# The Craftsmanship of Philadelphia Windsor Chairmaker Joseph Henzey

Herb Lapp

*Philadelphia became the Windsor chair capital of the Colonies and took the British design to new heights making it a truly American furniture form. The very best of those Windsor chairmakers includes Joseph Henzey who helped define the American Windsor style. Many examples of his work can fortunately be seen and studied today. This article looks at several of his early chairs and describes a data analysis model used as an aid in determining craftsmanship, attempts to identify specific chairmakers based upon study and measurements, and identifies what made Henzey's work unique and his craftsmanship a signature of the Philadelphia Windsor style.*

Paintings can sometimes provide more than just aesthetic enjoyment. They also serve as windows into history, allowing us to see the past before the advent of photography. Occasionally, painters captured furniture as part of their work, but it usually served as background supporting some other central theme. Many artists took license in representing the furniture, making serious study difficult.

That was not the case with artist William Witman's portrait of Revolutionary War hero, Daniel Rose (1749-1827) of Pennsylvania, painted at the end of the 18th century (fig. 1). A native of Reading, Rose was a clock and instrument maker in the prime of his life when the portrait was made. This large painting, measuring 64" high x 40½" wide, shows craftsmanship and handiwork very clearly. Witman has Rose standing among the colonial's prized possessions, including his sack-back Windsor chair. To me, upon first seeing this painting, the unusual detail and beauty of the chair were arresting. Why did Witman portray the chair in such detail? It is impossible to know for sure, but I believe a principal motivation may have been the craftsmanship of this elegant 18th century chair and Rose's pride in owning it. In all likelihood, the artist and his subject would have discussed these objects and what they meant to Rose.

Rose certainly recognized quality artifacts as he was an excellent craftsman himself. The valued possessions surrounding Rose include musical instruments he himself made. Rose became known for his beautiful tall clocks, several of which are in the collection of the Historical Society of Berks County, PA (HSBC). Of financial means and a patron of the arts, Rose would have sought out and been able to afford a master chairmaker from Philadelphia, just 50 miles southeast of his native Reading. Can we determine who that chairmaker was? In this article, I discuss a methodology I have developed that I believe does allow us to identify the chair's maker.

My personal experience with Windsor chair construction led to an interest in early Windsor chairmakers and a desire to learn more about these craftsmen. Prior to seeing Witman's portrait of Daniel Rose, issues of chair design had surfaced on the construction of my own chairs. Why did one chairmaker use a 15º leg splay angle rather than an angle of 12º? How exactly were the leg rake and splay angles drilled on the originals? I was struggling to drill mine accurately. There was a way to answer those questions, but it required me to measure old Windsor chairs.

It can be a formidable challenge for amateurs to gain access to study and measure valuable artifacts. At first, I struggled to find a way to work with professional curators. Charged with preserving old artifacts, their mission can inhibit

amateurs from getting close to their collections. It eventually dawned on me that museums are always looking for additional funding. The accessibility problem was solved when I volunteered to make and donate reproductions for the Reading Public Museum, Bartram's Gardens, and Fairmount Park's Lemon Hill Mansion. Soon my Windsor chair study portfolio grew to include over 400 photographed chairs with complete measurements of 125.

Most Windsor chairs in this study were unbranded making it nearly impossible to determine who the chairmaker may have been. I read with interest the works of Windsor chair experts Nancy Goyne Evans and Charles Santore. I was impressed that they could look at an unbranded chair and often attribute it to a likely chairmaker. My fieldwork process evolved from what I learned in building a Windsor chair myself and was enhanced when I measured my first chair at the Reading Public Museum. Over time, the process included snapping more than a hundred pictures per chair and taking many close-ups in order to better study the chairmaker's handiwork.

*Fig. 1 William Whitman's 1795 painting of Daniel Rose. Courtesy of the Historical Society of Berks County (HSBC), www.berkshistory.org.*

Today, my Windsor chair photograph archive contains over 12,000 images providing a significant database on forms and construction methods. When measuring a chair, I documented its dimensions on previously-drawn generic chair sketches that I photocopied and took into the field. Doing this required taking nearly 175 chair dimensions per chair. I soon realized that systematically studying chairs in this way provided insight into the chairmaker's construction methods and an understanding of the details of his craftsmanship. A professional background in the science and engineering fields naturally led me to wonder if it would be possible to use the numerical data I was collecting to objectively determine a chairmaker's identity.

