

phenomenon fits into a larger theoretical context. These intrusions upon the narrative tend to be repetitive and probably unnecessary for an understanding of urban development in nineteenth-century Minnesota. Wills's narrative is rich and her sources deep. In her capable hands, the Twin Cities story does not need the extra help.

Field Armies and Fortifications in the Civil War: The Eastern Campaigns, 1861-1864, by Earl J. Hess. Chapel Hill: University of North Carolina Press, 2005. xix, 428 pp. Illustrations, maps, notes, bibliography, index. \$45.00 cloth.

Reviewer William B. Feis is associate professor of history at Buena Vista University. He is the author of *Grant's Secret Service: The Intelligence War from Belmont to Appomattox* (2002).

When used in the context of the American Civil War, the word *fortifications* usually conjures images of the slugfest late in the war between entrenched Union and Confederate armies, when weapons technology and massive earthworks stymied the quest for decision and provided a chilling glimpse of the future of modern warfare. But how Civil War armies arrived at that point, how the use of fortifications developed during the war, and what impact new weapons had on that development have been tantalizing – yet daunting – historical questions.

Building on Edward Hagerman's *The American Civil War and the Origins of Modern Warfare* (1988), Earl Hess has tackled an ambitious project: to assess "how and why fortifications played a role in the success or failure of Civil War field armies" (xiii). More than a mere technical study, he provides fascinating insights into the development of wartime fortifications and looks at the influences of Dennis Hart Mahan, Henry Wager Halleck, and French military theorists on attitudes toward fieldworks within the U.S. Army. Moreover, this volume, which covers the period 1861-1864, is but the first of three studying fortifications in the Eastern Theater, with the last two projected volumes to focus on the final campaigns in Virginia in 1864-1865.

An interesting aspect of this volume is the chapter titled "Engineering War," which examines prewar theoretical influences and shows clearly that American officers (their experience in the Mexican War notwithstanding) embraced both the tactical offensive and field fortifications. However, as Hess points out, officers trained at West Point – as well as the available literature on fortifications – focused more on the technical aspects of construction than on how to employ armies and fortifications in a coordinated, effective manner. Nevertheless, fieldworks became more sophisticated as the war progressed,

often initiated by regimental, brigade, and division officers and, on occasion, by the rank and file. But even during the early years of the war, Hess notes, fortifications were used more often and in more advanced ways than has previously been understood.

One of the most important issues Hess addresses is the cause-and-effect relationship between the widespread use of the rifled musket and the proliferation of field fortifications. He argues that "continuous contact between opposing armies" had more to do with making the dirt fly than spinning projectiles. That assertion rests not only on his longtime study of fieldworks but is also grounded in his earlier research on the nature of Civil War combat. Although his conclusions are cogently argued and persuasive, they will undoubtedly generate debate over a question many believed was answered long ago.

Based on personal observations of surviving earthworks and a careful reading of battle reports, memoirs, and other primary sources, Hess succeeds in his goal of merging discussions of the construction of fieldworks with how officers and armies incorporated them into their battle plans. After 15 years of studying these issues and visiting hundreds of sites, Hess has produced an admirable, insightful, and important study that fills a critical gap in understanding the conduct of military operations during the war. It will likely whet the appetite of many scholars and buffs as they await the future volumes.

The John Deere Story: A Biography of Plowmakers John and Charles Deere, by Neil and Jeremy Dahlstrom. DeKalb: Northern Illinois University Press, 2005. xix, 204 pp. Illustrations, timeline, appendix, notes, bibliography, index. \$24.00 cloth.

Reviewer Leo Landis is director of interpretation at Living History Farms.

No single plowmaker dominates American history like the name of John Deere. A Vermont blacksmith often credited in textbooks with developing the steel plow, Deere is a mythical figure in American agricultural history. Neil and Jeremy Dahlstrom seek to provide a more thorough and humanizing view of John and Charles Deere, the father and son responsible for the creation of Deere & Company.

Relying largely on resources in the Deere & Company Archives in Moline, Illinois, the Dahlstroms shed light on the personal characteristics of John and Charles Deere. According to the authors, John's ingenuity and Charles's business savvy, among other traits, fostered the growth of the company and established it as one of the major suppliers of agricultural machinery in the United States.

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