





The Early American  
Industries Association

President:  
Denise Richer

Executive Director:  
John H. Verrill

THE PURPOSE of the Early American Industries Association is to preserve and present historic trades, crafts, and tools and interpret their impact on our lives.

MEMBERSHIP in the EAIA is open to any person or organization sharing its interests and purposes. For membership information, write to John H. Verrill, Executive Director, P.O. Box 524, Hebron, MD 21830 or e-mail: [executivedirector@EARLYAMERICANINDUSTRIES.org](mailto:executivedirector@EARLYAMERICANINDUSTRIES.org).

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The Chronicle

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# The Chronicle

of the Early American Industries Association, Inc.

Volume 71, no. 1

March 2018

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The Chronicle of the Early American Industries Association, Inc. (ISSN 0012-8147) is published quarterly by the Early American Industries Association, Inc. John Verrill, Executive Director, PO Box 524, 402 South Main St., Hebron, MD 21830. POSTMASTER: Send address changes to: The Chronicle of the Early American Industries Association, Inc. c/o John Verrill, Executive Director, PO Box 524, 402 South Main St., Hebron, MD 21830. USPO Publication Number 560-620. Periodical postage paid at New Bedford, MA, and at additional mailing offices. ©2017 The Early American Industries Association. The Chronicle is available on microfilm from: ProQuest, 300 Zeeb Road, Ann Arbor, MI 48106. Articles appearing The Chronicle are abstracted and indexed in Historical Abstracts and America: History And Life. Design: Patty MacLeish, Ideas into Print, 85 Lake St., Cooperstown, NY 13326. Printed by the QMC Group, 64 South Main St., Suite 207, Cortland, N.Y.

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## Acknowledgments

Paul Van Pernis not only compiled the history of the EAIA for this issue, but also researched much of the background information on the founders. Erik Goldstein of the Colonial Williamsburg Foundation graciously contributed his essay on the importance of collectors. Roger Smith, Martin J. Donnelly, Laura Townsend (daughter of Ray Townsend) and EAIA Executive Director John Verrill delved into files to answer queries about prominent EAIA members. Elton “Toby” Hall, past executive director, not only answered queries about EAIA’s past programs and leaders, but also passed on Karl West’s copy of Ray Townsend’s interview with Larry Cooke. Suzanne Fellman Jacob graciously allowed us to reprint her essay on Walter Jacob that appeared in *Stanley Woodworking Tools: The Finest Years*. Jane Rees arranged with the Tools and Trades History Society (TATHS) for EAIA to reprint the chapter from Jay Gaynor’s *Mr. Marquois’s Most Useful Pair of Scales*.

## Covers

**Front.** A plate made at Greenfield Village, The Henry Ford, Dearborn Michigan, in 2011. The plate features the EAIA logo, which is based on past-President Harvey Jeacock’s design for a medallion marking the fiftieth anniversary of EAIA in 1983. A photograph of the medallion was first used in *Shavings* in 1982 and on the cover of *The Chronicle* in 1984. In 1990, the Board decided to hold a contest to develop a new logo, something that would be “eye-catching, easy to remember, recognizable from a distance and simple to reproduce.” The following year, Carl Bopp reported that “the judges for the logo contest had concluded that, although twenty-eight creative designs had been submitted, it was their unanimous opinion that none had captured that ‘certain something’ that would best symbolize EAIA.” In the November/December 1991 issue of *Shavings*, two revised versions based on the medallion were presented to the membership for their consideration. The overwhelming choice was a version that used solid lettering on the rim and it became the official logo beginning with the March/April, 1992 *Shavings*. (*The Chronicle* 51 supplement, May 1998).

**Back.** The cover of the 1958 twenty-fifth anniversary issue. The illustration by Richard J. Stineley shows the interior of the Kitchen at Wiggins Old Tavern, Northampton, Massachusetts, where Lewis N. Wiggins and Stephen C. Wolcott met in 1933 and decided to gather others interested in tools and form “an association for mutual aid and pleasure.”

# The Purpose Endures

by *Patty MacLeish, Editor*

So, a man walks into a bar—well a tavern, actually. It's June 1933—a different era—so even on an early summer's day, this man is probably wearing a suit and tie, and he takes off his hat when he enters the tavern. He sees a fellow hanging an old tool—a gouge with a butternut handle—near a fireplace. The men start to talk, and that conversation leads to something much better than a punch line: the establishment of an enduring institution, one that would grow to involve some of the most influential individuals in the field of history museums and collecting—the Early American Industries Association.

The tavern in question was in Northampton, Massachusetts, and the visitor was Stephen C. Wolcott. He had been sent by his friend, Charles Messer Stow, the Arts and Antiques Editor of the *New York Sun*, for the purpose of meeting the man hanging the tools—who was also the tavern's owner—Lewis N. Wiggins. Wolcott and Wiggins were not alone in their interest in old tools. In 1933, nine out of ten people in rural America still lived without electricity, but the country was changing. The automobile was replacing the horse and buggy. Tools that had once been essential to everyday living and commerce were increasingly being relegated to the back corners of barns and sheds and their purpose forgotten.

Wolcott and Wiggins, however, were not simply interested in the tools as objects. They were curious about much more: What is this? What is it used for? How was it made? Who used it? And they had friends who shared these interests: Let's get them all together, they decided that day. Shortly after their meeting, in August, sixteen like-minded friends gathered at Wiggins Old Tavern in Northampton, and the Early American Industries Association was born.

These sixteen people piqued the curiosity of Paul Van Pernis and me, as we talked about the beginnings of the EAIA. Most of these founding members were born in the nineteenth century—two even before the Civil War—which meant that for some of them these tools of the past were tools they and their families had actually used. We did further digging and what we learned was astounding. The names on the founders' list are a who's who of the earliest collectors of American tools and historic artifacts. Some of the individuals were connected with living-history museums that were developing at the time. James Humberstone was the first curator at Greenfield Village. Albert B. Wells founded Old Sturbridge Village. (EAIA would hold its annual meeting there in 1946, shortly after it opened, and *The Chronicle* had been reporting on the progress of the project as it evolved.)

Others wanted their collections to become part of the historic record. Wolcott's tools formed the heart of the collection at Colonial Williamsburg, and William Sprague's tools did the same at The Farmers' Museum in Cooperstown, New York.

Other influential names soon joined the original sixteen. D.K. Landis, founder of the Landis Valley Museum, Mrs. J. Watson Webb (Lila Vanderbilt Webb) founder of the Shelburne Museum, and Loring McMillen, who was the driving force behind the founding of Historic Richmond Town on Staten Island, were all active leaders of the EAIA.

The EAIA members were spreading the word: These artifacts are important to our history, and we need to collect them, place them in the context of history, and preserve them for the future.

When discussing how to celebrate eighty-five years of EAIA in this issue, it was a challenge to decide what elements to focus on. We needed to update the history, of course (our last retrospective only covered up to 1993), but we also wanted to share with our members the influence the EAIA has had on preserving and researching these objects, and to describe what the EAIA has accomplished since 1933. In this issue, we hope to illustrate at least a few of those accomplishments. We aim to highlight the stories of some early EAIA leaders, as well as some of the more recent ones, and to show how these individuals not only studied history, but made it.

Not all EAIA members had the wherewithal—or personal collections—to start their own museums, but many developed a niche in the world of tools and trades, and made substantial contributions to the history of early trades as they researched and documented their collections and shared that information with fellow EAIA members. We have included articles about and by some of these extraordinary individuals, and Erik Goldstein, Senior Curator of Mechanical Arts and Numismatics at the Colonial Williamsburg Foundation and a member of *The Chronicle* Editorial Board, graciously contributed an essay reflecting on the importance of these collectors. We have also chosen articles from *The Chronicle* and other published works to introduce current members to these men and women of our shared past. My hope is that reading and enjoying the materials we have collected in this special anniversary issue will inspire you to further explore the archives of *The Chronicle* and the catalog of EAIA publications.

# The History of the Early American Industries Association: Our First Eighty-five Years

by Paul Van Pernis

*Much of the information in this history was gleaned from two earlier special anniversary editions of The Chronicle. Loring McMillen who was Vice-President of EAIA in 1958, wrote an article entitled "Early American Industries, The History of the E.A.I.A." for a twenty-fifth anniversary edition of The Chronicle (11 no. 3, 1958). William K. Ackroyd and Elaine B. Winn wrote "Early American Industries Association Sixtieth Anniversary History 1958-1993," which was published as a special supplement to The Chronicle 51, May 1998.*

The Early American Industries Association was founded in 1933 in the midst of the Great Depression. On August 31, 1933, sixteen men and women gathered at Wiggins Old Tavern at the Northampton Hotel in Northampton, Massachusetts, to form an organization of members interested in collecting, preserving, and studying the early tools and crafts of America. The meeting was the result of a conversation begun by Lewis N. Wiggins, the owner of Wiggins Old Tavern, and Stephen C. Wolcott of Nutall, Virginia, who had stepped into the tavern as Mr. Wiggins was hanging some old tools on the wall. In 1958, Mr. Wiggins wrote a letter to then-president of the EAIA Fred C. Sabin recalling the events that lead to its founding.

My memory is clear of our early days—the very first day in fact. I was in the north room of my "Wiggins Old Tavern"—the room that was later known as the "Kitchen." It was entered from the parking lot. The first room I had developed was known as the "Ordinary," the next room was the "Tap Room." On this very hot summer afternoon, I was working on the development of the "Kitchen." I was hanging on the east, whitewashed wall a number of treasured tools. In my hand was an exceptionally interesting hand wrought steel gouge with a wooden (butternut) handle.

Behind me a gentleman spoke, "I see Mr. Wiggins, that you are interested in preserving treasures. Do you know what that fine tool was made for?" I replied, "It is a gouge for woodworking." Then he asked me if I knew for what special purpose it was made and when I told him I did not know, he said, "It was especially made for gouging out wooden bowls." I thanked him and asked his name. "I am S.C. Wolcott and I live in Nutall, Virginia."

He was a charming, intelligent gentleman. We sat down in the kitchen chairs of the early 1700s and

discussed the various articles in that room; things that were for display and for use, as I was about ready to open that room to the public and service of food, as was in the Ordinary and the Tap Room. Mr. Wolcott said, "I spend several weeks each summer browsing around New England. I have met several interesting men who are collecting, preserving and studying the early tools and crafts of America. We should get together and form an association for mutual aid and pleasure. I have a very fine collection of carpenter's tools that someday I shall give to the Williamsburg Restoration." [Wolcott did indeed donate his collection of more than 2,500 items to the Colonial Williamsburg Foundation.]

I replied, "Please invite these gentlemen—as many as you like—to meet here at Wiggins Old Tavern as my guest for luncheon, then we can discuss plans for an organization. At any rate, we would like the opportunity of becoming acquainted."

To my joy, within a few days, he telephoned that W.B. Sprague and S.E. Gage, then at their summer homes in Litchfield, Connecticut, and Albert Wells, of Southbridge, Massachusetts, would be at hand on a certain day for a "get-together" luncheon. I telephoned a friend of mine, Earl T. Goodnow, of West Cummington, Massachusetts, an interesting intelligent collector of early Americana, to meet with us for luncheon. It seems to me it was July 1930. [Mr. Wiggins recollection here is incorrect, the date was August 31, 1933] After luncheon we held our first meeting.

William B. Sprague, after being contacted by Stephen Wolcott, circulated notices and letters to various collectors and other interested people and proposed a meeting for August 31, 1933, at the Wiggins Old Tavern to form the organization. Sixteen collectors met on August 31, 1933, and ratified the organization of The Early American Industries Association. The annual dues were set at \$1 a year, and it was decided to have two meetings a year. At that first meeting, the twenty original members were admitted to EAIA, four of whom could not attend, but a vote was held and they were admitted *in absentia*. The original members of EAIA who met that day were:

F. W. Fuessenich, Torrington, Connecticut

J. A. Humberstone, Edison Institute, Dearborn, Michigan

S. E. Gage, Bantam, Connecticut

A. E. Lownes, Providence, Rhode Island

## The EAIA: Our Purpose

Front and center on the first page of the first issue of *The Chronicle* in November 1933 was a small box stating the purpose of the newly-formed Early American Industries Association. The statement was short: “To arouse a wider public interest in collecting for preservation the tools and implements of the early American industries, of the home, farm, trades and crafts.”

By the time of the publication of the second issue of *The Chronicle* in February 1934, the statement of purpose had changed. The wording was significantly more detailed. One can almost feel the leaders of the new organization fleshing out what they thought the EAIA should try to achieve.

THE PURPOSE of the Association is to encourage the study of and better understanding of early American industries in the home, in the shop, on the farm, and on the sea and especially to discover, identify, classify, preserve and exhibit obsolete tools, implements and mechanical devices used by American craftsmen, farmers, housewives, mariners, professional men and other workers.

In the sixtieth anniversary edition of *The Chronicle*, it was noted in the summary of events for 1968

The approval of the recommendations of the Goals Committee appears to be the first revision of the goals

as established by the founders. The original aims were to discover, identify, classify, and preserve obsolete tools and implements and to bring members into closer contact so they could exchange information and knowledge of their use. A reaffirmation of the original goals was included with the further intention to dedicate itself to the education of its members and others interested in early tools.

Thus, in 1968 a slightly changed version of the statement of purpose first appeared (*The Chronicle* 21, no. 1). “THE PURPOSE of the Association is to encourage the study of and better understanding of early American industries in the home, in the shop, on the farm, and on the sea; also to discover, identify, classify, preserve, and exhibit obsolete tools, implements, and mechanical devices which were used in early America.” This version and the one that first appeared in 1934 were both printed in *Shavings* and *The Chronicle* until 2009, when the membership approved a new statement of purpose at its annual meeting. As then-president Bill Curtis noted in *Shavings* no. 207, the board of directors reviewed the work of the organization and decided to return to the pithiness of the original statement of purpose by adopting a new statement:

“The Early American Industries Association preserves and presents historic trades, crafts, and tools and interprets their impact on our lives.”

Dr. A. E. Bye, Holicong, Pennsylvania  
W. B. Sprague, New York, New York  
S. C. Wolcott, Nutall, Virginia  
A. B. Wells, Southbridge, Massachusetts  
L. N. Wiggins, Northampton, Massachusetts  
E. T. Goodnow, West Cummington, Connecticut  
F. L. Thomas, Litchfield, Connecticut  
J. C. Hood, Chelsea, Vermont  
Dr. E. A. Rushford, Salem, Massachusetts  
E. F. Bradford, Orange, Massachusetts  
F. P. Berger, Hartford, Connecticut  
U. Waldo Cutler, Worcester, Massachusetts

At Mr. Sprague’s suggestion, J.M. Connor, Jr., of Metuchen, New Jersey; M.L. Blumenthal of Elkins Park, Pennsylvania; Stephen H. Pell of Fort Ticonderoga, New York; and Charles Messer Stow of New York, New York, who could not attend the initial meeting, were also admitted to the membership. It is of interest to note that two women, Emma Fitts Bradford and Florence Bradford, were among the original sixteen members of the Early American Industries Association.

The original mission statement of the organization was developed shortly thereafter and stated: “The purpose

of the Association is to encourage the study and better understanding of early American industry, in the home, in the shop, on the farm and on the sea, and especially to discover, identify, classify, preserve, and exhibit obsolete tools, implements, utensils, instruments, vehicles, appliances, and mechanical devices used by American craftsmen farmers, housewives, mariners, professional men, and other workers.” [See sidebar, “The EAIA: Our Purpose.”]

William B. Sprague was elected as the first president of EAIA, with Stephen C. Wolcott as secretary, and Earl T. Goodnow, treasurer. Mr. Sprague quickly developed many of the guiding principles of the Association. He outlined those principles to include forming an association of people interested in the early tools and implements of America, to arouse interest in these tools, to discover their purposes and uses, to encourage museums to take a greater interest in this field, to encourage dealers to search for material, to exchange information, and to find a final and permanent repository for collections. He stated that the tool—common everyday tools of the home, hearth, and forge—and its use was the prime interest of the Association, rather than the product. The only requisite for membership was an interest in the purposes of the Association.

## Whatsits

It was at the third Annual Meeting of EAIA held at Wiggins Old Tavern in 1936 that the membership first started bringing unidentifiable tools to the meeting. It was at this meeting that the term “What-is-its”—soon contracted to “Whatsits”—was first used, and the “Whatsits” session has been a part of every EAIA Annual Meeting since then.

## Publication Program

With the completion of the first quarter century of The Early American Industries Association in 1958, the membership and Board took up the matter of “...recording for posterity the tools and trades of vanishing American industries.” In his “President’s Message” in the June 1959 issue of *The Chronicle* Fred Sabin outlined an expansion of the EAIA’s purpose based on decisions made at the October 1958 meeting in Dearborn, Michigan.

### PRESIDENT’S MESSAGE

In the Anniversary Issue of *The Chronicle*, October, 1958, Mr. Loring McMillen in his history of our Association wrote of the dire need of preserving our industrial history; and that outside of a few publications no effort is being made to study and record the vanishing tools and industries of America or their origins in England and Continental Europe. He pointed out that this is cause for uneasiness, and as our Association looks forward to our next twenty-five years we might well seek a remedy. This is indeed cause for uneasiness, and there is no better organization than our own EAIA to undertake such a task.

It has been our purpose to collect and preserve these vanishing tools, now it should be our purpose to record the history of these tools outside the medium of our own *Chronicle*. At the Anniversary Meeting at Dearborn in October 1958 I appointed a committee consisting of Co-Chairmen Ray Townsend and Bill Geiger; James Keillor, Edward Durell, Minor Wine Thomas, Frank Spinney, Loring McMillen, and Frank Wildung to investigate such possibilities. There are two possible ways by which we can accomplish this aim: (1) by obtaining the interest of a Foundation who would grant to our Association the necessary funds for such an undertaking, or (2) by our own members who have accumulated the necessary needed knowledge.

Our Association has a small fund set aside for such purposes and recently Mr. Edward Durell very generously contributed toward this project. This task is by no means an easy one and to be accomplished in the manner

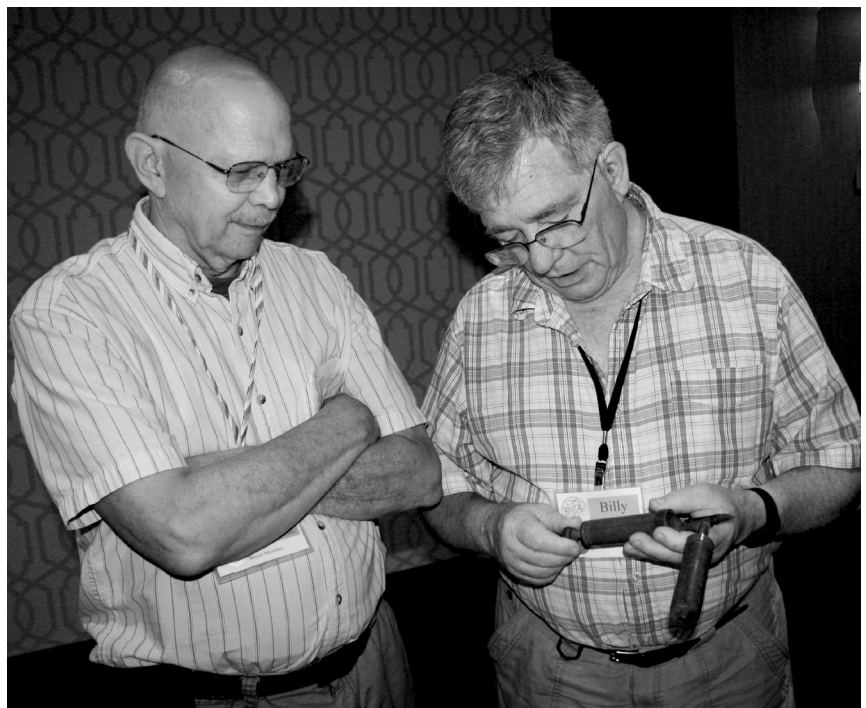


*Above. The Whatsits sessions, begun in 1936, are a perennial favorite of the annual meeting. This photograph from 1951. The caption from The Chronicle 4, no. 1 (January 1951) follows.*

### What Is It?

*Members of EAIA look over a beater (?) at the Spring Meeting at Old Sturbridge Village and Crafts Center, Sturbridge, Massachusetts. The item is still unlabeled. From left: Loring McMillen, director of the Staten Island Historical Society Museum; Charles C. Stoddard of the same institution; Mrs. Gillian W. B. Bailey, associate of Sunnyside Restoration (Philips Castle) Irvington, N.Y.; Dr. Sigmund Epstein, New York City, and Lewis N. Wiggins of Shelburne Museum, Shelburne, Vermont. The object remains unidentified.*

*Below. Sixty-plus years later, Loring McMillen’s son, Bill, continues the Whatsits tradition. Bill (right) and Bruce Van Hart (left) examined an item at the EAIA Whatsits session in Pittsburgh, Pa., in 2014.*





*Left. Mike Humphrey and past President Carl Bopp (on right) at the Annual Meeting in Cape Cod, 2013.*

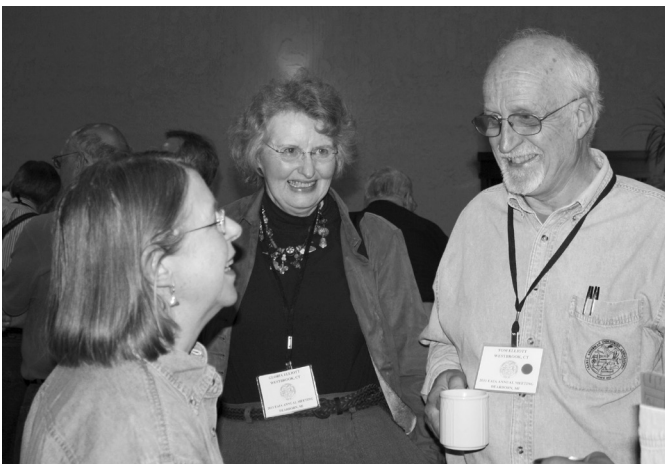
PAUL VAN PERNIS

*Right. EAIA President Judy McMillen, the first female president of the EAIA. She served from 2009 to 2011.*

PATTY MACLEISH

*Below. Jane Rees, Gloria Elliott and past-President Tom Elliott at the Annual Meeting in Dearborn, Michigan in 2011.*

PATTY MACLEISH



we would desire will take considerable research and study. A more detailed plan is being worked out and a dummy tool catalogue is being prepared as a sample of what we desire. We hope that at the Spring Meeting at Old Saugus we will be able to work out a more progressive program. We would more than welcome comments and suggestions from our members. We feel this is a worthwhile project for our Association.

A Publications Committee was formed, and a book on the Conestoga wagon was chosen as the first subject

for publication. (See page 17, “Publications of the Early American Industries Association, 1964 – 2018” for a list of EAIA publications and the profile on page 14 of Loring McMillen in “EAIA Leaders: Durell, McMillen & Van Pernis.”) Due to delays, rewrites by more than one author, and difficulty finding a publisher, the book entitled *Conestoga Wagon, 1750-1850*, by George Shumway, Edward Durell, and Howard C. Frey, was not sent to the publisher until 1964. Despite the delay, the initial order of 1,500 books sold quickly, and by 1967, a second edition of the book was in the works.

In 1991, the board established a Book Sales Program “to make available to members books and other material—either commercially produced or published by EAIA, which are consistent with EAIA’s educational mission.” The books were offered at a discount to members when possible as a benefit to members and sales were limited only to members, except for EAIA publications. Linda Stanton

## Past Presidents of The Early American Industries Association

1. William Buell Sprague	1933–1938	12. Paul B. Kebabian	1973–1976	21. Victor Cole	1997–1999
2. Lewis Noble Wiggins	1938–1941	13. William M. Dickson	1976–1979	22. J. B. Cox	1999–2001
3. Alexander J. Wall	1941–1942	14. Howard L. Greenberger	1979–1982	23. Peter J. Hathaway	2001–2003
4. Warren C. Lane	1942–1946	15. Douglas R. Hough	1982–1985	24. David L. Parke, Jr.	2003–2005
5. John Davis Hatch, Jr.	1946–1947	16. Harvey F. Jeacock	1985–1987	25. Donald D. Rosebrook	2005–2007
6. Edward Durell	1947–1955	17. Alan G. Bates	1987–1989	26. William L. Curtis, Jr.	2007–2009
7. Robert G. Hill	1955–1957	18. Daniel J. Comerford	1989–1993	27. Judith McMillen	2009–2011
8. Fred C. Sabin, M.D.	1957–1962	19. James M. Gaynor	1993–1995	28. Thomas Elliott	2011–2013
9. Lawrence S. Cooke	1962–1964	20. Carl E. Bopp	1995–1997	29. Paul Van Pernis	2013–2015
10. Joseph A. Lind	1964–1968			30. Patrick Lasswell	2015–2017
11. Wallace P. Wetzel	1968–1973			31. Denise Richer	2017–



served as coordinator of the program for many years. Many of the books that were featured were by EAIA members. The program was popular at first, but with the coming of the internet and on-line book sellers, sales decreased on the years. As Executive Director Elton “Toby” Hall pointed out in the introduction to the *Booklist* in 2002 (no. 52), “Many members consider the book sales program to be a valuable service to them both by bringing books to their attention of which they might not otherwise have known and by providing a member’s discount. Unfortunately the volume of sales in the past several years has dropped by about half. While making money on the program is not the primary purpose...we do not want to lose money on it, so we must have enough volume to cover the costs of the program.” The program could not compete with the internet, and by 2004 the program was discontinued and the remaining stock was sold to members.

### A Call for Tools from Washington

In 1960, EAIA was approached by the Smithsonian Institution regarding its new museum building, the National Museum of American History. The Association was asked if members would be willing to donate American wood-working and carpentry tools made prior to 1850 for an exhibit in the museum. The membership enthusiastically responded to this request, and by 1961 the Smithsonian had accepted sixty-two tools from EAIA members for this exhibit. Elwood Wray described the partnership in *The Chronicle* 18, no. 2 (1965) noting,

The fact that the Smithsonian Institution would be in need of tools to amplify its then-present stock in setting up exhibits in the new building under construction was brought to the attention of the EAIA in 1959 at the meeting in Williamsburg. After discussion by the Board of Directors, it was decided to offer our assistance, which was accepted by the Smithsonian...

While nearly everyone who visits the Museum can take pride in the beautiful building and is superlative exhibits, members of the EAIA can derive additional satisfaction in recalling that the purpose of our association—to discover, identify, classify, preserve and exhibit ... tools, implements... used by our forefathers—is in harmony with the objectives of the Smithsonian Institution.

### Membership

Membership at the time of the first issue of *The Chronicle* was twenty-six, and by November of 1934 the membership had grown to 405 and a year later to 610. Only three Annual Meetings were held during the years of the Second World War. No further membership totals were published until after the war. In 1947 the membership was 502, the war having taken a toll on the membership. W.B. Sprague, at the direction of the EAIA Board of Directors

incorporated the Association in the state of New York on March 16, 1942. In 1944, due to the rising cost of publishing *The Chronicle*, dues were raised to \$2 per year and the annual dues crept up gradually to \$5 per year by 1952.

Membership in EAIA did grow during these years, but in 1967 a decision was made by the Board of Directors to create three classes of membership: active membership, which entitled the member to a subscription to *The Chronicle* and the privilege of attending meetings; associate membership entitled the member to a subscription to *The Chronicle* and an opportunity to become an active member when an opening occurred; and subscription membership, which entitled the member to a subscription to *The Chronicle*. Active membership was limited to seven hundred individuals from 1967-1969. In retrospect, this was an unfortunate decision on the part of the EAIA Board of Directors as it led to some bad feelings from early American industry enthusiasts from across the country. On the upside, this decision helped give birth to the Mid-West Tool Collectors Association and several other regional tool groups throughout the country. In 1981, this decision was reversed, and anyone who paid membership dues was allowed to attend the EAIA Annual Meeting.

### The 1970s to the 21st Century

In 1971, all EAIA business information was removed from *The Chronicle* and published in a newsletter entitled *Shavings*. Initially published monthly it was soon determined that the business news of EAIA could be handled with a quarterly newsletter and since then, *Shavings* has been published four times a year.

To further improve communications with members, an EAIA web page was developed in the mid 1990s. Beginning in 2008, an electronic edition of *Shavings* was posted on the EAIA website ([www.earlyamericanindustries.org](http://www.earlyamericanindustries.org)) and members could elect to forgo the print edition and receive a color version of *Shavings* via the website. Executive Director John Verrill set up a Facebook page for the EAIA in 2012 to increase visibility of the organization among the general public and in 2016 he added Twitter and Instagram accounts.

