typeface can still be cast today in hot metal. I ordered Monotype #337 from type caster Ed Rayher in Massachusetts. In preparation, I built a type cabinet to house the variety of letters and font sizes being cast (different point sizes in upper and lower case, small caps, and italics, etc.), an estimated 10,000 pieces of type, along with a large amount of spacing material that filled my small studio. With the help of volunteers, the type and spacing was carefully distributed into cases. I began composing on September 2, 2009.



Hand-setting the Declaration—type case and composing stick.

The main text of the Declaration is set in 11 point type, cast on a 12 point body. The header fonts are 22 and 30 points in capital letters and small caps, respec-

tively, and the large W is 72 points, or an inch high. The text contains over 6,500 characters (plus well over 1,500 spacers), including more than 850 of the letter “e” but less than twenty each of the letters “j” and “k.” It contains many more periods and commas than we are accustomed to using today. Also in style at the time of the original printing was the “long-s” character, which looks like a small “f” with the horizontal cross going towards the left, so the word “Happiness,” for example, appears as “Happinefs.” This character was in use in the Middle Ages and fell out of fashion in printing around 1800.

Ligatures fi fl ff ffi m
 Quaints f fh fi fl ff ft
 ct st
 f vs. f (long s)

A “ligature” contains two or three letters kerned together and cast on one piece of type. Commonly used ligatures in the print shop today are shown above. Ligatures using the long-s in the historic Caslon typeface are sometimes known as “quaints,” shown below.

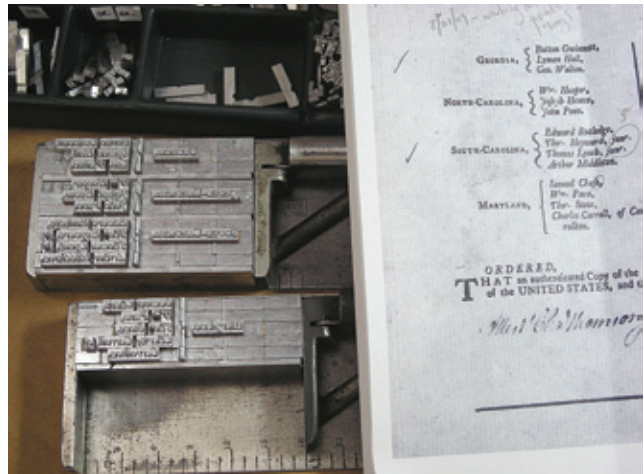
But when a long train of Abuses and Usurpations, evinces a Design to reduce them under a tyrannical Government, it is their Duty, to throw off such Government, and secure their Liberty and Security. Such has been the patient Sufferance of these Colonies, which constrains them to alter their former Constitution: No British君王 having in direct Object the Establishment of a Tyranny over these Colonies. To prove this, let Facts be submitted to the consideration of the United Colonies. He has refused his Assent to Laws, the most wholesome

Detail of contemporary reprint showing “ct” and “st” quaints and “ff” ligature.

The reproduction is fully justified, following the Goddard Broadside. It contains long-s characters and long-s ligatures, unfamiliar to most contemporary readers. As I began setting the left column, I realized the “ft” quaint (as in “mofit” and “hifstory”) was missing from the casting. Ed cast the pieces and sent them to me by Express Mail. Mary Katharine would have been impressed by the speed of the US Postal Service.

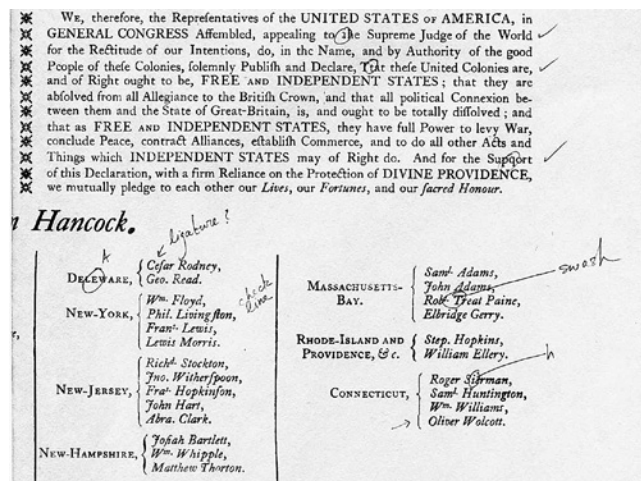
As I was setting the last few paragraphs of the Declaration, I was surprised to find that I had used

