

ROBERT BIGIO. *Rudall, Rose & Carte: The Art of the Flute in Britain*. London: Tony Bingham, 2011. 336pp., Illus. ISBN 978-0-946113-09-5 (hardback). Price: £75.00

Robert Bigio's long-awaited study of Britain's preeminent flute-making company presents a lovingly researched portrait of the firm, its principals, and the vast range of innovative instruments they made during nearly 140 years of operation (1822-1958), particularly in a half-century of entrepreneurial innovation before 1895. The book is a major accomplishment that must surely exceed even the high expectations its lengthy gestation encouraged.

Founded by George Rudall and John Mitchell Rose in 1822, when amateur flute-playing in Britain first reached fever pitch, the company achieved manufacturing standards of the highest quality. The association of Richard Carte, a pupil of Rudall, with the firm began a series of innovations that included the adoption of Theobald Boehm's revolutionary flute designs of 1832 and 1847, for the latter of which Rudall & Rose held the British patent, and two important designs patented by Carte in 1851 and 1867, as well as the embrace of almost every novel development in fingering, acoustics, mechanism, or materials invented by others.

The business undertook a substantial expansion in the 1850s, when it became known as Rudall, Rose & Carte. Probably using an infusion of capital provided by a partnership with William Prowse, of Keith, Prowse & Co., it acquired the substantial military musical instrument maker Thomas Key, and engaged in the production of oboes, clarinets, bassoons, cornets, sax-horns, saxophones, trumpets, trombones and other wind instruments. The firm also began the publication of the annual *Musical Directory* and *Royal Academy of Music Calendar*, and served as a platform for Carte's son, the impresario Richard D'Oyly Carte, until he founded the firm that achieved such success with Gilbert & Sullivan.

The firm was known from 1872 as Rudall, Carte & Co. In this phase it provided flutes on one model or another to 'virtually every leading player in Britain', as well as to many in the British Empire and elsewhere overseas. Instruments made in this period remained in use in British bands and orchestras until after World War II and even in a few cases as late as 1980. Richard Carte ceded control of the company to his son, Henry, in 1883 and dissolved the partnership early the following year. A little more than a decade later Henry sold the firm to a group of new owners, who made it a limited company in 1911. Innovations continued even into the Depression, with the development of flutes in the enormously expensive metal platinum and a corrosion-resistant nickel alloy called 'New Metal'. But the firm's decline, rooted in a cyclic resistance to change and exacerbated by a prohibitive U.S. tariff after World War I, ended with its sale to Boosey & Hawkes after the outbreak of World War II and the appearance of its trade name on poor-quality imported instruments.

Robert Bigio's thorough and comprehensive study proceeds from a rich documentary basis that includes the stock records of Rudall, Rose & Carte, later Rudall, Carte & Co., from 1869 until the early 1940s, which permit a detailed analysis of the firm's activities over a 70-year period. The records, now in the collection of the Horniman Museum, indicate the serial number, completion date, description, pitch, material and maker's name for most of the workshop's output, as well as less complete details of cost and sale price, sale date and buyer's name and location. This

plethora of detail in the background, Bigio's thorough familiarity with the contemporary musical world and its personalities, as well as his expert and practical knowledge of instrument design and construction, allows him to provide significant historical details of many of the illustrated specimens.

These illustrations, enhanced by expert examination and connoisseurship, and magnificently printed (in Britain) on matte coated paper in a clear and elegant layout by the author, are the crowning glory of this lavish publication. Of nearly five hundred superb photographs, almost all by Bigio himself, the great majority show the firm's flutes: simple-system, Boehm flutes, Carte's Patent flutes of 1851 and 1867, Clinton, Siccama, Rockstro, Radcliff flutes and others, in cocuswood, ebonite, silver, gold, ivory and boxwood, besides alto and bass flutes and piccolos, held by numerous institutional and private collections. Included for comparison and exemplification are dozens of instruments by a score of innovators and competitors. Many examples are shown in detail or in multiple views that elucidate complex mechanisms or display exceptionally fine craftsmanship. Moreover, portraits, letters, war medals, concert programs, legal records and buildings are illustrated alongside diagrams, fingering charts, musical notation and promotional leaflets. Twentieth-century photographs of the company's workshops illustrate its decline by revealing the everyday practicalities of an operation lacking the benefits of engineering technology, the division of labour and even electric light.

A reviewer charged to find fault with this carefully researched and amply written account will have a difficult task. For want of graver flaws, one might argue that Bigio's account militates against the notion that the sole recipe for business success is 'discovering what customers want and selling it to them' (p. 9, paraphrased on p. 101), in that it shows in such detail the role capital, personal relationships, social and business networks and family backgrounds played alongside technical mastery and business acumen in the achievements of the Rudall Carte enterprise. But on the whole Bigio presents enough evidence even on disputed matters with sufficient conviction that his judgments will overcome any such quibble.

This significant book will appeal to everyone interested in the history and manufacture of musical instruments, particularly the flute, as well as to students of nineteenth-century British musical life and culture. It should be in the library of every collector and connoisseur of woodwind instruments, as well as university music libraries, museums and major public libraries. In respect of thoroughness, clarity and production values, the study can serve as a model for any similar study in the future.

ARDAL POWELL

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