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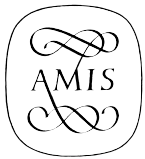


The Dolceola: A Story of Musical Enterprise in Toledo, Ohio*

WILLIAM E. HETTRICK

"An Announcement of Extraordinary Importance to Every Home in the Community."[1] "A Piano Opportunity."[2] "Every Home in Toledo Can Have a Piano."[3] "NOT IN TOLEDO Have such prices ever been made before, on Pianos."[4] With these attention-getting headings, the retail piano store of L. F. Boyd & Co. in Toledo, Ohio, announced its closing-out sale in a series of advertisements published in Toledo newspapers during the final month of 1903. Although the company had been engaged in trade at its advantageous downtown location on Adams Street (opposite the Lucas County Courthouse) for only a few years,[5] readers of the advertisement published in *The Toledo Daily Blade* on December 2[6] were advised that the firm was going out of business to allow Mr. Boyd to pursue a new musical enterprise, already formed and promising great success :

*This article is an expanded and revised version of a paper presented at the twenty-first annual meeting of the American Musical Instrument Society in San Antonio, Texas, on May 1, 1992. I wish to acknowledge, with gratitude, the following members of the ever-increasing band of Dolceola enthusiasts for their assistance in my research: Jeannine E. and Richard W. Abel, Peggy F. Baird, Margaret Downie Banks, Paul J. Christian, Andy Cohen, Pat Conte, William L. Cumiford, Lloyd P. Farrar, James E. Garber, Michael Goudket, Cynthia Adams Hoover, John Koster, Martha Maas, Bob Mead, Katherine Rhoda, Albert R. Rice, Arthur Sanders, and Kelly Williams. This article is dedicated to the memory of my father, William E. Hettrick, Jr. (1901–1988), who remembered the Dolceola and first told me about it.

1. *The Toledo Daily Blade,* December 2, 1903.
2. Ibid., December 9, 1903.
3. *The Toledo News-Bee,* December 16, 1903.
4. *The Toledo Daily Blade,* December 21, 1903.
5. The Toledo city directories list L. F. Boyd & Co. for only the years 1901, 1902, and 1903. For this and all succeeding references to these directories, see *Polk's Toledo City Directory* (Toledo: The Toledo Directory Co.). Each directory was officially published in July of the indicated year and therefore contains information compiled during the preceding months. L. F. Boyd was listed as a member of the National Association of Piano Dealers in America in the issues of *The Musical Age* (the magazine of that organization) for November 28, 1903 (p. 127) and May 28, 1904 (p. 96).
6. It was repeated in *The Toledo News-Bee* on December 4, 1903.

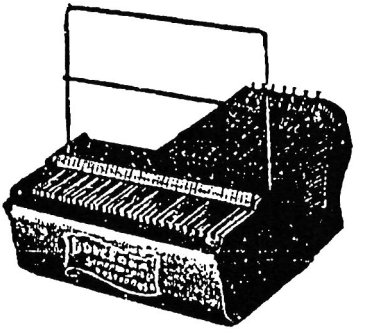
> Mr. L. F. Boyd, President of the Symphony Manufacturing Company, is one of the inventors of a marvelous musical instrument known as the Dolceola. The Symphony Manufacturing Company is a corporation composed of local capitalists who propose to manufacture and market this novel instrument on an immense scale, and Mr. Boyd will close out his piano business completely and devote all his time to the exploitation of the Dolceola.

Readers were further informed of the "Marvelous Invention" in a boxed section of the advertisement containing both an illustration and a description of the new instrument (see fig. 1). This information reveals the Dolceola as a stringed instrument with a small, chromatic keyboard of two octaves for the right hand and groups of keys controlling seven accompaniment chords for the left. Reportedly requiring little effort to play beyond an ability to read the treble clef, the instrument is said to produce an effect equal in tone and volume to that of "two guitars and two mandolins played together." The anonymous author predicts that the Dolceola would "find favor at family gatherings, musicales, for serenading, impromptu dances, and on occasions of like character." The anticipated retail price is given as about $35.00.

