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## Reed Organ Coverage in *The New Grove*

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THE fall of 1980 saw the advent of what the *New York Times* has called "the biggest music publishing event in the last quarter century." In preparation since 1969, *The New Grove Dictionary of Music and Musicians* finally made its long-awaited appearance. Twenty-six years have elapsed since the publication of the fifth edition of Sir George Grove's magnum opus, until now the standard musical reference work in the English language. In preparing the new publication, it became obvious to the editors that the field of musical knowledge had expanded to such an extent as to preclude the production of a true sixth edition. More progress had been made in the field of musicology in the period between the appearance of the two works than in the seventy-five years previous to the publication of *Grove 5*. This has been evidenced by the appearance of such monumental works as *Die Musik in Geschichte und Gegenwart* and *RISM (Repertoire Internationale des Sources Musicale)*, both of which are amply indicative of the inadequacies of *Grove 5*. In this light, it was deemed that a comprehensive English-language work of truly international scope was needed. Whereas in *Grove 5* British contributors outnumbered those of other nationalities five to two, in *The New Grove* their number is only about one-fifth the total.<sup>1</sup> This should do much to allay criticism of the earlier work, by American users at least, concerning its nationalistic bias. The editor of *Grove 5*, Eric Blom, suffered no qualms on this point, pointing out instead that it was "in the first place an English work," and implying that other nations could produce their own.<sup>2</sup> The editorial leadership of *The New Grove* has taken great strides toward the eradication of the basis for that criticism. In the light of more recent research, very little of the earlier work could be allowed to stand, and this material now comprises only about three percent of the total. Even this has been thoroughly re-edited. With these factors in mind, one might confidently expect truly

1. Stanley Sadie, ed., *The New Grove Dictionary of Music and Musicians*, 20 vols. (London: Macmillan Publishers Limited, 1980), 1: vii.

2. Eric Blom, ed., *Grove's Dictionary of Music and Musicians*, 5th ed., 10 vols. (New York: St. Martin's Press, 1955-61), 1: vi.

international coverage reflecting the latest in research, presented with a minimum of nationalistic bias.

The American reader interested in the history and development of the reed organ will then turn to that subject expecting to find coverage far exceeding the dated and somewhat Anglophilic variety provided by Alfred Hipkins in *Grove* 5 under the heading "Harmonium." His confidence is quickly shaken when he finds that no article exists under "Reed Organ" and that he is directed to look under "Harmonium." Here he is told—contrary to common usage in the United States for the last 120 years—that all reed organs are harmoniums. Lest the reader be unaware of the contradictions inherent in this viewpoint, a word of historical clarification is in order.

Free-reed keyboard instruments had their genesis in the late eighteenth and early nineteenth centuries, inspired to a large degree by the free-reed mouth organs known under various names for centuries in the Far East. Various experiments culminated in Grenié's *orgue expressif* of 1810, so called from the ability of its free reeds to respond dynamically to varying wind pressures without changing in pitch, as do organ pipes. This ability to produce tones of differing intensity in response to wind pressure has always been the characteristic advantage of instruments of this family. Grenié's innovation consisted primarily of applying free reeds to an existing foot-pumped chamber organ; extant pictures show a small pipe organ, the pipes of which contain free reeds, while the blowing mechanism common to such instruments remains unchanged. Later developments consisted mainly of doing away with the pipes and placing the reeds within the cabinet of the instrument itself. This trend reached another peak in 1840 when Alexander-François Debain patented his harmonium, an instrument of four ranks of reeds. The reeds were placed within the windchest and blown by internal pressure, as in Grenié's earlier instrument. Over each reed was placed a small cell or resonating cavity by means of which the timbre of the reed could be altered to some degree, thus making possible differing tonal qualities for each set of reeds. In 1843 was added the most characteristic feature of the harmonium, the "expression" stop. This was a device that allowed the equalizing effect of the reservoir to be by-passed at the will of the player. Air from the treadle-operated pumps was thus introduced directly to the reeds, enabling the player to exercise greatly enhanced control over the intensity of their sound, somewhat in the manner of the accordion. The pumping technique was different from that used when the reservoir was in operation, since the

least movement of the player's feet was registered. Later developments included the percussion device, whereby the forward set of reeds was provided with small hammers which struck the tongues at the moment air was admitted to them. This afforded a brisk attack, useful in rapid passages. Another improvement was the prolongment, by means of which a note or group of notes could be sustained at will, somewhat in the manner of the *sostenuto* pedal of the grand piano. Further refinements were added later, such as double touch and divided expression, but the basic form of the harmonium was and remained that of a pressure instrument equipped with the expression stop.