the last of the uppercase letters “P,” “C,” and “D,” and lowercase “d.” As I waited for recasting, I focused on typesetting the four columns at the bottom, listing the states and the signers’ names. In addition to being in separate columns, this part of the document is distinguished by the use of small caps for the states and the signer’s names in italics (also in 11 point type). Many of the names are abbreviated, such as “William” set as “Wm,” with the “m” as a superscript letter. Cast in 6 point type, it is smaller in height and width than a wooden matchstick. Type-high rules (printed as lines) separate each of the four sections. The representatives of each state are set next to separate pieces of bracket type on the right side of each column, with the brackets joining each grouping to one of the thirteen states.



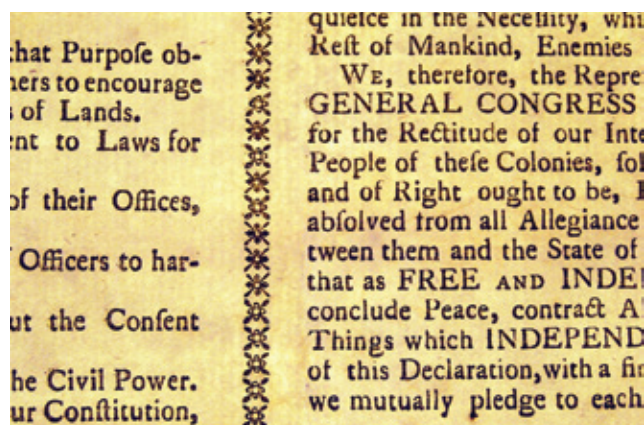
Two composing sticks showing hand-set type of Georgia, North Carolina, South Carolina, and Maryland with signer's names, beside a copy of the marked-up Goddard Broadside.

I set the title header next (“In Congress, July 4, 1776”...) and then the bottom “Order” by Congress. I composed the colophon with Mary Katharine Goddard’s name, city and state, as a final tribute.



Proof of historical reprint edition with pencil annotations.

The entire process of typesetting the Declaration, including printing numerous proofs and making revisions to the form, took approximately forty hours over a one-week period, concluding on September 9, 2009. The proofing stage included pulling out various letters and punctuation with my fingers or a tweezers and adding others, each time readjusting the changed line's spacing. My original intention in the studio was to concentrate on the hand typesetting within a confined block of time, working as quickly as possible, as I imagined Mary Goddard would have done when she received the Congressional Order. However, following the line justification of another printer is certainly more time consuming, and there were, inevitably, other delays. Aside from waiting for the recast ligatures and letters, the matrices for the flower sorts between the two columns, which were special-ordered from London, were lost in transit and had to be shipped a second time to Massachusetts for casting and shipping to New York. I also faced a uniquely modern crisis: my automatic press stopped working. Diagnosing the motor and wiring with mechanics, electricians, and other printers kept my attention away from the composing stick.¹⁶



Detail of the Goddard Broadside showing quints and center ornaments—flower sorts.

The Vandercook Universal III has a large press bed that can accommodate an 18- by 24-inch form. When all the text was proofed in final and the type form locked in position on press, I took a little time away and went to press immediately upon my return, on October first. It was very satisfying to finally ink up the press and pull prints for the final edition of one hundred copies. Having engaged in the process of setting type, proofing, exchanging letters, and repeating this until the form was as close as possible to an

accurate duplicate of the original broadside and ready for final printing, I can confidently say that Mary Katharine Goddard was meticulous and very able in her calling as a printer.



