

# Thomas Paine and Bridges

Review by Algernon D'Amassa of the book, *Tom Paine's Iron Bridge: Building a United States*, by Edward G. Gray

Florida State University historian Edward G. Gray tells a seldom-told story about Tom Paine, whom so many know - when they read or hear of him at all - as the early American revolutionist who tried to incite a similar revolution in Britain, and fewer still know he became a citizen of the first French Republic and was jailed under Robespierre; they know him as the author of *Common Sense* and some may have heard about (but seldom read) *Rights of Man*, *The Age of Reason*, and hardly ever *Agrarian Justice* even though we still debate their ideas. Many inherit the impression of Paine that John Adams conveyed in a letter to Abigail Adams in 1776, that he had "a better hand at pulling down than building".

Gray tells us a story of Paine the builder, a creative problem solver who pondered the dangerous Schuylkill River, and saw - perhaps as early as the Revolutionary War, witnessing the role rivers played in key battles around Philadelphia - the importance of infrastructure to a new nation's economy and social fabric. A footnote in other biographies, Gray's book focuses on Paine's interest in architecture and bridges in particular.

America was covered with old-growth forests and ample timber for building bridges, but wooden bridges were notoriously vulnerable, covered or not. Paine conceived of a permanent single-arch bridge constructed of iron, and as he traveled to Britain and France and back to America again, he sought the input of trained builders and potential investors wherever he went. His designs earned the admiration of many before his reputation sank, and several important bridges seem to have been inspired by his model of a pre-fabricated design that could be shipped and assembled on site, making architecture

and engineering exportable commodities.

This is a pertinent story coming at a time when the United States is learning painful lessons about the importance of infrastructure to domestic economy - or, if investment in maintenance and replacement is the measure, perhaps we aren't learning from our bad roads, crumbling tunnels, collapsing bridges, corroded plumbing, and ramshackle ports of entry. When Philadelphia was still the major port city, but seeing competition from Baltimore and New York, Paine looked to the dangerous riverine barriers around them and saw permanent bridges as essential to a United States, economically and politically.

In architecture, as with his writings, Paine was tragically loath to monetize his efforts. He held a patent for his bridge design and sought compensation when others built bridges based on his concept, but Gray shows him repeatedly pulling his focus from bridges to politics, losing political support and networks of friends after the French Revolution and *The Age of Reason* (falsely portrayed in his time and even today as an atheist treatise), plus a harsh attack on George Washington that backfired on Paine.

Gray ends with an intriguing epilogue about corporations and public-private partnerships in the early United States, including some earnest debate about whether "perpetuities and monopolies are contrary to the nature of a republican government," showing once more that the United States is still engaged in some of the same fundamental arguments from our early years.

*Tom Paine's Iron Bridge: Building a United States*

by Edward G. Gray, 2016, New York NY: W.W. Norton & Co