The first *Membership Directory* was published in 1977. The *Directory* contains an alphabetical and geographic index of all members as well as a listing of officers and the EAIA bylaws.

In 1977, the EAIA Board set up a committee to develop a research grant program to “...support individuals engaged in research or publication projects relating to the purposes of EAIA.” It was titled the EAIA Grants-In-Aid Program (now called the Research Grants Committee) and the committee chair was Charles Hummel. The committee moved ahead with the project, and EAIA’s first research grants were awarded in May of 1978. Four grants were awarded that year,



*Left. Tailgating at the 2013 annual meeting in Hyannis, Massachusetts. The first “Tool Exchange” took place at the 1977 Annual Meeting and along with Wednesday afternoon “tailgating” has been a much-loved part of our Annual Meetings ever since.*

PAUL VANPERNIS

*Above. EAIA President Denise Richer discusses the display she and her husband Rod designed for the 2014 meeting in Pittsburgh, Pennsylvania.*

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and since then EAIA had awarded more than 120 research grants to individuals to assist them in research consistent with the mission of the Early American Industries Association. Two of the grants are named in honor of late members of the EAIA. The Winthrop L. Carter Memorial Award is given in memory of Winthrop L. Carter, a long-time friend of the Early American Industries Association and a staunch supporter of its publication and research grants program. The Watson Award is named in honor of John S. Watson, treasurer of EAIA from 1967 to 1997, in gratitude for his devoted service to the Association. Mr. Watson was an enthusiastic proponent of the Research Grants Program from its inception until his death. The James M. Gaynor Memorial Research Grant, first presented in 2015, was named in honor of past president, longtime board member, and member of the grants committee, James “Jay” Gaynor.

In 1988 the EAIA Board of Directors voted to develop the position of Executive Director for the Association. A job description was developed, candidates were interviewed, and on July 1, 1989, Alan Bates became the first Executive Director of EAIA. On July 1, 1992, Richard Kappeler became the second EAIA Executive Director. Elton “Toby” Hall became the third Executive Director in 1994 and served in that position until his retirement in 2010. Current Executive Director John Verrill assumed the position in 2010. In 2009, Judy McMillen became the

first female President of the Early American Industries Association and served in that position until 2011.

The Early American Industries Association Board of Directors adopted a resolution on October 24, 2004, that established the EAIA Endowment Fund. Its purpose is to provide EAIA members and friends the opportunity to make charitable gifts to the Early American Industries Association. These charitable gifts have become, and continue to be, a permanent endowment of financial support for the Early American Industries Association. This fund has already assisted in furthering the publications and programs of our Association, particularly in the area of the Research Grants Program.

As we approach our eighty-fifth anniversary in August 2018, the Early American Industries Association continues to “preserve and present historic trades, crafts, and tools and interprets their impact on our lives.” We hope your pride in being a member of EAIA increases as you learn more in this issue about the history of EAIA and its impact on the history of early American industries and the people involved in them.

# The Founders

In researching the founders of the EAIA, Paul Van Pernis and I discovered that they were an illustrious group of individuals. Many were involved in museums of the era; some were also founders of the first American living history museums. Others were active in art museums and associations and other fields that touched on an interest in “old” things. All were interested in having American artifacts become part of museum collections. Considering that most of the founders were born in the nineteenth century, “early” American industries was within living memory. Editor

## Stephen Campbell Wolcott (1876-1934)

Stephen Wolcott was born in Wisconsin, and served as an ambulance driver and worked for the YMCA during World War I from 1917-1919. In the *U.S. Federal Census* from 1910, he's listed as a farmer, and in the 1930 as a “contractor.”

He was the person who first engaged Lewis Wiggins at the Wiggins Old Tavern. He was also the first editor of *The Chronicle* (1933-1934) and secretary of EAIA (1933-1934). In 1938, his widow presented Colonial Williamsburg with her late husband's collection of about three thousand tools representing forty crafts.

The collection was described in *The Chronicle's* twenty-fifth Anniversary edition as the “... outstanding collection that formed the basis of the physical recreation of the crafts of an eighteenth-century American colonial community.” Wolcott's collection remains an essential part of the Colonial Williamsburg Foundation's tool collection. (See Graham Hood, *The Williamsburg Collection of Antique Furnishings* (Williamsburg, Va.: The Colonial Williamsburg Foundation, 1973, pg. 13).

The announcement of Wolcott's death was published in *The Chronicle* 1, no 6 (1934).

Stephen C. Wolcott, our very highly esteemed Editor and Secretary, died on June 15th. Those who knew him personally, even though their contacts with him were occasional and brief, quickly came to appreciate his fine character and pleasing personality. To them his passing is a very sad event, and, as evidenced by the many letters received from the members, they fully realize how peculiarly well fitted he was for the task which he had undertaken and how much he will be missed. Perhaps no one, since the great Dr. Henry C. Mercer died, has been better equipped than Mr. Wolcott to do effective and important research work on early American industries. Full of enthusiasm, a natural scholar, with endless patience and doggedness, when on the trail of interesting data, and, by no means least important, so situated that he could devote an unlimited amount of time to any quest which he embarked upon, there can be no question that, had he been spared, he would have become a nationally known figure in the field which he had entered.

Fortunately we are able to publish one more of his characteristic editorials [see page 37] as well as the well-studied article on “The Frow,” which appears on the front page of this issue. We understood that he had also completed a lengthy article on Cooperage, and we hope to include this, and possibly other writings of his, in future numbers. We are sure that every member will be glad to

learn that there is no present intention of dispersing the monumental collection of tools which he had formed.

## Lewis Noble Wiggins (1876-1960)

Lewis Noble Wiggins was the second president of the EAIA. He was elected at the annual meeting at Northampton, Massachusetts, in 1938. Mr. Wiggins was born in Springfield, Illinois, and was a member of the class of 1898 at Princeton University.

Wiggins was a dairy farmer, a real estate agent, and president of the Illinois Ice Cream Company, as well as a hotel manager in Seneca and Rochester, New York. He eventually formed his own business, Wiggins Hotels Company, operating five hotels, including the Hotel Northampton, the home of Wiggins Old Tavern, beginning in 1927.

Wiggins was a member of the Advisory Committee of The Farmers' Museum in Cooperstown, New York, and from 1949 to 1953 was the Director of the Shelburne Museum in Shelburne, Vermont. He was vice-president of the EAIA from 1949 to 1951, and in 1958 was elected the EAIA's first president *emeritus*. At that time, he was the oldest member of the EAIA. He was remembered in *The Chronicle* as “a most enthusiastic supporter of the introduction of young people into the organization.”

The announcement of his death in 1960 in *The Chronicle* noted,

He was a true student of the early crafts and gave unstintingly of his time and knowledge. Many of our members owe their interest in the Association and the joy of collecting to his friendly advice and expert opinion.

## William Buell Sprague (1885-1942)

William Buell Sprague was elected the first president of the Early American Industries Association at the founder's meeting at Northampton, Massachusetts, in 1933. Mr. Sprague was born in Flushing on Long Island in New York and spent much of his life there until 1933 when he moved to New York City; he also maintained a summer residence in Litchfield, Connecticut.

A graduate of Yale University (class of 1906) and Columbia Law School, he was a member of the Society for the Preservation of New England Antiquities [now Historic New England] and the Litchfield [Connecticut] Historical Society as well as an avid stamp collector. Mr. Sprague has been referred to as “The Association” because of his

great contribution to the organization in its first years. In addition to being the first president, Mr. Sprague became the assistant editor of *The Chronicle* in March 1934, and on the death of the first editor, Mr. Stephen C. Wolcott in June 1934, he became the second editor of this publication. He held this post until his death on August 22, 1942. In 1938, the first local chapter of E.A.I.A. was founded in New Jersey and was appropriately entitled "Sprague Chapter Number I." Mr. Sprague was not only the second editor of *The Chronicle* but a major contributor as well. He made this publication an outstanding source of information on our early handcraft industries, and invaluable to libraries, museums, and students.

Following his death, his collection of tools was presented to The Farmers' Museum in Cooperstown, New York. David L. Parke's article on Sprague and his contributions as well as an article by Sprague are included in this issue.

### **Frederick William Fuessenich (1885-1973)**

**F**rederick William Fuessenich was from Torrington, Connecticut, and according to his obituary, he was "...one of the foremost authorities on early American antiques. He sold his extensive collection of antiques in 1927 and became an antique dealer in 1929..." during the Great Depression.

In 1918, his father, Frederick F. Fuessenich was president and treasurer and he was assistant treasurer of the Hendey Machine Company, a maker of precision machine tools, many of which are still in use. Fuessenich later was president of Berkshire Mortgage Company. In 1923, Fuessenich and his wife, Jean, purchased the Captain William Bull Tavern in Litchfield, Connecticut, which was built in 1745. The Fuessenichs moved it to a new site and restored it opening it as the Tollgate Hill Tavern. The application for designation of Bull Tavern as a National Historic Place in 1982, noted that "The Fuessenich restoration and use of the house was in a similar spirit to other pioneer antiquarians such as Henry Ford, Henry duPont, the Wells brothers, and Henry Sleeper."

The Fuessenichs' collection was extensive and included some of the most important pieces of American folk art. When the collection was dispersed in 1928, much of which found its way into the Edgar William and Bernice Chrysler Garbisch Collection, and eventually from that collection into the collections of the Metropolitan Museum of Art, the National Portrait Gallery, and the New York State Historical Association (now the Fenimore Art Museum).

### **James Arthur Humberstone (1909-1990)**

**B**orn in England, James A. Humberstone brought to the BEAIA a connection with Greenfield Village (now part of what is known as The Henry Ford). Humberstone was a student at the Henry Ford Trade School. Henry Ford read some of the articles Humberstone had written for the school

paper, and he eventually hired Humberstone as curator of his collections and to assist in the planning of the Edison Institute, now The Henry Ford, which opened on October 21, 1929. (Humberstone and his wife actually lived in Greenfield Village, and their son James Jordan was born there.) A few years later, Humberstone was among those who gathered at Wiggins Tavern. Following World War II, Humberstone was involved in the effort to revive the youth magazine *American Boy*.

### **Samuel Edson Gage (1865-1943)**

**S**amuel Edson Gage of Bantam, Connecticut, was an architect in New York City. He graduated from Columbia University with a degree in architecture and served in World War I. Gage was a practicing architect in Flushing, New York, for fifty-three years. He designed several large buildings including several Corn Exchange Bank buildings, and was also the principal fund-raiser for Memorial Field in Flushing, New York, built to honor Veterans of World War I. He specialized in colonial-revival style and designed many homes on the Upper East Side of New York and in Southampton on Long Island, and in Connecticut. He served as chair of the EAIA Admission Committee from 1933 to 1936. (At that time, individuals had to apply for membership in the EAIA.)

He published several articles in the early issues of *The Chronicle*. The following brief note published in volume 1, no. 7 (September 1934). It is typical of many notes published in *The Chronicle* in the early years of the EAIA that documented a fading way of life in America.

From MR. S. EDSON GAGE:

At Scott's Corner, between Pound Ridge, N. Y., and New Canaan, Conn., a basket-making industry, founded in 1841, is still carried on by a descendant of the founder. Native oak, ash, and hickory logs are halved, quartered, and half-quartered, and made into splints with a draw-knife on a bench similar to a shingle-horse. Many forms of baskets are made and sold, notably oyster baskets for New Haven.

(A photograph of Fred Bennett Scofield, who died in 1950, and may very well be the basketmaker referred to by Mr. Gage is available at the Pound Ridge Historical Society web site, [www.poundridgehistorical.org/history/](http://www.poundridgehistorical.org/history/)).

### **Albert Edward Lownes (1899-1978)**

**A**lthough born in Whitehall, New York, Albert Edward Lownes (1899-1978) is primarily associated with Providence, Rhode Island. He attended Moses Brown School there and graduated from Brown University in 1920. A textile executive and chairman of the board of American Silk Spinning he was a book collector, specializing in the history of science. He was not only a founding member of EAIA, but was also active in, or a founding member of, many Providence-area organizations including the Rhode Island Historical Society,

the Providence Art Club, the Providence Public Library, the Club of Odd Volumes, the American Antiquarian Society, and the Grolier Club. He donated to Brown University his collection related to Henry David Thoreau. Lownes served as Membership Chair of the Recruiting Committee for EAIA from 1933 to 1936.

#### **Dr. Arthur Edwin Bye (1885-1969)**

**D**r. Arthur Edwin Bye of Doylestown, Pennsylvania, was an author and artist. A graduate of the University of Pennsylvania, he received a masters and doctorate from Princeton. He was a curator at the Philadelphia Museum of Art and taught at Lafayette College, Vassar College, and the University of North Carolina. He was also an art restorer and art dealer. He was the author of several books, most notably, *Bucks County Tales*, a collection of stories and sketches and *Pots and Pans: Studies in Still Life Painting*.

#### **Albert Bacheller Wells (1872-1953)**

**A**. B. Wells was born in Southbridge, Massachusetts. He is best remembered, along with his brother J. Cheney Wells, as a founder of Old Sturbridge Village in 1935. His family was connected with the American Optical Company, which flourished under Albert's father, George Washington Wells. A. B. Wells eventually became treasurer and later chairman of the board of the company; J. Cheney Wells was executive vice-president. A.B. is remembered for his passion for collecting the ordinary items of everyday life, both domestic and trade-related. By the time of the founding of Old Sturbridge Village, the collection included approximately 150,000 items. Early issues of *The Chronicle* reference the beginnings of the Massachusetts museum. The October 1946 annual meeting of the EAIA was held at OSV shortly after it opened.

The following article appeared in *The Chronicle* (2, no. 6, September 1938) announcing:

#### **Quinebaug Village**

An interesting project is on foot at Sturbridge, Massachusetts. We quote from the souvenir program of the Sturbridge Bicentennial, which was held on June 18th, 1938:

"It is proposed to incorporate an educational organization which shall construct and maintain a model New England village of about the year 1800 'Quinebaug Village' in Sturbridge, Massachusetts. This village will be built and run as nearly as possible as if it had been settled fairly early in the seventeenth century, and had a normally prosperous development throughout that and the ensuing century...Quinebaug Village will be open to the public and it is hoped that it will provide an educational experience of benefit to those members of the public who visit it—that from their visit they will come more fully to realize what New England civilization was and so what it has counted for, and to realize also that life here a hundred and fifty years ago was definitely worth living.

#### **Earle Templeton Goodnow (1888-1974)**

**F**rom Hartford, Connecticut, Earle T. Goodnow was an antique dealer with a particular interest in books. His friend, Lewis N. Wiggins, invited him to the initial meeting, and in the EAIA's twenty-fifth anniversary edition of *The Chronicle*, Wiggins described him as "...an intelligent collector of Early Americana..." (*The Chronicle*, 11, no. 3 [October 1958]: 25; Goodnow was incorrectly listed as deceased in that issue.) He served as the first treasurer and as secretary-treasurer from 1933 to 1936.

In early issues of *The Chronicle*, there was a regular feature, "Points of Interest." Mr. Goodnow made an interesting inquiry in vol. 1, no. 2 in 1934.

Earle T. Goodnow writes that in going over a number of invoices over a hundred years old, he finds that wholesale stores of the time listed many articles such as spike-gimlets, bradawls, files, jack-planes, frows, hammers, iron squares, gauges, chisels, etc., that must have been made in factories. The "Inventory of a Country Store of 1675" also lists these articles. We usually think of these things as being handmade. What is the answer?

Mr. Goodnow, his curiosity piqued, continued his research which resulted in the article "The Manufacture of Tacks, Brads, and Sprigs" published in the following issue and is reprinted on page 46.

#### **Edward Allan Rushford, M.D. (1883-1949)**

**E**dward Allan Rushford was a physician and achieved the rank of Major during World War I. He was the founder of the Rushlight Society in 1932, which is now known as the International Association of Collectors & Students of Historic Lighting. He wrote numerous articles in the early issues of *The Chronicle* and many members of the Rushlight Society became members of the EAIA. The first annual meeting of EAIA on September 1, 1934, at the Wiggins Old Tavern in Northampton, Massachusetts, was held in conjunction with the Rushlight Club. Dr. Rushford gave the lecture at this meeting. Rushford and fellow EAIA members Lawrence (Larry) and Mabel Cooke were included in Charles Leib's article "The Lighting Collectors Hall of Fame: A Personal Top Ten List of American Collectors and Their Collections" (*The Rushlight* 3, no. 3 [September 2007]: 2-12).

#### **Emma Fitts Bradford (1859?- 1937)**

**E**mma Fitts Bradford appears to have been an antiques dealer in Orange, Massachusetts. She specialized in pewter and early lights.

#### **Florence Virginia Paull Berger (1871-1967)**

"**W**hen Florence Paull Berger arrived at Hartford's Wadsworth Atheneum in 1918," wrote Tara Weiss in the March 10, 2000, issue of the *Hartford Courant*, "she found a languid museum that had just inherited more

than 1,000 objects from the recently deceased financier J. Pierpont Morgan.”

Florence P. Berger had begun her career at the Museum of Fine Art in Boston where she curated, among other exhibits of American decorative arts, *American Church Silver* with George Munson. After twenty years at the MFA, she became the first general curator at the Wadsworth. In 1951, at the age of eighty, she was named curator of textiles and costumes, a position she held until 1966 when she was named curator *emeritus*. Following her death in 1967, the Trustees created the Florence Paull Berger Curatorship of Textiles.

Weiss also noted in her article that “[Berger] pushed the museum to acquire American antiquities, such as silver and furniture from Colonial times, which weren’t part of the permanent collections before the 1910s.”

### Uriel Waldo Cutler (1854–1936)

Born in Holliston, Massachusetts, Uriel Waldo Cutler was the head of the Modern Languages Department at Worcester Polytechnic Institute. He was the president of the Worcester Historical Society at the time he joined EAIA. He is best known as the author of *Stories of King Arthur and His Knights: Retold from Malory’s “Morte d’Arthur.”* He also wrote *The First Hundred Years of the Central Church in Worcester, 1820–1920* and *Jottings From Worcester’s History*.

### J. C. Hood

Some research has indicated that “J. C. Hood, Chelsea, Vt.,” was one-time manager of the Hood Farm in Chelsea, Vermont, and a breeder of American Berkshire swine and poultry. Further research may uncover more information.

### F. L. Thomas

No information has been discovered about this founding member from Litchfield, Connecticut.

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*Not all of those who were invited to join the new association were able to attend the first meeting in 1933. Consequently, during the meeting, “[a]t Mr. Sprague’s suggestion, J. M. Connor, Jr., M.L. Blumenthal, Stephen H. Pell and Charles Messer Stow, who could not attend, were voted upon and admitted.” Notes about these individuals follow.*

### John M. Connor, Jr.

Little was found about the life of J. M. Connor, Jr., except for a reference in the Plainfield Public Library describing him as a Metuchen Banker and an authority on American antiques. He served on the board of the EAIA from 1942–1958.

### Charles Messer Stow (1880–1952)

Although he was not able to attend the first EAIA meeting, Charles Messer Stow, who was the antiques

editor of the *New York Sun* is credited with being one of the original members to whom the Association owes much of its success. John Davis Hatch, secretary-treasurer of EAIA in 1940, EAIA’s fifth president, and one of the earliest editors of *The Chronicle*, wrote in 1958,

The many contributions made by Charles Stow that contributed to the founding of the Association were as follows: it was Stow who suggested that S.C. Wolcott stop at Wiggins Tavern in Northampton, Massachusetts, and who suggested that W.B. Sprague and S.E. Gage of Litchfield turn up at the earliest meeting in Northampton. Charles Messer Stow provided the good natured “push” to his New York friend Bill Sprague to take leadership in forming EAIA. Mr. Stow provided the early list of collectors that was responsible for the wide-spread start of those invited to the initial meeting and because he was the writer of ‘*The Quester*’ column, (a nationally known Friday afternoon weekly hobby section on art and antique collecting) in the *New York Sun*, he invited many to become members of the new organization.

It’s been said that Mr. Stow liked to refer to EAIA as the “Pick and Shovel Club” because the thrust of the Association was to identify and preserve the common everyday tools of the home, hearth, and forge.

He also served on the boards of the New York State History Association, the American Scenic and Historic Preservation Society, the New York City History Club, and the Municipal Art Society and was a member of many arts and history organizations.

### Moses Lawrence Blumenthal (1879–1955)

Moses L. Blumenthal was involved in his family business, Blumenthal Brothers Chocolate, the company that brought us Goobers, Raisnets, and Snocaps. Blumenthal’s primary employment, however, was as an artist. He was a long-time contributor to *The Saturday Evening Post*, well into the 1920s). His illustrations also appeared in *Life*, *Metropolitan*, *The Ladies’ World*, *Sunday Magazine*, *Ladies’ Home Journal*, and *Collier’s*.

### Stephen H. P. Pell (1874–1950)

Stephen H. P. Pell was a founder of the Fort Ticonderoga Museum. He inherited the property on which Fort Ticonderoga stood and undertook its restoration. He was well known as a collector of cannons. A hero of the first World War he received the Legion of Honor from France and a Purple Heart. It was noted in *The Chronicle* (1, no. 3, March 1934) that Pell, along with others, provided additional financial support to the Association in its early days. He was also an active member of the American Numismatic Society, serving on its council and for a brief period as its president.

# EAIA Leaders: Durell, McMillen & Van Pernis

*The history of any successful organization is the story of the services and accomplishments of its devoted members.*

Loring McMillen, "The History of the EAIA," *The Chronicle* 11, no. 3, October 1958

Each of the previously compiled histories of the EAIA has included profiles of some of the leaders of note of the EAIA. Presented here are three members have not been noted in past histories but whose contributions to the organization deserve attention. The EAIA has been blessed with great leaders from its earliest days, but these three share two common bonds. First, all have written articles for *The Chronicle*, which, of course, endears them to the editor. And, while posterity will remember them for those contributions, their enduring gift to EAIA was not their shared interest in examining the past to record how things were done, why they were done, and who did them, but rather their vision of the EAIA's future. Edward Durell and Loring McMillen were both early members of EAIA and together they pushed for greater support by the EAIA of research and publication. In time, a Publications Committee was formed resulting in significant contributions to the field. Over the years, the success of the program evolved to include grants-in-aid for researchers, which resulted in articles in *The Chronicle* and in some cases the publication of books. When Paul Van Pernis joined the EAIA board, he recognized that to ensure programs like the grants-in-aid would continue, the Association needed to plan for its future. And he got to work.

As Loring McMillen pointed out, EAIA's success is the story of members' services and accomplishments. Twenty-five years have passed since the last time profiles of EAIA leaders were published. We plan to continue documenting the contributions of these leaders in future issues; send your suggestions for profiles to editor@earlyamericanindustries.org. Editor

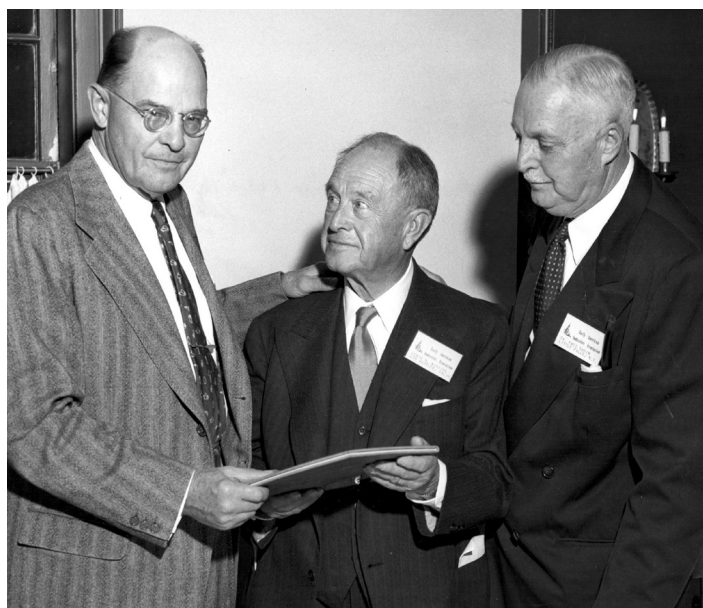
## George Edward Durell (1894-1988)

*Edward Durell was among the new members listed in the January 1936 issue of The Chronicle. He was the sixth president of the Association, serving from 1947 to 1955, longer than any other president and is generally credited with keeping the group alive during the difficult years following World War II. He was the driving force behind the EAIA's first publication in 1964, Conestoga Wagon 1750 -1850. Raymond Townsend wrote a remembrance of Durell at the time of his death, and it is reprinted below.*

He never considered himself a joiner. He said, "I join a group if I can make a worthwhile contribution." He was an active member of the Board of Trustees of the Ohio Manufacturers Association, the Ohio Chamber of Commerce, and the American Foxhound Association, cofounder and past master of the Rocky Fork-Headley Hunt Club of Columbus, he was also a member of the Blue Ridge Hunt Club of Clarke County, the Columbus Club, and the Princeton Club of New York. In addition, he founded the George Edward Durell Foundation in Virginia.

A little known fact about Ed's life, particularly by newer generations, was that he developed a severe case of glaucoma that resulted in very defective vision. However, this handicap was overcome by having his lessons read

to him. Not only did he excel academically but, while at Princeton, became editor-in-chief of the *Princeton Pictorial Review* and was a 2nd Lt. in the National Guard. When his unit was called up for active duty in World War I, Ed was able to "wangle" an OK to serve. He became a Cavalryman which led to his love for horses and his very active



Edward Durell, Lewis Nobel Wiggins, and Fred Sabin, M.D., in 1958.

participation in fox hunting. Yet, with all the overcoming of handicaps and his activities as well as his business involvements (he was Chairman of the Board and CEO of the Union Fork and Hoe Company), he found time to serve our Association in so many ways and in such an outstanding manner!

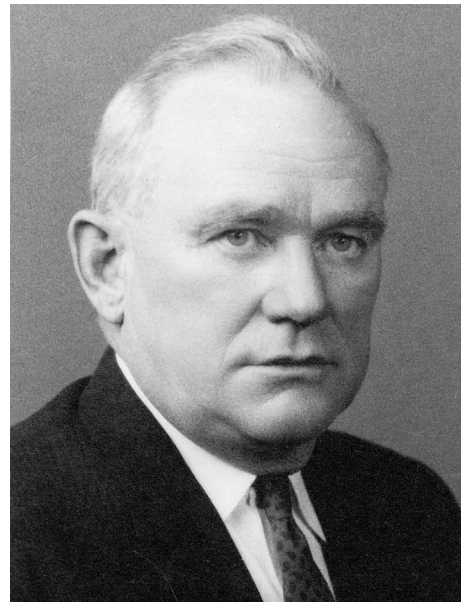
At his fiftieth college reunion at Princeton, he and his classmates were asked to write an account of what had given them their greatest pleasure and satisfaction over the years. Ed wrote about EAIA. Through the pages of *The Chronicle*, in the newsletters and meeting minutes, we find Ed always ready to give suggestions he thought would further the aims and ideals of the Association's founders. He always understood that the organization belonged to the members and often requested that they let him know what kind of meetings, speakers and subjects they wanted. He was always seeking constructive suggestions for the betterment of the Association.

He did all in his power to increase the active membership, reminding members that "the Association will be just as helpful and interesting to you as the work you put into it, and the more people you interest in joining it the more your pleasure will be increased." He was constantly prevailing on members to submit articles to *The Chronicle*. Ed was well aware of the great amount of knowledge most of our members have concerning tools, implements and utensils, and in later years, he formed what he entitled "T.O.T."—Tap Our Talent, to better utilize the group's natural resources. He stressed the need for larger membership and noted the importance of forming more regional groups of tool and implement collectors. He pleaded for members to do more for school-aged children with exhibits and instruction on the use of the tools displayed. Under his auspices, the first auction was held which was considered very successful, having raised over \$1,000.

At a directors' meeting in September 1980, it was pointed out that Ed Durell was about to turn eighty-five years of age. Wishing to acknowledge the fact that it was largely due to his determination and dedication that EAIA was sustained in its formative years, the Board of Directors declared him president *emeritus*. It further directed that the tool directory project be dedicated in his honor as a fitting tribute to the man who established the publication program and brought to fruition its first book, *Conestoga Wagon*.

At the Association's fiftieth anniversary, he was awarded the EAIA Fellows Award with these words: "Edward Durell, whose life work and interest have echoed the purpose of the Early American Industries Association ... " He was a most remarkable man!

*Raymond E. Townsend*



*Loring McMillen*

### Loring McMillen (1906-1991)

In 1958, Loring McMillen was assigned to write the history of the first twenty-five years of the EAIA (see *The Chronicle* 11, no. 3, October 1958). What luck for the EAIA! The Association could not have found a better candidate for the job, and McMillen took advantage of assignment, using it to push the EAIA to carry out its mission through a significant new direction. He had joined EAIA in 1934 and later served as director as well vice-president. By the time he undertook the EAIA history assignment in 1958, he was considered one of the most influential authors of local history and his efforts for the EAIA are a testament of his talents.