Readers of *The Toledo Evening News*[7] had already been informed of L. F. Boyd's new musical business venture in a brief article published in the issue of May 19, 1903. Although the instrument in question is not named, the accompanying illustration, description, and reference to Boyd clearly identify it as the Dolceola. In fact, the article mentions not only L. F. Boyd, but also D. P. Boyd (they were brothers), crediting both with having invented and patented the new instrument, and with having striven "for the past twenty years to perfect an action for a small portable instrument that would have a key-board similar to a piano, and permitting the use of regular piano music, instead of figure music, as used with the autoharp, guitar, zither and other instruments of like character." Notwithstanding this characterization of the evident superiority of "regular piano music," the article goes on—with no explanation—to state that "figure music" (i.e., musical notation consisting of numbers and other symbols, either in combination with or to the exclusion of regular staves, clefs, notes, rests, etc.) would be employed for this instrument. The

7. This newspaper was merged with *The Toledo Bee* to form *The Toledo News-Bee,* which began publication under that name in early June, 1903. See John Hardy Doyle, *A Story of Early Toledo* (Bowling Green, Ohio: C. S. Van Tassel, 1919), 132.

The Dolceola



The Marvelous Invention That Caused the Close-Out of the L. F. Boyd & Co. Piano Business.

In tone effects and volume the new instrument is equal to two guitars and two mandolins played together. While it is more easily mastered than any other musical instrument played by note, there is no ordinary composition beyond its range, and any regular piano, violin or mandolin music can be interpreted upon it.

The keyboard has two octaves of treble keys, flats and sharps, tuned in chromatic scale—the same as a piano—and seven groups of accompaniment chords, with two heavy bass strings to each group, giving unusual variety to the accompaniment. The action is easier and quicker than piano action, and one gets effects impossible on the piano.

One needs to learn only the treble clef, as the bass or left hand work is all laid out and adjusted in groups to be played with two fingers, and so simply arranged that with a few hours' study one can play the accompaniment to any tune he can whistle or sing.

Because of its weight and size the new instrument will find favor at family gatherings, musicales, for serenading, impromptu dances, and on occasions of like character. It is 18x24 inches, and weighs only 12 pounds in case. It will retail for about $35.00.

FIGURE 1. Detail of advertisement, L. F. Boyd & Co., *The Toledo Daily Blade,* December 2, 1903.

mechanical action is described as being "easier and quicker than the piano action, . . . simple and easy to adjust."[8]

An additional early article about the Dolceola exists in the form of a very weak photocopy, lacking both the date and the name of the newspaper in question, sent in 1972 from the Natural History Museum of Los Angeles County to the Toledo–Lucas County Public Library and now preserved in the Local History and Genealogy Department of the latter institution.[9] In addition to the familiar illustration of the Dolceola, this article includes portraits of both D. P. Boyd and L. F. Boyd, the only ones known to exist; unfortunately, they are very faint in the photocopy. Statements in the text about the formation of the manufacturing company and the closing of the piano store, as well as the familiarity with which locations are identified, suggest that the article appeared late in 1903 and in a Toledo periodical.[10] Because of its importance to the present study, a substantial amount of this text is quoted here (retaining the original spelling and punctuation):

ABOUT TWO TOLEDO INVENTORS

. . . Mr. D. P. Boyd and his brother, Mr. L. F. Boyd, have been residents of Toledo for several years past, and have been conducting a retail piano store at 719 Adams street. The result of their genius is the making of a musical instrument that marks the first radical departure in the invention of music-producing mechanisms, made in 30 years. After five years of experiment and study, accompanied by the usual discouragements, these mens' efforts have been crowned with overwhelming success. The result is a musical instrument that is nothing short of marvelous. . . .

