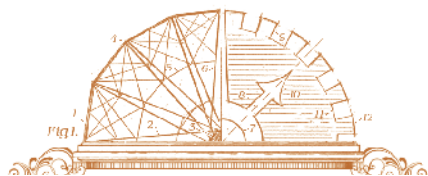


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INNOVATORS

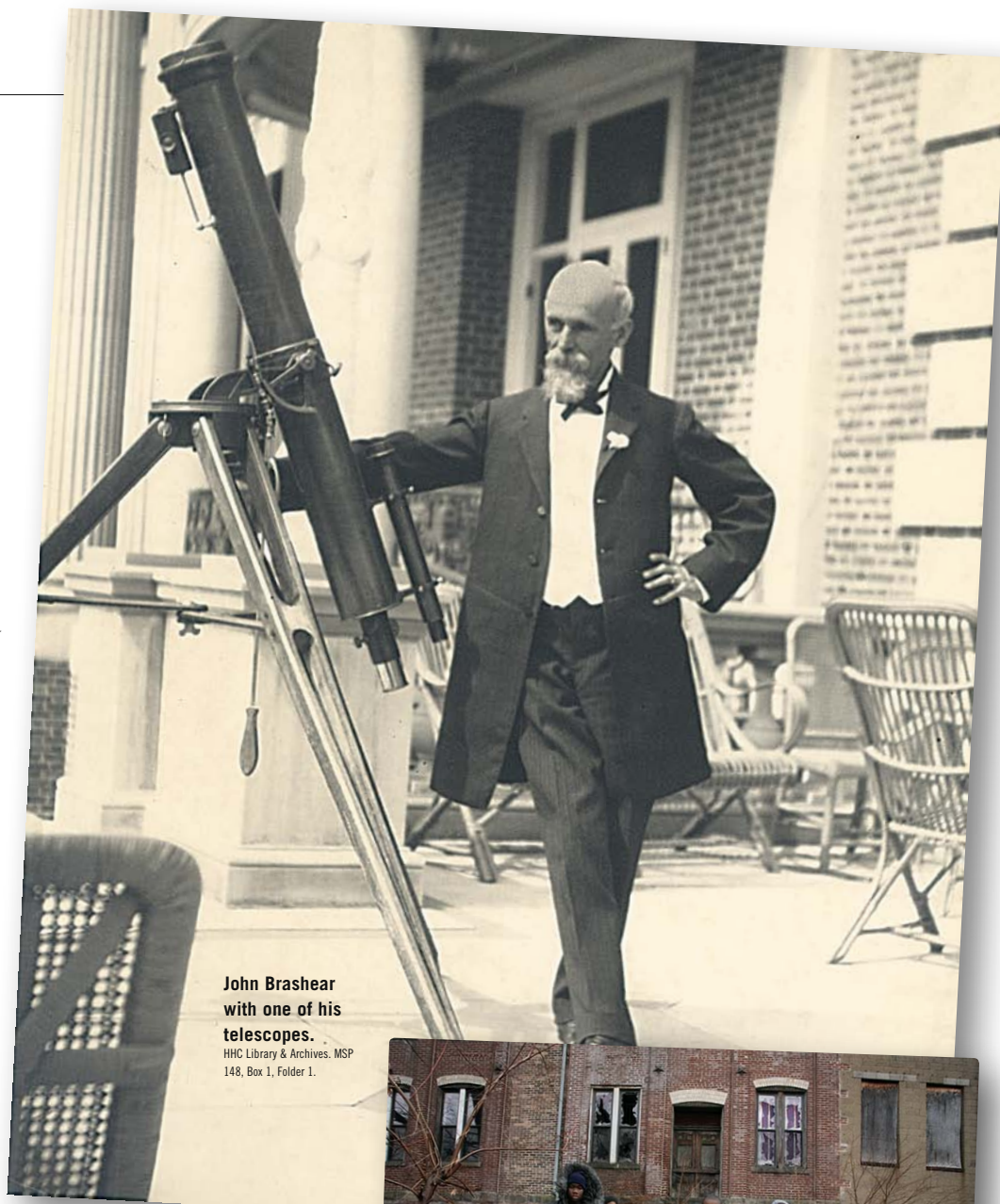
By Lisa A. Miles

Advancing Astronomy and Community: John Brashear

When Samuel Pierpont Langley discovered a humble Pittsburgh millwright making spectacular lenses at his Pittsburgh home in the 1870s, he set events in motion that changed telescope-making forever. Soon after, observatories in Europe were calling on Brashear for his precision lenses and scientific instruments. PBS recently aired a documentary about the telescope, but did not have time to mention the Langley-Brashear collaboration and Brashear's significant contributions to the field.

As a young man, John Alfred Brashear was fascinated with the stars but too poor to buy an amateur telescope—so he built one. Over the span of a decade, while laboring by day, Brashear worked by night to construct the telescope that caught Langley's attention. He did this in a little workshop behind his South Side home with wife Phoebe faithfully by his side.

Langley was an early aviation researcher who tested flight principles with numerous "whirlybird" experiments off an Allegheny City hilltop (now Pittsburgh's North Side). This land housed the campus of the Western University of Pennsylvania, and was where the Allegheny Observatory originally stood, with Langley as director. "Allegheny Time," a crucial innovation for the nation's first railroads, was established at this observatory. A group of mostly laymen (but also including the millionaire William Thaw) formed the



John Brashear with one of his telescopes.

HHC Library & Archives, MSP 148, Box 1, Folder 1.

Kids from the Northview Heights afterschool program pause between the Brashear factory (in back) and house during a community open house that the author organized and taught in 2008, with funding from the Buhl Foundation.

Lisa Miles.