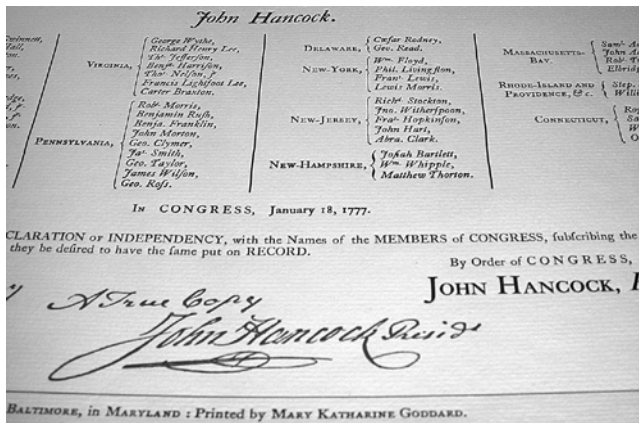
Transferring type from composing stick to galley for the historical re-creation, showing the first two paragraphs set on a 35 pica line.



Full press lockup.

While not all of the remaining nine Goddard Broadside are signed, the Library of Congress copy is signed by John Hancock, president of the Continental Congress, and attested to by Secretary Charles Thomson. I received permission from the Library of Congress to photograph the two signatures, and deviated from metal type for a final press run printed from a photopolymer plate. The body of the broadside is, of course, in black press ink, as was the original. For the two signatures I mixed a brown ink to mimic the discoloration of pen ink one sees over time, creating a two-color print.¹⁷

LESS THAN A YEAR LATER I went to press with the inclusive version of the Declaration of Independence. For this edition I removed all the “long-s” pieces of type, along with the “ft” and “fh” quints, and replaced them with “s” characters and “st” and “sh” ligatures, respectively, so the document could be easily



Historical reprint detail: John Hancock's signature.

understood by readers of all ages. As a result, almost every line required adjustments of spacing. The Memorial Day weekend of 2010 provided a quiet time for me to substitute the “s” characters at my studio, and July fourth was a perfect day to make final revisions, pull one last proof, and go to press, completing the full edition before the fireworks celebration of Independence Day.

The paper for the contemporary edition is bright white, 100% cotton with four deckle edges, also 21 by 16 inches. I had it pulled by David Carruthers of Saint-Armand Paperie in Canada, and chose this paper for its whiteness and texture, to distinguish it from the creamy white of the historic edition.¹⁸ The text is printed in a deep black that I custom mixed. To make a further distinction, the John Hancock and Charles Thomson signatures are printed in a soft blue instead of a faded black-brown. Rather than an edition of 100, as was the historical reproduction, the newly revised version is an edition of 118 as an acknowledgment of the January 18, 1777, date when Congress ordered the printing from Mary Katharine Goddard.

Throughout the process of recreating the Declaration of Independence, I felt a consistent connection with Mary Katharine Goddard and thought about her hardships during such a volatile time in our country's history. I visualized her receiving the urgent Order from Congress and welcoming the opportunity to do her duty. I pictured Mary in her print shop during the cold month of January, setting each letter of the vital proclamation and pulling sheets on her wooden hand press without twenty-first century amenities, as I composed the same letters to print on my fifty-year old electric press. Knowing I would then print a rewritten edition, I fantasized how Mary would have felt if she

had received a second Order from Congress commissioning a revised Declaration of Independence that clarified equal rights for all races and genders during her lifetime. As my thoughts shifted between centuries, I contemplated Mary Goddard's convictions and character as a defender of the liberty of the press, knowing we very often take this privilege for granted today.

MARY KATHARINE GODDARD died on August twelfth, the same month and day that the first batch of Caslon type arrived in my print shop by US post more than two centuries later. The date was symbolic, as I honored the life's achievements and extraordinary accomplishments of Mary Katharine Goddard, journalist, compositor, publisher of news, first postmistress of the United States of America, and fine letterpress printer of our Declaration of Independence.