In the United States, affairs had taken a different turn. After some initial experimentation, instruments built here were designed to operate on the vacuum principle, whereby the reeds were placed on top of the windchest and air was drawn in through them. Suction bellows did not originate in the United States; however, it was the American builder Jeremiah Carhart who perfected and popularized this type of construction, taking out a patent for it in 1846.<sup>3</sup> This approach made for a considerably simpler instrument than the harmonium. The exhaust bellows was attached directly to the underside of the windchest and consisted of a reservoir and two pumps; no true expression valve was possible, since the pumps could exit air only through the reservoir. The reeds were outside of and above the windchest, making the introduction of any hammer mechanism for percussion purposes difficult if not impossible. The reed cells which held the reeds were soon mass-produced; Carhart took out a patent for a machine to mill such work in 1856.<sup>4</sup>

Another feature which differentiated the American instrument from the European harmonium was the voicing of the reeds. Harmoniums depended on their resonating cavities to provide varying tonal colors. The art of free-reed voicing, discovered by the American Emmons Hamlin as early as 1848–49, accomplished something of the same effect by another means. This consisted of introducing a crimp or curl in the free end of the reed tongue in such a manner as to make the tone rounder and smoother. Since the reeds were mounted on the upper surface of the windchest, rather than in the interior as in the harmonium, construction was considerably simplified, with no need for reso-

3. Robert F. Gellerman, *The American Reed Organ* (Vestal, N.Y.: The Vestal Press, 1973), p. 6.

4. *Ibid.*

nating chambers. The technique of free-reed voicing was quickly adapted by all American builders and subsequently by European makers as well.

Thus, by the latter part of the nineteenth century, two distinct types of free-reed keyboard instrument were in existence: the harmonium, with its pressure bellows, cavity boards for tonal variety, and expression stop; and the American organ or cabinet organ, with its exhaust bellows, voiced reeds, and simplified design which lent itself readily to mass-production.<sup>5</sup>

When is a reed organ not a harmonium and vice versa? The characteristics of the two instruments should be clear from the foregoing. The external appearance of the two is similar, as is the manner in which

5. The term "melodeon" is frequently encountered in association with the reed organ, particularly in the early portion of its history. The *Compact Edition of the Oxford English Dictionary*, 2 vols. (London: Oxford University Press, 1971), 1: 1765, defines it simply as "an earlier form of the 'American organ'." Anthony Baines in *The New Grove* (12: 112) follows this same line, adding, however, that it is a "harmonium with suction bellows," an obvious contradiction of terms. The name seems to have been applied at an early date to a variety of free-reed instruments; Baines (*ibid.*) mentions that it was used to denote the button accordion. In the United States, the term "rocking melodeon" was applied to the lap organ, an instrument held in the lap and pumped with the left hand by raising and lowering the top. The top also included the upper part of the pumping mechanism and contained the keys (or buttons, in some cases), which thus moved with the rocking motion which gave the instrument its name. The term "melodeon" occasionally might also denote a reed organ of any type. Hector Berlioz's *Treatise on Instrumentation*, enl. and rev. Richard Strauss, trans. Theodore Front (New York: Edwin F. Kalmus, 1948) contains a section (pp. 403-04) entitled "The Melodium Organ [*sic*] by Alexandre"; a subtitle reading "The American Organ, the Harmonium" seems to denote a certain amount of confusion as to terminology. The ensuing description is general and could apply to either the harmonium or the suction instrument. Another section (pp. 404-05) is entitled "Pianofortes and Melodiums [*sic*] with Prolonged Sounds."

The word "melodeon," however, was used most often to denote specifically an early form of reed organ built in the shape of a small square piano. It stood on four legs placed at the corners of the rectangular case, or, in its more portable forms, on lyre-shaped standards placed at either end. Though it might contain two sets of reeds and even two manuals, it typically had only one set and no stops. It was tonally limited because of its primitive blowing apparatus: it had only a single pump operated by the right of a pair of pedals placed in an appendage which hung down below the body of the instrument in a manner similar to that employed on a square or grand piano. The left pedal operated a swell. It is readily apparent why the melodeon rarely had more than one set of reeds: the suction bellows system had only a single pump and was inadequate to support them properly, since on the return stroke of the pump, the instrument depended entirely on its reservoir for power. Mark Twain, an amateur musician and an accurate observer of things musical, stated the case succinctly in his 1869 travel book *Innocents Abroad* (New York: New American Library, 1966), p. 34, when he spoke of "a melodeon which was a little asthmatic and apt to catch its breath when it ought to come out strong."

they are played. Yet, the same may also be said about certain clarinets and saxophones. The violin and the viola also share the same characteristics, but surely no one would claim that they were the same instrument.