A company of local capitalists has been organized to manufacture the Dolceola and, no doubt, the labors of these men will be substantially

8. This article includes a statement that a reference to the Boyds' new invention had been "made in the Sunday Times." Since this article appeared in the issue of *The Toledo Evening News* for Tuesday, May 19, the cited reference in *The Toledo Times* would have been published on Sunday, May 17. No copies of that issue appear to have survived. Another result of the merger cited above in note 7 was that, starting in early June, 1903, the Sunday issue of *The Toledo Times* became the *Sunday Times-Bee.*

9. Members of the staffs of both of these institutions were unable to find any information on file that would identify the source of the article. Coincidentally, the Natural History Museum of Los Angeles County possesses a Dolceola in somewhat poor condition, lacking the identifying decal on the front. There is no record of the date and source of this acquisition.

10. I have checked the appropriate issues (late 1903 through early 1904) of the following newspapers for this article with no result: *The Saturday World, The Toledo Daily Blade,* and *The Toledo News-Bee.* Copies of *The Toledo Times* and *Sunday Times-Bee* could not be found for the period in question.

> rewarded as an enormous sale is predicted for the instrument. The Boyd brothers have made other inventions pertaining to musical instruments upon which foreign and domestic patents were granted several years ago. Their inventive genius has not been confined to musical instruments, as they have gone into other fields with success. The piano business on Adams street is being sold out and Mr. L. F. Boyd has been elected president of the Symphony Manufacturing company, which will manufacture the Dolceola. Mr. Boyd's 21 years of experience in the musical business admirably fits him for this position. D. P. Boyd, through whose inventive genius, the Dolceola was made possible, is a brother of L. F. Boyd and has devoted many years to experiments and study along the lines of musical instrument mechanisms.

Leander (Lee) F. Boyd and David P. Boyd had indeed pursued musical experimentation and invention before developing the Dolceola, as shown by two U.S. patents for other instruments granted in 1895.[11] These documents identify them as residents of Marion, Indiana, at the time. The Toledo directories first show Leander as a resident of that city in 1899, working as a salesman for the Whitney & Currier Co., an established Toledo piano house.[12] David Boyd first appears in the 1901 directory as a piano tuner working for L. F. Boyd & Co.[13] There was also an Edwin C. Boyd, probably a third brother, who is listed continuously in the directories from 1901 on, starting as a clerk at L. F. Boyd & Co.[14] The Symphony Manufacturing Co. appears in the city directory for 1904, with L. F. Boyd as president and general manager. A separate

11. U.S. patent no. 537,914 (application filed on December 19, 1894) was issued to Leander on April 23, 1895, for an improved Pitman-rod, a tracker mechanism for the organ, linking a key to its corresponding valve. U.S. patent no. 539,789 (application filed on March 5, 1895) was issued to both Leander and David on May 28, 1895, for a guitar bridge designed to cause the strings to pass over the bridge, under the soundboard, and then out again to an attaching point on the surface.

12. Harvey Scribner, ed., *Memoirs of Lucas County and the City of Toledo* (Madison, Wisconsin: Western Historical Association, 1910), 1: 613–14. Leander Boyd is missing in the 1900 city directory, but appears again in 1901 through 1903, associated with L. F. Boyd & Co. In the directory for 1904 he is listed as president and general manager of the Symphony Manufacturing Co., but he is missing in the 1905 directory. His final listing is in 1906.

13. David Boyd's listing in this capacity continues into 1903. In the 1904 directory he is identified as the factory superintendent of the Symphony Manufacturing Co. He is missing in 1905, but reappears in 1906 and continues to be listed with a variety of occupational descriptions (to be discussed below) for many years thereafter.