The role of historian was not Loring McMillen's day job at the time, but it was his passion. He was born on Staten Island, in Castle Corners in 1906. A civil engineer—he had graduated from Union College in Schenectady—he worked for almost four decades for New York Telephone retiring in 1966. During that time, he studied architecture at Columbia and volunteered at the Staten Island Historical Society. In 1934, after his successful efforts two years earlier to save Richmond County Clerk's and Surrogate's office from the wrecking ball, he was named Staten Island's official historian. It was an unpaid position, but as a *New York Times* reporter wrote in a feature on McMillen in 1988 ("Man for the Ages on Staten Island," August 21, 1988),

Mr. McMillen set precedents for the post. He saved the work of Alice Austen, the nineteenth-century photographer of New York Harbor, from the hands of a junk dealer. He also founded and developed the Richmondtown Restoration, a 100-acre historical village and outdoor museum of seventh-, eighteenth-, and nineteenth-century houses on central Staten Island, the only one of its kind in New York City.



He worked with other history organizations as well. In 1943, he was instrumental in the craft displays at the nascent Farmers Museum in Cooperstown, New York (see “Loring McMillen: Preservationist and Public Historian” by Charles Sachs, *Staten Island Historian*, 1991). In 1962 he was named to New York City’s Landmark’s Preservation Commission—one of its original members.

That list represents just a few of his volunteer efforts in historic preservation, and those efforts, especially those involving Staten Island Historical Society, did not go unnoticed. A year after retiring from New York Telephone, he was named executive director of Historic Richmond Town on Staten Island, a position he held until 1976. The formation of Historic Richmond Town was a goal he had pursued for thirty years. Amazingly, he was engaged in all of this work while working full time and raising a family. (His involvement in the EAIA rubbed off on that family. His son, William “Bill” McMillen, and Bill’s wife Judy are both active members of EAIA. Bill and Judy each served on the board, and Judy was EAIA’s first female president.)

McMillen was prolific writer. Staten Island and New York City history were his focus, but fortunately *The Chronicle* was often the beneficiary of his talents; see for example “Sandpaper” (*The Chronicle* 8, no. 2 [April 1955]: 17-18). There were also articles on museum practices and restoration in general, including a two-part article “Dating Old Buildings” for *The Chronicle* (3, nos. 17 and 18 [October 1948 and January 1949]; see page 42) and “What’s Its,” a plea for expanding the documenting of the past to include not only articles but also a vigorous publications program (“What’s Its,” *The Chronicle* 8, no. 3 [July 1955]: 31).

Probably among the last things he wrote was a letter to the editor to the *The Chronicle* (44, no. 1 [March 1991]: 31). Typical of many letters of the period, McMillen drew attention to an item that at one point was common in everyday life and that should receive additional study before it disappeared entirely.

To The Editor:

Signs used by merchants can be a fascinating study. As documentary evidence of certain aspects of times past, they can sometimes also afford us bits of information not to be found elsewhere. A special sort of sign, an outsized representation of some object used as a symbol for a particular kind of business, must have begun to be used long, long ago when few people could read. The convention has hung on however, and even today it is possible to find an occasional sign-symbol of this sort exhibited outside a shop. Such signs must have been quite common in times past. As emblems of early American industries these old timers deserve our attention.

(This letter on store signs generated several responses as well as a plea from the editor who thought that it would

make a wonderful subject for a full article, none was forthcoming. The plea remains in effect.)

As significant as his work as historian and researcher was, however, his greatest impact on the organization was his vision for the organization’s future. In 1958 he concluded his recounting of the EAIA’s history with these thoughts:

As the first quarter-century of the Association’s existence draws to a close and we appraise the work which has been accomplished, we have cause for both satisfaction and uneasiness. *The Chronicle*, an active Association devoted to preserving the tools and traditions of our ancestors, and collections, private and public, are causes for satisfaction. However, on the side of uneasiness, the splendid articles in *The Chronicle* and Dr. Henry C. Mercer’s book, *Ancient Carpenters Tools* still stand as the sole scholarly writings concerning the tools of our Early American Industries. Apart from the splendid collections and the Museums which house them and which are the work of private philanthropists such as Henry Ford, Albert Wells, John D. Rockefeller II, Stephen C. Clark, Dr. Henry C. Mercer, Mrs. J. Watson Webb, and Roscoe Smith, the bulk of the work in preserving our industrial history is in the hands of unpaid volunteers. As admirable as this amateurism may be it is not preserving our industrial history as rapidly as it is being destroyed. A report of a large Foundation lists grants for fellowships to study various cultures abroad for vocational and crafts training in far-off India and Iran... However, no grant is listed to study and record the vanishing tools and industries of America or their origins in England and Continental Europe. This is the cause for uneasiness, and as we look forward to our next twenty-five years we might well seek a remedy.

His comments were taken to heart by EAIA leadership and by 1966, the EAIA was funding researchers and writers. The first recipient was Raphael Salaman; the EAIA supported him in the research for *Dictionary of Woodworking Tools*. This endeavor led to the establishment of a fund to be used for grants to promote scholarship to be published by EAIA. Other recipients were William Goodman for *The History of Woodworking Tools and British Planemakers from 1700*, and Ken and Jane Roberts’s *Planemakers and Other Edge Tool Enterprises In New York State in the 19th Century* (see: “Sixtieth Anniversary History 1933-1993,” *The Chronicle*, 51 supplement [1998]). EAIA’s publication program, accomplished on occasion in partnership with other institutions and organizations, was extensive. (See the full list on following pages.) By 1977 these undertakings had evolved into the EAIA grants program another Loring McMillen accomplishment, just as he had envisioned his earlier article, “Whats Its,” when he made a plea to the membership:

In brief, we have made great progress in preserving our vanishing early American industry, yet this progress consists mostly of accumulations of tools or exhibits displayed



*Executive Director John Verrill and EAlA Past President Paul Van Pernis.*

for recreational or entertainment purposes. What is needed is a more thorough and scholarly approach similar to that which is brought to bear upon the ancient cultures.

*Patty MacLeish*

### Paul Van Pernis

Why do membership organizations succeed? A group of individuals with like-minded goals may managed to hold a group together, but the sustainability of an organization needs more than “like-mindedness”; it requires, to use the cliched phrase, “time, talent, and treasure.” For most of the life of the EAIA, members happily gave of their time and talent. In the early 2000s, the EAIA, however, had had several years of budget deficits and was dipping into its reserves. Luckily, Paul Van Pernis was elected to the board. He understood that as much as individuals might love an organization like the EAIA, its operations, programs, and publications needed to be put on a sound financial footing. He saw that the “treasure” part of those three “Ts” needed more attention.

In October 2004 that the EAIA board passed a resolution to establish an endowment with Paul at the helm. The purpose of the new fund was to provide “members and friends the opportunity to make charitable gifts to the Early American Industries Association. These charitable gifts will become a permanent endowment of financial support for the Early American Industries Association.”

Paul, Executive Director Elton Hall, and committee members Jim Bovay, Bill Brooks, Bill Curtis, David Parke, Don Riley, and Don Rosebrook went to work. Its initial goal of \$250,000 was modest—way too modest time would

show. Paul was relentless. Not an issue of *Shavings* was published without a plea from Paul coaxing members to join the effort with a gift.

Although in line to become president in 2009, he stepped away and chose instead to run again for the board so he could see the endowment project through. By 2009, in spite of the recession of 2008, with sustained giving from many members and several large bequests from others that first goal was met. In 2015 the endowment surpassed \$500,000, and then in 2017, thanks to a bequest of \$230,000 by EAIA member Avrum Silverman, the endowment reached \$700,000.

Having seen the early goals of the endowment fund come to fruition, Paul could have stepped back. After all, he was a practicing physician in Wisconsin, until he retired in 2015, and had helped update the EAIA bylaws and the policy and procedure manual. He also spearheaded the planning of several annual meetings beginning in 2011 (and along with his wife Eileen, he has remained an invaluable member of the annual meeting committee). However, Paul returned to the office of first vice president and on track to begin his term of president in 2013.

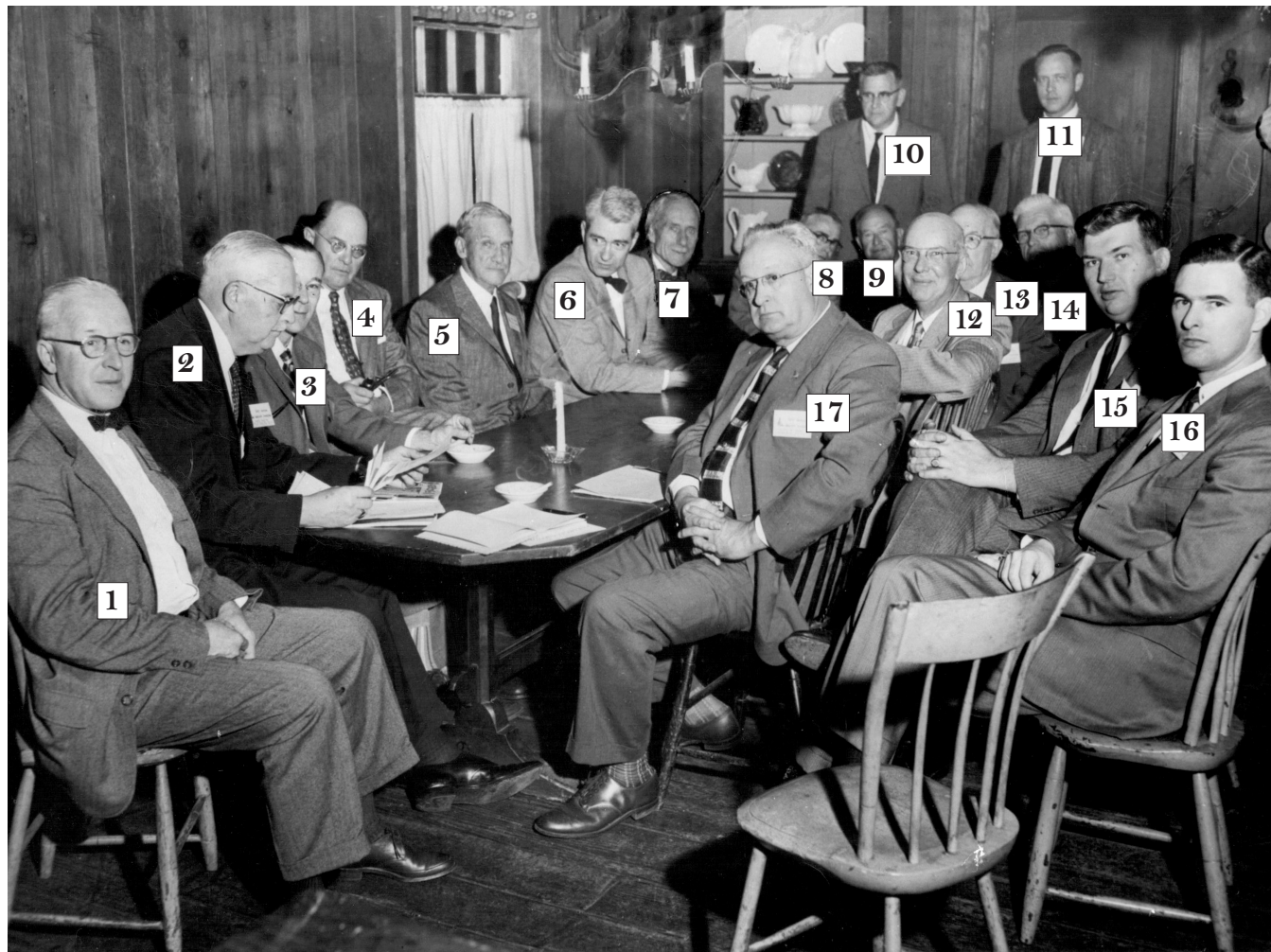
Reviewing this list of accomplishments, it appears that with Paul it’s all work and no play, but he is not a dull boy at all. In fact, he is a very joyous, enthusiastic boy, as anyone who has met Paul at an EAIA event or an annual meeting can attest. He is an avid collector, especially of the planes of Leonard Bailey, Charles Miller, and Stanley Plane & Level, although Eileen claims he’ll collect any old tool he can get his hand on. He also writes regularly for the EAIA blog and *The Chronicle*. The membership showed its appreciation of his work in 2017 when he was given the Long-Time Service Award.

Nobody likes raising money or updating bylaws and manuals (most don’t even like reading them), but Paul did it. Why? The statement Paul wrote when his was running for the board in 2009 explains it all.

EAIA has always given me more than I’ve given to it, The wonderful programs in interesting places, continuous learning through programs and publications, and most of all the opportunity to enjoy the friendship and mutual interests of a wonderful group of people who I would have never met without being in EAIA. I want to continue to help EAIA become a better organization.

Paul’s foresight and willingness to work on projects he knew were important to the EAIA’s future has put it on a sound footing, guaranteeing that the programs and events Paul so treasurers will be around for eighty-five more years at least. In one of his early pleas to members, Paul quoted Winston Churchill, “We make a living by what we get; we make a life by what we give.” Paul has made a life by giving to the EAIA.

*Patty MacLeish*



*The EAIA Annual Meeting in Dearborn, Michigan, in 1958. It was at this meeting that a decision was made that “now it should be our purpose to record the history of these tools outside the medium of our own Chronicle” and thus marks the formation of the Publications Committee. In attendance here are: 1. Sanger Atwill; 2. Fred Sabin; 3. Minor Cooper; 4. Ed Durell; 5. Bill Reddick (?); 6. Lawrence Cooke; 7. Sam Lessey; 8. Minor Wine Thomas (?); and 9. Lewis N. Wiggins; the handwritten key on the back of the photograph is difficult to decipher, but the remaining individuals are listed in the following order: Ray Townsend, John Still, Larry Johnson, Archie Keillor, Oscar Payne, Joe Rake, Charles Van Dover and John Fox. Matching the names to the photograph is difficult. Please contact the editor with further information.*

## Publications of the Early American Industries Association, 1964 – 2018

*Conestoga Wagon, 1750–1850*, by George Shumway, Edward Durell and Howard C. Frey, 1964.

*Planemakers and other Edge Tool Enterprises in New York State in the Nineteenth Century*, by Kenneth D. and Jane W. Roberts, published in cooperation with the New York State Historical Association, 1971.

*Illustrations of Trades*, by Charles Tomlinson (London: Society for Promoting Christian Knowledge 1860) reprinted by EAIA in cooperation with Old Economy Village, Pennsylvania

*H.H. Harvey’s Special Illustrated Catalogue for 1896–7, Marble and Soft Stone-workers Blacksmiths and Contractors’ Hammers and Tools, manufactured by him in Augusta, Maine*, reprinted by EAIA in 1973.

*T.B. Rayl & Co., Wood-Workers Tools, Detroit Tool Depot,*

(circa 1885–1889), re-printed by EAIA 1973.

*Explanation or Key, to the Various Manufactories of Sheffield, with Engravings of each Article*, by Joseph Smith; edited by John S. Keabian, 1975.

*Mechanick Exercises or the Doctrine of Handy Works*, by Joseph Moxon, 1678. Reprinted with an introduction by John S. Keabian, 1975. Also reprinted with Astragal Press in a limited edition, 1979.

*The Stanley Plane, A History and Descriptive Inventory*, by Alvin Sellens, 1975.

*The Chronicle*, Volumes 1–11, reprinted, 1976.

*Wheeler, Madden & Bakerwell’s Illustrated Price list of Patent Ground Circular, Mill, Cross-Cut, Hand, Panel and Rip Saws, Butcher’s Bow Saws, Back Saws, Wood Saws, Felloe and Turn-*

ing *Webs and Plastering Trowels*, 1976

*C.S. Osborne and Co., Newark, New Jersey Catalog*, c. 1890. Catalog reprinted in cooperation with The Mid-West Tool Collectors Association and The Early Trades and Crafts Society, 1976.

*Catalogue and Price List* Joshua Oldham, New York, U.S.A., 1976

*The Wooden Plane*, by Richard A. Martin, 1977.

*A Bibliography of Tools* by R. A. Salaman, 1978.

*A Catalogue of Tools for Watch and Clock Makers*, by John Wyke of Liverpool (circa 1770). Reprinted in cooperation with the Henry Francis DuPont Winterthur Museum, 1978.

*Jedediah North's Tinner's Tool Business* by John Demer, 1978.

*The Saw in History*, by Henry Disston and Sons, 1926. Reprinted in cooperation with The Mid-West Tool Collectors Association, 1978.

*Thomas Grant, Ironmonger*, by Daniel Semel. Published in cooperation with Fraunces Tavern Museum, 1978.

*Tools for all Trades* by Hammacher, Schlemmer & Co., 1896. Reprinted in cooperation with The Mid-West Tool Collectors Association, 1978.

*Tools Used in Building Log Cabins in Indiana* by Warren E. Roberts, 1977. Reprinted in cooperation with The Mid-West Tool Collectors Association, 1978.

"R. J. Allen, Son & Company: Tubular Lanterns, Street Lamps, &c., 115 Arch St., Philadelphia, Penn." Philadelphia, Pennsylvania: R. J. Allen, Son & Company, 1880? Reprinted as a supplement to *The Chronicle*, 1979.

"List of Prices, of Tin & Sheet Iron Workers' Machines: Manufactured by A.W. Whitney, Woodstock, Vermont." Reprinted as a supplement to *The Chronicle*, 1979.

*American Mechanical Dictionary* by Edward H. Knight, 1881. Reprinted in cooperation with The Mid-West Tool Collectors Association, 1979.

"Price List," William Marples & Sons, Limited, Sheffield, 1909 Edition. Reprinted in cooperation with The Mid-West Tool Collectors Association, 1979.

*Hirth and Krause Leather and Findings Catalog*, 1890. Reprinted in cooperation with The Mid-West Tool Collectors Association, 1980.

*Hynson Tool & Supply Co. Catalog No. 52*, 1903. Reprinted in cooperation with The Mid-West Tool Collectors Association, 1980.

Joh. Weiss & Sohn *Werkzeugfabrik in Wien*: Ausgabe 1909. Austrian catalog reprinted in cooperation with The Mid-West Tool Collectors Association, 1980.



Two EALA publications.

Above. *A Pattern Book of Tools and Household Goods*.

At right, Paul Kebabian: *Writings on Tools & Toolmakers*. A *Pattern Book* is in print; copies of the Kebabian book can be found at book dealers.

*À La Forge Royale Fabrique d'Outils Montés a Travailler Le Bois, Féron & Cie, Successeurs del Lemainque* (At the Royal Forge, Manufacturer of Finished Tools for Working in Wood, Féron & Cie, Successors to Lemainque), 1927. Translated by Seth W. Burchard and published in cooperation with The Mid-West Tool Collectors Association, 1981.

*The American Axe and Tool Co.*, c. 1894. Reprinted in cooperation with The Mid-West Tool Collectors Association, 1981.

*Disposing of a Tool Collection*, by Ivan C. Risley. Reprinted in cooperation with The Mid-West Tool Collectors Association, 1981.

*Jan Van Vliet's Book of Crafts and Trades*, a portfolio of reproductions of etchings done in 1635 with a reappraisal by Harry Bober, 1981.

*Popular Technology, or, Professions and Trades (Hazen's Panorama)*, by Edward Hazen, 1846; reprinted, 1981.

*Practical Carriage Building*, compiled by M.T. Richardson in 1892. Reprinted in one volume, 1981.

*Appleton's Cyclopedia of Applied Mechanics*, vols. I & II plus supplement, c. 1880. Reprinted in cooperation with The Mid-West Tool Collectors Association, 1982.

D. Stolp *Gereedschappen*. catalog, c. 1915, translated by Seth W. Burchard. Reprinted in cooperation with The Mid-West Tool Collectors Association, 1982.

*The Chronicle*, Volumes 12-26. Reprinted, 1983.

*Illustrated Book of Stoves Manufactured by Vose & Co.*, 1853. Reprinted, 1983.

*A Treatise on Files and Rasps, Descriptive and Illustrated: for the Use of Master Mechanics, Dealers &c. in Which the Kinds of Files*

CONTINUED NEXT PAGE

*in Most Common Use, and the Newest and Most Approved Special Tools Connected Therewith, are Described—Giving Some of Their Principal Uses. With a Description of the Process of Manufacture and a Few Hints on the Use and Care of the File*, 1878 (Nicholson File Co., Providence, R.I.). Preface by John S. Keabian, 1983.

*Thomas Napier, The Scottish Connection*, by Alan G. Bates. Published in cooperation with The Mid-West Tool Collectors Association, 1986.

*Directory of American Tool Makers*, working draft edition, edited by Gene Kijowski, 1990.

*The History of the Woodworking Plane*, by Josef M. Greber, 1956. Translated by Seth W. Burchard, 1991.

*Directory of American Toolmakers: A Listing of Identified Makers of Tools Who Worked in Canada and the United States*

*Before 1900*. Robert E. Nelson, ed., 1999.

*Paul Keabian: Writings on Tools and Toolmakers*, forward by Ted Ingraham, 2003.

*A Pattern Book of Tools and Household Goods*, Introduction by Jane Rees and Elton W. Hall. Published by The Early American Industries Association in cooperation with the Peabody Essex Museum, 2006.

*The Directory of American Toolmakers*, a CD version of the 1999 edition of *The Directory of American Toolmakers*, Robert Nelson, editor, 2007.

*The Chronicle*, Volumes 1–60 (1933–2007) a DVD containing the first sixty volumes of *The Chronicle*, 2009.

*Stanley Woodworking Tools, The Finest Years*, by Walter Jacob, 2011.

## Recipients of the J.D. Hatch and Long-Time Service Awards

In 1993, EAIA established two awards to provide recognition to those individuals who have served not only the EAIA, but additionally those individuals who have advanced the mission of EAIA through their scholarly writing. By granting these awards, the EAIA chooses to recognize those whose outstanding contributions of time, effort, and research have enabled the EAIA to better serve its members and to increase the knowledge and understanding of early American industries.

Candidates for the Long-Term Service Award should have demonstrated a high level of commitment with at least ten years of service to EAIA. The recipient shall have contributed a substantial amount of time, effort, and creative imagination to EAIA and shall have established a record of effective participation in the affairs of the Association.

J.D. Hatch provided more than fifty years of service to the EAIA. He was editor of *The Chronicle* from 1942–1949 and served at the fifth president of EAIA from May of 1946 to May of 1947. Winners of the J.D. Hatch Award are individuals who have demonstrated excellence in the advancement of general knowledge of early American industries through scholarly writing in articles, books or public presentations consistent with the mission of the EAIA.

Year	J.D. Hatch Award	Long-Time Service Award
1993	Charles F. Hummel	Raymond Townsend John S. Watson
1994	William Sprague Charles Stow	William K. Ackroyd Ivan C. Risley Daniel M. Semel
1995	Kenneth D. Roberts	Alan G. Bates J. Lee Murray

Year	J.D. Hatch Award	Long-Time Service Award
1996	Emil & Martyl Pollak	Ruth Hyde Paul B. Keabian
1997	John S. Keabian	David V. Englund Daniel B. Reibel
1998	Roger K. Smith	Bud Brown
1999	John M. Whelan	Gene Kijowski Robert Nelson
2000	Donald & Anne Wing	Carl Bopp James M. Gaynor Frank G. White
2001	Mark & Jane Rees	Philip A. Cannon, II Kathy Fox Jack Gorlin
2002	Walter W. Jacob	Arlene Kendra David L. Parke, Jr.
2003	Paul B. Keabian	Louise Muse James L. Packham
2004	Elliott Sayward	William & Judith McMillen Terry L. Hansen
2005	Frank White	Peter J. Hathaway Gordon & Linda Stanton
2006	Alvin Sellens	Jim Bovay Robert & Chris Kozakiewicz
2007	Thomas C. Lammond	Jane Rees
2008	Milton H. Bacheller, Jr.	J.B. Cox Andrew A. D'Elia
2009	Donald Rosebrook	Kenneth Culnan George T. Lott
2011	John G. Wells	
2012	Philip E. Stanley	
2015	Tom Elliott	
2016	<i>no awards</i>	
2017	Thomas Kelleher	Paul Van Pernis William L. Curtis

# Collectors and Their Influence

by Erik Goldstein

Collectors as a bunch are funny people. Driven by lust towards the next acquisition and its endorphin rush, we're also prone to a litany of benign quirks. We are exuberant and love to discuss our "stuff" with others of the same affliction, or in the absence of such a soul, someone who is polite enough to feign interest. Perhaps our greatest virtue is a strong feeling of benevolence towards fellow accumulators, students, connoisseurs and those who have yet to be.

As a curator at Colonial Williamsburg, I'm really just a professional collector, one who actually gets paid to spend someone else's money on all sorts of wonderful old stuff. Wow! I am also keenly aware of how lucky I am, and of the obligations that come along with these responsibilities.

The road to the desk I occupy began when I was four or five years old, and I've accepted more than my fair share of "passed torches" along the way. Of the many mentors I've had and still have, one in particular stands out. Not for his unbridled generosity, his finely-honed collecting eye or his endearing personality. It was his core belief that it is a privilege to acquire bits and pieces of America's past, alongside the information which contextualizes them. Joe believed there is no worthier purpose for a carefully assembled collection than its use as an educational tool. Thus, when he'd invite me to New York for a quick lunch, I knew I'd be flying home with a pocket of treasures worth years of my salary. Handed to me over a turkey sandwich and a knish, he'd smile widely and quietly instruct me to "use them" with the goal of "paying it forward."

When Patty MacLeish asked me to write the introduction to this section of the EAIA eighty-fifth anniversary publication, I immediately thought of Joe, and what he stood for. For inspiration, Patty provided me with copies of past articles from *The Chronicle* written by and about some very prominent toolies. After reading them, it was apparent that EAIA has many extraordinary "Joes" too.

Two of the patriarchs of EAIA were voracious collectors, and clearly of this same mind-set. One of the first things Jay Gaynor told me about, after I succeeded him as the guy responsible for Colonial Williamsburg's tools, was the famed Wolcott collection. Wolcott, *The Chronicle's* first editor, was also the secretary of EAIA until his passing in 1933. His 2,577 items, donated in 1936, formed the basis of the Foundation's collection of antique tools and was the seed from which the much-touted Historic Trades program grew.

William B. Sprague, the founder of EAIA, donated his extensive tool collection to The Farmers' Museum in Cooperstown, New York, in 1942, right before his untimely death.

In reading about the man, I find I have much in common with him. Also a native of Flushing, NY, I was born at the very hospital Sprague served as a Board member, and like him, once collected stamps too. Additionally, I can trace my "roots" right back to him. In the pre-War years, Sprague influenced a twenty-something year old Staten Islander named Loring McMillen, who served as EAIA's Vice President for more than two decades. This fellow was the father of our very own Billy McMillen, who is my mentor, though I'm just one of throngs who would proudly make that claim. Wolcott, Sprague, and McMillen the elder were also focused on the collection of specific categories of knowledge, for the benefit and enjoyment of any interested party. It is through the efforts of such folks that EAIA has thrived since the early 1930s, and we are all much the better for it. By bringing the tools of the past to the forefront and linking them to all-but-lost technologies, we collect and preserve our mechanical and industrial heritage in an incredibly enriching fashion. The presentation and sharing of such is also where the fun really begins, and these three gents knew it as well as we do.

For the better part of a century, the Early American Industries Association has been the communal glue which bonds us together, be you a tradesman/woman, collector, student, hobbyist, scholar, or all of the above. Our members have generated volumes upon volumes of published work, built and shared monumental collections, and advanced the ball of knowledge leagues down field. As we stand on the shoulders of past and present scholars, collectors and philanthropists in our common pursuit, we should never lose sight of the responsibility which comes with it; to pay it forward.

Looking towards EAIA's next eighty-five years, what can you do to honor and promote this fine avocation we all enjoy so much? Continue collecting and learning about ancient tools and the technologies which required their use. Talk to your EAIA friends frequently, and fuel their enthusiasm for this stuff, just as their fuel yours. Enlist new folks. Ask many questions. Visit and support museums which cater to these interests. Look for a scholarly void in an area of keen interest to you personally, and then consider crafting a way to fill it. I'm sure *The Chronicle's* editor, your EAIA friends, and those destined to follow your path in coming decades will be grateful you did!