Alfred Berner, author of the article "Harmonium" in *The New Grove*, brings impressive credentials to his task. His career in musicology is too diverse to relate in detail here; suffice it to say that it has been long and distinguished. Since 1962 he has lectured in the study of musical instruments at the Staatliche Hochschule für Musik in Berlin and has been intimately associated with the re-establishment of the Institute for Musicology (now part of the Stiftung Preussischer Kulturbesitz) in Berlin, winning particular acclaim for the expansion of the museum of musical instruments attached to the Institute. His article entitled "Harmonium" in *Die Musik in Geschichte und Gegenwart* is scholarly and informative, although, as might be expected, it tends to view the subject from a strictly German standpoint. When he says that the term "harmonium" has been adapted in Germany for all instruments whose tone is produced by free reeds, whether the air stream is generated by pressure or by vacuum,<sup>6</sup> we are ready to accept this usage as right and proper, particularly when it appears in a German-language publication. When, however, in his article in *The New Grove* the attempt is made to apply this usage to the American instrument as well, credulity fails. The differences between the two instruments have been noted, and anyone who has dealt with them on a technical basis will find this confusion of terms hard to accept. The features which are peculiar to the American instrument were perfected in the United States and achieved such success and popularity as to sweep the harmonium from the markets, even in Europe. A note in the April, 1891, issue of *The Music Trades* is enlightening:

There is no doubt about it that the American reed organs are playing sad havoc among the makers of the German Harmonium. Recently there have been numerous controversies between the German manufacturers and the German representatives of the different American firms, and it is really amusing to see how the German maker tries to run down the foreign article.<sup>7</sup> The ultimate result was that the European makers were forced to produce instruments built along American lines. According to the article

6. Alfred Berner, "Harmonium," *Die Musik in Geschichte und Gegenwart*, ed. Friedrich Blume, 14 vols. (Kassel: Bärenreiter-Verlag, 1949-68), vol. 5, col. 1699.

7. "Ninety Years Ago: American Organs Popular in Germany," *The Music Trades* 129 (April, 1981): 28.

in *The New Grove*, certain German manufacturers developed the exhaust system to the point that it approximated the capabilities of the harmonium and then retained the term "harmonium" for their product, disregarding the difference in design.<sup>8</sup> The fact is that these must have constituted a distinct minority when compared to the literally hundreds of thousands of instruments produced by American manufacturers under the name "reed organ." Altogether, over three hundred firms manufacturing reed organs in the United States have been identified.<sup>9</sup> Berner himself notes that the firm of Estey had produced 100,000 instruments by 1881. The W. W. Kimball Company had built over 400,000 by the time it shipped its last in 1922.<sup>10</sup> Neither of these firms and few of their competitors called their products "harmoniums," nor did the people who bought them. The term was only rarely and at an early date applied to American instruments, and with the passage of time it was dropped. In an advertisement of 1856, Mason & Hamlin displays "melodeons and harmoniums"; in the same print the larger instrument is also called an "organ-harmonium"; and in 1864, the same instrument is called a "cabinet organ." The untenable position taken in regard to the American instrument is demonstrated in the article itself in an 1889 advertisement reproduced by way of illustration. Clearly labelled "Mason & Hamlin American Organ" in the original, the instrument is nevertheless dutifully dubbed "harmonium" in the author's caption.

Also puzzling in the article is the failure to credit Emmons Hamlin with the discovery of free-reed voicing. This technique was also quickly adapted by European makers because American instruments employing reeds so voiced, when used in conjunction with the suction bellows, produced tones which were, in the words of the article, "more balanced" in comparison with the compression harmonium. The suction instrument "did not yet have the typical characteristics of the compression harmonium,"<sup>11</sup> nor, it should be said, did it ever exhibit these characteristics as commonly built in the United States. Reed voicing is not even mentioned except in conjunction with improvements made in two- and three-manual instruments produced "between the wars," a feature scarcely new at the time, since it originated in the factory of the Amer-

8. Alfred Berner, "Harmonium," *The New Grove*, 8: 174.

9. Gellerman, *The American Reed Organ*, p. 16.

10. Van Allen Bradley, *Music for the Millions* (Chicago: Henry Regnery Company, 1957), p. 181.

11. Berner, "Harmonium," *The New Grove*, 8: 174.

ican maker George A. Prince in 1848 or '49.<sup>12</sup> Hamlin's achievements are noted elsewhere in the same work by a different author, in an article on the firm of Mason & Hamlin.