14. Edwin Boyd's directory listings show him at L. F. Boyd & Co. until 1903. In 1904 he is identified as manager of the Dolceola Co., and from 1905 on variously as "pianos and organs," "pianos," "salesman," "manager," and "manufacturer's agent."

listing in the same year identifies the Dolceola Co., with E. C. Boyd as manager.[15]

The pages of *The Music Trades,* a national journal of the music business, chronicle the fortunes of the Dolceola business through reports filed from Toledo by Harry Thorpe (mostly signed "H. T.").[16] An article dated October 22, 1903,[17] states that the Symphony Manufacturing Co. had been organized a few weeks before with a capital of $100,000.[18] At that time, according to the article, there had been some question whether the Boyd brothers' new instrument would be manufactured in Toledo or would be made under contract by a company in the East. In the meantime, however, the officers had leased the Milton Taylor building, located at the corner of Prouty Avenue and Hiett Street,[19] which was being fitted out with the necessary machinery. By the end of the year the plant was expected to have between thirty and forty employees. Almost two months later, Thorpe reported on December 14[20] that the factory was already in operation and that President Boyd now expected to have forty or fifty men employed by the beginning of 1904.[21] The business had difficulties during its first year, however, as revealed in Thorpe's report of January 3, 1905,[22] headed "Dolceola Assets Sold at Auction":

> The property of the Symphony Manufacturing Co., manufacturers of the Dolceola, was sold at auction last week for $10,025. Boyd Bros. and others were the purchasers. The particulars of the deal could not be learned, as Mr. Boyd could not be found. The store, at No. 611 Madison avenue, has been closed.

15. Both companies are indicated as having offices at 611 Madison Avenue. The Symphony Manufacturing Co. also has a listing for its factory building at the corner of Prouty and Hiett Avenues.

16. The Toledo directories record Harry Thorpe's employment in that city: assistant superintendent of the Western & Southern Insurance Co. (1902), clerk at an unnamed company (1903), and finally clerk (1904) and salesman (1905) at the Starr Piano Co. The 1906 directory lists Thorpe as "removed to Detroit, Mich."

17. *The Music Trades,* October 24, 1903, p. 39.

18. The figure of $10,000 seems much more likely.

19. As indicated above, Hiett was officially designated as an avenue. A suitable frame building with a brick extension is shown at the southwestern corner of Prouty and Hiett in southwestern Toledo in *Baist's Real Estate Atlas of Surveys of Toledo Ohio* (Philadelphia: G. Wm. Baist, 1904). The structure no longer stands.

20. *The Music Trades,* December 19, 1903, p. 43.

21. No records have been found to substantiate the number of workers employed in making Dolceolas.

22. *The Music Trades,* January 7, 1905, p. 27.

But out of the ashes of the former company there emerged a new enterprise, as Thorpe reported on February 13, 1905,[23] under the heading "New Makers of the Dolceola":

> The Toledo Symphony Co., who recently purchased the business of the Symphony Manufacturing Co., manufacturers of the Dolceola, have leased the third and fourth floors of the Berlin Block, corner of St. Clair and Jackson streets, and will engage in the manufacture of the Dolceola on a more extensive scale than ever. The officers of the new corporation are S. C. Schenck, president; Francis P. Chapin, vice-president; E. T. Affleck, secretary and treasurer; D. P. Boyd, superintendent of factory. L. F. Boyd, one of the inventors, is going to represent the company on the road. The new factory will be equipped with the most approved machinery. To *The Music Trades* representative Mr. L. F. Boyd yesterday said: "Our facilities are now greater for turning out Dolceolas than they were in our old factory. I recently returned from a flying trip through nearby territory. I called on forty-seven music dealers and secured bona fide orders from forty-four of them."[24]

Toledo directories show the city's growing population at about 180,000 inhabitants in the early years of Dolceola manufacturing. Situated in northwestern Ohio at the western tip of Lake Erie and well connected by railroad lines, the city benefited from a considerable amount of traffic in shipping and transportation. The manufacturing base was mixed, and in 1904 the only other product even remotely similar to the Dolceola being produced in Toledo was the Talk-O-Phone, a talking machine with the familiar long, conical horn (models sold for $15 to $40). Two years later, a piano manufacturing company was started as well. Toledo had an active musical life—in addition to what was being done in the schools—with some 170 private music teachers, about a