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*EAIA member Erik Goldstein, Senior Curator of Mechanical Arts and Numismatics, the Colonial Williamsburg Foundation*

# My Life with Walter

by Suzanne Fellman Jacob

*For close to two decades as editor of The Chronicle, I have had the privilege of working with some very interesting and knowledgeable men and women. Perhaps I should not have favorites among them, but were I permitted, one would be Walter W. Jacob. We have worked together for almost twenty years and he was always happily answer my queries and accept recommendations for edits. I was also honored to serve as his editor on the book Stanley Woodworking Tools: The Finest Years. "My life" with Walt has been enhanced by the author of this piece, Suzanne Fellman Jacob, who originally wrote this essay as the introduction to that book. She became a dear friend in her role as the go-between and computer-savvy member of the Stanley Tools team. Sue is a fine writer herself. Her article "Corn Husking Pegs" appeared in The Chronicle (59 no. 2) and she is the author of The History of Joanna Furnace, 1791-1999. Suzanne shares here the story of how Walt, along with his brother Charles, became a collector of a type of tool that in the 1960s and 1970s was not as popular an item among collectors as the tools of the eighteenth century.*

Walter W. Jacob began collecting Stanley tools in the late 1950s. A Stanley catalog offer found in the back of *Popular Mechanics* started Walt and his twin brother, Charles, on a lifetime adventure of using, collecting, and researching Stanley tools and sharing their knowledge with others.

By the time he was in his teens, Walt knew he had a talent for woodworking, which required the use of numerous hand tools, which in turn added to the need to fill his growing tool bin.

Any extra money he made or saved from his allowance was spent at a Coatesville, Pennsylvania, hardware store that sold Stanley tools. But it was that no. 34, 1958 catalog advertised in *Popular Mechanics* that started it all. The catalog included all the Stanley planes available at that time. The brothers were determined to have one of each of the types. But as they scoured flea markets, they discovered variations on the planes, which required more research, which meant obtaining more planes. And the cycle began.

Walt graduated from West Virginia University with a B. S. in wood industries from the College of Forestry—a perfect complement to his talent for woodworking and his collecting passion. After college, Walt and Charles began their business, Jacob Brothers, which became known for antique repair and restoration work, using original hand tools. Every Saturday and Sunday morning, they would travel to flea markets and farm auctions, where they could



*Walt Jacob with an eighteenth-century Chester County, Pennsylvania-style spice chest that he designed and made using Stanley tools.*

SUZANNE FELLMAN JACOB

purchase many Stanley tools for a song. At the time—the 1960s and 1970s—most people were interested only in “American Colonial” tools such as wooden planes and goose-wing axes, but not Stanley tools. Many a Sunday the brothers would fill their decrepit old station wagon with dozens of Stanley tools purchased at bargain basement prices. People snickered behind Walt’s back for many years. Stanley tools were just not a good investment.

They visited many old hardware stores in a three-state area. These were the days when there were phone booths, and phone books in those booths. The Jacobs would pull into a town and check the Yellow Pages of the local directory under “hardware.” If a hardware store was listed at 11 Main Street or 2 Front Street, they would make a visit under the assumption that the store had to have been located in the center or earliest part of the town for years. Seldom was that assumption incorrect. Upon entering the store, they would find Stanley boxes piled on the top shelf. They would be full of dust and dirt because they were old, unwanted items, and usually the “old, unwanted items” took a ride in that station wagon to join the Jacob collection.

Some of the stories of how specific tools were obtained are laugh-out-loud funny. Two of the nicest Miller patent plow planes in the collection were purchased at a farm auction. A.M. Beidler, a well-known and popular tool collector and dealer from Philadelphia, was also at that auction. Beidler made it known that he was going to bid on the Miller patent planes, and Walt knew Beidler had very deep pockets. But minutes before the planes were to be

placed on the auction block, a Pennsylvania state trooper entered the grounds and announced that anyone parked on the road would be ticketed. Beidler had to hurry back to his car and moved it. By the time he returned, the planes had been hammered down and had become part of the Jacob collection. Beidler, after grinding his teeth for a while, was gracious in his congratulations to Walt and his brother.

And the collection grew from planes to screwdrivers to miter boxes, to drills, braces, saws, Zig-Zag rules, measuring tapes, levels, and hammers. And each time some new type of tool was added, research was required. The research required old Stanley catalogs and ephemera, and more items were added to the collection. Along the way, as the years passed, other people began collecting Stanley tools. It was a small, tightly-knit fraternity that other tool collectors tolerated. Walt and his brother became experts, and other tool collectors began going to them with questions. In 1996, John Walters published the reference, *Stanley Tools Identity and Value*. The value of Stanley tools was rising, and over the years there were many exciting tales of purchases missed or obtained as others discovered all things Stanley.

The story of an early Stanley plane that made it into the Jacob collection is one of many. At a Saturday farm auction on an early February day that was bitterly cold with a nasty wind blowing, Walt arrived with sandwiches and a thermos of hot chocolate and found a good parking spot. He reconnoitered the sale and then returned to the car, opened his Walters book, and identified the plane type that he wanted to bid on. Walt figured the tool would be sold early in the auction because of its position on the auctioneer's block. When the tool came up for sale, the auctioneer opened the bid at \$3. Walt waited until the plane was almost sold before he jumped in with a bid. It hovered at a low, reasonable price of about \$80. Walt almost had



*The earliest known Leonard Bailey no. 9 cabinetmaker's block plane, probably produced by Bailey in Boston before 1867. This plane caught Walt Jacob's eye at an auction and he was able to add it to his collection.*

WALT JACOB

it for his own, when a fellow tool collector turned to see who was going to get this dirty, ugly, rusty plane. When he did, the bidding began anew. Walt would eventually walk out with the plane [a Bailey no. 9 block plane that Walt discusses in *Stanley Woodworking Tools: The Finest Years*] but only after paying a four-figure price that left the auctioneer in shock. After the gavel rapped out sold, the auctioneer turned to one of the auction runners and said into an open mike, "What the hell was that?"

By the time I met Walt in 1986 (we "dug each other up" at an archaeology convention in Delaware), the Jacob collection had its own "tool room" in the Jacob family home. It was there in October 1987, on our second date that I was reverently introduced to the collection. I had never met anyone as passionate about inanimate items and the story behind each one as Walt was about the planes he showed me that night. He commenced at the top of four shelves, each of which was about twelve feet long. And down the line we went. He'd say "This is the best" or "This is really unique" as he took each plane off the shelf. Walt took the planes apart and showed me blades, adjustments parts, and casting differences. By the end of row two, my eyes had glazed over, my feet ached from standing, my cheeks hurt from smiling for so long, my neck needed an aspirin from nodding in total (mis-) understanding at everything Walt said, and my lower back throbbled from peering at the planes because at that point in our relationship, I wasn't allowed to touch them since Walt didn't know how much natural grease my hands produced. Walt could handle tools without any fingerprints showing, while I might leave a trail that police investigators would love. Frankly, every damn one of those planes looked alike to me except for their sizes. If we hadn't had to be at an event by a certain time that night, he would have spent another couple of hours and finished the entire wall of tools. When you're dating, you want to act interested and enthralled in everything the other person says.

I did wonder that night if he ever would act as excited about me as he did about his tools.

Thirty-two years later, Walt still gets animated about the slight variation in anything Stanley. In writing articles for *The Chronicle* over almost two decades, Walt has discovered important information that has added to our knowledge of Stanley tools and the history of the company. *Stanley Woodworking Tools: The Finest Years* added to the Stanley scholarship published by John Walters, Al Sellens, John Wells, Paul Van Pernis, Roger Smith, and others.

I now touch the tools as Walt hands them to me, but I'll often put on gloves first. And I have my own favorites, as does Walt. And yes, he is still excited about me and the Stanley tools—in that order, I might add.





*An ogee plane with the full Chelor mark — “CESARCHALOR/LIVING\* IN/ WRENTHAM” — in three lines. The fully written Cesar is rarely found.*

PHOTOGRAPH DAVID V. ENGLUND COLLECTION, COLONIAL WILLIAMSBURG FOUNDATION

# How I Decided to Collect Nicholson & Chelor Planes

*by David V. Englund*

*In June 2017, Chris Bender’s “Plane Chatter” column in The Chronicle (70, no. 2) focused on the amazing collection of longtime EALA member David V. Englund. The collection was bequeathed to the Colonial Williamsburg Foundation following Dave’s death in October 2015. In this article reprinted from The Chronicle 52 no. 2 (June 1999), Dave provides background on his collection and his motivation to specialize on collecting Nicholson and Chelor planes. His story is indicative of the long EALA tradition of members sharing knowledge with other members. Seminal articles from The Chronicle on the Nicholsons and Chelor by John Kebabian and Anne Wing, who are mentioned in Dave’s story, are reprinted in this issue beginning on page 47.*

I started collecting antique tools in 1968, but it was not until 1984 that I began buying eighteenth-century American planes, and in the late 1980s, I decided to specialize in Nicholson and Chelor planes as the main thrust of my collecting.

A lot happened in that approximately twenty-year period that brought me to that decision, and people often ask how I began collecting antique tools. It started in 1968 when I went one Saturday morning to Pike Place Market, a favorite tourist spot in downtown Seattle. The main floor is famous for its fish markets and produce booths, but the upper level had a small antique shop run by Dan Vorhees and Fred Dau. At the time, they both were Seattle public school teachers. They had a handful of antique tools and for less than twenty dollars I bought a five-inch wooden compass plane, an English brass-backed tenon saw, and a

hefty wooden spoke shave. After looking at them for a few months, I decided that this was going to be my new hobby.

To find tools in Seattle, you had to visit used tool stores, the less expensive antique shops, and pawn shops (which were less productive). It was possible to find some English imported tools in Vancouver, British Columbia, and I tried to arrange my vacations to places where some good tools might show up. I did a lot of driving on weekends to nearby towns like Coupville and Etonville, where I was able to find things like boatbuilders’ tools and occasionally a nice rosewood level or marking gauge. There were a few one-off, primitive-looking bench planes, but almost nothing of early-American imprinted tools. Two things happened about then that started to change my thinking about what I should buy.

First, I met Paul Marmount, who had already spent twenty years collecting antique tools. He was in engineering sales and had done a lot of traveling across the country. Paul looked at tool collecting with an eye for the finest examples of tools that had been produced, and he had a lot of rosewood and brass tools, and tools made of ebony. Paul was a subscription member of EAIA and encouraged me to join.

Then, in 1970, I learned about the various mail-order dealers and ordered their catalogs. Vern Ward, at Iron Horse Antiques, was first, and Arnold and Walker followed in 1974. Then came Jack Clouser of Ye Old Tool Shed in the mid-seventies, and in 1972 Don and Anne Wing started the Mechanick’s Workbench. I bought wooden, mostly primitive tools through these catalogs.

My first major tool auction was sale of the stock of Ar-

nold and Walker, held at Christies in the South Kensington district of London. My wife still puts up with a ceiling-high chairmaker's lathe in our kitchen/family room, that I bought at that great auction. I met many well-known collectors there, among them Don and Anne Wing of Marion, Massachusetts. In 1980, I went to my first Jack Bittner auction, held in Brattleboro, Vermont, and I was amazed at the tremendous variety of early New England tools that it was possible to buy. I spent a lot of money buying primitive wooden braces in those days, and it turns out that these kinds of tools have gone down considerably in value. It was at that Bittner auction that I met Jack Keabian, and he told me that I should attend the EAlA meeting in Salem, Massachusetts. Jack spoke to the right people so I could register, and in 1980 I attended my first EAlA meeting. Don and Anne Wing were there and helped mentor me starting a close friendship that lasts until today. I continued buying wooden bitstocks at East Coast auctions and dealer sales until I had a chest full, and I was convinced these were the things to buy, until I met Emil Pollak at the 1982 EAlA meeting in Shelburne, Vermont. The two of us got into a big discussion about buying bitstocks versus buying imprinted eighteenth-century American planes, and Emil convinced me of the importance of having the maker's imprint on a tool. He compared it to buying a signed oil painting versus an unsigned one. The discussion, aboard the paddlewheeler *Ticonderoga* at Shelburne, forever changed my outlook on collecting.

I purchased my first eighteenth-century plane from Don and Anne Wing for one hundred dollars. It was not a recognized maker, but was imprinted with the maker's name. At that time, I had never paid anything close to that kind of money for a molding plane, and it was a tough decision. I continued buying early planes by American makers, and was paying about four to five hundred dollars each for Nicholson and Chelcor planes at the time. Then came a sale where Roger Smith had a tool table with a Nicholson and Chelcor for sale, but they had replaced wedges. I asked him if he didn't have any that were in better condition, and to my surprise, he pulled out a beautiful pair from under the table that were in "Fine" condition. "One thousand dollars each, and you can't buy just one," Roger announced.

I think about then I started shaking like a leaf. "Give me a few more minutes to make up my mind," I asked, and went to Don and Anne Wing for advice. Anne assured me that if I didn't buy them, they were going to, so I went back wrote out a check with trembling hands. Who says tool collecting is not exciting?

Jack Keabian's 1985 auction was very exciting for me.\* As I previewed the auction, I realized he was selling exactly the type of tools I was collecting. I had picked out four nice early

*\*In 1985, long-time EAlA member and prominent collector and researcher, John S. Keabian, sold his extensive tool collection.*

planes I wanted to buy, but during the auction something inside me snapped and I bought nine items for \$11,000. Just after the end of the auction, I told Emil Pollak that I had gone crazy, but he assured me I had done the right thing. Emil turned out to be right. I recovered financially and was glad of it.

For the next few years, I kept considering the charisma that was associated with these three plane makers, Deacon Francis Nicholson being the first documented American planemaker, his son John as his apprentice, and Cesar Chelcor, his black slave whom Nicholson freed by his will. The whole mystique of the "Living in Wrentham" imprint on their planes appealed to me, and I decided to concentrate mainly on collecting the planes of these three makers. I began buying ten or so Nicholson/Chelcor planes on each trip I made to auctions and dealer sales, but after two or three years of doing this, I began to realize that my collection was too heavy in average or below-average quality planes. Since then, I have tried to concentrate on the "Good+" to "Fine" condition planes. This, of course, meant that I bought fewer planes each trip and paid higher prices. Interestingly, I have noticed in the past couple of years that the higher prices have seemed to bring the finer quality planes "out of the woodwork." Earlier-style (we think) Nicholson planes have recently been showing up that have a smaller and more round finial on the wedge, as well as wider chamfers on the body. They tend to be imprinted only with the name and location, leaving off the "living in" stamp. Without a doubt, the higher prices have brought out some exceptional planes. When I purchased a F. Nicholson crown molder for \$10,000 at a Crane auction, it was a record price paid at auction for a tool in America. That lasted only a short time, and then a new record of \$15,500 was set for a F. Nicholson crown molder at the 1994 Brown auction.

One interesting story regarding the Nicholson crown molder is that I took it along to the CRAFTS [the tool groups CRAFTS of New Jersey] picnic right after buying it. Bud Brown was there and asked to see it. I did not realize at the time, but he thought it was from the Barnet Delson collection. Apparently, he went to visit Dr. Delson and found out he still had all his Nicholson/Chelcor planes. Guess what? The 1994 Brown auction featured planes from the exceptional collection of Dr. Barnet Delson, and the cover of the auction catalogue pictured a row of six Nicholson and Chelcor molding planes. I bought four of them, two of which are absolutely exceptional.

What is expected to happen to my collection of Nicholson and Chelcor planes? Barring an unexpected financial setback, I hope to place this collection in the hands of Colonial Williamsburg to be used as a study collection for future researchers of America's industrial heritage, but until I die, I think I'll just keep and enjoy them a little every day.

# Remembering William Sprague

by David L. Parke, Jr.

*The collector of this class of material enjoys a unique advantage. In spite of increasing competition, he can still experience all the thrills of the antique collector of fifty years ago. He can explore territory which has long since yielded up its last Hitchcock chair and Currier and Ives print.* William B. Sprague<sup>1</sup>

So William B. Sprague described the state of tool collecting in the July 1933 issue of *Old Time New England*, a publication of the Society for the Preservation of New England Antiquities [now known as Preserve New England]. A month later, he called together a group of his friends in what was to be the first meeting of the Early American Industries Association. Active collector, preservationist, and writer, Sprague personified the ideals and set standards for an organization that has flourished far longer than its earliest members might have imagined. Not only does the organization he founded still prosper, many of the tools and implements he collected are still viewed by more than 100,000 people a year. Numerous articles which he wrote for *The Chronicle* during the 1930s still serve as important references in their respective areas. Yet, for all his accomplishments, our memory of William Sprague is vague. While much must be left to conjecture, his collection and the manner in which he used it to gain better understanding of early American industries show an extraordinary sense of purpose and vision. This discussion will seek to delineate William Sprague's significant achievement.

Of his personal life little is known. William Sprague was born in 1885 in Flushing, New York. He graduated from Yale University in 1906, following a family tradition. After graduating from Columbia University Law School in 1909, he joined his father in the family law practice in New York. By the 1920s he was serving on the boards of several realty corporations in New York, and on the board of the hospital in Flushing, New York, where he resided.<sup>2</sup> Much more can be deduced about his collecting because he carefully recorded the acquisition of each tool and implement in a loose-leaf notebook. With meticulous precision, he recorded the name of each object, the person from whom he acquired it, the date acquired, and the purchase price. He apparently was already a well-established collector of stamps, having served as vice president of the American Philatelic Society from 1915 until 1917. Taking the catalogue of his collection as a guide, it is apparent that he did not fall into the hobby gradually but set out to build a

collection as a well defined project. How William Sprague became interested in antique tools is not known, but there can be little doubt that he was inspired by Henry Mercer. He wrote in an early issue of *The Chronicle*:

The writer had a great privilege of a brief meeting with Dr. Henry Mercer shortly before his death in 1930, and was deeply impressed with the fervor of his belief in the importance of rescuing and preserving all relics of American Industry and of acquiring a better understanding of the basic part which they played in the country's history. Unfortunately, he did not live to enjoy the seed which he has sewn.<sup>3</sup>

The earliest acquisitions listed in the notebook occurred in August 1928 which, it is assumed, was the time he began collecting. He approached tool collecting in much the same way that Mercer had, attempting to acquire a representative sampling of tools from as many early trades and crafts as possible. Within the space of three years, through 1931, he had amassed the bulk of a collection of over 2,000 objects.

Sprague's well-worn copy of Mercer's *Ancient Carpenter's Tools*, published in 1929—only a short time after he began collecting—remains in his collection today. A high percentage of his objects were acquired in 1929, the first full year of collecting. The catalogue gives nothing to indicate that his collection was confined to any particular period of the year, such as the summer months. Although there is no way of knowing, the speed at which he built his collection, and its ultimate use as the basis for articles in *The Chronicle*, suggests that he may have had that ultimate purpose for it in mind all along.

It was at first thought by this writer that Sprague acquired items for his collection on various trips around the Northeast. The majority of the objects come from Connecticut, New York, Pennsylvania, and surrounding states. A closer look at the catalogue reveals that he bought tools from widely separated locations over a short period of time. In August of 1930, for example, he purchased a flax wheel from "Andrews" of Northfield, Connecticut, for \$5; three augers from "Bogart" of Greensboro, North Carolina, for \$5; a saw vice from "Rowe" of Broadalbin, New York, for \$1; and a [glovers] cutting block from "Mills" in Gloversville, New York, for \$5. In June 1929, he bought corn shellers from individuals in Bridgeport, Connecticut; Dover, New Hampshire; Bridgeton, Maine; and Marietta, Ohio. Sprague's catalogue lists one hundred

different sources in twenty states as far west as Colorado and as far south as Georgia. It is likely that he visited many of the locations prior to purchasing tools, especially those near his summer home in northeastern Connecticut. It is likely also that he acquired many through the mail. While he purchased groups of tools from a single source, his catalogue lists one hundred different sources.

How did he make so many contacts in such a relatively short period of time? Was there a network of collectors to which he could appeal at this early period? Were some of the individuals listed in the catalogue dealers? In the absence of personal correspondence or other personal documents, much must be left to conjecture. A number of individuals listed, including "Durell" in Ohio and "Wolcott" in Virginia were collectors and Sprague did call together a group that shared his experiences to begin EAIA. [Durell and Wolcott were founding members of EAIA.] Little else is known about the network of collectors at this time.

Another possible explanation for Sprague's far-reaching sources is that he may have placed ads in newspapers or other publications as he did in early issues of *The Chronicle*. In the first issue, he inserted the following: W.B. Sprague of 43 Cedar Street, New York City "collects farming and trade tools and is especially interested in tools of the unusual and lesser known trades," he has "some 200 duplicates" for exchange or sale.\*

William Sprague's collection catalogue shows clearly that he purchased virtually everything that he acquired. The catalogue also reveals that the value placed on antique tools during the early years of the Great Depression. The majority of Sprague's purchases were under \$3 and range to a high of \$25 for the purchase of pump-log boring tools. The following are examples of prices he paid; moulding planes ranged from 15¢ to 75¢, a single ox yoke \$10, a wooden plow \$17, a goosewing axe \$4, flax break \$20, butter mold \$0.25, whale-oil lamp \$1.50, and a grease lamp \$4. In 1929, the most active year of his collecting, he spent \$1,670 on his collection. When converted to today's [1993] equivalents, this sum might be considered substantial for a collector even at current prices. His willingness to pay for tools may have had some impact on his ability to assemble the collection so rapidly.

He sold tools as well, but does not appear to have been concerned about income, as he lost money on as many

transactions as he made money. It was not unusual for him to sell a tool for half of what he paid for it. In numerous cases the entry for a particular tool has been crossed out. This may have been done when tools were traded. Entries for tools sold were not altered.

When one considers the rapidity with which William Sprague built his collection it might be assumed that he was not very selective in his purchases. A quick glance at the collection itself, however, shows that he had an exceptional eye for the rare and unique. Perhaps the most striking example of his selectivity can be illustrated with planes, probably the most widely collected tools today. Of two hundred twenty-three carpenter's tools listed in the collection only twenty-six are planes. Of the planes only seven are factory-made examples. The remainder are either eighteenth-century or craftsman-made examples. At a time when basic research on planes was many years in the future and examples of all types were readily available, Sprague made the distinction between hand-made and factory-made examples. Even more remarkable is the quality of the examples he did select, most of which would be eagerly sought after by collectors today. By coincidence, one of the twenty-six planes is a complex moulding plane made by Francis Nicholson, the earliest documented American planemaker.

Sprague had a particular interest in assembling objects related to highly specialized and obscure trades and crafts, many of which he was to share later in articles with others in *The Chronicle*. Among the more obscure trades represented in his collection are goldbeating, filemaking, hatmaking, combing, and glovemaking. In many instances the objects he collected in these areas remain among the few remaining examples of their kind.

It is apparent that William Sprague spent many hours organizing his collection by subject. He used an identification system to place each object in a specific category consisting of a main topic such as "Farming," denoted by a capital letter; subtopics such as "Agriculture" or "Livestock," denoted by a Roman numeral. This was further divided into specific functions such as "tilling" or "reaping" signified with a lower case letter. Each object was then assigned a number within the category. A potato masher, for example might be assigned the code; F (household item), II (food), b (kitchen preparation of raw food generally),

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\**The Chronicle* in January 1937 (1, no. 21) published information collected about what members were collecting and what they were looking for. Sprague's response was: "New York: William B. Sprague (C), 43 Cedar St. Collects: large farm implements; farm tools; hunting, fishing and trapping equipment; kitchen and household utensils; lighting devices; surgical, medical and dental instruments; toilet articles; tools of trades and crafts; weighing and measuring devices. Offers farm tools; hardware; kitchen and household utensils; lighting devices; surgical, medical, and dental instruments. Wants hatter's battery, authentic swingle block, pigeon stool. Wants books of trades and industrial encyclopedias, not later than about 1850. Wants Literature and pictures. Write \*. Visit (collection at Morris, near Litchfield, Conn.). Specializes in tools of the unusual trades."

7 (7th object in the category). It is evident that Sprague borrowed his identification system from another, and as yet unidentified, source because there are gaps in the sequence of letters and Roman numerals signifying topics his collection did not cover. Identification codes were written on small paper labels pasted to each object.

In his collecting Sprague naturally came in contact with those who shared his interests. On August 28, 1933, he called together a group of fifteen of these individuals at Wiggins Tavern in Northampton, Massachusetts. The group elected him the first president of the new organization—the Early American Industries Association—a post he held until 1938. Two early members of the Association, both of whom have since passed away, provided brief glimpses of Sprague to the writer.

Loring McMillen, vice president of EAIA from 1948-1971, joined shortly after the organization was formed. He remembered him thusly,

I was in my twenties and by far the youngest member of the Association. I remember Mr. Sprague well—short, stocky, slightly stooped, spoke seriously and well with a sprinkling of humor. He was probably the most serious collector of the founders and one of the few who applied a museum and academic approach to the objects in his collection.<sup>5</sup>

William Sprague traded tools with another early member—and later president—of the Association (1947-1955), Edward Durell. He wrote,

I attended the EAIA meetings, which in the early days were held at Wiggins Tavern in North Hampton [sic] and was operated and possibly owned by Louis Wiggins. Since I was living in Columbus, Ohio, to attend one of these meetings on Saturday, I either had to spend Friday or Saturday night at the Tavern, and [I] became well acquainted with Mr. Wiggins, but I saw very little of Mr. Sprague. However, I was able to see and enjoy Sprague's collection as he lived not too far from North Hampton. As I recall it, his collection was housed in a long chicken house and the tools of various trades were separated as you walked from one end to the other.<sup>6</sup>

The new organization grew with great speed. By November 1934 (fifteen months after the first meeting) there were 405 members. By July 1935 the membership had grown to 539.

One of Sprague's main interests in EAIA appears to have been *The Chronicle*. He became assistant editor in March 1934 and editor in June of that year upon the death of Stephen C. Wolcott, its first editor. As already mentioned, William Sprague wrote articles for *The Chronicle* based on his collection. One of his articles appeared in every issue from 1934 until his death in 1942, an individual contribution of scholarship that has yet to be matched.\*

One additional article was found among his papers and was published after his death. For Sprague, collecting was an enjoyable part of his research, a means to an end rather than an end in itself. "Early American Manufacture of Felt Hats," "The Cork Cutter," "The Wool Comber," "The Pin Maker," "The Parchment Maker," "The Gold Beater," and "Flax Dressing by Hand" are a few of the articles based upon tangible evidence in his collection. Through these articles he brought that collection to readers well after his death. [Sprague's article, "The Comb Maker" is reprinted in this issue..]

In August 1938 Sprague ended his term as EAIA's first president. The final acquisition of tools recorded in his catalogue came in September of 1939. It appears that he ended his collecting as abruptly as he began it only eleven years earlier. Had he completed what he set out to do? Was he embarking on some other challenge? During the summer of 1942 he negotiated for the transfer of his entire collection to a new museum, The Farmers' Museum in Cooperstown, New York. EAIA's ties to the new museum were strong from the beginning. Louis Wiggins, who followed Sprague as EAIA's president, was a member of The Farmers' Museum advisory committee. He may have played some role in the transfer of Sprague's collection. Negotiations for the transfer were completed only a few weeks before Sprague died in an accidental fall on August 22, 1942. Coincidentally, in a letter dated the same day, Clifford Lord, Director of the New York State Historical Association and The Farmers' Museum, mentioned to Dr. U.P. Hedrick, an advisor to the new museum, that the "Sprague Collection is now all here at Cooperstown and we are setting some sections of it up for immediate display."<sup>8</sup> As a fitting tribute to his memory, Volume II of *The Chronicle*, covering the period of 1937 to 1944, was dedicated to him.

In an article entitled "Classify Your Collections" published after his death, William Sprague left advice for his fellow and future collectors.<sup>9</sup>

...it is not practical to fix a hard and fast dividing line between the collectible and the non-collectible and that everyone must be guided by his own interests, tastes and circumstances.

Fortunately for EAIA and ultimately for The Farmers' Museum, William Sprague brought together a wide variety of interests, intellectual inquisitiveness, and a strong desire to share his interests and channel them to better understanding of early American industries.

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\*Two other prolific contributors to *The Chronicle* were Walter Jacob and Jack Whelan. Walt has written quarterly "Stanley Tools" columns for almost twenty years. Jack contributed book reviews and wrote the "Plane Chatter" column quarterly from 1994 until 2007. Editor

## Notes

1. William B. Sprague, "A Collection of American Implements," *The Chronicle* 1, no. 13 (September, 1935): 4.
2. Yale Obituary Record 1942-1943 (New Haven University, 1944). See also Winfield Scott Downs, *Who's Who in New York 1938* (New York, 1938): 1,055.
3. William B. Sprague, "Dr. Henry C. Mercer," *Old Time New England* (July 1933). The article was reprinted in *The Chronicle* no. 1, no. 18 (1935):18.
4. *The Chronicle* 1, no. 4 (1933): 4.
5. Letter, Loring McMillen to David L. Parke, June 23, 1982. Mr. McMillen was listed as a new member April 1934.
6. Letter, Edward Durell to David L. Parke, January 20, 1982. Mr. Durell was listed as a new member in January 1936.
- 7 "Leaders of the EAIA," *The Chronicle* 9, no. 3 (October 1958): 30.
8. Letter, Clifford Lord to Dr. U.P. Hedrick, August 22, 1942.
9. William B. Sprague, "Classify Your Collections," *The Chronicle* 2, no. 22 (December 1942): 190.