SUPPLIERS

David Carruthers of Saint-Armand Papeterie in Canada:

www.st-armand.com

Katie MacGregor, eighteenth-century conservation papers:

kmpaper@midmaine.com

Ed Rayher, typesetter: www.swamppress.com

NOTES

1. There are fifty-five Congressional signatures on the document, which includes that of John Hancock, as president. It does not include the name of Thomas McKean of Delaware, who signed a later copy.
2. I have spelled Mary Goddard's middle name as “Katharine” with an “a,” following her printed colophon on the Declaration. However, in most of the research and websites I viewed, including the Library of Congress, it is spelled “Katherine” with an “e.”
3. The First Amendment, protecting all people's rights of freedom of speech and freedom of the press, was not submitted to the states for ratification until September 25, 1789, twelve years after the Goddard printing of the Declaration. It was adopted on December 15, 1791 (http://www.law.cornell.edu/wex/First_amendment).
4. While there had been numerous reprints of the first Dunlap edition and the original written manuscript over

the years, the Goddard Broadside had not yet been replicated when I announced the project at the annual meeting of the American Printing History Association in January 2009. This was confirmed by librarians at distinguished institutions with whom I spoke. I have received full support and encouragement since the beginning of this project from Mark Dimunation, chief of the Rare Book and Special Collections Division of the Library of Congress, and other librarians familiar with the Goddard printing.

5. I had conversations about my plans to recreate the Goddard Broadside and rewrite the text to include “all men and women” with Jim Green, librarian at the Library Company of Philadelphia; Rosemary Fry Plakas, American history specialist at the Rare Book and Special Collections Division; Barbara Bair, specialist of early American history in the Manuscript Division of the Library of Congress; and David Armitage, historian and professor at Harvard University.

6. Both of the editions I printed of the Declaration are accompanied by a broadsheet containing an introductory paragraph written by noted historian David Armitage of Harvard University (and author of *The Declaration of Independence: A Global History*), an essay written by historian Martha King (who is currently working on a book about colonial women printers), and an essay I wrote on the making of the Goddard Broadside recreation. The essay page is the same size as the *Declaration*, 21 x 16 inches. It was set digitally in Adobe Caslon and printed letterpress using photopolymer plates, in blue and red inks on Bugra white papers.

This article draws on historical readings, research, and my own personal experiences as the compositor and printer recreating this historic document. Additional material in the article was gathered and presented in honor of Mary Katharine Goddard for Women’s History Month in March 2011 at Colonial Williamsburg, in March 2010 at Brown University (where, interestingly, I also met descendants of William Goddard), and on July 3, 2010, at the Maryland Historical Society.

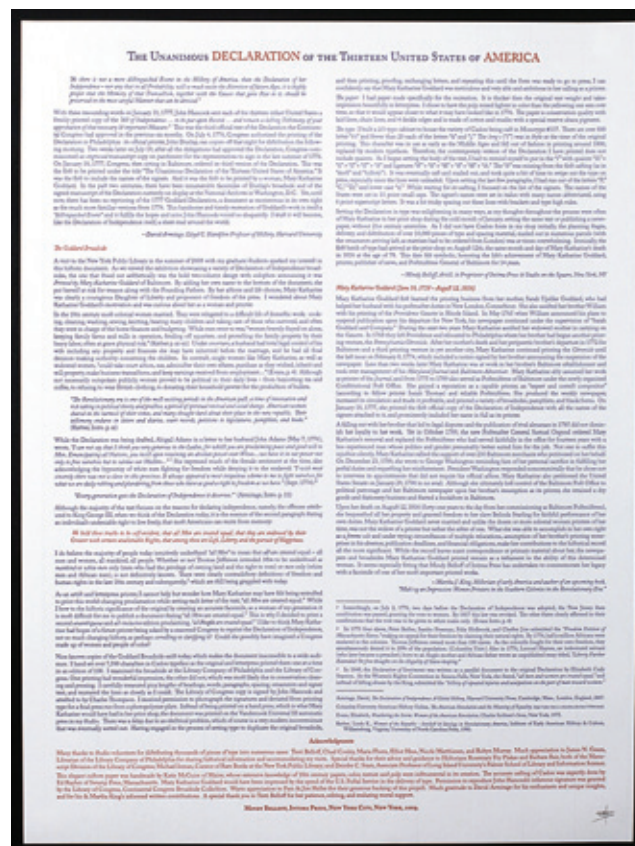
7. Sarah Updike was from a prominent Rhode Island family and the great aunt of Daniel Berkeley Updike, founder of the Merrymount Press in 1893 and author of *Printing Types: Their History, Forms and Use* (1922).