23. Ibid., February 18, 1903, p. 43.

24. The Toledo directories show the officers of the Toledo Symphony Co. as active businessmen in that city. Schuyler C. Schenck (president) served as agent in the coal department of the Delaware, Lackawanna & Western Railroad Co., as well as president of the First National Bank. A biographical sketch and photograph of Schenck appear in John M. Killits, *Toledo and Lucas County, Ohio, 1623–1923* (Chicago and Toledo: The S. J. Clarke Publishing Company, 1923), 2: 190–93. Born in New York State in 1842, Schenck came to Toledo in 1870 and distinguished himself "as a dealer in fuel, as a financier and as a promoter of other commercial enterprises" (p. 190; no mention is made of the Dolceola). He died in 1913. Francis P. Chapin (vice president) was manager of the Equitable Life Assurance Society of New York. Edward T. Affleck (secretary and treasurer until some time in 1905) was president of the E. T. Affleck Coal Co. at that time; from 1906 on, he held positions of authority in succession at several Toledo banks.

dozen dealers in musical instruments and merchandise, and three dozen amateur bands, orchestras, and choral societies. This level of musical participation was probably normal for a midwestern city of Toledo's size at a time when people still sought their entertainment in the company of others. Thus, along with its musical groups, Toledo boasted some 130 other organizations, not including the sixty "secret societies" that met in over 300 individual chapters throughout the city. It was in this environment that the Dolceola enterprise was begun.

The Dolceola Instructor

The companies engaged in manufacturing and marketing the Dolceola produced printed materials as part of their commercial campaign. The first of these was the *Dolceola Instructor* (sixteen pages plus cover), a tutor for the instrument published by the Toledo Symphony Co., with a copyright of 1904 assigned to the Symphony Manufacturing Co.[25] Its stylish *art nouveau* cover, featuring an illustration of the instrument placed in a roundel between two ornamental torches, is shown here in figure 2. This publication begins with a description of the Dolceola and a summary of the rudiments of music, progressing on to the illustrations of the separate keyboards for the left and right hands (shown here, respectively, in figs. 3 and 4), with instructions for their use and the tuning of the strings they control. Each key activates a separate hammer mechanism, which will be described below. The right-hand keyboard (see fig. 4) is equivalent to a tiny piano keyboard spanning two octaves, comprising all of the chromatic notes from c′ (middle C) to c‴, as clearly indicated in the musical notation displayed above it. The keyboard for the left hand (see fig. 3) represents the novel aspect of the Dolceola design. Thirty-five strings are involved, grouped into seven chords, numbered consecutively from right to left. Each chord consists of five strings (pitches) arranged in the following manner. The root of the chord, controlled by a raised black key (played by the index finger), lies at the left of each group; it is tuned two octaves below the indicated notation. The next note, controlled by the adjacent white key (also played, alternatively, by the index finger), is the third of the chord (in chords 1, 2, 3, 6,

25. A complete copy is found in the New York Public Library. A very fragile copy of the cover only is in the collection of America's Shrine to Music Museum, The University of South Dakota, Vermillion (reported in a letter of March 28, 1990, from Margaret Downie Banks, Curator).

FIGURE 2. *Dolceola Instructor* (Toledo: Toledo Symphony Co., 1904), front cover. Courtesy of the New York Public Library.

and 7) or the fifth (chords 4 and 5); it is likewise tuned two octaves below the notation. Finally, the white key at the right of each group (played by the thumb) controls three high notes (indicated at concert pitch in the notation) by activating a broad hammer that strikes all three corresponding strings simultaneously. The seven chords available on the left-hand Dolceola keyboard provide a logical selection of diatonic and chromatic harmonies in the relative keys of E-flat major and C minor, as shown in table 1.

