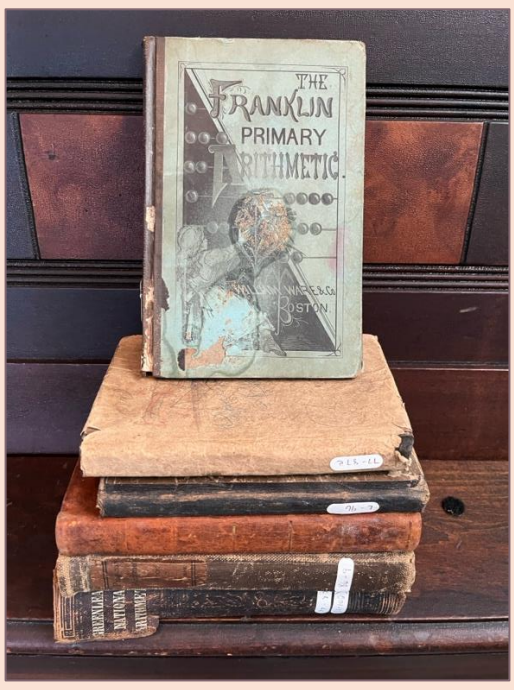


Arithmetic Books

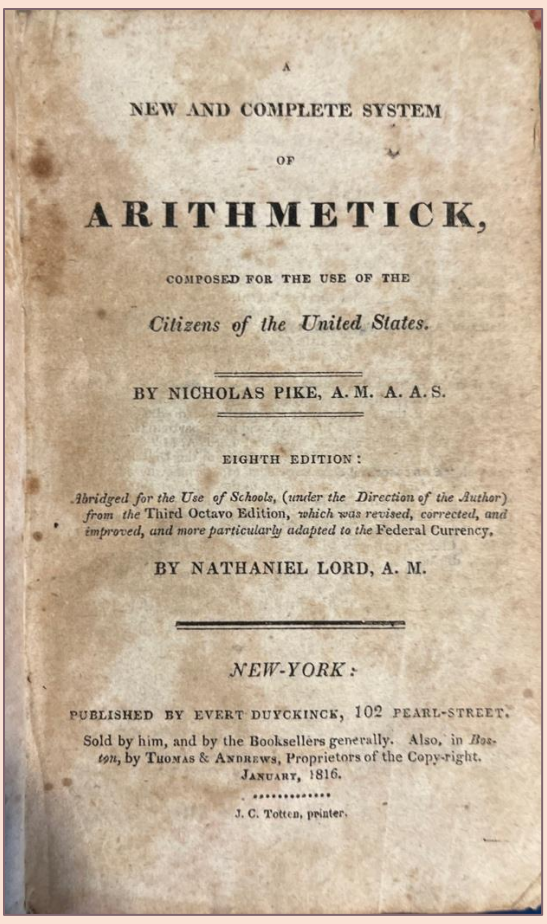
from the Shelves of the Boylston Historical Society Library

By Carrie Crane

There was a time when teaching mathematics beyond basic arithmetic was not considered a necessary part of a young person's education. For centuries, advanced mathematical research was pursued by individuals that were not associated with any university and were instead supported by patrons. But as international trade began to grow and technologies advanced, the demand for people with a deeper understanding of mathematics increased and it became part of standard education. That in turn meant an increase in the need for those who could teach math as well as prepare textbooks for students.

In the United States, the 19th century was a period of significant growth in math education. With a burgeoning sense of nationalism and the realization that the independence of the country would be served by both military strength and engineering know how, the oldest universities, Yale and Harvard began to offer areas of study and research starting with arithmetic, then geometry and eventually algebra. This influenced the requirements for admittance, and this too quickly had an impact on elementary education.

As math education took hold in the first decade of the 1800s, arithmetic instruction in America was largely influenced by the textbooks and methodologies imported from Europe, particularly from England. Starting in the second decade, math text books were being written and published in the U.S. The theory and methods were very similar, with one significant change, all the math problems concerning money referred to Federal dollars rather than British pounds. These texts, like their English predecessors emphasized rote learning and repetition.