If confusion arises concerning the arbitrary use of the term "harmonium" for both European and American instruments, despite their clearly differing design and construction, the same confusion is borne out in the drawings which accompany the article. Schematic diagrams of the two instruments are shown side by side to illustrate their differences in construction. That of the harmonium is said to show an instrument without expression; yet, the expression valve is clearly visible and is designated as such. The valve is in its open, or "off" position. In the drawing of the American organ, channels below the reeds are indicated. Judging from the drawing, the board forming the top of the windchest must be one inch thick. If such construction were truly followed, there would indeed be channels below the reeds. However, in the instrument as built in the United States, the board is generally only about one-quarter of an inch in thickness and is made of spruce or similar material. This is the substance from which piano soundboards are made, and, since the reeds rest on its upper surface, it functions in somewhat the same manner. There are no "channels" in the true sense of the word. A quick reference to the corresponding diagram in *Die Musik in Geschichte und Gegenwart* shows similar construction to that shown in *The New Grove*; attribution here is given to Willy Simon, author of *Kleiner Ratgeber bei Anschaffung von Harmoniums* (*Little Guide for the Purchase of Harmoniums*) of 1910.<sup>13</sup> This work was issued by Carl Simon, a Berlin publisher of much music for the harmonium and an avid promoter of the instrument. Simon may have known German construction techniques well, and German suction instruments may have been built according to this fashion, but American instruments were not. In another similar case the word "pan" is used to describe the windchest of the American organ. The "pan" of the harmonium consists of the structure containing the reeds, reed compartments, and channels. The American instrument has only a windchest containing the pallet valves; the reeds and reed cells are placed above them. These are minor points, but they constitute additional attempts to make the American instrument conform to European nomenclature.

12. Gellerman, *The American Reed Organ*, p. 12, quoting *The Musical Courier*, April 22, 1885. A Mason & Hamlin catalogue of March, 1880, puts the date "about twenty-eight years" earlier, or in approximately 1852.

13. Berner, "Harmonium," *Die Musik in Geschichte und Gegenwart*, vol. 5, col. 1714.



Firms and persons connected with the reed organ in the United States receive poor coverage. Estey and Mason & Hamlin are mentioned, although Emmons Hamlin and Jeremiah Carhart, two pivotal figures in the development of the American instrument, are not. The Vocalion organ, surely a high point in the development of free-reed keyboard instruments, is completely omitted, although its automatic counterpart, the Orchestrelle, receives passing mention. In all fairness, it must be said that the Vocalion is given separate treatment elsewhere in the work. However, this consists of five lines describing the instrument as it was in 1885. Nothing is said about its history or subsequent development. The lone bibliographical reference is one hundred years old.

Notice is taken of the development of instruments with several manuals and pedals. These were clearly a departure from their earlier foot-pumped brethren in that the dynamic possibilities of the free reed were not generally utilized, and they were intended to have the same function as a small pipe organ. Yet, even here the more appropriate term "reed organ" is eschewed, and the older term "harmonium" is used. No cognizance is made of the later development of these instruments in America through the application of electronic amplification, as in the products of Minshall-Estey, Everett, and Wurlitzer.

The decline of the popularity of the reed organ can be attributed to a number of factors, the chief of which was a gradual change in musical taste and a lack of versatility on the part of the instrument to reflect that change. Curiously, the rise in popularity of the accordion is cited in the article as a major factor in this decline. While this may have been true in some measure, the accordion never achieved any great vogue in the United States. One need only note the number of reed organ manufacturers, Estey and Mason & Hamlin included, which turned to the building of pianos, to detect the real source of competition. This trend was spurred on by the advent of the commercial piano, an instrument assembled from parts supplied by jobbers. Joseph P. Hale, chief proponent of this manufacturing system, was able to produce pianos at greatly reduced prices in comparison with those of the old-line makers, prices which more closely approached those of the generally lower-priced reed organs. These inexpensive pianos, when coupled with the recently perfected piano playing mechanisms (which, by the way, had developed from the vacuum-system reed organ), resulted in an instrument which far surpassed the reed organ in musical capability. To learn the effect of this, a glance at those oft-quoted indicators

of public taste, the Sears-Roebuck catalogues, is sufficient: in 1902, many reed organs could be found in their pages; by 1927 the reed organs are gone and their place is taken by pianos, significantly all but one a player. Of course, in later years other factors served to obliterate what remained of the reed organ's popularity. Electronic technology, first in the form of the radio and phonograph, and later the electronic organ, sounded its final knell in the United States.