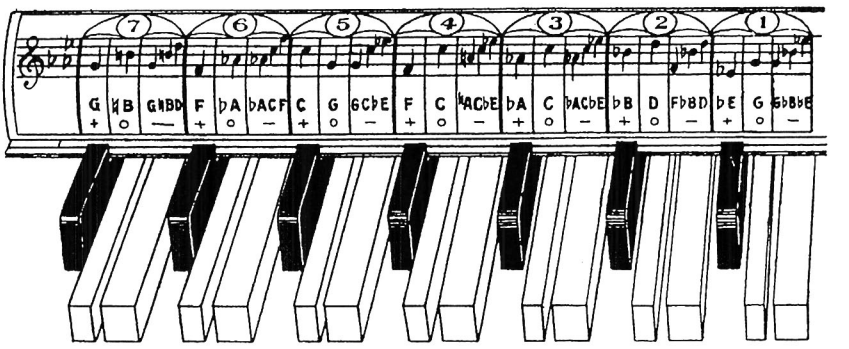


FIGURE 3. *Dolceola Instructor,* p. 6: left-hand keyboard. Courtesy of the New York Public Library.

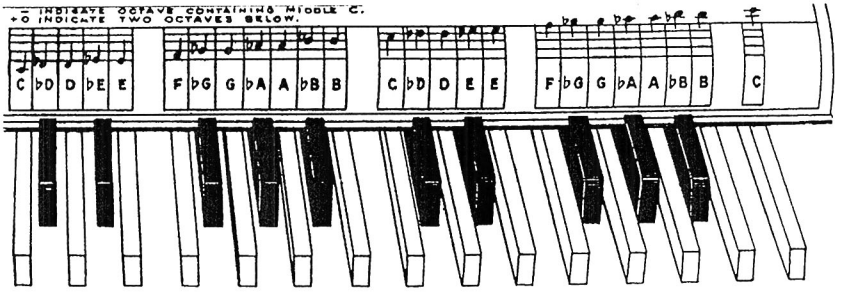


FIGURE 4. *Dolceola Instructor,* p. 7: right-hand keyboard. Courtesy of the New York Public Library.

The "Instructions for the Bass or Accompaniment Chords" printed underneath the illustrations of the two keyboards in the tutor explain the notation symbols shown above the left-hand keyboard and used as an important feature of music arranged for the Dolceola. The black key in each chord group is indicated by the symbol +, the adjacent white key by the symbol O, and the white key at the right by the symbol –. The particular chord to be played is shown by its corresponding numeral enclosed in a circle. This type of "figured" notation for the left hand is found in the eight arrangements that follow in the *Dolceola Instructor,* which range from traditional tunes to the latest hits from Tin Pan Alley. An example of the former is the song "Annie Laurie" (p. 10), which

TABLE 1. Chords Produced by the Dolceola's Seven Sets of Keys for the Left Hand.

Set	Chord	Harmonic Function	
		In E-flat Major	*In C Minor*
1	E-flat major	Tonic (I)	
2	B-flat major	Dominant (V)	
3	A-flat major	Subdominant (IV)	Submediant (VI)
4	F major-minor 7th	Dominant 7th of the dominant (V^7/V)	
5	C minor	Submediant (VI)	Tonic (I)
6	F minor	Supertonic (II)	Subdominant (IV)
7	G major	Dominant of the submediant (V/VI)	Dominant (V)

makes use of chords 1, 2, 3, 5, and 7 (see fig. 5).[26] It can be seen in this example that the method of arrangement is to place the melody in the right hand, while the left hand plays the chord keys in the order + – O –. This is typical of all the selections in duple meter in the tutor. Pieces in triple meter tend to have each chord extended through two measures with the left hand playing the pattern + – – / O – –. Final melody notes in both meters are usually accompanied by a fuller sound played by both the index finger and the thumb of the left hand together, as indicated by the symbol combining both + and –. One of the arrangements, "Love's Dreamland Waltz" (p. 12), creates a fuller sonority at certain places by another means: the addition of extra notes below the melody line in the right hand, at one point resulting in a three-note chord. Seven of the eight arrangements in the book are in E-flat major, a few having brief excursions to related keys. "Nearer My God to Thee" is in B-flat major because of its melodic range. Harmonized with chords 2, 1, and 4 (I, IV, and V^7), it shows the basic but limited capabilities of the Dolceola in that key.