About that time I had the opportunity to meet Nancy Goyne Evans. During our meeting at Winterthur, I excitedly told her about my idea. She challenged my hypothesis, stating that since Windsor chairmakers never made two chairs that were exactly the same, it would be impossible to apply this type of objective analysis. Afterall, we were not studying manufactured chairs. While Evans made an excellent point, I decided to proceed with my plans. Even if my experiment failed, I would learn much about the chairs. Although Evans' skepticism proved to be well-founded, the model I developed began showing positive

results, and I eventually found a way to statistically validate to an acceptable level of confidence the variable she had pointed out to me: the variation inherent in a single chairmaker's handmade work. Using measurements from numerous Henzey-made chairs, I ran the data collected from each of his branded chairs through the model to see how each withstood the scrutiny of being treated as an unbranded chair. As expected, no two chairs were exactly alike. By using simple statistics, however, I was able to determine the ideal measure for different features of his sack-back chair (see sidebar). I decided to use 78 of the 175 measurements I had taken to define the ideal chair. As anticipated, none of his individual chairs perfectly fit the ideal Henzey sack-back design I had created, but all met the test of statistical significance to be a Henzey-made chair. The model was now ready to test against an unbranded sack-back.

The idea that one could visually and subjectively attribute an unbranded chair to its chairmaker was a discovery that pleasantly surprised me. Having measured nearly 60 chairs, I surprised myself when, at Pook & Pook Auctions in Downingtown, PA, I saw a chair across the room and immediately recognized it as a Henzey sack-back. At last I was able to identify by sight alone the product of a chairmaker—at least a Henzey chair. But turning over this chair, I could not find the Henzey brand. Once home, I ran its dimensions through the model and confirmed it as Henzey-made. The biggest surprise came, however, when I analyzed a series of overlapping digital images of the bottom of the chair's seat. Using my digital camera's image software tools, I found what initially looked like faint letter stampings. Further analysis revealed most of the letters of Henzey's last name faintly stamped into the wood. I compared the size and font of these nearly invisible markings to clearly visible branding on other Henzey chairs. They matched almost exactly, providing independent confirmation of the model's validity. *Almost exactly* meant that I had found another surprise. Looking carefully at many Henzey brands, I realized that he used at least two different iron brands to mark his chairs throughout his career.

The sack-back chair shown in the painting of Rose (fig.1) shows that the chairmaker chose bold leg rake and splay angles. The chair compares dramatically with the sack-back chair shown in Figures 2 & 3. This chair has characteristic 19th century black paint and was likely made for a more value-conscious customer since it has the simple paw hand termination. I measured this chair and found that the rake and splay angles for the front, rear, and arm supports all agree within one degree of each other. The craftsmanship of this chair is exceptional, but it wasn't made by the same chairmaker who made Daniel Rose's chair. Later analysis using references cited in the bibliography led me to conclude that the chair shown in Figures 2 & 3 was made by Francis Trumble. I do not possess sufficient measurement data on Trumble sack-backs to confirm this hypothesis using the model.

To date I have located and measured 16 Henzey sack-backs. I was granted permission to study the historically significant Windsor chairs at Philadelphia's Carpenters' Hall used by the First Continental Congress in 1774. The Carpenters' Company records archived at the American Philosophical Society confirm that Henzey made these chairs in 1773. At the time of my first study session, five sack-backs were on public display and two more, not seen in years, were locked securely in the basement. After completing the study, I suggested that they move the better of the stored chairs into the display area for millions of visitors to enjoy and they agreed.

After completing measurements on the Carpenters' Company chairs, I moved down Chestnut Street to Independence Hall to study the Henzey chairs in its collection. Independence National Historical Park (INHP) has four Henzey-made sack-backs and a few bow-back armchairs that were studied in the same manner. In between trips to INHP, I found and studied two other Henzey-made sack-backs at Pook & Pook Auctions.

The sack-back, like other Windsors, is an artistic furniture form that leads the eye from the top of the bow down to the ends of the arm which, in the case of the chair in the portrait of Rose, terminate in a carved knuckle (fig. 4). This knuckle is very distinctive, but how does it compare with Henzey examples that survive?

