
In this fourth volume in the New Series of the Johns Hopkins Studies in the History of Technology, Jeanne McHugh has written a book that seems to have at least three major purposes. The first is to give a fairly complete biography of Alexander Lyman Holley, a New Englander by birth, a graduate of Brown University, a mechanic and engineer who worked with the development of American locomotives in the 1850s, and most important, the man who was the builder or consultant for nearly all the original Bessemer steel plants in the United States. Her second task was to write brief biographies of the men who were instrumental in the birth of the European and American steel industries: Henry Bessemer, William Kelly, Göran Fredrik Göransson, Robert Mushet, John Fritz, William Siemens, and Sidney Gilchrist Thomas. Finally, the thread that runs through all these men's lives is the development of the Bessemer and open hearth processes, and these subjects McHugh covers in great detail.

Although the author handles each of these themes well, the way in which she has organized the book has the potential for creating confusion. Just when the reader becomes immersed in the life of Alexander Holley, he finds himself involved suddenly with Henry Bessemer and his experience, and then with other Europeans in the early industry. By the time one finishes reading about the Bessemer process and all of its variations, he has difficulty remembering that the book began as a biography of Alexander Holley.

On the positive side, the author writes knowledgeably about the technological aspects of the Bessemer and open hearth processes. Her explanations are clear and complete, and she has chosen her illustrations carefully. The details of the business ventures in which Holley was involved as part of the early American steel industry are also fascinating. Holley himself seems to have been an interesting figure, but his chief value to this work is as the common denominator through which the author has tried to connect the various parts of her story.

The research in this book seems to have been prodigious. Ms McHugh has relied primarily on sources such as treatises, speeches, papers, and newspaper articles that her subjects or their contemporaries themselves wrote, and she has integrated them and their
illustrations into a narrative that is at the same time technical and general and should appeal to readers with all levels of expertise. The one additional section that the volume could use, however, is a bibliography. There are footnotes at the end of each chapter, but it is tedious to search each one for sources. The author does include as Appendix 2 a "Catalog of the Books, Addresses, and Professional Papers Written by Alexander Lyman Holley."

McHugh has been associated with the American Iron and Steel Institute in several professional positions, and she displays a deep interest in and knowledge of her subject. Her book is good reading for anyone interested in the technological history of the nineteenth-century American steel industry and in its outstanding figures.

Colorado Historical Society

JUDITH ANN HEBERLING


Since Vatican Council II there has been a growing awareness of the vanguard role played by religious women in American Catholicism, both past and present, and an accompanying awareness of the dearth of information available in general histories of the church in the United States published to date. Hence, On the Wing: The Story of the Pittsburgh Sisters of Mercy, by Sister M. Jerome McHale, R.S.M., is a welcome addition to American Catholic studies.

On the Wing chronicles the story of the Sisters of Mercy from the arrival in Pittsburgh, Pennsylvania, in 1843 of Mother Frances Xavier Warde and six Irish sisters. The story of these women who accompanied Bishop Michael O'Connor, first bishop of the newly established Diocese of Pittsburgh, to establish the church in that "Western city" represents a microcosm of the nineteenth-century American church. It captures the vitality of the nascent church in portraying the pioneering courage of these Irish missionaries, their rugged journey to Western Pennsylvania, and the struggles to establish themselves in a city caught up in the rapid expansion of industrialization and permeated with the hostile nativist sentiments which characterized the urban centers of the Northeast in mid-century.

Throughout the five chapters of On the Wing, the reader becomes increasingly conscious of the leadership role of religious women in the