Allegheny Telescope Society following the intense interest generated by the discovery of Donati's Comet in the 1850s.

Brashear lived on Pittsburgh's South Side and was not associated with the group, but he traveled across the rivers to see Langley, who became his mentor and colleague. Langley also

introduced Brashear to Thaw, a railroad man who owned undeveloped land on the peak adjacent to the university's campus. Thaw became Brashear's benefactor, giving him title to the land, and then built a beautiful Second Empire home with a three-story factory there to accommodate his every need.

A previously unpublished
photo of Brashear held by
his descendants.

Lisa A. Miles

The Western University of Pennsylvania later relocated to Oakland and became the University of Pittsburgh. For a time, before the City of Pittsburgh annexed Allegheny City, students would mingle for dinner and conversation with scientists from around the globe. They gathered around the long table in the later-added Arts & Crafts Board Room of John Brashear's home.

Langley and Brashear had a reputation for their down-to-earth teaching manners and humanitarian ways. When mishaps occasionally occurred in the lens-making process in the factory, students were dismissed from Langley's class to witness the teachable loss. Brashear especially had an affinity for young people; some even referred to him as "Uncle John."

In his new factory, Brashear filled orders for the Lick and Lowell observatories, among many others. Within a short time he went from millworker to world-renowned scientist, and even served as director of the Allegheny Observatory and acting chancellor of the university near the turn of the new century.

Brashear's passion, though, was perfecting his skill in his factory, and he returned to that alone until his death in 1920. He was interred alongside his wife in a crypt at the base of a telescope in the relocated Allegheny Observatory, with the inscription, "We have loved the stars too fondly to be fearful of the night."