## Author

At the time David L. Parke, Jr., wrote this article, he was Executive Director of the Hershey Museum and Hershey Gardens in Hershey, Pennsylvania. He served in that position until 2005. From 1978 until 1985, he was curator and later Associate Director of The Farmers' Museum in Cooperstown, New York. David served as editor of *Shavings*, as a member of the board of directors,



Past presidents Jay Gaynor and David L. Parke at an EAIA annual meeting auction.

chair of the publications committee, secretary, and first vice-president. He was EAIA president from 2003–2005. He died in March 2017.

Included in this issue a companion piece that also appeared in *The Chronicle* 46 no. 3 (September 1993) by Kathryn Boardman on the importance of Sprague's collection at The Farmers' Museum (see following page) as well as "The Comb Maker" an article by William Sprague.

## The EAIA and the Coining of "Rhykenology"

Google "rhykenologist" and a "Wikitionary" entry appears defining the term as a person who studies woodworking planes. The definition references EAIA's *Shavings* that included a calendar piece about a gathering of rhykenologists. A bit more research and you learn that the word is derived from the Greek word, "rhyken" meaning "to smooth."

The term often used in *The Chronicle* and appears to have entered the tool collectors lexicon. But here's the real scoop on rhykenology from the pages of *The Chronicle*.

In 1992, the following letter was received by the editor and printed in the January issue (45, no 1, p. 21).

Some time ago I wrote Alan Bates in an effort to trace the term RHYKENOLOGIST. He said to write to you and "get the origin of 'rhykenology' right from the horse's mouth."  
Harry R. Chandler

Many years ago Bob Graham and your editor, with

inspiration from Bill Goodman, coined rhykenology because we wished to have a capsule term that would identify an interest that was growing by leaps and bounds but could only be described by a mouthful of words—the study and collection of antique woodworker's planes. With the advent of rhykenology—based on the Greek words for plane and reason—was born the British-American Rhykenological Society and its magazine, *Plane Talk*. These are both, unhappily, recently defunct but the word continues to be used along with its derivatives, rhykenologist and rhykenological.  
Elliot M. Sayward, editor

Elliot M. Sayward (1921-2009) was editor of *The Chronicle* from 1983-1993. William "Bill" L. Goodman was the author of *British Plane Makers from 1700* and *The History of Woodworking Tools*. Robert "Bob" D. Graham was a frequent contributor to *The Chronicle*. All were members of the British-American Rhykenological Society (B-ARS).

Patty MacLeish

# *Ah, Yes, It's A Sprague*

## *The William B. Sprague Collection at The Farmers' Museum*

by Kathryn A. Boardman

The symbols of our friendships are sometimes very simple things, but quite meaningful, none the less. For me, over the past decade or so of working with the collection of The Farmers' Museum, the museum's small, neatly written red paint numerals on William Sprague's collection have become a linking symbol—a kind of friendship with Mr. Sprague himself. In our daily handling of collections for research, teaching in our history museum graduate program, or preparing an exhibit, the “s” and four numerals have brought forth the mantra of familiarity, “Ah, yes, it's a Sprague.” This usually leads us through a well-worn pattern of actions. First, looking up the “new” Farmers' Museum number “F xxx.42.” Eventually we go to our working copy of Mr. Sprague's own catalogue to find out his bits of history on the object. Sometimes, if we're really fortunate, Mr. Sprague's own paper labels with his cataloguing code of letters and Arabic and Roman numerals will still be tightly glued to the object. It's a little like an ongoing conversation with the collector about the wonderful tools for which he searched all over the northeastern United States and Ohio.

This “Ah, yes, it's a Sprague” is repeated at least a couple of times a week around the storage building and exhibit spaces. This frequency reflects the number and variety of objects which William Sprague collected. There are quite a lot of them, and they comprise the core of the rural life tools and collections at The Farmers' Museum. To borrow a cooking metaphor, his collection is the soup stock from which a great historical stew continues to be made as we add careful selected ingredients. And, in our exhibits, they compromise the first courses of what we serve our visiting public at the museum. They set the standard for the rest of our repast of the past.

Shortly after the collection arrived at The Farmers' Museum in 1942 the individual objects were accessioned in to the museum's collections and received an accession number consistent with the museum's catalogue system. From documents and photographs we've been able to review so far, it appears that the collection was arranged for public exhibition in much the same manner that William Sprague arranged them. In some instances the collection may also have been integrated among other similar pieces in groupings such as agricultural tools or shingle making.

The Farmers' Museum exhibits changed dramatically with the addition of Per E. Guldbeck to the staff [a member and board member of the EAIA]. Per's historical-, process oriented- and folk life-driven approach changed the exhibits into a more complete storytelling style, which influenced exhibition trends throughout museums in the United States.

The Sprague collection joined the growing museum collections to tell a more complete story about people and how they lived and worked.

Another wave of exhibit updates and a change in presentation styles began at The Farmers' Museum in 1979 and continued until 1991. Exhibits were shifted around in the museum's historical dairy barn exhibit center. New colors, materials, and exhibit techniques were utilized, and more of the growing collections were added to the exhibits—blending all the while with the initial collection of William Sprague. “Beginnings,” a new agricultural exhibits, “A Sheltered Nest,” a different look at “improvements” in household cooking, cleaning and laundry tools and techniques; and “The Tradesman's Tool Chest,” the museum's largest exhibit of trade and craft tools to date, are all enhanced by the strong core collection from William Sprague.

As The Farmers' Museum enjoys its fiftieth year, a great deal of assessment, dreaming and planning for the future is going on. We see ourselves more clearly fulfilling our educational charter as a center and museum of rural life and history with a renewed emphasis on the processes of agriculture and trades. The strength of our collections, the array and arrangement of our historic buildings, our rural location, and the farm history of our site lead us back to this focus in each staff and consultant meeting. Once again, Mr. Sprague's special interest in tools and equipment of rural life and hand industry show a foresight from which The Farmers' Museum is fortunate to benefit.

In the first quarter of the twentieth century, many museums were busy focusing on the lives of the wealthy, influential, and heroes of political or military endeavors. The roles and lives of the working classes and agriculturally based were often ignored. Like Henry Ford, Henry Mercer and founders of The Farmers' Museum, William Sprague shared an interest in the folks who made every day life happen. Sprague also shared an important collecting philosophy of preserving the original patina of the tools rather than extensively “cleaning them up.” The marks of human use (and sometimes abuse) were valued then, as they are today, by museums and serious students of technology and everyday lives. This is still important to us today as our definition of rural and agricultural change and hand skills are dramatically altered by technology and power sources. Mr. Sprague's collecting vision lives on at the core of the renewed vision of The Farmers' Museum.

From kettles to planes, from calf pokes to soldering

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CONTINUED ON PAGE 41

# The Lawrence S. Cooke Library

by Raymond R. Townsend

Lawrence “Larry” S. Cooke was an early member of the EAlA and a past president. Together with his wife, Mabel, he amassed a collection of some three thousand volumes. (They also had an extensive and important glass collection.) This collection was the basis of the EAlA library that was once housed at the Spruance Library in Doylestown, Pennsylvania. As with the other collectors featured in this issue, Cooke reveals the thrill of the hunt and the joy of finding that special object. EAlA member Karl West had a copy of this interview with Larry Cooke written by Raymond R. Townsend for *Shavings* and contributed it to this issue. Larry Cooke and Raymond R. Townsend are both pictured in the photograph that illustrates the article on EAlA publications on page 17. This article is an edited version of the original. Editor

When interviewing Larry I noted the same zeal that is shown in one who has just found a favorite tool he had been looking for, who comes into the meeting room clutching his new found possession like a doting father would his new-born son!

I asked Larry what “sparked” his interest in collecting and forming a “tool” library. His response and stories of the hunt are of great interest.

Basically one summer we were up in Vermont [at] Tuttle [a dealer]....They also at that time ran a rare book sales department out of an old house in Rutland. Mabel and I discovered a set of the early encyclopedia of Dobson, and I bought them. I had recently become a member of EAlA and this got me started, particularly in old encyclopedias, mechanical dictionaries and that sort.

We went up to Sturbridge [Old Sturbridge Village in Massachusetts] even before it opened to the public as an operating museum, and very early on they had a very good research library. Later, when I was on different committees at Old Sturbridge and had to go up for meetings, Mabel would spend her time in their library with Etta Falkner, the librarian. Based on that, we got really inspired in all the research material that was available there and got the idea, wouldn't it be wonderful to have some of that under my own roof so that, if I got the itch at midnights on Sundays, I wouldn't have to get out of my pajamas to look it up.

And gradually [the library] grew, and I made a list of books I would like to get and scratched them off when I was able to get them.

Larry mentioned Rees's *Cyclopaedia*...

...which is a very desirable one...as much as twenty-five years ago would have sold for \$300-\$400. There was a Boston dealer in early rare books and I had been looking at a set of Rees she had out, but she wanted a lot of money for them. One day, when walking by, there was big sign painted in the window that said, “Any book in this store 25¢.” I went in and said, “Does this include Rees?”

Obviously, it had not meant to, but she gave me a dirty look and said, “Well, that's what the sign says, doesn't it?” “You mean you'll sell them for that—25¢ a volume?”

She said, ‘Yes!’ I think there are forty volumes, which means about ten bucks. The interesting part is that when we came to pack them up, she could not find volume one, and the reason being is that [dealers] often, in a set like that, would put volume one out on display with the idea that they had the rest of the set. But somehow they had gotten mixed up. She assured me that someday she would find it, and I could have it. But she never did. In book tracing this later on in two different places, we happened to find volume one to Rees, and I bought both. One of them matched the set quite well and I kept that. Later on somebody advertised for volume one. Apparently this happens with dealers quite a bit with things that come in big sets.

Cutbush's *Artist's Manual*, two volumes, was one I had on my list for a long time and did not find it anywhere. Finally, I found volume one at Goodspeed's, a famous Boston book dealer, who just went out of business after a little over one hundred years. But they would not sell me the one as they felt it was not complete, and they hoped to find the other. About two months later, Mabel and I were down in Pennsylvania on our way home from an EAlA meeting, and we heard of a book dealer on a farm out in the country, so we went out and browsed around. To our delight, we found volume two; he did not have volume one, but he was happy to get rid of it, which I bought. When we returned, I told Goodspeed's that I had volume two, and he let me have volume one at a fairly decent price. So I got the pair; although they do not match in binding; it is the contents that count.

One of my best stories is about the Gregory's *Dictionary of Arts and Sciences* that I had on my want list for several years. I had looked in all the catalogs that I received by never found it. One day we had been at an afternoon tool auction and it was announced that there was to be a book auction that night at a nearby town. We went over to look it over beforehand. Here was a set—it's a three-volume set—of Gregory. . . Imagine a whole bunch of book dealers, any of whom would snap this up as it is worth several hundred dollars. We put it where it would go up early, so about ten minutes into the auction, we asked the runner to put up the three volumes. So he got it and when he had the chance, he handed it to the auctioneer, and the auctioneer opened it to the title page. The title page reads “Gregory's Dictionary”.. and the word “Dictionary” is in real big and fairly simple letters, and where it reads “Arts and Sciences,” the lettering is small and in real fancy script that is hard to read. The auctioneer looked at it and said, “Here is an old dictionary. Anybody interested in an old dictionary?” Which would kill the sale, like selling an old family Bible which many of you would not bother to take home. I got it for three dollars! Which was an



opening bid. That was one of the biggest thrills that I have had in book collecting.

I asked Larry what was the earliest book in his. He replied,

*Plumier* [*The Art of the Turner*] was given to me by a friend, who earlier had sold me a copy of the first edition of Henry Mercer's book and autographed by him. Later, when my friend died, he left me Plumier with a letter in the book to me commenting that he had had one other copy that he had sold to Henry Ford and that mine was the only other copy he had available. It is in very good condition. It is the first edition, 1701.

*Diderot's Encyclopedia*...I have the very fancy twelve-volumes bound in six "Tomes," as they call it. It [the reprint] was done in Switzerland about twenty years ago. I believe something like 3,000 printed and made up for the world and were distributed. I believe the United States had an allotment of 600 sets. Mabel and I stopped down in New York at the importers and bought I a copy. We had to pay for them in an office building and then go over to a warehouse to pick them up. But when we were negotiating the sale, the importer casually mentioned that they were almost gone. He had one or two copies left. He said that he knew that two or three sets had been bought by antique dealers who planned to cut them up immediately just to get the plates to frame. That is how good they were.

There was a book dealer in Wales, Blackwell, who started printing a little booklet once or twice a year, the name was *Gwerin* [known today as *Folk Life: Journal of Ethnological Studies*] I discovered it at Sturbridge and found that I could subscribe to it. After five or ten years, maybe ten or twelve copies under that name, a Welsh folklife society became so interested in it that they took it over and changed the name, but it is a continuation of the same one. I have a

large run of these.

Surprising and interesting is that quite a number of EAIA members, or people connected with these museums where we met, were writers of books whom Mabel and I got to know. And whenever possible, we would get their autographs. For instance, Larry Johnson's book, *Over the Counter and On the Shelf* and books like that. One of the most interesting ones occurred at an EAIA meeting at the Shaker Museum, Hancock, Massachusetts. It was the only meeting that Eric Sloane attended, and he brought a big beautiful oil painting, I believe a red barn, to the meeting to be auctioned off for their treasury. He brought a couple of the drawings he used to illustrate his books, and he gave me one. In addition to that, all of his books I had at that time, I had brought to the meeting since I knew he was going to be there. He personally autographed them. Each is a cute little drawing in his style of a covered bridge, barn, or something like that and each is dated in connection with the EAIA meeting.

I asked what Larry would suggest to beginning collectors of books, and he stated,

First thing you should do is mark out your boundaries, your objectives. You should have a terminal date; I chose 1900. In terms of the collection, you should decide where you start and where you stop and how deep you want to go. And then beyond that, the best thing is to get as many bibliographies as you can and make a wish list of what you would like to own, and set a price of, say ten or twenty dollars, as far as you will go. It is important that you have a list of what you have with you so as not to buy duplicates. That is not to say I would not buy one if it was in good condition and reasonable.

The above does not begin to tell of all in Larry Cooke's library. His list of bibliographies is a must to those seeking out reference books. Lists of glass bottle works; glass paperweights; lighting; clocks; furniture, and early living are but a few.

### President's Message To The Women Members of the EAIA

WE DEDICATE this issue to the women of our organization. Especially those women who remain so much in the background! We men realize that we monopolize our meetings and the articles that appear in our *Chronicle*. Often we fail to remember that you, too, have interests in our Early American Ancestors and that you, too, collect and are proud of what you collect and the information and knowledge that you possess.

We men, to make up for this lack of recognition on our part, dedicate this issue to you women members of the EAIA. Every article that appears in this issue was written by one of you! The pictures and the research that has gone into these articles have come from you!

We trust that this will make you realize that we feel that you are a part of our organization and that without you our organization lacks a certain "something" that you have added by being present at our meetings and

behind we men who love the bygones of yesteryears. By this issue of *The Chronicle* we show our appreciation for your devotion and hope that this will prompt you to contribute articles for our *Chronicle* that we, too, may share your knowledge and collections.

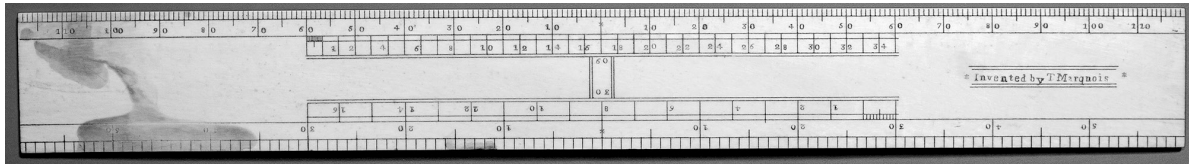
As President of EAIA, I personally take this opportunity to express my deepest appreciation to you and command that our male members take a back seat and listen to what you have to say!

Fred C. Sabin, MD.

*The Chronicle* 14 no. 4 (December 1961)

*The articles in that issue were, in fact, all written by the distaff side of the EAIA. Oddly, all of the articles were related to domestic arts. One wonders what prompted the decision for the issue, as women from the earliest days of the EAIA had contributed articles on far-ranging topics to The Chronicle.*

*Editor*



An ivory scale stamped "Invented by T Marquois" (11<sup>1</sup>/<sub>16</sub> inches long, 1<sup>7</sup>/<sub>16</sub> inches wide, 3/<sub>16</sub> inches thick.) It probably is one that Marquois himself sold.

## Mr. Gaynor's Most Useful Book

Members of EAIA have published original and groundbreaking works—Emil and Martyl Pollak's *A Guide to the Makers of American Wooden Planes* (now in its 4th edition revised by EAIA member Tom Elliot); Nancy Goyne Evans's *American Windsor Chairs*; Roger K. Smith's *A Guide to the Makers of American Wooden Planes vols. 1 & 2*; and Jennie Alexander's *Make a Chair from a Tree*—are but a very few.

EAIA member James "Jay" Gaynor was a thought-provoking and engaging writer. He recognized that historical objects are products of their time, and that to fully understand and appreciate artifacts it is essential for them to be connected to the people who made them and used them. Providing context was a hallmark of Jay's research and writing, and in doing so, he transports the reader into the past. Many members are familiar with his publications, most notably *Tools: Working Wood in Eighteenth Century America* (with Nancy L. Hagedorn) as well as numerous letters to the editor and several articles for *The Chronicle* including, "Mr. Hewlett's Tool Chest," 38, no. 4 [1985]: 57-60, and 39, no. 1 [1986]: 4-8; "Chuck-It: Eighteenth-Century Metal-Pad Braces," [53 no. 3 [2000]: 96-104], and "A Confirmation of Justified Ignorance: The Jamestown Medalet," 66 no. 4 [2013]: 163-167. Any of these will provide the reader with an appreciation of Jay as a writer and researcher. Read, for example, a letter to the editor he wrote in regards to an article on the Sheffield wimble (*The Chronicle* 46, no. 3 [1993]: 88-89) in which he muses on a snap-joint wimble. He concludes the letter:

One of the wonderful things about tools is how they can carry us from Philadelphia to Sheffield to Solingen with so little effort, leaving our heads "wimbling" from all the unanswered questions we discover along the way.

His last book, *Mr. Marquois's Most Useful Pair of Scales*, is a fine example of his talent as a writer and researcher. The Tools and Trades History Society, the book's publisher, has granted us permission to reprint Chapter 6, "Who Used Them," to share with readers of *The Chronicle*.

Jay Gaynor died very suddenly in July 2014, just as the book was nearing its final preparation for publication. Fortunately for us, his friend and colleague, Jane Rees (an authority on scales and rules) was able to see the manuscript through to publication. As Jay noted in the book's acknowledgment,

Jane Rees deserves the major credit or blame for initiating

my fascination with Marquois Scales and for this publication of the results. As we encountered them in shops and at auctions in our travels around England, she told me what they were and what she knew of them as a result of her work on *The Rule Book*. Probably the most intriguing aspect was that neither she, nor anyone else I asked, knew much about them at all. She encouraged me as my research progressed, accompanied me on visits to museums and libraries, added bits and pieces of information she uncovered, made sure I maintained an "English perspective" as I sought to make sense of everything ...

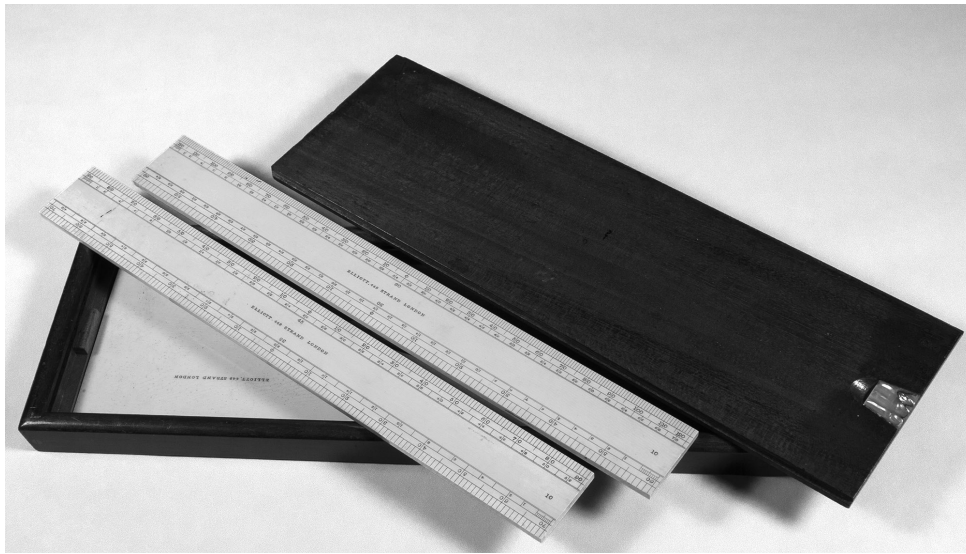
### Who Used Them

*Mr. Marquois's Most Useful Pair of Scales* begins with the details of Thomas Marquois's life. He was probably from a family of Huguenots who fled persecution in France for England. In the early eighteenth century, the French were considered superior military tacticians. The departure of Huguenots not only left the French bereft of their skills, craftsmen, but the Huguenots also shared their insights with the British. In explaining Marquois's background, Jay draws a picture of what London was like at the time for a young man starting out. The reader learns of how apprenticeships worked, what skills Marquois would have learned, how young men were prepared for the military, the struggles in making a living, and the hardship of day-to-day existence. He also uses Marquois's life as a point of departure to describe the lives of other important men of the era such as the engraver Paul Fourdrinier, and the architects William Kent and Christopher Wren. Marquois apprenticed to Fourdrinier, in 1742, and Jay draws us into the wider story of Marquois life as we learn the importance of the connection. An illustration of Fourdrinier's business card was designed by William Kent. Fourdrinier also engraved works for other architects, including Wren's plans for rebuilding London following the Great Fire. Although Marquois did not become an engraver, this connection to Fourdrinier proved fateful, as his master was also the engraver of *The Elements of Fortification* by Stephen Riou, a fellow Huguenot. At some point after leaving Fourdrinier's, Marquois set himself up as an instructor of "...Fortification, Artillery, Mathematics, &c...."

Chapter six, "Who Used Them," recounts the application of the tool from its inception to the second World War.

Patty MacLeish





Ivory set of Marquois's scales, stamped "ELLIOT 449 STRAND LONDON" 1854-1886.

a fortification on paper, with scales and compasses; and to examine the systems proposed by different authors, in order to discover their advantages and disadvantages.<sup>8</sup>

Stephen Riou devoted the first seventy pages and five plates of his *Elements of Fortification*, the book for which Fourdrinier likely was engraving plates when Marquois was his apprentice, to "a compendious treatise of geometry ... indispensably necessary to the understanding of what follows."<sup>9</sup> Fortifications were designed as geometrical constructions, and precisely spaced parallels, perpendiculars, and bisections abound.

Another application of parallel lines was explained by Adams under the heading "Of Parallel, Or Military Perspective." "In this kind of projections [sic], the eye is supposed to be placed at an indefinite distance from the object in the diagonal, and looking down upon it in an angle of  $45^\circ$ , so that the top, one side, and one end, are seen under the same angle, and therefore appear in their true proportions with respect to each other; and therefore heights, lengths, and breadths, must be laid down by the same scale, and all parallel lines made parallel."<sup>10</sup>

In order to prepare students for engineering, fortification, and artillery practice, British military schools taught geometry. Since Marquois scales were handy tools for geometrical construction, whether sitting at a desk or in the field, military schools taught their use and advocated them as standard equipment.

In his mid-nineteenth-century *Descriptive Treatise on Mathematical Drawing Instruments*, William Ford Stanley noted, "It appears somewhat curious that this antiquated system of scales should be still retained as a portion of military education, when such artificial systems have been for many years abandoned by the architectural and engineering professions. These scales have only one merit, solidity;

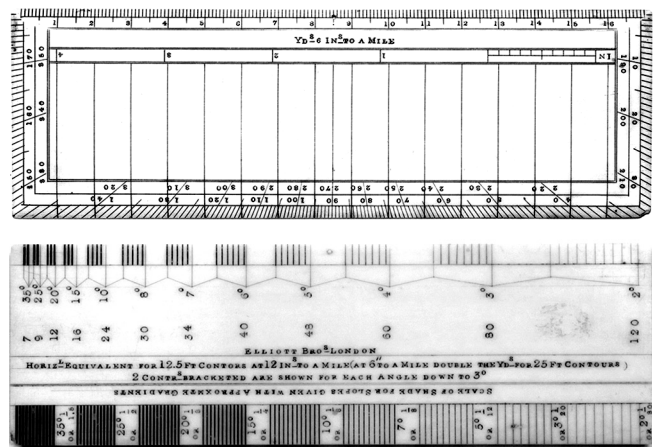
this is of importance to the military officer."<sup>11</sup> Whether due solely to "solidity" or other features Stanley failed to note, the scales remained important to the British military for many years, if not on the field of battle, then in the academic world training them to be there. They were still being acquired by the military during World War II.

Despite their 150-year-plus association with the British military, it is intriguing that Marquois scales seem to have been totally ignored by the militaries of other countries. Several sets have appeared for sale over the last decade that have

colonial or Commonwealth connections. However, with only a couple exceptions, the literature about the scales is English, and the surviving examples remain in or can be traced to the United Kingdom. Furthermore, I have found no documentary evidence to indicate their use by other countries' militaries.<sup>12</sup> It is also interesting that, although sets were sold by retailers in Plymouth (W. C. Cox and J. Coombes) and Greenwich (Hudson & Son), I can find no evidence of their use in navigation or other naval applications, other than in textbook examples of simple geometric constructions.<sup>13</sup>

Given below is a list of references to Marquois scales.