A

NEW AND COMPLETE SYSTEM

OF

ARITHMETICK,

COMPOSED FOR THE USE OF THE

Citizens of the United States.

BY NICHOLAS PIKE, A. M. A. A. S.

EIGHTH EDITION:

Abridged for the Use of Schools, (under the Direction of the Author) from the Third Octavo Edition, *which was revised, corrected, and improved, and more particularly adapted to the* Federal Currency,

BY NATHANIEL LORD, A. M.

NEW-YORK:

PUBLISHED BY EVERT DUYCKINCK, 102 PEARL-STREET.

Sold by him, and by the Booksellers generally. Also, in *Boston*, by THOMAS & ANDREWS, Proprietors of the Copy-right.

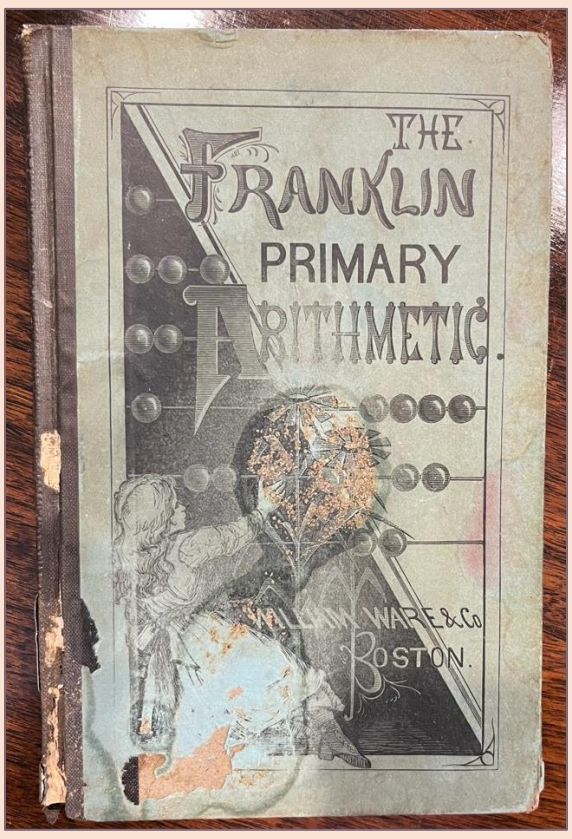
JANUARY, 1816.

J. C. Totten, printer.

The Fuller Research Library at the Boylston Historical Society has numerous arithmetic books from the 19th century, the earliest being published in 1816. *The New and Complete System of Arithmetick*, by Nicholas Pike A.M.A.A.S. as adapted by Nathaniel Lord A.M. It contains the following explanation on its title page, "*Abridged for the Use of Schools (Under the Direction of the Author) from the Third Octavo Edition, which was revised, corrected and improved, and more particularly adapted to the Federal Currency*." The preface further describes the approach:

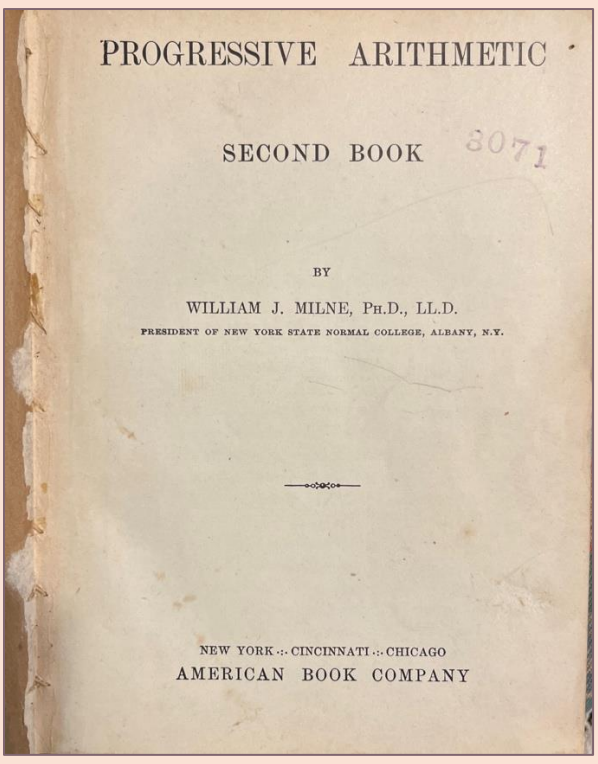
> "The most important improvement in this Edition, is the introduction of examples in the Federal Currency under each rule; and while this was considered necessary, in order to extend the knowledge and use of that currency, it was thought important not to omit examples in pounds, shillings and pence, which are, and will continue to be, the basis of many arithmetical questions; and therefore, an acquaintance with them will always be useful."