*Figs. 2 & 3 Philadelphia sack-back that the author attributes to Francis Trumble, another Philadelphia master chair and cabinetmaker. Courtesy of HSBC.*

Figures 5–8 show the details of one of Henzey's 1773 Carpenters' Hall sack-backs. The wood he used for the bow, arm, knuckles and spindles on these chairs was hickory, a difficult wood to carve, but one that rewards the artist with very crisp, long-lasting details. Hickory does not hold paint well compared to other hardwoods, however. This is the reason why hickory parts typically appear unpainted at areas prone to high use.

Henzey demonstrates his craftsmanship in the small volutes seen on the lateral edges of the handhold. His work is very consistent, not only among chairs within a large set like the Carpenters' Hall group, but also from chair to chair made at widely different periods of his career. The set of Carpenters' Hall sack-back chairs made in 1773 shows exceptional talent and skill early in his career. I see this craftsmanship in all Henzey-made sack-backs with carved knuckles (figs. 9–11). He also made sack-backs with paw handholds, undoubtedly priced to compete with similar chairs made by his peers since they were easier to make. Not many of these simpler designs survive based on the examples I have located and studied. Perhaps more of them were made and shipped to locations outside of Philadelphia.

*Fig. 4 Detail of Whitman's painting showing Daniel Rose's chair. Courtesy of HSBC.*

Henzey did superb work making many different styles of Windsor chair. Based on the Henzey chairs I've studied, the sack-back variant survives in the greatest number, suggesting it was likely his most popular offering. In most cases, Henzey's sack-back arms were crafted from a single piece of hickory, avoiding the necessity of gluing a sidepiece to the arm for the handhold and carved knuckle. On all the chairs included in my study, Henzey added a glue block under the arm termination to complete the handhold carving (fig. 8). Each was a mirror image of the others, even those that were not shaped at the same time as a set of chairs.

Figure 9 is an example of Henzey's 7-spindle sack-back with carved knuckles that I refer to as his mid-range sack-back offering. This was a very popular design. Figure 10 shows his 9-spindle design, arguably one of the very best sack-backs ever made, and likely represents his high-end offering. When making this chair, he added another small spindle positioned between the arm-bow joint and the arm support. This design feature was not necessary to make a stronger or more robust chair. His 9-spindle chair is exceptionally symmetrical while lending a rich and stately appearance to the compact Windsor armchair. When viewed against the 7-spindle design, it appears to be much more complete. This chair sits among the many chairs in Independence Hall's Assembly Room where the Declaration of Independence and Constitution were signed. Here in this large collection of important Windsor chairs (none of the Windsors in this room is original to the room), the 9-spindle sack-back commands attention.

Unfortunately, little documentation exists describing the lives and work of the Philadelphia Windsor chairmakers. Through Nancy Goyne Evans' exhaustive research, we know that some chairmakers teamed up, perhaps sharing stylistic

*Fig. 5 Detail of the Henzey carved knuckle chair. Images on this page courtesy of the Carpenters' Company of the City and County of Philadelphia.*

*Fig. 6 Knuckle and arm post viewed from the outside.*

*Fig. 7 Knuckle viewed from the front.*

*Fig. 8 Knuckle viewed from below shows the carved glue block.*

details, and most certainly sharing workload. For many chairmakers, however, including Henzey and Trumble, we have little knowledge. Questions such as which chairmakers turned their own legs and which outsourced to vendors remain. The leg we see in Figure 12, compared to other Henzey chair legs (figs. 9, 10 & 19), are virtually identical to the leg on the Trumble chair seen in Figures 3 & 4. Initially I wondered if this were a coincidence, but I do not believe so now. In musings with Evans regarding my craftsmanship studies, I suggested that Henzey may have collaborated with Trumble due to the similarity of leg turning styles and other attributes. She saw this very differently than I:

> *"I found no evidence that the two men collaborated. Trumble was a generation older than Henzey and had a well-established furniture-making business by the time Henzey finished his apprenticeship. Whom Henzey apprenticed with we do not know, although there is no evidence that his master was Trumble. Trumble began as a cabinetmaker in the early 1740s (when Henzey was born) and added Windsor chairmaking to his craft practice in the mid 1750s. As early Windsor craftsmen, he had already experimented with design development in the high-back styles and had produced sack-back seating before Henzey opened his own shop. Henzey could have worked briefly as a journeyman before going into business on his own, and he could even have been employed briefly in Trumble's shop."* (N.G. Evans, personal communication, July 12, 2008)

