

Steam: The Untold Story of America's First Great Invention. By Andrea Sutcliffe. New York: Palgrave, 2004. x + 272 pp. Index, notes, bibliography, appendix, illustrations. Cloth, \$24.95. ISBN: 1-403-96261-8.

Reviewed by Terry S. Reynolds

The title of this volume, *Steam: The Untold Story of America's First Great Invention*, is very misleading. The book does not provide, as its primary title suggests, a comprehensive history of steam power in early America. Rather, its focus is entirely on the emergence of the steamboat. It ignores the use of steam engines in mines and mills. The subtitle is even more misleading. The story of the steamboat's "invention," including the pivotal role of lesser-known figures like John Fitch and James Rumsey, has been told *many* times, for example by James T. Flexner (*Steamboats Come True: American Inventors in Action*, 1944, reprinted 1992) and Brooke Hindle (*Emulation and Invention*, 1981), to name but two. The very bulk of the book's bibliography gives the lie to the claim that this is an "untold" story, and Andrea Sutcliffe provides no introductory remarks to clarify just what part of the tale can be so characterized.

Steam focuses on the emergence of the steamboat in America between 1784, when James Rumsey first demonstrated to George Washington a model of a boat designed to move up streams, and 1815, when Robert Fulton died. Besides Rumsey and Fulton, another key figure in the story is John Fitch, a Connecticut-born inventor who competed with Rumsey to develop the first operative steamboat. Fitch actually succeeded in building a steamboat and operating it as a commercial line between Philadelphia and Trenton in 1790, a full seventeen years before Fulton's celebrated trip from New York to Albany on the *North River* (also known as the *Claremont*). The location of Fitch's venture was unfortunate. Operating on the broad Delaware River in a region whose flat terrain allowed sailing vessels and stagecoaches to travel relatively rapidly, he was unable to make his steamboat service pay. Fulton, with a slower boat, inaugurated his commercially successful service on the Hudson River, which passed through hilly terrain, making navigation more difficult for sailing vessels and precluding rapid travel by stage.

Once I got beyond my aggravation with its puffed-up title, I enjoyed reading this book. Sutcliffe eloquently retells the story of the steamboat's invention, making good use of primary source material, providing more detail on some topics than previous authors, and adding a slightly different twist to earlier versions of events. *Steam* is directed to a popular rather than a scholarly audience. Sutcliffe has not come up with significant new insights, but the book's organization and prose are superb.

Sutcliffe treats the three principals of her story—Rumsey, Fitch, and Fulton—equitably, neither idolizing nor demonizing. She skillfully navigates the bitter and often complicated rivalry between Rumsey and Fitch in the 1780s and early 1790s. She also describes a host of supporting figures, including some of America's founding fathers. George Washington, Thomas Jefferson, and Benjamin Franklin, for example, had extensive dealings with her three main protagonists.

Early America steamboat inventors struggled with two challenges: The first, which was technological, was to transform ideas and models into commercial propositions, a task that required the development of appropriate hardware, such as boilers and propulsion systems. The second, which was financial and legal, was to raise enough capital to support technical development and secure the rights to their inventions.

On technological matters, Sutcliffe's account is not as good as Hindle's, but she does clarify some issues surrounding the principals' changing ideas on propulsive systems (mechanical oars, water jets, paddle wheels) and their attempts to develop or secure reliable engines and boilers. The technical explanations are hampered by insufficient and inadequate diagrams and illustrations accompanying the text.

However, in discussing the financial and legal contexts in which the early steamboat inventors operated, Sutcliffe does a better job of tracing their struggles with American intellectual property laws (or the lack thereof) than previous authors. In the absence of an effective federal patent system, inventors and their financial backers had to spend an inordinate amount of time and money on the road, visiting state capitals and lobbying politicians to secure state-sponsored monopolies for their inventions. Without such monopolies, attracting the capital needed to transform ideas and models into commercial ventures was exceedingly difficult. The struggle between Rumsey and Fitch over the "invention" of the steamboat, and the parallel attempts of other steamboat

inventors like John Stevens, Samuel Morely, and Robert Livingston to gain patent rights and secure state monopolies, constitute an excellent case study of the difficulties in opening businesses based on new technology in early America. In fact, as Sutcliffe's narrative demonstrates, the wildly conflicting claims being made for the invention of the steamboat were compelling factors behind the passage of the first U. S. patent laws. The inadequacy of these early laws is vividly illustrated in Sutcliffe's account of the inventors' continued struggle for state monopolies. The weaknesses in the laws were compounded by the actions of the first director of the U.S. patent office, who regularly awarded patents to himself.

In summary, scholars already familiar with the story of the steamboat's invention will encounter little that is new in this misleadingly titled book. But they will find solid research, occasional original insights, and new material on a number of minor issues, wrapped in prose that is a pleasure to read. If I had to recommend a book on the emergence of the steamboat in the United States to a general reader, it would be this one.

Terry S. Reynolds is professor of history at Michigan Technological University. A former president of the Society for the History of Technology, he is the author of several books and numerous articles on aspects of the history of technology. He edited The Engineer in America (1991) and coedited Technology and American History (1997). He is currently working on the history of the Lake Superior iron ore industry.