The reader who looks to the bibliography of the article for guidance in research or further reading on the American reed organ will be sorely disappointed. Of the thirty-seven items listed, eleven are in French, twenty-five are in German, and one lone work, dating from 1857, is in English. The latest entry (in German) dates from 1938, and more recent sources in English are ignored completely.<sup>14</sup>

Coverage of individual firms elsewhere in *The New Grove* is improved, though deficiencies exist. The French firms of Mustel and Debain are given coverage, but not Alexandre. Both the American companies Estey and Mason & Hamlin are the subjects of articles, an improvement over *Grove* 5. We are told, however, that Mason & Hamlin sold its reed organ facilities in 1911 to the Aeolian-Skinner Organ Company, a firm which did not come into existence until 1932.<sup>15</sup> The W. W. Kimball Company, once one of the world's largest makers of reed organs, is not mentioned. Shortcomings in the coverage of the Vocalion organ have been noted above. On the plus side, both the Aeolian Company and the Aeolian Corporation receive coverage, as does the pioneering firm of Carhart & Needham.

Let it be said here that it is easy for a reader to find fault with the coverage of a reference work, myopically expecting more information on subjects dear to his own interests than can logically be hoped for in a work attempting to deal with all aspects of musical knowledge. Editors face a nearly overwhelming task in selecting what is to be covered and to what extent. What, then, can be said of the coverage of the reed

14. They would include such studies as: H. F. Milne, *The Reed Organ* (London: Musical Opinion, 1930); Jules J. Duga, "A Short History of the Reed Organ," *The Diapason* 59 (July, 1968): 24-25; Gellerman, *The American Reed Organ*; Russell Eugene Schulz, "The Reed Organ in Nineteenth-Century America" (D.M.A. diss., University of Texas, 1974); and James H. Richards, "The Vocalion," *The Diapason* 66 (August, 1975): 5-7, 19.

15. Q. David Bowers, *Encyclopedia of Automatic Musical Instruments* (Vestal, N.Y.: The Vestal Press, 1972), p. 310. Orpha Ochse, in *The History of the Organ in the United States* (Bloomington, Ind.: Indiana University Press, 1975), p. 368, gives the date as 1931. Barbara Owen gives the date as 1932 in her article on Aeolian Skinner in *The New Grove*, 1: 118.

organ in *The New Grove*? The inclusion of American firms previously omitted is an advance, although the main article leaves something to be desired. It is not the purpose here to deprecate the work; it sheds light on aspects of the development of the instrument hitherto unavailable in English. In matters German it is exemplary, but in other areas, it loses credibility, particularly in its tendency to see American developments through European eyes or to ignore them altogether. It could be said that the differences in terminology are simply the result of varying national usage. If so, it would seem only logical that the terminology presented reflect the usage of the vast number of readers in whose language it is written.

Surely enough has been said here to demonstrate the fact that although all harmoniums are reed organs, all reed organs are not harmoniums. A. J. Hipkins, writing in *Grove* 5, recognized this fact and suggested that all free-reed keyboard instruments be designated reed organs.<sup>16</sup> Subdivisions could then be made in this general classification, as has been done by Percy Scholes<sup>17</sup> and Sybil Marcuse,<sup>18</sup> to name two. This advice has not been followed in *The New Grove*, whose coverage of the reed organ, while worthy in many respects, contributes little to the solution of the problem.

### *Waco, Texas*

16. A. J. Hipkins, "Harmonium," *Grove's Dictionary of Music and Musicians*, 5th ed., 4: 75.

17. Percy M. Scholes, *The Concise Oxford Dictionary of Music*, 2d ed., ed. John Owen Ward (London: Oxford University Press, 1964), pp. 475-76.

18. Sibyl Marcuse, *A Survey of Musical Instruments* (New York: Harper & Row, Publishers, 1975), pp. 737-41.