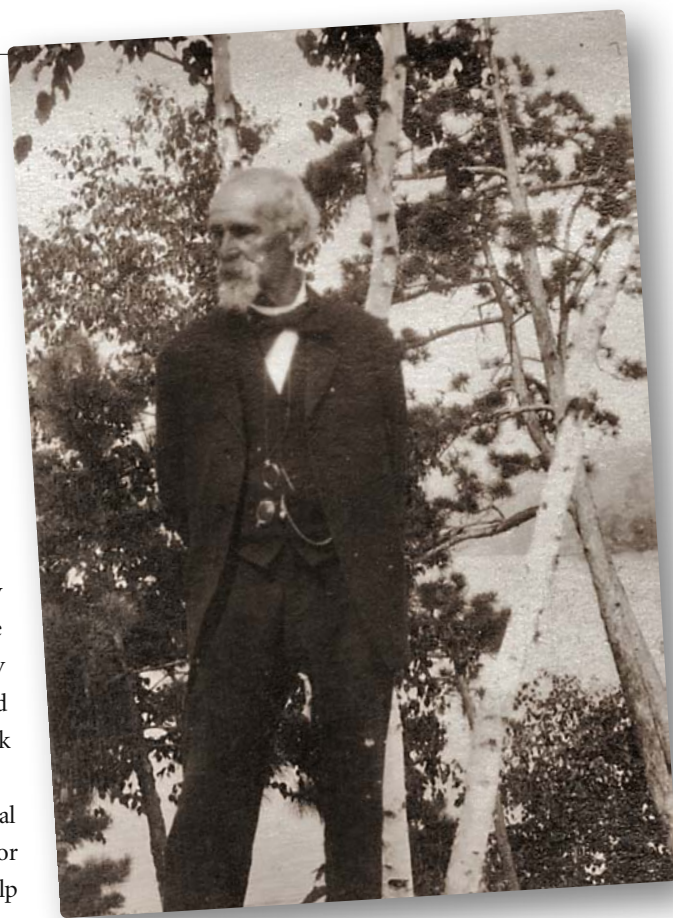
The historic North Side home and factory of John Brashear sit unoccupied and long-neglected on Perrysville Avenue—two structures emblematic of a forgotten chapter in our nation's history of astronomy and aviation. The buildings are remnants of the wondrous contribution to scientific history of a neighborhood now known as Perry Hilltop.

Educational programming regarding the Brashear structures was conducted in fall

2008 as a means to "stimulate a community via its history." In primitive fashion (no heat or electricity) and a humble manner (that perhaps would have pleased Brashear), with creativity and the kindness of a realtor (as agent for the bank-owner), children and community ushered a public in to see a place where so much history unfolded. The event opened the eyes of many to the hidden history of this economically deprived neighborhood, but much work remains.

Both structures retain historical elements and there is support for the pair to house a museum to help document the work of Brashear and Langley in astronomy and at the university. Both buildings are available for modest sums but need restoration or renovation. Vintage instruments have been offered to start a historical collection. Historic designation is underway and the projects have begun to attract interest from the national scientific community. Both house and factory should be cared for and open to tours and study.

Brashear's life and work, though evident, are only minimally known by anyone treading the hilltop land that holds so much history. His contributions should be known and celebrated by children and adult visitors, and provide inspiration to all residents, educators, historians, and scientists. He was best known in the scientific community as the man who developed advanced silvering techniques for telescope mirrors, but in Pittsburgh, Brashear is remembered as a humanitarian scientific educator. His telescopes are still in use today. He advanced astronomy to great end, and his



memory challenges a modern-day community to resurrect his legacy.

Learn more about John Brashear and Samuel Langley by examining some of their personal effects and instruments in *Pittsburgh: A Tradition of Innovation* at the History Center.



Lisa A. Miles is a musician and author of the bestselling *Resurrecting Allegheny City: The Land, Structures & People of Pittsburgh's North Side*, and *This Fantastic Struggle: The Life & Art of Esther Phillips*. She teaches extensively from her creative work, including the Brashear workshops mentioned above, which she independently coordinated. Lisa is working on a sequel to *Resurrecting*, as well as coordinating interest in the Brashear structures and shepherding them through national historic designation. Visit www.lisamilesviolin.com for more information.