The *Dolceola Instructor* concludes with a diagram of the action (for each key) of a typical Dolceola, along with detailed instructions for its

26. In addition to "Annie Laurie," the tunes are "Home Sweet Home," "Nearer My God to Thee," "Suwanee River," "Love's Dreamland Waltz," "The Mansion of Aching Hearts" (permission by H. Von Tilzer Co.), "A Little Boy in Blue" (T. F. Morse, used by permission of Howley Doesser & Co.), and "The Good Old Summer Time" (used by permission of Howley Doesser & Co.). Composers and copyright holders are identified only as indicated above.

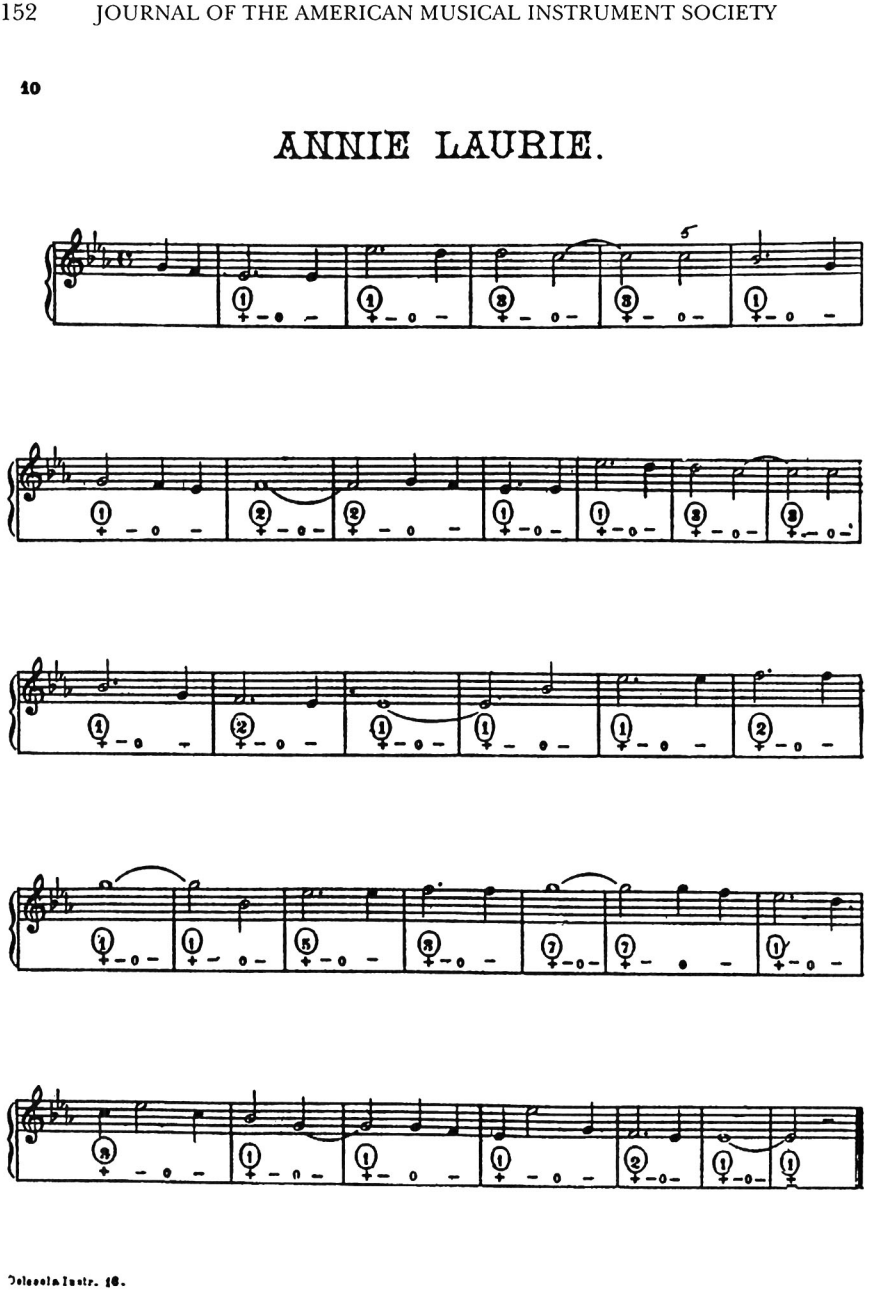


FIGURE 5. *Dolceola Instructor,* p. 10: "Annie Laurie." Courtesy of the New York Public Library.