The unique undercarriages of the chairs by Henzey and Trumble employ different leg rake and splay angles, with Henzey's being the bolder of the two master chairmakers. Why are the profiles of their legs nearly perfect matches while so much variation is seen in the legs turned by others of the same period? Evans commented constructively on my inference that the similarity might be explained by more than mere coincidence, pointing out that there are pitfalls in drawing conclusions strictly from studying craftsmanship and style comparisons. With documentation about Windsor chairmaking so sketchy at this level, the best advice is to proceed carefully. Evans offered an alternative explanation for the leg profiles matching:

> *"… urban centers like Philadelphia almost always had an available labor pool (journeymen) to tap when business was brisk in a particular shop. Word of mouth probably was the best procurement method, although local newspapers carried an occasional advertisement. Also by the post revolutionary period, suppliers of turned work, who resided and worked outside the city, were becoming common. Many suppliers produced generic turnings suitable for any shop, some could have had "sample" turnings from specific shops to be copied exactly…"* (N.G. Evans, personal communication, July 12, 2008)

*Fig. 9 Henzey Carpenters' Hall 1773 7-long spindle sack-back chair. Courtesy of the Carpenters' Company of the City and County of Philadelphia.*

*Fig. 10 Henzey 9-spindle chair from the Independence National Historical Park (INHP). Museum catalog number 8139.*

*Fig. 11 A 9-spindle Henzey sack-back from the collection of Dr. & Mrs. Donald Shelley. Pook & Pook Auctions, Downingtown, PA, www.pookandpook.com.*

*Fig. 12 Henzey Carpenters' Hall sack-back chair leg. Courtesy of the Carpenters' Company of the City and County of Philadelphia.*

Having compared Henzey's work to that of another chairmaker, I then turned my attention to investigating what could be gleaned from comparing examples of a chairmaker's work over the course of his career. I found and measured four sack-backs made by another chairmaker from Lancaster County. Data from the model confirmed my conclusion that the four were indeed made by the same man, although he did not brand his work. In addition, the chairs were arranged in the order they were made by assessing the maker's skills at the time each chair was made. I was then able to place the chairs on a timeline from early to mature work, based on the assumption that the chairmaker's skill level had improved with experience.

The four chairs made by the Lancaster County chairmaker support the common sense belief that skills do indeed evolve and improve over the course of a chairmaker's career. In Henzey's case, however, *all* of his work is remarkable. I was unable to find a quality-based chronology of his craftsmanship in the chairs studied. For the 16 Henzey sack-backs analyzed, the craftsmanship was of an unusually high and uniform level throughout his 29-year career. There are no indications of early or late craftsmanship. With the exception of the Carpenters' Hall chairs made in 1773, it would be reasonable to assume that the others were made over the balance of his career, especially from the period before the Revolution when the style was most popular.

Aside from the knuckles and legs, the arms and bows of Henzey's sack-backs are also interesting to consider. Some of the characteristics of his chairs were used by other makers. Other characteristics were likely modeled after the work of others, most noticeably Trumble and William Cox. It is impossible to say with any degree of certainty which of these men was the actual trendsetter. I do think it safe to say that these three master Windsor chairmakers collectively defined the Philadelphia style that was copied throughout the Colonies. Other tell-tale details can be found, especially in the shape of the bow. I refer to this detail as a rectilinear bow shape. It is neither round nor oval. Squaring at the bends is clearly noticeable and distinguishable. It must be mentioned that two of Henzey's Carpenters' Hall

sack-backs had more circular-shaped bows. It is unclear what explains this anomaly. Perhaps, like furniture makers today, he bought or borrowed some pre-bent bows from another chairmaker to fill a large order. The order for the Carpenters' Hall chairs was time-sensitive, as Franklin was moving his library from Independence Hall to Philadelphia's first new commercial building which was not yet finished at the time the new occupant took up residency.

Henzey sculpted the face of his bows several inches above where each end penetrates the arm (figs. 13 & 14). This gives the bow a more three-dimensional aspect while adding style and grace to the chair. Figures 15 and 16 show the upper joint of two different chairs. In Figure 16, the bow, through long years of use, has been pulled slightly away from the arm revealing a small part of the tenon. The craftsmanship of Henzey's joinery is such that the bow's lower skirt is always seated tightly to the surface of the arm. I have made four sack-backs using this same mortise and tenon joint and still find it challenging and very time consuming.