The BHMS copy of this book belonged to Capt. John Andrews (1802- 1879), the son of John Andrews and Margaret Parker. His father, Corp. John Andrews was appointed by the selectmen of Boylston to be the first inspector of schools in 1803.



The Franklin Primary Arithmetic, by E.P. Seaver and G. A. Walton was published in 1879 and donated to BHSM by Norman French in 1984. In the preface of the book the following is stated,

> "*The Franklin Primary Arithmetic* is intended to be an aid in teaching numbers by the objective or intuitive method. As it is from objects that the child gets his first notions of numbers, so it is by the use of objects that the teacher will best succeed in imparting clear and lasting knowledge of numbers….To aid in this appeal to the senses a very liberal use has been made of pictures and other illustrations: these will, to some extent, take the place of tangible objects; while taken in connection with the text that serve a no less important purpose in awakening and training the imagination in aiding the memory to retain observed facts."



Donated to BHSM by Marie Wirt in 1986, Progressive Arithmetic by William J. Milne was published in 1906. It is designed for use by students in the 5th or 6th year of the studies. According to its preface, "*It begins with a brief but comprehensive review of the work of the first four years, preparing the pupils to enter upon the study of the new topics with intelligence and ease.*" It goes on to say,

> "The exercises, both oral and written, have been carefully graded, making the advance from one step to the next easy and natural. They are so numerous and varied that the pupil can not fail to become thoroughly familiar with numbers and with the process of computation."

The wording of these various prefaces was a sales pitch to clearly and precisely state the advantage of one text over another. Over one hundred books on Arithmetic were published in the 1800s, starting slowly early in the century and increasing significantly as the decades went on with the formation of the District School system in 1850. Competition to have a school district choose a particular book grew along with the rate of publishing. Much like today, there was disagreement about how best to teach math and the methods, even in the 19th century, were continually developing. The textbooks needed to make their case and the preface, often as long as several pages or more, was the place to do that.

Acknowledgements:
- Editor, Nancy O'Loughlin Filgate, Curator and Director, Boylston Historical Society and Museum, Inc.
- *Franklin Primary Arithmetic*, by E P Seaver and G A Walton, published by William Ware, Co. 1879
- https://www.resourceaholic.com/p/digitised-antique-maths-textbooks.html
- Journal of Education, June 1, 1899 p. 351 https://www.jstor.org/stable/44060716 Brief obituary for William Ware.
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- *Mathematics in America: The First Hundred Years,* Judith V. Grabiner, Pitzer College, 1977, https://scholarship.claremont.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1122&context=pitzer_fac_pub
- "Nineteenth-Century Efforts to Promote Mathematics Education from Grade School to the University Level ." Science and Its Times: Understanding the Social Significance of Scientific Discovery. . *Encyclopedia.com.* 16 Aug. 2024 <https://www.encyclopedia.com>.
- *Progressive Arithmetic Second Book*, William J. Milne, 1906
- New and Complete System of Arithmetic, by Nicholas Pike abridged by Nathaniel Lord, published by Evert Duyckinck, New York, 1816

Published
Boylston Historical Society and Museum, Inc.
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