1813: "List of Articles with which a Gentleman Cadet of whatever Establishment, must be provided on his admission to the College [Royal Military College at Sandhurst]. ... He is also to bring with him a Bible and a Common Prayer Book, (and unless an Orphan) 1 Case of Mathematical Instruments,



A scale of hachures, which are a series of parallel lines used to indicate the direction and gradient of mapped slopes. They are on the reverse of a military protractor made by Elliott Brothers, London, probably during the second half of the nineteenth century.

and Marquois' Scales, agreeable to pattern; the First volume of Dalby's Mathematics; 1 Levizac's French Grammar; and 1 Nugent's French Dictionary; and he will be allowed to take them with him when he leaves the College.<sup>14</sup>

1842: Maj. Basil Jackson, professor of military surveying at the Honourable East India Company's Military College [Addiscombe], attributed the origin of the scales to "the late Mr. Marquois" and gave instructions for the learner to acquire "the use of the scales, with which the students at our military colleges are all familiar." He went on to observe that "As the student will constantly want to draw perpendiculars in this way, when constructing the figures of fields, and laying down off-sets, I recommend him to procure a pair of Marquois scales with the triangle, and to make himself master the methods of using them."<sup>98</sup>

1861: W. S. Binns in his *Course of Geometrical Drawing*: "Now, besides being able to draw one line parallel to another we can also draw it at any required distance; and this is one property of the Marquois Scales which makes them so valuable to the military student. When a number of lines have to be drawn parallel to each other, as in the slopes of a work, much time is saved, and greater accuracy attained, by the use of the Scales, than by setting off the distances with the compasses."<sup>16</sup>

1865: J. F. H. De Rheims, professor of fortification, freehand and geometrical drawing, natural philosophy, and chemistry. "As we have already observed, military students are usually provided with a most useful pair of scales, termed "Marquois," from the name of the inventor. A proper acquaintance with these scales will not only greatly facilitate the performance of works of detail, but whilst in a great measure obviating the necessity of using the compass, will produce those constructions with much greater rapidity, neatness, and accuracy. The proof of their construction depends on Euclid 2, VI. Book."<sup>17</sup>

1868–1869: The course in surveying at Aldershot included "Explanation, use, and construction of scales—several examples worked and a plate of scales drawn—mode of using the usual drawing instruments, protractors, and Marquois' scales."<sup>18</sup>

1873: Maj. W. H. Richards, late instructor of military surveying, Royal Military College, Sandhurst, explained how the Marquois scales can be used "with advantage in the construction of ... scales of [surveying chain] links."<sup>19</sup>

1878: William Ford Stanley in his *Treatise on Mathematical Drawing Instruments*: "Marquois' Scales are used for military drawing only, for which purpose they possess some essential qualities. They are very portable, have much greater solidity than ordinary scales, and their peculiar form adapts them to supply the place of the square, set square,

straight-edge, and parallel rule, for limited size drawings."<sup>20</sup>

1882: A book of examination questions for "militia officers preparing to compete for army commissions" and to "assist the gentlemen cadets at Woolwich and Sandhurst, as well as the officers at the Royal Staff College," prepared by Col. L. Griffiths, late royal artillery, included several questions regarding Marquois scales and applications.<sup>21</sup>

1887: William Gordon Ross, major Royal Engineers; professor of geometrical drawing and fortification, Royal Military Academy, Woolwich. "For ruling parallel lines a heavy rolling metal ruler is on the whole the best tool. Jointed parallel rulers are bad. For small drawings the Marquois Scales, when accurate, are often convenient, and so are small ebonite set squares."<sup>22</sup>

1905: Commissions for London University Candidates. Special Requirements for Candidates for the Royal Artillery, "In the Competition Examination for admission to the Royal Military Academy." "Geometry.—Geometrical drawing and practical geometry of plane figures, including the use of Marquois and other scales."<sup>23</sup>

1906–1907: In *The Student's Handbook to the University and Colleges of Oxford with the Programme of Special Studies for the Academical Year 1906–7*, under "Elements of Military Engineering and Military Topography," "The examination will be partly written, partly practical. Candidates must provide themselves with drawing instruments for use in the examination, including Marquois scales, protractor, and compasses. No knowledge of Trigonometry will be required."<sup>23</sup>

1911: Authors of *A Treatise on Surveying* noted that "These [Marquois] scales seem to be very little used nowadays by draughtsmen, being regarded as chiefly useful for military drawings."<sup>24</sup>

## Notes

1. *Mr. Marquois's Most Useful Pair of Scales* was published by the Tools and Trades History Society (2015), and is reprinted here with permission. It is available from TATHS ([www.taths.ord.uk](http://www.taths.ord.uk)) and Astragal Press.
2. George Adams, *Geometrical and Graphical Essays, Containing A Description of the Mathematical Instruments used in Geometry, Civil and Military Surveying, Levelling and Perspective; with many New Problems, Illustrative of each Branch* (London: Printed for the author, by R. Hindmarsh, 1791), 19.
3. Thomas Sopwith, *Treatise on Isometrical Drawing As Applicable to Geological and Mining Plans, Picturesque Delineations of Ornamental Grounds, Perspective Views and Working Plans of Buildings and Machinery, and to General Purposes of Civil Engineering* ..., 2nd ed. (London: John Weale, 1838), 136.
4. London: Printed by T. Brettel, 1841, British Library Integrated Catalogue.
5. Sylvanus Urban, *The Gentleman's Magazine*, new series (July–December 1841) (London: William Pickering; John Bowyer Nichols and Son, 1841), 16: 176. The reviewer

goes off on a tangent when he asks: “Why does Mr. Clifford call himself “Professor of Mathematics, Fortification, and Navigation?” Are not fortification and navigation branches of the mixed mathematics? We know it is not uncommon for polymathist schoolmasters to restrict the term mathematics to geometry.”

Given the misspelling of Marquois, it is possible that both Sopwith and Clifford were using Nicholas Meredith’s *The Description and Use of Pocket Cases*, or, less likely, a George Adams’s *Catalog of Mathematical and Philosophical Instruments* dating to the early 1790s, as a source. (Meredith, states “There is a kind of Parallel Ruler lately invented, known by the name of Marquois Parallel Scales” (p. 5) and “There are two kinds of Instruments, viz. the Proportional Compasses and Marquoi’s [sic] Parallel Scales; which, though they do not make a part of every good Case of Instruments, are yet sometimes found in them, or used in conjunction with them.” (p. 42).

Other “authoritative” sources also used this spelling and/or attributed the scales’ invention to “an artist named Marquoi”: *The Supplement to the Penny Cyclopaedia of the Society for the Diffusion of Useful Knowledge* (London: Charles Knight, 1851), 2: 267; Charles Davies and William G. Peck *Mathematical Dictionary and Cyclopaedia of Mathematical Science* (New York: A. S. Barnes & Co., 1855), 355; and *The Century Dictionary* (New York: The Century Co., 1890), 3637. These last two are American and almost certainly picked up the name and attribution from English publications.

6. Hulme, *Mathematical Drawing Instruments*, 92. Bennett H. Brough, *A Treatise on Mine-Surveying*, 4th ed., rev. (London: Charles Griffin & Company, Limited, 1894), 185.
7. John Muller, *A Treatise Containing the Elementary Part of Fortification, Regular and Irregular. With Remarks on the Constructions of the most celebrated Authors, particularly of Marshal de Vauban and Baron Coehorn, in which the Perfection and Imperfection of their several Works are considered. For the Use of the Royal Academy of Artillery at Woolwich. Illustrated with Thirty-Four Copper Plates*, 2nd ed. (London: J. Nourse. 1756; 1st edition 1746). As noted earlier, Muller was professor of artillery and fortification at the Royal Military Academy.
8. John Muller, *A Treatise Containing the Elementary Part of Fortification ...*, 5th ed. (London: F. Wingrave, Successor to Mr. Nours, in the Strand, 1799), 13–14, 19.
9. *The Elements of Fortification*, preface.
10. Adams, *Geometrical and Graphical Essays*, 479.
11. William Ford Stanley, *A Descriptive Treatise on Mathematical Drawing Instruments, their Construction, Uses, Qualities, Selection, Preservation, and Suggestions for Improvements. With Hints upon Drawing and Colouring*, 5th ed. (London: E. & F. N. Spon, 1878), 212–213. He goes on to suggest improvements: “but on the other hand they are deficient in the constant convenience of edge reading, and require every dimension to be taken with the dividers, or, what is more tedious, by the artificial system.”
12. In “Calendar for the Year 1928–1929,” the Board of High School and Intermediate Education, United Provinces, Allahabad, India, included “Geometrical Drawing ... The theory and use of instruments especially of the protractor and Marquoise [sic] scale.”
13. Lt. Henry Raper, *The Practice of Navigation and Nautical Astronomy*, 19th ed., rev. and enlarged by Cmdr. Thomas A. Hull, R.N. (London: Published by J. D. Potter, Sole Agent for the Sale of the Admiralty Charts, 1891), 24. “The in-

struments necessary in constructing the figures in these problems are, a pair of compasses and a straight edge of any kind, as of a ruler, or, when such cannot be had, the back of the fold made by doubling a piece of thick paper. Also the parallel rulers are convenient. These may be of the common form, which needs no description here, or those called Marquoi’s [sic] Rulers.”

14. *The Military Panorama, or Officer’s Companion for May 1813* (London: Printed for P. Martin, late of the firm of Cuthell and Martin), 169–170.
15. Jackson, *Elementary Surveying*, 35–37.
16. W. S. Binns, M.C.P., *A Course of Geometrical Drawing Containing Practical Geometry, Including the Use of Drawing Instruments, The Construction and Use of Scales, Orthographic Projection, and Elementary Descriptive Geometry*, rev. ed. (London: John Weale, 59, High Holborn, W.C. 1861), 13–14.
17. De Rheims, *First Practical Lines in Geometrical Drawing*, 15. De Rheims was “For Many Years Professor of Fortification, Freehand and Geometrical Drawing, Natural Philosophy, and Chemistry, in Most of the Oldest and Principal Military Establishments in the Neighborhood of London and in Woolwich.”
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23. *Mathematical Gazette*, 190–192.
24. *The Student’s Handbook to the University and Colleges of Oxford with the Programme of Special Studies for the Academic Year 1906–7*, 17th ed., rev. to Sept. 1906 (Oxford: Clarendon Press, 1906), 149.
25. Reginald E. Middleton, Osbert Chadwick, and J. Du T. Bogle, comps., *A Treatise on Surveying*, 3rd ed., part II (London: E. & F. N. Spon, Ltd., 1911), 2.

# The Chronicle

Patty MacLeish

In November, 1933, soon after the first meeting of the EAIA, the first issue of this publication appeared. In the lower right corner was the following notice:

## Introducing "The Chronicle"

In presenting this, the first issue of our "Chronicle" to the members of our association, and to any and all who are interested in our purpose, we hope we have started a medium wherein each one will find some item of interest news, or information.

It is hoped this effort will stimulate all of our members, or outsiders, to contribute some article or news or suggestions.

If we can get contributions, with good pictures or sketches, on a variety of the subjects in which our members are interested we should be able to make the future issues a source of reference and possibly of authority.

It is submitted to you in the spirit of our purpose and the hope that it will justify your cooperation.

While the wording of the purpose of the EAIA has evolved over the years, the introduction describing *The Chronicle* in that first issue holds true today. In the earlier pages of this issue we have focused on the EAIA itself—its history, leadership, and legacy. On the following pages, we will turn out attention to *The Chronicle*.

When it was first published, *The Chronicle* included articles about trades and objects, notes and queries, and frequent (and sometimes fierce) letters to the editor, along with EAIA business. (Eventually the business part was removed from *The Chronicle* and a new publication, *Shavings*, became the organ for news about the organization, its members, and events.)

The organization was not quite a year old, when the editors were already concerned about its viability of a monthly newsletter, "we could, of course, decide to publish bimonthly instead of monthly or to print four pages instead of eight, either of which would cut the yearly cost in half. ...The other way is, for the present, to continue in 'hand-to-mouth' fashion—publishing as frequently as may in the judgment of the officers be justified by the influx of new member, always reserving enough in the treasury to 'spread' the issues over the year."

Because of the "hand-to-mouth" nature, the publication schedule, at first, was a bit irregular. Volume 3

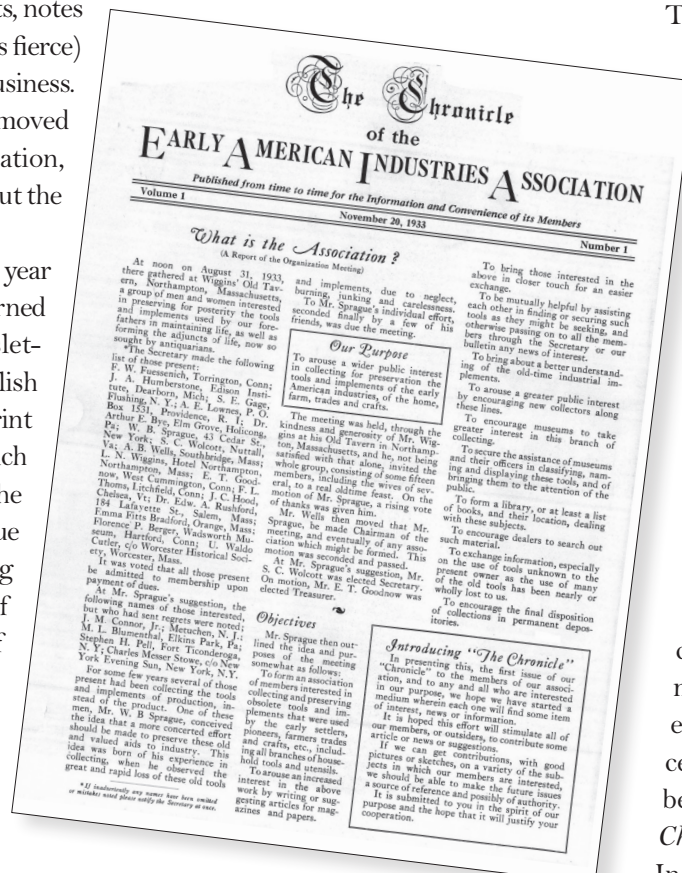
of *The Chronicle* consisted of twenty-three issues, covering the period from July 1944-1950. With the end of World War II and the prospect of a better financial footing, in 1951 beginning with the January issue, the publication schedule changed to a regular, twelve-page quarterly. (See "Memorandum from the President" page 45.)

The number of pages grew. Beginning in 1972, there were sixteen pages and the following year a separate cover was added. By 1991 the number of pages was increased to thirty-two, and in 1998 to forty pages plus a cover.

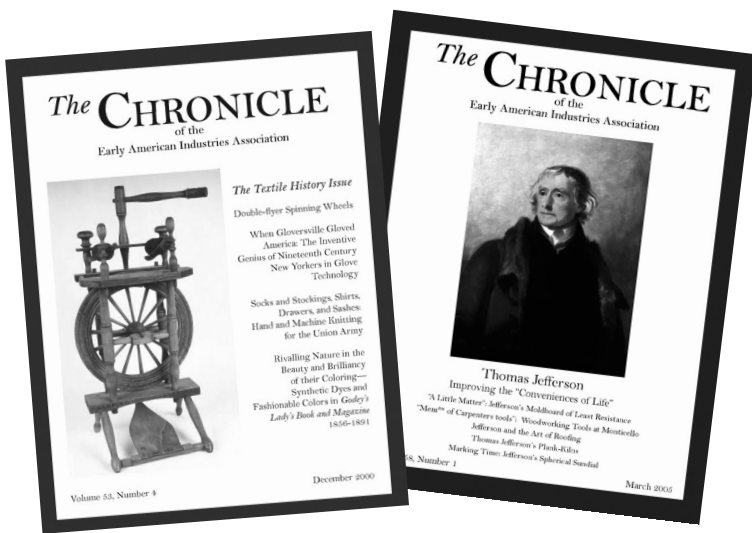
Over the years, special issues were published. The first was in 2000 with the publication of the proceedings of the Textile History Forum held in Cooperstown, New York, in 1999, with Rabbit Goody as guest editor (vol. 53, no. 4, December 2000). In 2002, member Philip Stanley introduced an issue that focused on measuring instruments (vol. 55, no. 2, June 2002). We were honored when the staff at Monticello, Thomas Jefferson's home, prepared a special edition focusing on Jefferson's inventiveness, "Jefferson, Improving the Conveniences of Life" (vol. 58, no. 1, March 2005). In 2015, to honor the memory of EAIA member and leader, Jay Gaynor, a special edition of *The Chronicle* (68 no. 3, September 2015) was published in his honor, featuring articles by those he had mentored.

The grants-in-aid program became the source of many articles based on new and original research for *The Chronicle*.

On the following pages, we have reprinted several articles—some written by individuals who were profiled earlier on these pages. Other articles were selected to give a flavor of the contributions in the early days when *The Chronicle* served as the conduit for communication among members. Letters to the editor and queries on miscellaneous topics were the best example of how *The Chronicle* fulfilled that role. Included also are articles by



Page 1 of the first issue of The Chronicle.



of *The Chronicle* in an electronic format. You won't regret owning it. For the traditionalist who likes curling up with a good book, back issues often appear at auctions, both live and online. The index project, which first began in 1951, has commenced again in earnest; it covers 1986 through 2008 with more issues being regularly included. The DVD version of *The Chronicle* is searchable, as well.

*The Chronicle* has been published in an unbroken run since that first issue and represents an important repository of information about early American tools, industries, and the men and women who produced those tools. It is the single largest repository of information on early American industries.

From the very beginning pleas for contributions made their way into almost every issue of *The Chronicle*. Heed those words and become part of this eighty-five-year old repository! An article in *The Chronicle* is an opportunity to tell others about our research and continue that philosophy of sharing information that began with that first meeting between Stephen C. Wolcott and Lewis Wiggins in 1933.

*Two of the four special issues of The Chronicle have been published in the past eighteen years including one on Textile History and one featuring the inventiveness of Thomas Jefferson. These and other back issues through volume 60 are available on DVD.*

William Sprague, Loring McMillen, and Earle Goodnow, one of the founders of EAIA. Some of the articles in *The Chronicle* contained ground-breaking information. The articles by John Keabian and Anne Wing documented the lives of two tradesmen of southcoast Massachusetts. Their early work led to the uncovering of the first known American plane maker, Frances Nicholson, and the first documented African-American planemaker. Finally, there are bits and pieces of material that simply struck my fancy. A close read of the back issues reveals the curiosity, humor, and depth of knowledge of the membership.

The EAIA has plans to soon offer the next ten volumes

### Editors of *The Chronicle*

There have been eleven editors of *The Chronicle*. Many of the editors were prolific writers and frequent contributors to *The Chronicle*. Megan Fitzpatrick, a writer, former editor for *Popular Woodworking Magazine*, and woodworker, will continue that tradition when she assumes the post as editor in September 2018.

- Stephen C. Wolcott, 1933–1934
- William B. Sprague, 1934–1942
- John D. Hatch, 1942–1949
- Josephine H. Peirce, 1949–1952
- Minor W. Thomas and William D. Geiger, 1952–1956
- William D. Geiger and Raymond R. Townsend, 1956–1963
- Raymond R. Townsend, 1963–1970
- Dan Reibel, 1970–1979
- John S. Keabian, 1979–1983
- Elliott Sayward, 1983–1992
- Dan Reibel, 1993–1999
- Patty MacLeish, 1999–2018

### Editorial

*Shortly before his death, Stephen C. Wolcott, the first editor of The Chronicle, wrote a brief editorial in which he most eloquently put forth the case for learning as much as possible about the objects we collect.*

Any tool or implement worth having deserves to have its history recorded. This is often impossible, as when the article has left the hands of its original user and even of his descendants, but frequently a little time spent in asking questions will develop information that will greatly increase the importance of the object, and at times give it a personal touch of human interest that will more than repay the trouble taken. So far as possible, whenever we acquire an interesting item, let us make every effort to learn the names of its former owner and of its maker, the approximate date of its manufacture and use, its technical name, and its function and method of use. This is too often neglected, especially by dealers, with the result that these relics are passed on to those who have no way of procuring the information necessary to identify them. We all wish that the early tool-makers had stamped or otherwise marked their products with names and dates, but, in our haste for acquisition and desire to possess, we should not ignore the opportunity to procure this missing data.

—S.C.W [Stephen C. Wolcott]  
*The Chronicle* 1, no. 6, July 1934  
 published posthumously



# The Comb Maker

by William B. Sprague

*William B. Sprague, who was the subject of articles in this issue by David Parke and Kathryn Boardman, was a founding member of the EALA, its first president, and the second editor of The Chronicle. He was also a frequent contributor to The Chronicle, and this article appeared in volume 2, no. 20 in April 1942. Mr. Sprague, as both David and Katie point out, had a fondness for classifying objects. He also, it appears, did not like footnotes, as you will see from his opening note in the brackets below. He used this same referencing system for all of this articles in The Chronicle. Editor*

[The capital letters, interspersed through the text, refer to the list of authorities at the end of the article.]

“From deposits, thought to be nine thousand years old, bone combs ornamented with curiously carved animal figures have been unearthed, proving not only the antiquity of the comb but to the value placed upon it” (A 1). At various times and places, combs have been made from wood, gold, silver, brass, bronze, japanned iron, lead,—which was supposed to turn grey hair to its original color! (A13)—ivory, tortoise shell, rubber, and probably many other materials, but this discussion will be confined to those which were made by hand in America from the horns of cattle.

“Horn consists almost entirely of animal matter, chiefly membranous—namely, coagulated albumen with a little gelatine, and an inconsiderable portion of phosphate of lime; had the horns much more earth they would be brittle like bones, had they much more gelatine they would be soluble like jelly or glue, as they are constituted, the quantity of gelatine is only sufficient to allow them to be considerably softened by a degree of heat not exceeding that of melted lead...Their gelatine serves as a natural solder, so that neighboring surfaces, when perfectly free from greasy matter, may be permanently joined together by moisture, heat, and pressure; the union becomes perfect, but horn being a cheap material, the process of joining it is seldom practised” (H).

The founding of the comb industry in America is generally credited to Enoch Noyes, of West Newbury, Massachusetts, in 1759 (A 15), probably because the business which he established grew to considerable proportions, although there was at least one earlier “horn breaker and comb maker” Captain Robert Cook of Needham, Massachusetts, who died in 1756 (A 15).

The preparation of the horn for manufacture into combs, drinking cups, and other articles was known as “horn breaking.” After soaking the horn in water for about a month to destroy by putrefaction the membrane which held the core in place (H), the tip was sawed off (B, G, H,) and then, according to one writer, it was “divided longitudinally on one side with

the same instrument” (C). The weight of authority, however, is that, while still in cylindrical form, it was softened by boiling in water for half an hour (H) or in oil (A 18-9) or by roasting it in the flame of a wood (B, E, F, G) or coal (H) fire until it was “nearly as soft as leather.” Mention is made of the risk of “scorching or frizzling” it when the latter method was used (H). When thoroughly soft, it was slit up one side (E, E, G) “with a strong-pointed knife, and opened out by means of two pairs of pincers applied to the edges of the slit” (H).

“The flats are inserted between iron plates previously heated and greased which are squeezed tight in a kind of horizontal frame or press by means of wedges” (H, see also E, C). This was known as the “wedge press” (Figure 3) and, in the early comb shop, was “usually merely a huge log of wood, four or five feet long, with a hole mortised in the center,” in which the iron plates were placed upright (A 48).

“For general purposes, as for combs, the pressure should be moderate, otherwise, in the language of the workman, it “breaks the grain” and causes the points of the teeth to split;

Figure 1 (right). “The Comb Maker.”

FROM RIVINGTON'S TRADES.

Figure 2 (below).

“Comb Maker.” Note the men on the right who appear to be using a twinning saw.

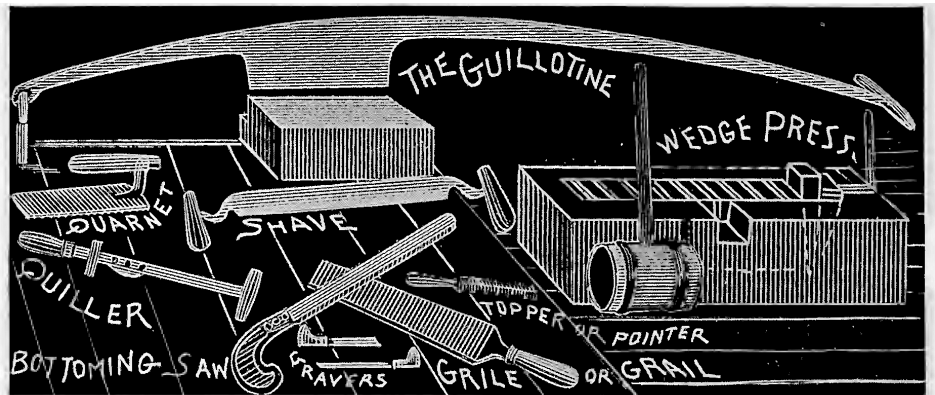
FROM HAZENS TRADES



but great pressure is purposely used in the manufacture of the leaves for lanterns, which are afterwards completely separated with a round-pointed knife, scraped and polished. The heat and pressure when applied to the light-colored horn renders it almost transparent" (H). The flats were then plunged into cold water to harden them (E, E, F, G), cut to proper size with a "thin steel saw bow mounted in an iron or wooden handle" (somewhat resembling a modern hack-saw—*Author*) and divided into sheets or leaves from one-twelfth to one-quarter of an inch thick, with a "small iron chisel" (F). The wrinkles and flaws were removed with the "guillotine" (Figure 3) followed by a "knife having two handles, similar to those used by coopers, which he works *from him* across the grain of the horn from one end of the intended comb to the other." (B, Figure 3 "Shave"). The final finish to the plate was given by means of the "Quarnet" (A, Figure 3) or "quannet" (D, I 1842). This was a sort of coarse rasp, and while using it "the work was mostly placed on the knee as a support" (D). The teeth of the quannet were sometimes "made by pieces of saw teeth inserted into inclined kerfs in a beech stock" (I, 1842).

For cutting the teeth, the plate was fastened "by that part meant for the back, into an instrument for holding it called a 'clam' by wedges" (B, G), "the clam has a long handle, which the workman places under him as he sits; by this means he steadies the object of his work, as both hands are to be employed in the operation" (B). The plate was held "at an angel of 45° with the horizon" and the saw was worked horizontally (F).

The saw with which the teeth were cut was the "stadda" (Figure 4). The blades are shown as (a), an end view of the tool as (b), a side view as (c), and the action of the blades as (e); (d) represents a more unusual form of stadda, but Knight does not explain its use. "It has two blades so contrived, as to give with ease and exactness the intervals between the teeth of combs, from the coarsest to those which have from 40 to 45 teeth to the inch. The blades or plates of the saw are made of thick steel, and are ground away on the edge as thin as the notches in the comb and they have from ten to twenty points in the inch of slight pitch. The plates (blades) are fixed in two grooves of the stock by means of the stuffing, which consist of two long



From "Leominster Historical and Picturesque"

### COLLECTION OF OLD COMB-MAKERS' TOOLS

Figure 3. Comb makers' tools including the guillotine, shave quarnet and grile.  
FROM COMB MAKING IN AMERICA

wooden wedge or folds of brown paper; contact between the blades is prevented by a thin slip of metal, called a "lanquid" ("languet" in I, 598), which is of the thickness of the teeth required in the comb. One blade is in advance of the other from one-sixteenth to one-quarter of an inch; at the first process a notch nearly of the full depth is made in the comb, and a second notch is commenced; at the next process the notch in advance is deepened, and a third commenced, and so on consecutively. By this means the teeth can be cut in a regular manner, for the very action of cutting out one tooth scores out a place for the saw for the next adjacent tooth." (D, see also I 598). The stadda was also called the "gauge-leaf saw" (A 19). Another description of the tooth-cutting process follows, and, while the same general method was pursued, the blades of the saw, instead of "thick steel" as stated above and as illustrated, may sometimes have resembled that of a jig or scroll saw. "The teeth themselves are cut out with a double saw, *composed of two thin slips of tempered steel, such as the mainspring of a watch, notched with very fine sharp teeth* [*italics ours*].

These slips are mounted in a wooden or iron stock or handle, in which they may be placed at different distances to suit the width of the comb teeth. A comb maker, however, well provided in tools, has an assortment of double saws, set at every ordinary width. The two slips of this saw have their teeth in different planes, so that when it begins to cut, the most prominent slip alone acts, and when the teeth of this one have fairly entered into the comb, the other parallel blade begins to saw" (F).

Moreover, another writer, in this connection, speaks of a "double saw, each blade of which is like the small one with which joiners and cabinet maker cut their fine work" (B).

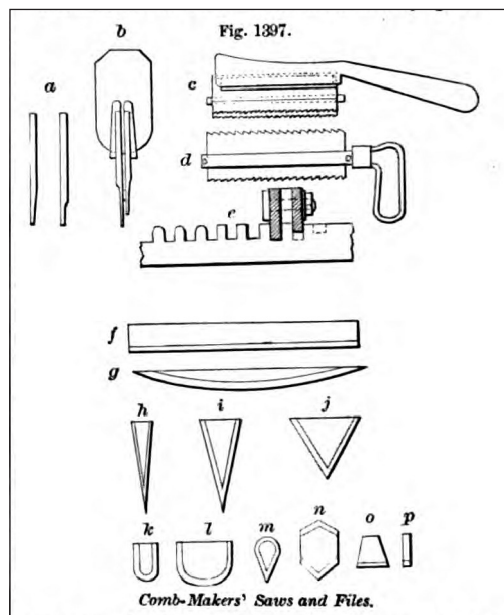


Figure 4. Comb maker's staddas and files  
FROM KNIGHT'S DICTIONARY

In the case of larger combs, it was possible to make two from one plate by means of the twinning saw. The plate, by means of clamps, was bent “so as to render the upper surface considerably convex; to this surface the twinning saw is applied by the hand of the workman, who makes a number of incisions; which are completed both ways with two different kinds of saws, and the end of each tooth is cut from the back of the opposite comb with an instrument called a ‘plugging awl’” (C, see also I, 2688), or, as another authority, writing of tortoise shell combs, puts it, “The teeth are cut out with a thin frame saw, while the shell, equal in size to two combs, with their teeth interlaced, is bent like an arch in the direction of the length of the teeth. The shell is then flattened, the points are separated with a narrow chisel or “pricker” (F, H). The two men pictured at the right in Figure 2 are apparently performing these operations.

After the teeth were cut, each of them was “square and rough on the inside,” so that it was necessary to employ a tool “about the size and shape of a case knife, having teeth like a file on each flat side; after this, two others of the same shape, but each finer cut than the other, follow; one stroke on each side of the comb is then given by a rasping tool, in which also a little attention is used to give the ends of the teeth a small bevel or angle: this tool is used to take off any roughness that may remain on the sides of the teeth” (B). More specifically, the “carlet” (no Figure), “about an inch wide and ten inches long, bevelled like a clapboard and with teeth on both sides” was used to cut away the teeth at the ends; the “topper” or “pointer” “a blunter tool” (Figure 3) finished the points of the teeth; “in making dressing combs, a curious tool called the ‘vidder’ (no Figure) was used to scrape away the plate, leaving the back thicker”; and the “graile” or “grile” (Figure 3) smoothed the sides of the teeth (A 19). Other tools for the same purpose were the “float” and the “found” (D, I 598). Cross sections of the blades of these tools are shown in Figure 4: float (f), graile (g), found (h), carlet (i) and topper (j), the double lines indicating the position of the teeth. “The teeth have a forward inclination of about 15° and are made by a file, not a chisel. They are of lower temper than usual and are sharpened by a burnisher” (I 883), of which “the blade is about 2 inches long, 1 inch wide and 1/6 inch thick; the end is mostly used, and is forcibly rubbed first on the front side of every tooth and then on the back, by which means a slight burr is thrown up on every tooth, somewhat like that on a joiner’s scraper” (H). The bottoming saw (Figure 3) with “a very narrow blade with specially cut teeth and a curved handle, rounded and sharpened the spaces between the teeth” (A 58).