Tenons were usually pinned for added strength, but not always. Due to multiple layers of old paint, it is often impossible to see if the bow is pinned unless one resorts to non-intrusive testing such as x-ray. Figures 15–18 show two different views of the arm-bow joinery. A small chip can be seen in the tenon (fig. 18), but the one in Figure 17 is virtually perfect, like the rest I have studied. These details are excellent indicators of Henzey's craftsmanship which is evident even on areas not typically seen by the customer.

The 9-spindle Henzey sack-back seen in Figure 11 is virtually identical to the INHP chair in Figure 10. On the INHP chair, the lower portion of the carved knuckle is missing. This is also the case on several of the 1770-1780 Henzey-made comb-backs I have studied at the John Bartram House and at Stenton, James Logan's house, in Philadelphia. It is the only craftsmanship weakness I have found on any of Henzey's chairs. Why the lower portion of the knuckle is missing is unclear. The bottom of the knuckle is shown in Figure 19.

Henzey did make other types of sack-back chair, notably children's chairs. During the course of this study, I discovered two children's sack-backs likely made before or shortly after the Revolution since original verdigris or green paint is visible and the style was still very popular (fig. 25). Henzey, like his chairmaking peers, made his own verdigris by grinding copper acetate and mixing it with liquids such as linseed oil.

The first child's chair I found was at Philadelphia's Fairmount Park Lemon Hill Mansion (fig. 20). This chair has been incorrectly repaired, possibly sometime in the nineteenth century, after its undercarriage was broken. Although it is missing its medial stretcher, and both side stretchers are whittled replacements (as opposed to turned), it displays all the hallmarks of Henzey's wonderful craftsmanship, mirroring his adult sack-back models. This chair was branded with the stamp (fig. 22) Henzey also used on his adult chairs.

The discovery of a second child's sack-back occurred on a visit to Pook & Pook Auctions during the sale of Dr. and Mrs. Donald Shelley's wonderful Americana collection in April 2007 (figs. 23 & 24). This chair was branded, but it was not discernable to the naked eye. Subjective and objective analyses, using the model previously discussed, revealed that Henzey made this chair. Computer-enhanced images of the bottom of the seat ultimately revealed that Henzey's brand was barely there, just as I had found on the adult chair.

Henzey's challenge was to scale down the adult chair to proportions suitable for a child. He did not relax his standards on the child's chair as evidenced by its carved knuckles. All the details found in his adult chairs are evident in these smaller versions. I have made three

*Figs. 13 & 14 Front and side views of Henzey bow-arm junction (circled). A squared mortise & tenon joint is used. Courtesy of INHP, Catalog no. 8139.*

*Fig. 15 Arm-bow joint, upper view. Courtesy of the Carpenters' Company of the City and County of Philadelphia.*

*Fig. 16 Arm-bow joint, upper view. Courtesy of INHP. Museum catalog no. 7394.*

*Fig. 17 A Henzey through-tenon, viewed from below. Collection of Dr. & Mrs. Donald Shelley, April 2007. Courtesy of Pook & Pook Auctions.*

*Fig. 18 Arm-bow mortise and tenon joint of an adult Henzey 9-spindle sack-back viewed from below. Catalog number 7394. Courtesy of INHP.*

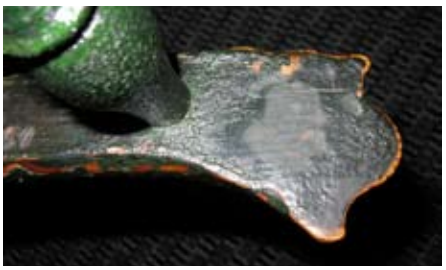

*Fig. 19 Carved knuckle, viewed from below, of the Henzey chair in the Shelley sale, April 2007 at Pook & Pook Auctions. Courtesy of Pook & Pook.*

*Figs. 20 & 21 A Henzey child's sack-back inspected by the author. Courtesy of the Colonial Dames, Philadelphia, Chapter II.*

*Fig. 22 Henzey brand on Lemon Hill child's sack-back. Courtesy of the Colonial Dames, Philadelphia, Chapter II.*

## About the Windsor Chair Data Model

Managing so many pieces of data is a challenge. Since there was no precedent for managing the type of information I was collecting, I couldn't set about writing a computer program that would allow me to input all the dimensions of the chairs I measured and return an answer to my question. I chose Microsoft Excel because I was familiar with it and because it allowed me to see all the data even if I had to scroll across several screens to do so. This helped me to analyze the data in incremental steps. Following the axiom that simpler is better led me to stay clear of complex statistical treatments which is fine since I'm no statistics genius.