8. On July 26, 1775, Benjamin Franklin was appointed the

first Postmaster General of the colonies by the Continental Congress (Natnl Postal Mus, “Benjamin Franklin”). During this time, the postal system in the colonies was still being established, allowing newspapers to be distributed without censorship. On October 11, 1775, under the heading “Constitutional Post-Office,” Mary announced in the *Maryland Journal* that two posts eastward and southward set out from and arrived at her office each week. There were 75 post offices established in the new American nation by 1789. Today we have over 30,000 delivery facilities, according to the National Archives and Records Administration (2010 USPS Annual Report).

9. Although papermakers and journeymen were among those exempt from military service, the Goddards still had difficulty finding skilled help, as evidenced by the ads they placed requesting help (Miner 1962, 165–6).

10. The only political expression available to women was the petition, which begins with an “acknowledgement of subordination” and contains “the rhetoric of humility.” (Kerber 1980, 85).



Essay broadside accompanying both contemporary Belloff printings of the Declaration. Photo by Curtis Eberhardt.

11. On July 2, 1776, two days before the Declaration of Independence was adopted, the New Jersey State constitution passed, granting the vote to women. By 1807 this law was revoked. The other states clearly affirmed in their constitutions that the vote was to be given to *white males only* (Evans 1975, Introduction).

In 1848, the Declaration of Sentiments was written by Elizabeth Cady Stanton as a parallel document to the original Declaration of Independence. At the first Women's Rights Convention in Seneca Falls, New York, Stanton stated, "all men and women are created equal," and instead of listing abuses by the King, submitted the "history of repeated injuries and usurpations on the part of man toward women." In 1863, Stanton, along with Susan B. Anthony, organized women in support of the Thirteenth Amendment, which abolished slavery. Two years later, the Fifteenth Amendment passed, stating that voting rights could not be denied on account of race; however, it did not mention gender.

12. The surviving copies are at the Library of Congress, Connecticut State Library, Library of the late John W. Garrett, Maryland Hall of Records (MHR), Maryland Historical Society, Massachusetts Archives, New York Public Library (NYPL), Library Company of Philadelphia, and the Rhode Island State Archives (Walsh, Michael J., "Contemporary Broadside Editions of the Declaration of Independence." *Harvard Library Bulletin* 3 [1949]: 41, cited by <http://www.thedeclarationofindependence.org>).

The NYPL does not allow anyone to handle its copy, and it is only available for viewing when on exhibition during the summer months. I did speak by phone with librarians at other institutions, but it was difficult to obtain the necessary information without actually seeing and feeling the document in person. The MHR copy in Annapolis, according to one librarian, is badly creased and damaged from having been folded for many years. Since it had suffered too much loss, he did not recommend traveling there to view it. It would be fascinating to see and compare all nine surviving copies, as was done by a Harvard study with twenty-one of the twenty-six Dunlap broadsheets (Goff 1976).

13. I spoke with and received support for my decision from Jim Green, librarian, and Michael Inman, curator of rare books, at the New York Public Library.

14. The Library of Congress copy is listed as 54 x 44 cm, or

21.3 x 17.3 inches. There are variations in sheet sizes, which is also due to wear and folded edges or mounted sheets. The documents as I measured them are 21 x 16 inches.

15. In late July of 2009 the rains and flooding were incessant in Maine, and we were hoping it would calm down and allow Katie's newly made paper to dry flat. Fortunately, the weather did finally cooperate, right on schedule.

16. The problems with my electric steel press made me wonder if the Goddards' wooden hand press was sturdier than other colonial presses. While most printing houses had their presses shipped along with other supplies from Great Britain, William Goddard is believed to have ordered the first printing press built in the colonies, commissioned from a watch- and clockmaker, who crafted it in mahogany in 1770 (Miner 1922, 91).

17. Although the color may have looked darker in 1777, I took artistic license, as with the paper color. This was an aesthetic decision.

18. Funding of the paper for this contemporary edition was provided by a grant from the Puffin Foundation, whose mission is "to support creative and innovative initiatives that will advance progressive social change."

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MINDY BELLOFF

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