



Carlyle House

DOCENT DISPATCH

Northern Virginia Regional Park Authority 

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Surveying Carlyle House's Past Our New Compass and Chain

by Kirk Hoffman

Patience finally paid off for Friends Board Member Emeritus and former president, Oscar Fitzgerald, who is responsible for Carlyle House's newest addition, an 18th-century Surveyor's compass and chain. After searching for ten years, Dr. Fitzgerald located these ideal pieces for the collection from a dealer in Ohio. While they do not have Carlyle family provenance, his probate inventory from November 13, 1780 indicates that John Carlyle owned "1 Surveyors Compass & Chain," and Dr. Fitzgerald felt they should be part of the collection.

In 1620, Edmund Gunter invented a surveyor's chain that became the industry standard for over 200 years. Gunter's chain was comprised of 100 links, each link measured almost eight inches, with twenty-five links equaling one pole. Earlier poles contained two poles but with Gunter's innovation each chain contained four poles, the equivalent of sixty-six feet. Surprisingly, the chain now in the Carlyle House collection is like earlier chains and is only comprised of the two pole (33 feet). A surveyor could read the chain from either end, a convenience not afforded by previous models, and the new chain corresponded well to square measurements of acreage.

The surveyor's compass, also called a circumferentor, was the most common instrument used to measure land in the colonies. Improvements were commonly made to the compass prior to the Revolution, but it remained a fairly standard form through the 19th - century. The "new" Carlyle House compass likely was made before 1760, since after that date compasses usually utilized bubble levels as well as steel needles, instead of iron, for increased magnetic strength. The Carlyle House compass displays some interesting design elements, such as the inclinometer

used to measure slope, an unusual feature for a piece from this period. The sight vanes at each end of the arm are dovetailed, which is typical of compasses before 1770. The socket underneath allows it to be placed on a Jacob's staff or tripod for use in the field. In fact, the instrument case itself is well designed to contain all its pieces in the minimum amount of space, even down to the grooves at the bottom for extra needles. Surveyors



CARLYLE HOUSE

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carried extra needles in case others were damaged and could replace them by prying off the glass cover.

The compass provides several clues to its origin. English compasses read from 0 to 360 degrees around the face, while colonial compasses read from 0 to 90 degrees between each cardinal direction. The lack of decoration and spare use of brass also indicate that the compass originated in the colonies. Several fine instrument makers practiced in cities such as Boston and Philadelphia. In his travels up and down the coast, Carlyle could have purchased his compass from one of these craftsmen. However, before the Revolution, some surveyors continued to order their instruments from England. The place of manufacture of the surveyor's compass and chain on Carlyle's probate inventory is unclear. Carlyle also owned three other small compasses that appear on the inventory at Torthowald. However, his surveyor's compass and chain are listed on his Alexandria household inventory, meaning that he had more use for them in his civic duties than in his land speculation.

As a trustee of Alexandria, Carlyle served in several capacities that required skill in surveying. Settling land disputes, building or repairing roads, and adding land to the growing town, would have required this specific equipment, as well as knowledge of the subject. Carlyle likely received his surveying education

“on the job” while working for William Hicks and later for the Fairfax family, rather than from any formal sources. The land boom in Virginia during Carlyle's lifetime brought the surveying profession into the mainstream economy. More land was patented between the years 1728 and 1748 than in the first hundred years of the colony. Speculators bought huge tracts of land that required the attention of surveyors. Companies could obtain even more land than individuals, and John Carlyle took full advantage of this collective enterprise. In 1749, he and the other members of the Ohio Company received a grant for 800,000 acres on the northern frontier. Yet field surveying was tedious and time-consuming work and usually left to professionals.

Any person or company buying land in Virginia dealt directly with the office of the County Surveyor who was responsible for assessing the land grants from the Crown, confirming ownership and settling disputes. John Carlyle's name never appeared on record as a County Surveyor, or even as a deputy or assistant. Several of his friends did hold the position, however. George Washington was the County Surveyor for Culpepper County from 1749-1750. In fact, Washington earned that appointment shortly after assisting John West, the assistant Fairfax County Surveyor, with the assessment of the new town of Alexandria. The reproduction surveyor's map used today during tours of Carlyle House is George Washington's copy of that plan, which he made for his brother Lawrence, a trustee of the town. Washington was only fifteen when he started surveying tracts of his brother's land, and a year later he spent time with George Fairfax and James Glenn on a field expedition. However, his military obligations made surveying a short-lived career.

John Carlyle's family, through his second wife, Sybil, also held several important surveying positions. George West was Fairfax County Surveyor from 1754 until 1772 when he became the County Surveyor for Loudoun County. William West was the Assistant Surveyor for Fairfax County in 1742, and John West, Jr. held the position for several years after 1749.

As with most Virginia gentlemen, those who considered themselves surveyors by profession also ran merchant enterprises and held minor civic posts in the community. Likewise, a few public figures and private individuals practiced surveying in their business activities. Carlyle was one of the latter, a merchant and a civic leader who likely used his surveying knowledge and equipment in town, rather than in the field.



This February the surveyor's compass and chain will be exhibited in Colonel Carlyle's Study. Our hope is that it will facilitate your discussion of Carlyle as a merchant and entrepreneur. To augment the compass and chain exhibit, we are looking to acquire a map that would show the various tracts of land owned by Colonel Carlyle. Stay tuned for further developments.