The finished combs were polished first with brick dust and then with rotten-stone and vinegar (A 62, C), rotten-stone and oil (B), pumice stone and tripoli (F), or charcoal and water (G), rubbed in with buff leather. Special combs

were ornamented with hand engraving and jig-saw work. Almost every description of comb making contains directions for treating the a horn comb in one or more ways so that it resembled tortoise-shell and might be sold as such. “The poorest and coarsest of paper and tow twine were used for wrapping, and one comb on the outside showed the contents of the package. It was not until about 1835 that boxes came into use for the packing of combs.” (A 27).

The first primitive comb-making machinery seems to have appeared about 1806 (G) but from then on was constantly elaborated and improved, one of the earliest inventors being David Emory Noyes, a grandson of the founder of the hand industry (A 32). There are interesting exhibits of early comb makers’ equipment at the Robert A. Spill Comb Shop at Leominster, Massachusetts. [R.T. Spill & Co., appears to no longer be in business], and at the Bucks County Historical [Mercer Museum].

### Authorities

(A) *Comb Making in America*, Bernard W. Doyle, Leominster, Mass., 1925; (B) *Book of English Trades*, C. & J. Rivington, London, 1827, pp. 89-93; (C) *Panorama of Professions and Trades*, Edward Hazen, Philadelphia, 1837, pp. 80-82; (D) *Encyclopedia of Useful Arts*, Charles Tomlinson, London, 1852, p. 419 (Vol. I); (E) *American Family Encyclopedia*, Webster & Parkes, New York, 1859, p. 1004; (F) *Dictionary of Arts, Manufacturing and Mines*, Andrew Ure, New York, 1850, p. 316, supp. p. 267; (G) *American Artists Manual*, James Cutbush, Philadelphia, 1814, no page numbers, see *Manufacture of Combs*; (H) *Dictionary of Machines, Mechanics, Engine Work and Engineering*, D. Appleton & Co., New York, 1852, pp. 25, 28, 631 (Vol. I); (I) *American Mechanical Dictionary*, Edward H. Knight, New York, 1874.

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AH, YES, IT’S A SPRAGUE, CONTINUED FROM PAGE 29  
 irons, from shuttles to powder boxes, from butter paddles to beesmokers—the objects with neatly written “s” and four numerals in red paint will continue to be the center piece of our presentations at The Farmers’ Museum in telling the stories that so interested William Sprague. Curators, registrars, students, and researchers will continue to seek his wisdom on this wonderful array through the catalogue notes he left us. “Ah, yes, it’s a Sprague” will be exclaimed with excitement and appreciation for a long tome to come.

Thank you Mr. Sprague.

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*At the time she wrote this article in 1992, Kathryn A. Boardman was a colleague of David Parke’s at The Farmers’ Museum, where she worked with the Sprague Collection almost daily for twenty years. She is on the faculty of SUNY Oneonta, Cooperstown Graduate Program. She is the editor of The Bulletin of The Association of Living History, Farm and Agricultural Museums.*

# Dating Old Buildings

by *Loring McMillen*

*These articles by Loring McMillen originally appeared in The Chronicle 3, nos. 17 and 18 (October 1948 and January 1949) The editorial notes were written by then-editor Edward Durell.*

## Part I: Stone and Brick

In general there are three methods of dating an old building; first by documentary means, second by the style of architecture, and last by a study and analysis of its parts and the method of their construction.

The first two methods are well known. When sufficient evidence exists, as with most of our better known buildings, no further proof is necessary. However, as is more often the case with lesser buildings, documentary evidence is inconclusive or wholly lacking and so many renovations have been made that the original architectural style has been lost. The third method has then to be used. Too little is known about this method, since many early details of construction persisted with minor changes for many years and for a similar reason others have no place in written history. However, exhaustive study of many examples, and of records, is gradually building a check list of data which can be applied to any structure with reasonable accuracy. The following data was drawn from a study of buildings in the vicinity of New York, chiefly Staten Island, first settled by the Dutch in 1639 and later by the French and the English. It is applicable equally, with the usual local variations, to buildings elsewhere. Materials commonly used in building have been wood, stone and brick. In New England, tradition and an abundant supply of timber led to the construction of the typical New England frame house.

Stone and brick were used sparingly. In cosmopolitan and Dutch New York and neighboring New Jersey, the frame house shared equal favor with the traditional Dutch brick house and the French stone house. In Dutch, or German, Pennsylvania, due to the abundance of the material and a knowledge of its use, the stone house predominated, while in the South the brick building was generally constructed. Stone walls were constructed 22 inches in thickness and consisted of an outer and an inner wall, bonded to each other by overlapping the larger stones and the keying effect of the smaller ones. This thickness was the natural result of the size of stones, which could be conveniently handled. Variations exist such as in foundation walls, which were thicker, and in large buildings. Early mortar was made of lime and sand and unless locally available used only in pointing, the remainder of the wall being laid up in ordinary clay. At first, and until as late as about 1720, much of

the early lime for mortar was obtained from the burning of oyster shells, and mortar thus made can be readily recognized by the presence of large calcinated pieces of shell.

Legislation in the various provinces discouraged this practice; New York forbade the taking of oyster shells for the burning of lime in 1704. Lime burned from limestone came into use about 1730 with the discovery of limestone deposits. The early mortar thus made shows large particles of the stone, but with the gradual improvement in kilns, and in burning, these particles after 1830 can no longer be discerned.

Early stone walls show little attention paid to coursing or dressing, being laid up in what is known as "undressed random rubble," that is the stones were used as found, and placed without continuous horizontal joints. Gradually greater care was used in dressing, that is, in tooling or in squaring the stones and laying them up in courses. Greater care was also used, in quoining on the corners, or "long and short work," as it was called. By 1800 and earlier we have the beautiful stonework of the buildings of Pennsylvania and of northern New Jersey, but by 1820 stone as a common wall material ceased generally to be used in all but public buildings.

While records exist referring to the importation of brick at New York and other colonial ports, the tradition of Dutch and English brick brought from the old country is largely unsubstantiated. To the contrary, ample evidence exists showing the local manufacture of brick from the earliest times to the present. Unfortunately, little concerning age can be deducted from the size, texture or color of bricks. Various sizes were employed in all sections notwithstanding that on June 19, 1703, New York Province standardized by law the size of manufactured brick at  $2\frac{1}{2} \times 4\frac{1}{4} \times 9$  inches. This was the most generally accepted size and prevailed until about 1790 when the present size of  $2 \times 4 \times 8$  inches came into use.\*

Old bricks, of course, were hand made, that is hand processed in wooden molds open at the top. They thus show five smooth sides and one sanded or rough side. No marking was made upon these bricks to the despair of the historian, and determination of their age can only be hazarded by increasing evenness of texture, hardness, and depth of color of later examples. Later bricks were also more uniformly and carefully made and as a result the joints between are narrower. Bonds, such as English

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\*"Dutch Brick" commonly spoken of in New York, originally referred to the larger size brick. In more recent times "Dutch Brick" has mistakenly been thought to suggest the actual place of origin, as being in Holland. Ed.

or Dutch, were used at all times and thus can not be used for dating of brickwork.

Stone and brick were both used in fireplace, hearth, and floor construction; stone more generally in the older examples, particularly in the kitchen fireplaces where its use lasted until about 1750. The tools formerly employed by the mason and bricklayer were similar to those in use today: the stone mason's hammer for rough shaping stone; the three-cornered trowel, the most useful tool of all for laying mortar, rough pointing, and shaping brick (a beautiful tool to watch in the hands of a skilled workman); the rectangular smoothing trowel for plastering work; the mason's level, at first a plumb bob on a T-frame; then about 1830-1840 the spirit level—much longer than the carpenter's level; the lead plumb bob suspended from a string; and the "hawk," a square board with a round handle set at right angles for holding mortar while plastering. The "hawk" and the smoothing trowel were actually plasterers' tools, but in former years the trades of mason, bricklayer, and plasterer were one, even as they are today, particularly among independent workers. Old plaster followed the same rules as mortar, being made in the same manner. Plaster in the stone houses was applied directly to the stone in one thin coat. In the frame house, plaster at first also was one coat mixed with the hair of some animal for greater binding and elimination of cracks. About 1790 to 1800, two coats, a scratch coat and a fine coat, began to be applied. The three-coat plastering job is a modern improvement.

## Part II: Wood

In studying the frame house, we find that it was still being constructed in the countries from which our first settlers came. However, as a result of the depletion of the forests in the lowlands, we find the Dutch, the French and the Germans more versed in the construction of masonry buildings, whereas the English, with some forest reserves, were still accustomed to erecting frame buildings. As far as I have been able to determine, the construction methods employed by the carpenters of each nationality were nearly identical and it was only in architectural details that variations occur; as for example, the frame house of New England has no resemblance to the frame house of the Hudson Valley or farther north, although the method of joining is the same.

In the New World, timber was framed at the building site or nearby, and prior to 1790-1800 each building member was hewn from a log nearest in size to the desired dimension so as to make the smallest amount of cutting. For this cutting or hewing, the broad axe, with one perfectly flat side and a cutting edge sharpened like a chisel, was used. This axe and the ordinary felling axe in the hands of a skilled artisan were all that were needed to square and smooth a log for use. The

adze, often accredited for the smoothing of the surfaces of a beam, was never used for this purpose, but when used at all by the house carpenter was employed to level the upper surfaces of joints for the more even laying of the floor boards.

The method of framing a building is ages old and is still practiced in some sections in barn construction. It has not been used since about 1870-1880 for house construction. After hewing to the required size, all members were cut to length and joined together on the ground by the mortise-and-tenon method, secured by one or more wooden pins or treenails. To insure that no member would be separated from its component and would take its place in the erected framework of the building, the carpenter joiner marked the outside of each member close to the joint with a Roman numeral, beginning with "I" and working usually right to left along one face of the building, repeating the same numerals on the opposite side. Usually these marks were made with the one- or two-inch chisel, but often a small tool called a scribe was used. This had a small steel blade set in a handle which, with a scratching movement, cut the necessary numerals. The use of this tool caused this method of construction to be named the "scribe rule" as distinguished from the "square rule" which followed. The latter method has been used since mortise-and-tenon framing went from general practice about 1870. This method, used today, by which the carpenter saws each member to proper length on a line indicated by his "square," is familiar to us all. Since there is no mortise-and-tenon to be fitted, as only nails are used for fastening, each member today can be placed in position as soon as cut.\*

When the frame was completed on the ground, the sides were assembled and raised into place on the sill of the foundation walls. The other members, floor joists and roof plates were then added. Roof rafters, usually first assembled as a simple "A" frame, were finally raised upon the plates and the house was ready for covering. Numerous are the accounts of the old house or barn "raisings" of former years. Only a few years ago, I was fortunate to chance upon one in the French-Canadian section east of Quebec where this practice seems still to be continuing. Here forty to fifty men and boys swarmed about the laid-out hewn framework of a barn and at the shouted directions of a master carpenter carried and erected in a few hours the entire framework of the barn.

In dating framework, the following can be used as a guide. In the earliest work, oak was almost universally used,

*\*The balloon frame involved the substitution of thin plates and studs, running the entire height of the building and held together only by nails for the older method of mortise-and-tenon joints. Invented apparently by George Snow in Chicago in the early 1830s, it marks the penetration of industrialization into housing. Its invention coincides with the improvement of sawmill machinery as well as with the mass productions of nails.— Ed.*

with the gradual substitution of other wood, particularly the softer varieties such as pine and whitewood. At first members were exceptionally large, indicating little understanding or regard for what was necessary for strength. About 1770, members became smaller in cross section, particularly floor joists, which in the early examples were nearly square in cross section. These now gradually assumed greater depth in relation to width. Spacing between joists and posts diminished from forty-four inches in Colonial days to twenty-four inches about 1830. The most significant change took place about 1790 when sawed timber began to take the place of hewn, at first in studding and bracing, but finally in the larger members as well.

Probably the most interesting operation in building following the erection of the frame took place immediately after the shingles or clapboards were placed. Stakes, either split or whole saplings about two inches thick, were slipped horizontally into grooves formed by two small strips nailed to each side of a post. Clay mixed with straw or salt marsh hay was packed about the stakes filling the space between the posts with a solid wall insulation, which was plastered over for the wall covering within. This process was called "daubing" and was identical with the same process used in erecting the half-timbered houses of Europe, with the clapboards omitted and the outer surface whitewashed. Records exist attesting that the "half-timbered house" was erected in this country in the early days. However, the scarcity of lime and the abundance of wood, together with the more rigorous climate of America soon discouraged the erection of such buildings. About 1790, in the New York area, bricks began to be used instead of clay for wall filling, although examples are known earlier. By 1870, this construction ceased entirely, only to be revived in recent years by substituting patent wall insulating material for brick.

Clapboards and shingles have been mentioned as the usual covering for the sides of the frame house. Both were used from the earliest times, often in combination, shingles on the north and east since they gave better protection, and clapboards on the south and west, or often, as when the home faced south, clapboarded only on the front, since clapboards with their beaded or molded edges were more attractive. In New England clapboards were narrow and thin, made of oak and later white pine. In New York early clapboards were much wider of random widths, as wide as twelve inches, with a beaded edge. By 1790 these were narrower and the beaded edge, so popular as an edge molding during colonial times, had become an ovolo (quarter round) or cyma molding.

The earliest shingles, or shakes, were of oak, of which no examples have survived to the author's knowledge. Very early, however, white cedar and white pine were used, three feet being the usual length of the shingle. These were random

width  $\frac{3}{4}$ -inch thick at the butt and hand-riven. Before 1780 shingles were often "battered," that is butt trimmed in the shape of a circle or three-sided. These were nailed both at the butt and in the length to riven oak furring strips. After 1800 these strips were power sawed and following 1840-1850 shingles were also.

Boards for flooring were at first of oak, but very early of white pine. Before the general introduction of power sawing, about 1790, they were hand sawed. Hand sawing can be recognized by the irregular kerf marks left by the ancient two-man pit saw. Boards were joined by tongue and groove or by a slip joint—a piece of wood slipped into the grooves of two joined boards. By 1800 floor boards became narrower and usually of one width, which permitted alternate breaking of joints. In old flooring of random widths, as much as twenty inches had to be broken over the same joist to prevent wastage.

Earliest roof coverings were clapboards and shingles. Thatch, which was occasionally used, was used as late as 1800 in covering barns. Tiles were used only on the better buildings at early dates, and it is believed no early examples of any of these coverings exist today. Shingles became the universal roof covering in the same sizes as those used for wall covering. The three-foot shingle seems to have been more popular before 1780 and the 27-inch length thereafter.

With structural details belong those simple articles of joining called builders' hardware. Chief among these is the lowly nail and its less frequently used cousin, the screw. Contrary to popular belief, the iron nail is nearly as old as frame building itself. The expression referring to a building as being constructed without a nail is only partly correct, for only the framework was thus constructed. All the superficial covering of clapboards, shingles, lath and trim were fastened with iron nails.

The nail has been the object of much descriptive writing, and I will not therefore linger upon this interesting subject. Prior to about 1790 nails were made by hand and their simple outline can easily be recognized by the sharp point and finely tapered shank with irregular hammered sides, and the head beaten into many shapes—each with its purpose and name. Like the sturdy oak tree, there were more than three hundred varieties of nails, each with its name and purpose, such as the "Rose Sharp," "Fine Rose," "Flat Point Rose," "Clasp," "Clout," "Fine Dog," etc.

Following 1790 machines were invented which made the shank of the nail, leaving the head still to be hand-fashioned as formerly. By 1825 the entire nail was machine made, and for years the "cut nail" as it was called was the standard nail for all general use and can be recognized by its regular flat sides, blunt point and flat head. The present wire nail came into general use following 1890.

Iron screws were used only to fasten butt hinges and other hardware. Prior to 1846 these were pointless and before about 1800 handmade. Butt hinges were cast iron and came into use following 1780. By 1820 they had replaced the strap and "H" or "HL" hinge for interior use. Wooden case locks with wrought-iron works precede 1780 and between this date and 1820 the wrought-iron case lock was in general use. These were rim locks, that is, applied to the surface of the door. Mortised, or built-in locks, began to be used as early as 1810, and from this date, or somewhat later, the cast iron lock begins to appear.

Latches were, at first, of the Suffolk type, that is open handle, and the Norfolk type of handle fastened to a plate came into general use about 1810-1820.

Probably no trade, no industry has shown so little change during the centuries that has fulfilled the needs of mankind, as the art of building. From foundation to roof, from timbered frame to finished trim the story is the same: stone by stone, brick by brick, timber by timber they are fitted into place — one by one — with the same age-old tools, the mason's trowel and the carpenter's hammer and saw, each fulfilling the same function as formerly. Only in the substitution of materials and the conveniences within the house has there been change. If the ancient carpenter were to return today, he could take up his old trade after a short period of adjustment by the side of his modern fellow workman.

## Memorandum from the President to Members of EAIA

*This note from President Edward Durell that was published in The Chronicle 4, no. 1 (January 1951) could be sent today by the EAIA board to members with but a few alterations. Pay heed to its message!* Editor

I think all of you who have been fortunate enough to have been members of the Association for many years and have enjoyed *The Chronicle* under the able editorship of such men as William B. Sprague and John Davis Hatch, Jr. and now our devoted Treasurer, Mrs. Josephine H. Peirce, know that all of these editors have been handicapped in bringing out as good a magazine as could have been produced due to being limited in funds and articles. Therefore, I am appealing to you for assistance so we may have a bigger and better *Chronicle* as time goes on. It is a four-point program as follows:

1. We now have 537 members of the Association, there being a net gain in the year 1950 of 76 members or 14 percent. What we want to do is to more than double the number of members of the Association. This will bring in considerable money for the Association, as the cost of additional copies of *The Chronicle* required for the new members is very much less per copy than what it now costs to get out the copies for our present membership. Therefore, won't you help your Association and increase your pleasure in *The Chronicle* by getting at least one new member in the next thirty days.

2. We were very fortunate at the Cooperstown meeting in persuading Mr. and Mrs. John Kenneth Byard of Norwalk, Connecticut, to become cochairmen of a membership committee to tap new sources of membership for the Association. Undoubtedly there are available to many of you lists of members of other groups that

might be interested in *The Chronicle*, such as State and County Historical Societies and members of other hobby and collector clubs. So won't you please get these lists and send them direct to Mr. and Mrs. Byard.

3. During the past year we were successful in having the Early American Industries Association approved by the Treasury Department of the United States as an organization to which contributions could be made and these contributions deducted on your business or individual tax returns. I hope, therefore, that many of you will make a contribution to the organization in proportion to your means and your interest in its welfare. None too small and none too large.

4. Since I am certain that we will get a very generous response from our members to the three points of the program outlined above, I appeal to you on the fourth point and that is for the contribution of articles and photographs which would be of interest to the members of the Association. These should be sent direct to our Editor, Mrs. Peirce. Those of us who have been close to the editors know that they have great difficulty in getting our members to drop their modesty and write for *The Chronicle*. Many of you are experts in a particular line of tools and many of you have specimens that are to be found nowhere else in the world. Won't you please share these prized tools and devices with the rest of us? Only by your furnishing a photograph and an article can the rest of us enjoy with you something that I know you will be quick and glad to show any member who might visit you.

Let's all do a little and we will accomplish much. Yours for more fun and more knowledge in our hobby.

EDWARD DURELL, President

# Manufacture of Tacks, Brads, and Springs

by Earle T. Goodnow

*The following information was secured from a letter of May 30, 1832, written at Abington, Massachusetts, by Benjamin Hobart to the Secretary of State of the United States. E.T.G.*

The making of tacks by hand commenced in the town of Abington about 1770. The first attempt was to cut up old hoops into points, by a very imperfect kind of shears, and take them up, one by one, and place them in a common vise and screw up and unscrew for the purpose of heading each tack with a hammer. From this process, they were called *cut tacks*.

This mode was much improved by the use of movable dies about the year 1800. These dies were placed in an iron frame in the shape of an ox-bow; the two ends in which were placed the dies, being brought together by a lever pressed by the foot. In the first process a man might make 1,000 tacks per day, in the latter 8,000 per day. This was a great improvement and the inventor, Mr. Ezekiel Reed, was entitled to a patent, but he could not conceal the simple operation and it soon came into common use.

(While this machine might in one sense be considered as heralding the passing of the hand mode, do not overlook the fact that to make one tack, a kick of the foot was necessary and, after all, by this process the operator was only able to produce 8,000 tacks per day and incidentally a day was fifteen hours in the summer and ten hours in the winter. E.T.G.)

With these machines, or tack tools as they were called, thus improved from three to four hundred men and boys were employed in making tacks in the town of Abington and vicinity from about 1800 to 1816. For about thirty years previous to 1800, the business progressed from a small beginning to the employment of the number of hands above mentioned. In 1815-16 a machine was invented by Mr. Jesse Reed, of Hanover, son of the aforementioned Ezekiel Reed, to make tacks in one operation. Mr. Melvil Otis, of Bridgewater, claimed and received a considerable share in the invention. Improvements on the machines were soon made by Thomas Blanchard of Springfield and Samuel Rogers of East Bridgewater. For the exclusive patent rights on these improved machines, Elihu Hobart and the writer of the letter, Benjamin Hobart, paid \$20,000; they also expended about \$10,000 for building machines and fixtures and putting them into operation by water power; these new machines produced from 100,000 to 150,000 tacks each per day, and one, for some reason better than the rest, produced 250,000 in one day.

In conclusion, a few figures on the quantity and cost of production may be of interest. They are as follows—for one year's production—to manufacture 300 tons required about \$35,000; to be invested in land, water privileges, buildings,

fixtures and machinery with tools, wagons and horses, or oxen, for transportation purposes, and exclusive of patent rights, say for these.....	\$ 35,000
300 tons of iron .....	30,000
Rolling same into plates .....	9,000
Transportation 25 miles.....	2,000
To 100 workman for making 1,200,000 m. of tacks, or 1,200,000,000 in a month.....	15,000
Papering and boxing .....	1,000
5,500 wooden boxes .....	100
200 reams of household sheathing paper	700
Wharfage on 5,000 boxes shipped .....	100
Freight.....	750
Iron, steel, files, band leather, oil and twine .....	750
Agents to superintend.....	1,500
Commissions on sales .....	1,500
Insurance.....	500
Coal, wood, etc., etc .....	1,500
TOTAL.....	\$100,300

These figures were for two shops. There were in the United States about this time a number of shops which used about 2,000 tons of iron and paid out a total of about \$200,000 in labor.

In the manufacture of the following articles tacks were extensively used: hand-cards, trunks, saddles, carriages, bellows, cigar and other boxes, brooms brushes, sieves, shoes, posting advertisements, etc., etc.

**Industrial Information**  
**From Our Colonial Ancestors**

**The following was taken from the 1785-87 Jones Family Papers in the Manuscript Division of the Library of Congress; microfilm in Colonial Williamsburg Research Department. The Jones Family were prominent merchants of Williamsburg and plantation owners of Virginia.**

**Lumber and nails for house and corn crib.**

“Memo That for a House 16 by 12 it takes 850 10 Penny Nails for Coverg. 1 116 for Weather boardg. & 792 Boards Rafters 12 foot long. 7 foot Pitch.

“For an House 20 by 16 it takes 1050 10 penny Nails 1400. 8d Nails & 1000 Boards. Rafters 16 foot long 8 foot Pitch.”

“For a Corn House 16 foot Square 500 10 Penny Nails 270—8d Nails & 314 Boards.”

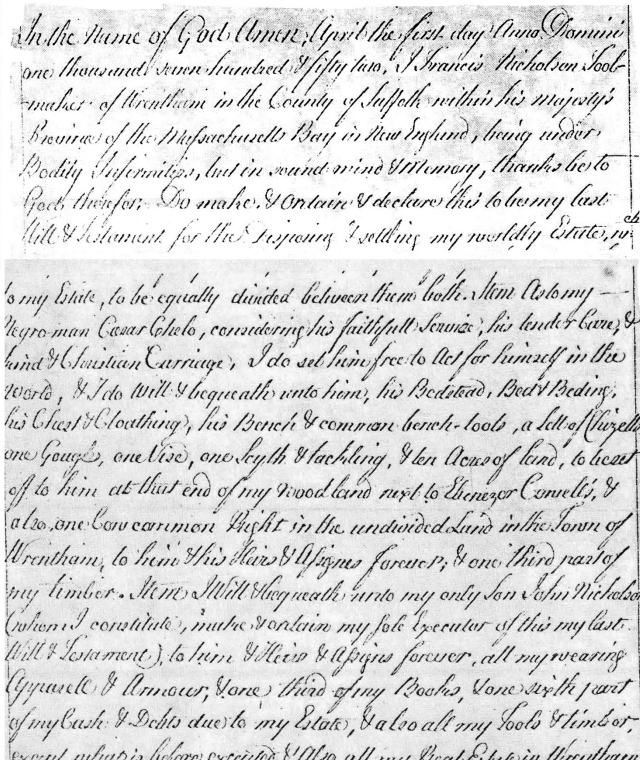
“In all 2106 Boards, 2400—10 Penny Nails & 2786- 8 Penny Nails.”

*(The Chronicle 13, no. 4 [December 1960]: 45)*



# EAIA and the Early Research on the Nicholsons and Caesar Chelor

In 1970 John S. Kebabian reported in *The Chronicle* on a plane he had recently found, and through a series of articles by him and with further research by Anne and Don Wing, tool collectors and historians learned of the lives of three important planemakers: Francis and John Nicholson and Caesar Chelor.



Francis Nicholson's will in which he frees his "Negro man Caesar Chelor."  
From *The Chronicle* 25, no. 1 (January 1971): 25

The Francis Nicholson is considered the first maker of wooden planes in America and Chelor the first documented African-American craftsman and toolmaker. That research was used by others to make further discoveries and eventually led to Richard T. DeAvila's book, *Cesar Chelor and the World He Lived In*. Mr. DeAvila's collection of Chelor planes was featured in the 1989-1990 exhibit, "The Real McCoy: African American Invention and Innovation," at the Smithsonian Institution's Anacostia Museum.

Mr. DeAvila noted in his article in *The Chronicle*, "Cesar Chelor and the World He Lived In" (46, no. 2, [1993]: 39-42),

Kebabian traced those names in the vital records of Wrentham and identified Francis Nicholson (white) and Ceasor Chelor (black) as residents of that town in the eighteenth century. Pushing his further investigation he added other details. As it turned out, Nicholson and Chelor were master and slave. Kebabian wrote of his important finds in *The Chronicle* (December 1970, June 1971, and March 1972.) He early suggested that Nicholson's planes could be assigned to the first half of the eighteenth century and that Chelor might be our first recorded black planemaker. Further research by Anne and Donald Wing supported the supposition. Articles under their byline in a variety of publications confirmed that Francis Nicholson was indeed our earliest documented "Toolmaker." Simultaneously, his slave, Ceasor Chelor, was recognized as the earliest documented black "Toolmaker."

Because of their importance to the history of toolmaking in America, those early articles from *The Chronicle* have been reprinted in this special anniversary edition. Some of the Kebabian articles have been edited to include only the material related to Nicholson and Chelor.

Editor

## Eighteenth-Century American Plane Makers

by John S. Kebabian

At the auction sale of the Blake estate in Fitzwilliam, New Hampshire, in 1967, I acquired the following planes with maker's marks of ancient aspect.

1. Smoothing Plane, marked "CE CHELOR" "LIVING IN" "WRENTHAM"—three marks in all. Owner's stamp "L.B."
2. Molding Plane, marked "CE CHELOR" "WRENTHAM."
3. Molding Plane, marked "I NICHOLSON" "WRENTHAM." This Wrentham mark and that in Numbers 1 and 2 are identical.

[A] later acquisition was [a Skew]-blade, Rabbet Plane, marked "I NICHOLSON." The mark is the same as in Number 3, but here fresh and sharp—it is rather worn in Number 3.