As mentioned in the article, critical measurements were selected and entered which allowed me to calculate the simple average and standard deviation for each. This second measure tells us how consistent or inconsistent the groups of individual dimensions are across all the chairs Henzey made of the same style. Thinking back to my college Analytical Chemistry class, I realized that there was a better measurement I should use—the standard deviation of the mean, or average. This second measure of variation is a truer indicator to use for comparisons. With it, one can select the confidence level for certainty about the deviation. I chose a high value, a 90% level of confidence, meaning that any "yes" it fit, or "no" it did not, would be right at least 90% of the time. This is a statistician's technique frequently used in scientific work. The larger the number of chairs I studied, the tighter or more precise this number became, so any conclusions I would reach would be even more accurate.

I was rewarded for all the hard work of measuring so many of Henzey's sack-backs. I set a cut-off percentage threshold of 60%, that is, 60% of the dimensions had to fall within those recognized already before I could say yes, this chair was made by Henzey (if it was unbranded). In the end, I selected the 60% cut-off based on how the data behaved.

Of the sixteen chairs that did meet the standard, I was also able to visually determine that the sack-backs were made by Henzey. The model confirmed my visual assessment that yes, this unbranded chair is what it appears to be. It cannot be disputed that visual analysis is subjective and, therefore, imperfect. Neither are statistics absolute. Statistics give us a consistent objective process that allows for variation while yielding reproducible results. In the end, it was exciting to see that the two independent processes, visual and computer-modeled, are consistent with one another. It remains to be seen if this process can be replicated across all Windsor chairs made by Trumble, Cox, Letchworth and others who did periodically brand their chairs.-*H.L.*


*Figs 23 & 24 Henzey child's sack-back from the collection of Dr. & Mrs. Donald Shelley. Courtesy of Pook & Pook Auctions.*

*Fig. 25 Original green verdigris paint on a child's sack-back by Henzey. Courtesy of Pook & Pook Auctions.*

*Fig. 26 Underside of arm showing mortise and tenon joint attaching bow to arm on Lemon Hill Henzey child's sack-back. Courtesy of Colonial Dames Philadelphia, Chapter II.*

reproductions of this chair and found each time it was much harder to make than the adult version. The work to bend the bows and shape parts having tighter radii, and drilling holes in a thinner bow, are some of the reasons child's chairs are much more difficult to make. The customers who commissioned these children's chairs must have been very special to warrant this degree of effort.

Joseph Henzey was not only one of Philadelphia's premier Windsor chairmakers, he was arguably one of the best of all time. His craftsmanship helped define the most popular Windsor chair style for both children's as well as adult forms. The Windsor sack-back chair in Witman's painting of Daniel Rose can certainly be attributed to the craftsmanship of this master chairmaker, as Nancy Goyne Evans (1996) points out in her book *American Windsor Chairs*. The analysis of the data I have collected enables us to take a careful look at the Rose portrait again and confirm the chair captured in the portrait is indeed by Henzey. The beauty and robustness of his chairs still speak to us after a period of nearly 250 years and merit celebration and further study.

*ACKNOWLEDGEMENTS*

*My sincere thanks to Karie Diethorn, Chief Curator at INHP; Christy Thompson, Administrator at Carpenters' Hall; Joshua Blay, Curator and Assistant Director HSBC; Nina Long, Director, Library Services and Curator, Wistar Institute; Ronald Roth and Deborah Winkler of the Reading Public Museum; and Joyce Jones, Administrator, Lemon Hill Mansion for their support and encouragement in this work. I also wish to acknowledge a debt of gratitude to Nancy Goyne Evans for her sage advice, patience and mentoring.*

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*Herb Lapp is an independent researcher and woodworker who lives in Southern Berks County, PA. He has discovered many Windsor chairs, especially a very early Philadelphia comb-back at the Betsy Ross House in Philadelphia. Today he is researching the life of eighteenth-century Philadelphia merchant and miller, Thomas Livezey, prompted by the discovery and study of Livezey's 1750 Philadelphia comb-back chair, descended through his family and now exhibited at the Germantown Historical Society.*