It occurred to me that genealogical records might be a key to the dating of some of these planes. Accordingly, I went to the genealogy and local history room of the New York Public Library, and found the following: In the Wrentham, Massachusetts Vital Records to the year 1850, compiled by T. W. Baldwin, the marriage of Ceasar

(sic) Chelor and Judith Russel is recorded, April 20, 1758. Births are recorded of eight children to Cesar (sic) and Juda (sic) Chelor, Beulah, May 10, 1760; Juda, April 25, 1762; Elisabeth, December 12, 1763; Asor, August 4, 1765; Alpha, March 15, 1767; Hepzibah, March 16, 1771; Askins, May 8, 1773; David, September 20, 1775. The mention of Cesar or Ceasar Chelor, at the birth of David is his last appearance in the Wrentham records. He does not appear in the 1790 United States Census at Wrentham.

It is evident from the above that the plane-making Chelor was active in Wrentham between 1758 and 1775, and that he was no longer there in 1790. No other person of that name appears in the Wrentham records. The marriage record of the Chelors states that they were both Negroes. Would Chelor therefore be the first American Negro Tool Maker?

Concerning the "I Nicholson" of planes, Numbers 3 and 4, the Wrentham records are less informative. Since capi-

tals "I" and "J" were both written as "I" in the eighteenth century, we may confidently assume that the planemaker was one of four John Nicholsons in the Wrentham Vital Records. No other "I" or "J" Nicholsons there appear. The marriage of John Nicholson and Mary Ware is recorded on April 22, 1742. The death of John, son of John and Mary Nicholson, November 16, 1737 (either this or the marriage date seems to be erroneous); birth of John, son of John and Sarah Nicholson October 12, 1737; of John, son of Captain John and Sarah, October 24, 1787. Considering that "I NICHOLSON" was using the same "WRENTHAM" stamp as Chelor, we may assume that they were roughly contemporary. The most probable of the Nicholsons to be the plane maker would therefore be the John, son of John and Sarah, born October 12, 1737.

*The Chronicle* 23, no. 4 (December 1970): 52

## More Eighteenth-Century American Plane Makers

by John S. Keabian

Recently the writer acquired an early plane with the mark "F\* NICHOLSON" "WRENTHAM" (Figure I). Consulting the *Wrentham Vital Records to 1850*, it was found that there was only one person of that name and initial to whom this mark could be attributed. Deacon Francis N Nicholson is recorded as deceased on December 7, 1753, in his seventieth year (i.e., his birth date would be about 1683). Also recorded are his marriage to Sarah Ware, June 6, 1722; the birth of a son, Francis, May 27, 1729, and the death of son Francis on August 20 of the same year. There are no other F. Nicholsons in the records. In view of this, we may attribute the "F\* NICHOLSON" planes to Deacon Francis; his dates would indicate that they can be assigned to the first half of the eighteenth century. Our fellow-member Dr. Barnet Delson is the owner of a plane with these marks, with the words "LIVING IN" before the "WRENTHAM."

"I.\* NICHOLSON"—certainly a John Nicholson—was the next owner of these two latter marks...It is not clear what the relationship of John Nicholson was to Francis ; the Wrentham records are of no help on this point. What is apparently the same "I.\* NICHOLSON" mark also appears with the marks "IN" "CUMBERLAND"—a Rhode Island address. Finally, the "LIVING IN" and "WRENTHAM" marks appear with the name "CE \* CHELOR";[h]ere the Wrentham mark is so worn that Chelor must certainly have been the last of these three users. [T]he mark is the same size throughout (23mm. long). Chelor (see *The Chronicle*, 23, no. 4) appears in the Wrentham records from 1758 to 1775 and is the only person of that name to so appear.

*The Chronicle* 24, no. 2 (June 1971): 25

## More on the Eighteenth-Century Plane Makers of Wrentham, Massachusetts

by John S. Keabian

Inquiries made at the Probate Court of Suffolk County, Massachusetts (Boston), have disclosed the following. The last will and testament of Deacon Francis Nicholson was signed on April 1, 1752, and was filed after his death on December 14, 1753. In this will, the Deacon refers to himself as "Toolmaker." The inventory of his estate was made at Wrentham on December 18, 1753; his manufacturing tools

are, unfortunately, lumped under one entry valued at £32.

By his will, Francis Nicholson liberated "my Negro-man Caesar Chelo" [the final "r" of the name being omitted] "considering his faithfull Service, his tender Care. & kind and Christian Carriage, I do set him free." Nicholson bequeathed to Chelor "his Bedstead. Bed & Bedding, his Chest and Cloathing, his Bench & Common bench-tools, a Sett

of Chizells, one Gouge. one Vise, one Scythe & tackling, & ten Acres of land ... & one third part of my timber." Chelor himself (including his bequest ) was valued at £160.

The will also discloses that John Nicholson was the son of Francis Nicholson; he inherited from his father "all my Tools & timber, except what is before excepted," along with land and other goods.

Caesar Chelor died intestate in 1784; his age then must have been about 65-70. His estate was inventoried on August 17, 1784, his tools being given a lump valuation

of 424 shillings, 4 pence. The administration document is dated August 30, 1784. Chelor is also identified in the documents as "Toolmaker."

The span of activity of these three persons thus is clearly shown to extend from the early years of the eighteenth century to 1784. All three are so far known from their marks on planes. Whether as "Toolmakers" they produced other implements is not known at this point.

*The Chronicle* 25, no. 1 (January 1971): 25

## The Nicholson Family —Joiners And Tool Makers

by Anne Wing

Francis Nicholson, of Wrentham, Massachusetts, is probably the best known American planemaker. Much information about him has appeared in *The Chronicle*. He apparently was the first to engage in the planemaking trade in Anglo-America. His son, John, was also a plane maker, as was his former slave and successor, Cesar Chelor.

We briefly summarize this published research on Nicholson:

**1683/84:** Birth (from his age at death).

**1713:** Appears in church records in Rehoboth, Massachusetts.

**1715-29:** Children born in Rehoboth and later Wrentham.

**1722, 1730, 1748:** Marriages in Wrentham.

**1752:** Will, in which he refers to himself as a Tool Maker, bequeaths most of his tools to his only son John, and bequeaths some tools, bedding, clothing, etc. to his Negro slave, Cesar Chelor, granting him his freedom also.

**1753:** Death in Wrentham in his seventieth year, a Deacon in the church.

John Nicholson and Cesar Chelor also made planes in Wrentham, using the same "Living in" and "Wrentham" stamps that Francis had. John also made planes in Cumberland, Rhode Island.

The discovery of these facts, and the interesting way in which they are presented in the original articles, have sparked a great deal of enthusiasm in eighteenth-century planemakers and have also raised many more questions. Herewith are the results of further research concerning the Nicholsons.

Having the good fortune to live in southeastern Massachusetts, we [the author and her husband Don Wing] have been able to delve into many old records to learn more about this group of early American manufacturers, whose trade grew from joiners making a few extra tools for other joiners to full-time business, culminating in the wooden plane factories of the mid-nineteenth century. One of the most striking aspects of this research has been the amount of time and digging required

to trace these men, who were not famous in their own time and did not leave records as the better known figures did; they were middle class workers/craftsmen. One can spend literally days going through early deeds and other records and come up with no new information and yet there are so many sources that, given time, one can learn a great deal.

The town of Rehoboth is in Bristol County, Massachusetts. A search of the land deeds there revealed that Nicholson of Rehoboth purchased land in the town in 1716 (at the age of 33), with a John Rolestone, both men listed as "joiners." This was the only land record of Nicholson in Rehoboth. Town records show both men being paid for work on the meeting house from 1716 to 1718, both individually and in partnership. Nicholson was paid for work on windows and casements, showing that he did indeed work as a joiner as a young man and did not start out solely as a planemaker.

Because Wrentham, where Nicholson lived most of his life, was originally part of Suffolk County, the town's early probate and land records are in Boston. A check of indexes there showed that John Rolestone owned property in Boston, which led us to look into the Vital Records of the city. Here we found three facts of immediate interest:

Francis Nicholson married in Boston, on March 10, 1707, Abigail Badger; their son, John, was born there on March 4, 1712; and, on the day before Francis's marriage, John Rolestone married Dorothy Nicholson, providing an apparent family connection with Francis. One would like to assume that Dorothy was Francis's sister, or perhaps his mother or sister-in-law remarrying.

The births of three children of Francis and Abigail appear in the Boston records: Mary in 1709, Mehitable in 1710, and John in 1712. Two more daughters were born in Rehoboth, Abigail in 1715 and Sarah in 1717. Another daughter, Elizabeth, who married in 1737, must have been born in this period, but she is in the birth records of neither Boston nor Rehoboth.

Francis's wife Abigail died in Rehoboth in 1721; and shortly more than a year afterwards he married Sarah Ware. The marriage took place in Wrentham, but their first two children were born in Rehoboth. Both of them and their brother born in 1729 in Wrentham died before the age of one; and their mother Sarah died in 1729, fifteen days before her younger son. One wonders whether this series of tragedies led Francis Nicholson to move from Rehoboth to Wrentham in 1728 as church records show that he moved in that year.

Francis Nicholson married twice more, Mary Ware in 1730 and Hannah Gay in 1748, but apparently had no more children. His eldest child, Mary, disappears from the records after her birth in 1709. Of the other eight, only three lived to adulthood and only one, his son John, survived him.

With such a wealth of dates on some of his children (we can even trace some of his great-grandchildren!), it is frustrating to have so little information on other aspects of his life, the two most important here being his origins and his apprentices.

We have found no birth of a Francis Nicholson to date, nor can we find a record of his coming from England. There were some Nicholsons in Boston who were joiners in the late seventeenth century, but we have not been able to connect them with Francis. Records of the late 1600s are, of course, incomplete and in places poorly indexed, and so with further digging he may turn up.

So many planes by makers in towns close to Wrentham resemble those of Francis Nicholson in style that he must have had several apprentices, or at least employees. Planes by Henry Wetherel of Norton, E. Clark of Middleborough, and Jonathan Ballou and Joseph Fuller of Providence, to name a few, appear to have been heavily influenced by the Nicholson school. It is possible that Francis's planes were the only professionally made ones available that were distributed in any quantity, and the other men merely copied them; but the geographic proximity of all the makers tends to make one favor the apprentice theory. One hopes that more hours with dusty volumes will produce a key to these relationships.

It seems safe to assume that both John Nicholson and Cesar Chelor learned the planemaking trade from Francis Nicholson; we can be certain from the records that they at least worked together.

We have been able to answer some questions about Francis's son John: he was born in Boston on March 4, 1712. Checking Vital Records of towns close to Rehoboth and Wrentham, we have found that John Nicholson of Wrentham married Mary Throop in Bristol, Rhode Island, on November 10, 1736. A son John was born and died in Wrentham the following year. Daughters Abigail (born 1738) and Mary (born 1740) married in Wrentham and died there in 1775 and 1780, respectively. John's wife Mary died in Wrentham in 1741.

With two small daughters to care for, John married Mercy Ware (a niece of Francis's wife Mary and cousin once removed of Sarah) in 1742. They had three daughters, Mercy, Elizabeth, and Sarah, born in 1743, 1745, and 1747, respectively.

The first land deed of John's that we have found is dated 1739 (John was age 27) in Wrentham, in which Francis and John Nicholson, joiners, purchased land together. In 1746 John bought more land in Wrentham, on both sides of a brook called Abbots Run.

It has been assumed that John moved from Wrentham to Cumberland, Rhode Island, because planes have been found marked with both town names. Suffolk County deeds showed him in Wrentham up to 1746, in Cumberland from 1751-63, and in Wrentham again from 1770-86.

We have now found that he did not move from Wrentham to Cumberland—the border moved! The boundary between Rhode Island and Massachusetts had been in dispute for some time and was settled in 1746/47, the new town of Cumberland being formed from the "Attleborough Gore" section of Wrentham. The land which John Nicholson bought in Wrentham in 1746 was sold by him in 1747, but the land was now in Cumberland, obviously a part of the border change. Abbots Run Brook is still in Cumberland today.

Interestingly, John apparently did move from Cumberland back to Wrentham, sometime between 1763 and 1766, as he is referred to as being "of Cumberland" in deeds from 1747 to 1763 and "of Wrentham" from 1766 on.

Further evidence that John Nicholson was affected by the border change is the fact that his daughter Sarah was born in Cumberland in 1749 but baptized in Wrentham; the church must have been on the Wrentham side of the new line. Cumberland town records show that John Nicholson served on the Town Council in the years 1752-1753 and again in 1755-1757. (1754 was the year when he was administering his father's estate). Thus evidently, he was a respected member of the community.

An interesting change in the records of John Nicholson is the fact that the land deeds give his occupation as joiner or yeoman to 1754 and consistently as gentleman from then on. Whether he became more wealthy (because of his father's estate being settled in that year?), rose in social status, or simply chose to list his occupation differently is uncertain.

While the Cumberland dates are now fairly definite, many questions remain. John's wife Mercy died in Wrentham in 1785. A year later, a daughter Mary was born to a John and Sarah Nicholson in Wrentham; was this the same John, having remarried and fathering a child at the age of 74? (His first daughter Mary had died in 1780.) There is no marriage record for John and Sarah Nicholson in Wren-

tham or Cumberland, and we have found no birth record of another John Nicholson who lived to adulthood and could have married the mysterious Sarah. The baby Mary died within a month, but a son John was born in 1787.

According to the 1800 Census, a John Nicholson was head of a household in Norfolk County (which now included Wrentham), the household consisting of one elderly male, one elderly female, and a male between 10 and 16. This could be our planemaker at the age of 88, with a son aged 13.

This is not as outlandish as it may sound—an obituary in the *Columbian Centinel* (Massachusetts) dated October 31, 1807, lists Capt. John Nicholson “formerly of Wrentham, d. in Union, age 96.” A helpful librarian and several telephone calls led to the discovery that John Nicholson died in Union, Maine, on October 8, 1807, at the age of 96, fitting with the 1712 birthdate of the planemaker (Maine was, of course, part of Massachusetts until 1820.) Further, according to a town history of Union, John and Sarah Nicholson joined the church there in 1803. Thus it seems very likely that the planemaker and the father of John in 1787 are one and the same man.

Why John Nicholson moved to Maine is still a mystery to us, as are gaps in the dates that we have found for him. Between 1771 and 1785 we have found him in no land deeds or other records; this may just mean that he was not actively trading land, or it may have more significance, since this was the period of the Revolution.

John Nicholson is referred to as “Captain” in documents at least as early as 1763. Perhaps he gained experience in the French and Indian Wars and participated in the Revolution. His military records, if indeed any exist, must

be researched. It is possible that he was involved only with local militia, or that Captain was merely an honorary title.

The other long gap in the records is between 1787 and 1800, during which period he was presumably in Wrentham, here again perhaps just not terribly active (he was in his seventies by then). A search of the land and other records in Union may yield some clues to both this gap in the records in Wrentham and the reason for the move to what is now Maine. Because of his age—ninety-one—when he and Sarah joined the Union church in 1803, one would think that he went to live with a daughter or son, but the only child to survive him, as far as we have been able to find, was his son John, who was only sixteen in 1803. Quite possibly, however, some of his grandchildren could have been living in Union.

As we have come to expect, finding information on early planemakers seems to raise as many questions as are answered. We have learned a great deal more about John Nicholson and his father Francis; and yet we still do not know where Francis came from or whom either man trained as apprentices. We have no business records of either father or son, and now we find John going off to Maine at an advanced age for an unknown reason! Obviously, the story is far from complete.

*The Chronicle* 36, no. 2 (June 1983): 41-43.

### Other Articles from *The Chronicle* on The Nicholsons and Chelor

Chris Bender, “Plane Chatter: Historically Significant Planes by Cesar Chelor, Francis Nicholson, and John Nicholson Find New Home at Colonial Williamsburg,” 70, no. 2 (June 2017): 75-81.

Richard T. DeAvila, “The Jethro Jones—Cesar Chelor Connection,” 42, no. 4 (December 1989): 87-88.

Richard T. DeAvila, “Cesar Chelor and the World He Lived In, Part I,” 46, no. 2 (June 1993): 39-42; “Cesar Chelor and the World He Lived In, Part II,” 46, no. 4 (December 1993): 91-101.

David V. Englund, “A Study of Two Francis Nicholson Planes,” 50, no. 1 (March 1997): 29-30.

Mike Humphrey, “Plane Chatter: More on Cesar Chelor,” 66, no. 3 (September 2013): 123-127.

Ted Ingraham, “Francis, John, and Cesar: A Different View of Their Planes,” 54, no. 1 (March 2001): 1-8.

Ted Ingraham, “Plane Chatter: Francis Nicholson Update,” 58, no. 3 (September 2005): 120-123.

Pat Lasswell, “Plane Chatter: Francis Nicholson Smoothing Plane,” 61, no. 3, (September 2008): 127-129.

Emil and Martyl Pollak, “A Study of Planes Made by Francis & John Nicholson and Cesar Chelor,” 38, no. 2 (June 1985): 25-27.

*Editor*

### Chronology

The dates and locations of the Nicholsons as concisely as possible.

#### Francis Nicholson

1683-4	Birth (because of age at death). Location unknown.
(By) 1707 to 1712	In Boston
1713 to 1728	In Rehoboth
1728 to 1753	In Wrentham
1753	Death in Wrentham

#### John Nicholson

1712	Birth in Boston
1713 to 1728	In Rehoboth
1728 to 1747	In Wrentham
1747 to 1763-66	In Cumberland
1763-66 to at least 1800	In Wrentham
(By) 1803 to 1807	In Union
1807	Death in Union

# Letters to the Editor

*In the earliest years of The Chronicle, comments to the editor appeared in the "Communications" section. Some letters were comments on articles while other items were simply items of note—something culled from an old newspaper or information on a recently acquired tool. Later the department was called "Letters," and was often the scene of a lively discussion. In recent years, perhaps because of the new popularity of message boards and blogs, there are far fewer comments or items of interest sent to the editor.*

To the Editor:

The November issue brings to mind two matters. One is the article by Doctor Epstein on crutches. He might be interested to learn that in Essex, Connecticut, was shown in a historical exhibit a few years ago, what they call the "town crutch." Apparently this was passed from one cripple to another over a period of about eighty years or more and on it the user cut his name, date, and the nature of his injury.

The other matter was the mention of the Landis Valley Museum in the Pennsylvania article. The last issue of the *National Geographic Magazine*, in an article about Hungary, tells how they have created a museum to collect and preserve the peasant arts and trades.

Mr. Newton C. Brainard  
*The Chronicle* 2, no. 3 (January 1938)

## Coopering, Filletsers Fillitsers, and More

*Articles in the March and June issues of The Chronicle (35, nos. 1 and 2) in 1982 provoked considerable discussion in the September issue.*

To the Editor:

I read with amused fascination the article by Stanley E. Whiting, "Some Lesser Known Tools of the Cooper" (*The Chronicle*, March 1982). It was the result of logical deduction by an academic, but to me, for whom coopering has been bread and butter, it tended to make me feel something of an anachronism. It is many years now since I have made a cask, and while I might have thought it flattering for anyone to have thought it hardly possible without the use of a gauge, I look back now with sufficient objectivity to respect their doubting. However, I can assure Mr. Whiting that in the making of casks by hand, for wine and beer, no stave gauge was used by the cooper.

In "dressing" (shaping) straight pieces of wood so that they can be "raised up" (put together in a hoop), and "fired" (bent into shape), a cooper learns to judge, with his eye, exactly how much "inside shot" (angle) is necessary, and how much "height" (amount of bend or belly), the cask will have. The jointing of the straight stave requires the most skill of all the processes in coopering. Because the curve at the end of the chime (end of stave) is smaller than the

curve in the pitch (centre of the stave) the angle appears to be greater, and apprentices will often make the mistake of jointing too much inside shot in the pitch. This leads to open joints inside the cask at this weak part, so that upon being fired staves so jointed will probably break, and the cooper will have a "duck." A stave left very slightly rounded in the pitch will also tend to break. Coopering was precision work, and called for a very high degree of skill.

A friend of mine, Charlie Goldsmith, now retired and living in Devon, used to dress staves for small casks up to nine gallons, on a horse, using only a crumming (draw) knife, without recourse to a jointer, and some coopers using Memel oak, which is relatively soft and straight grained, could boast of being able to shape their staves so well with an axe that they didn't need to use a jointer plane. Such coopers would feel insulted if it were suggested that they used any mechanical measuring contrivance to help them out. It was sheer skill.

The stave gauge is mentioned in Mr. Raphael Salaman's very comprehensive *Dictionary of Tools* (p. 205), but I have never come across one. From the appearance and amount of curvature on the ones that Mr. Whiting illustrates, I would think, that these were used in the making of vats. These often outlasted the breweries, and although there were specialist vat makers, wet coopers would occasionally be called upon to make one, usually a one-off job, and not being familiar with the amount of inside shot required, might well find such a gauge very useful. It could be used all along the stave, whereas it certainly couldn't have been used in the pitch of a stave with a belly. I would be inclined to think that the Roman numerals, XXVI, stand for a 26 barrel vat size, consistent with that amount of curvature. The references to the Hooping Dog were clearly explained and very well illustrated.

Kenneth J. Kilby

[Kilby was the author of *The Cooper and his Trade* and *Coopers and Coopering*.]

To the Editor:

The article by Stanley Whiting on coopers' tools in the March 1982 issue of *The Chronicle* is most interesting. However, I would add a comment about information available in Diderot. Mr. Whiting is correct in his belief that the Diderot plates reproduced in the 1959 selection by Dover Publications and edited by Mr. Gillespie do not illustrate any stave gauges, but if a complete edition of the Diderot plates is consulted, the stave gauges (patron or crochet) will be found. The Readex 1969 edition illustrates them on page 936, plate IV, figure 1-3 with the corresponding discussion on page 935. In the Abrams 1978 edition, the corresponding plate is on page 2466. The hoop dog (*tiretoir*, *tire-a-barrer*, or

*tire-a-cercle*) is shown on these same plates in figures 24 and 25 as well as in the plate cited by Mr. Whiting. In the latter case, it is shown in use.

Forest M. Clingan

To the Editor:

With no disrespect to William Downes, I would say that his filletster (*The Chronicle*, March 1982) is not a mystery to me. One who owns and occasionally uses a moving fillister (I like the colloquial spelling) will recognize that Mr. Downes's plane has been neatly repaired by a former owner, who inserted pieces of hardwood in place of the original brass depth stop, which had been removed, either by accident or possibly by design. The two small inserts toward the rear seem, to me, to be similar repairs of dents.

After making these repairs, the owner had a still-serviceable large rabbit plane. After all, the fillister was simply a rabbit plane with the added refinements of a bottom fence and a depth stop, both adjustable. Very handy for raising panels, in small scale shop production. In the woodwork of old houses, schools and church buildings, one may observe the marks of the fillister. Historically, as the need for handplaning of raised panels diminished and finally died out, fillister-cutting was taken over and included in the various operations of the combination and "universal" type planes.

Carlos H. Ball

To the Editor:

In the note, "More on the Side Rabbit" (*The Chronicle*, June 1982, pg. 28), there is a typo; it says the iron is skewed 22 degrees forward of vertical. I suspect the correct reading should be "12 degrees forward of vertical."

Daniel M. Semel

To the Editor:

When I read *The Post Man* piece (*The Chronicle*, June, 1982, p. 38) my curiosity was aroused by the "(?)" in the quotation "small young Spier (?) Elm Timber." [*The Post Man* was an eighteenth-century London newspaper] As the timber was for making into pipes, I thought "Spier" might be a reference to pump spears, iron connecting rods used in pumps.

A trip to the Oxford English Dictionary made this idea seem unlikely, but it produced this: "Spear, a young tree, especially an oak; a sapling". I would say spier was a variant spelling of this word, and that the merchant was describing small diameter elm logs.

Elliot M. Sayward

*The Chronicle* 35 no. 1 (September 1982)

## Tool Prices

To the Editor:

While sorting through the papers of Larry Cooke's estate, I came across a list of purchases that he

compiled at one time. New tool collectors might get a better understanding of why "the old folks" balk at some prices these days by examining samples from the list. It includes the following:

- apple parer 1.00
- bench vise 3.00
- bit brace .50
- broadaxe 1.00
- cresset 1.50
- fleshing knife 1.00
- food chopper .50
- frame saw 2.00
- froe 1.50
- h.f. wrench .25
- hay hook, iron 1.00
- hay hook, wood .25
- hog scrapper lamp 1.75
- lard lamp 5.00
- miners cap lamp .50
- molding planes 1 .50
- mud spoon .25
- nail header .50
- scorper .50
- screw box .50
- sickle .25
- T-auger .25
- tobacco cutter 1 .75
- tongs .50
- traveler 1.00
- wood tap .50

It does make interesting reading, and I am awaiting to see what the cresset goes for at Crane's Auction. The whole list is about five pages.

Karl H. West, Jr.

From *The Chronicle* 51, no. 1 (1998)

## Heavy Duty Soap

To the Editor:

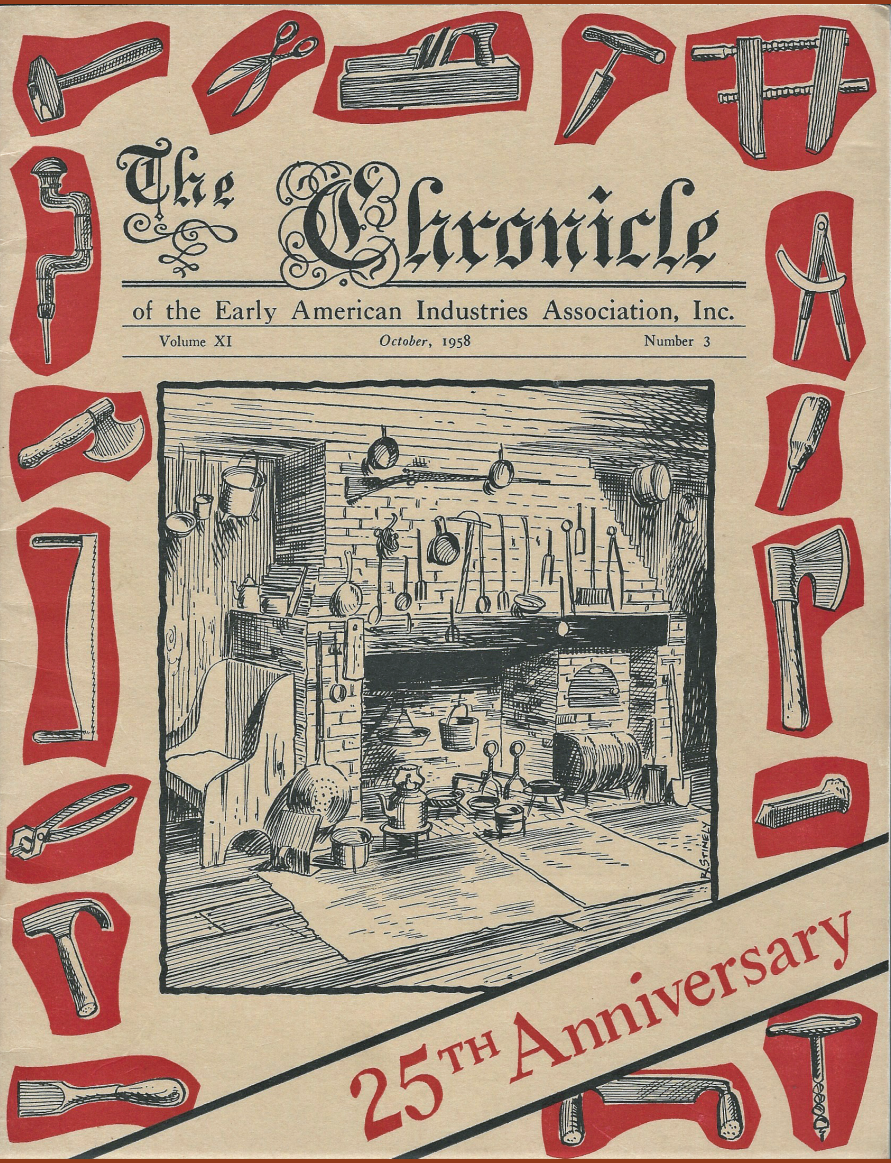
The words "Cast Steel" on a tool have caused a lot of discussion over the years. I guess by now everyone knows that it refers to how the material was made, rather than the tool. However, in looking thorough an 1857 diary and account book from Sweden, N.Y. (near Rochester), I ran across an entry that puts a whole new spin on the subject:

"January 7 Bar of Cast Steel Soap ..... \$0.06"

If you have trouble with this, try saying it out loud.

Ted Kinsey

*The Chronicle* 57 no. 3 (September 2004)



# The Chronicle

of the Early American Industries Association, Inc.

Volume XI

October, 1958

Number 3



25<sup>TH</sup> Anniversary