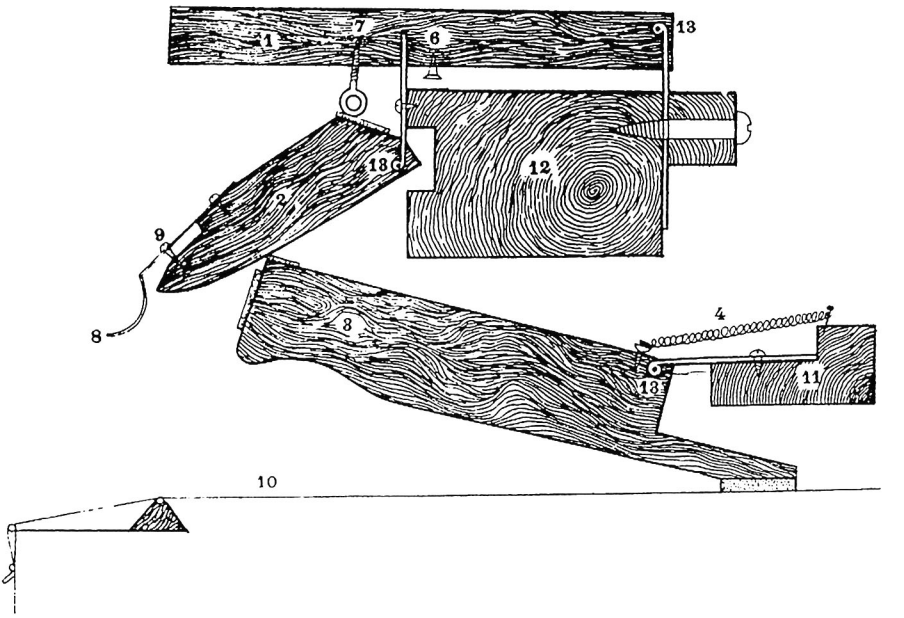


FIGURE 6. *Dolceola Instructor,* p. 16: diagram of the action. Courtesy of the New York Public Library.

regulation. The diagram, shown here in figure 6, depicts a simple down-striking hammer mechanism in its resting position. The three moving parts in each action pivot on metal rods running the width of the instrument (no. 13). The dip of each key (1) is regulated by a screw (6) inserted in its bottom. Depressing the key causes an adjustable screweye (7) to bear down on the jack (2), which pivots downward. This, in turn, propels the bare wooden hammer (3) down to strike the string (10) with its rounded lower-front corner. After impact, the hammer rebounds off the string and is caught at its front end by the flat metal jack spring (8), whose tension is regulated by a screw (9). When the key is released, the spiraled metal spring (4) hooked on to the hammer brings all moving parts back to their initial positions, and the felt damper at the (right) end of the hammer comes to rest on the top of the string. Felt strips are also affixed to other parts of the action that receive pressure or friction: on the top end of the jack (2) where it is pushed down by the head of the screweye (7) and on the front end and adjoining upper surface of the hammer (3) where they come into contact, respectively, with the

jack spring (9) and the lower surface of the jack (2). This entire mechanism coincides in every important feature with the one described and illustrated in a U.S. patent issued on June 18, 1907, to Leander F. Boyd.[27] This represents a simplified version of the action "designed to provide a cheap, simple, durable, and effective keyboard and action to be applied to and used in connection with instruments of the type known as the 'autoharp'," for which both David P. and Leander F. Boyd had received a U.S. patent on February 3, 1903.[28] This earlier version contains a sustaining bar (controlling a damper-lifting action) running across the instrument in front of the keyboard.

Related Instruments and Terminology

The Boyd brothers might more correctly have chosen the word "zither" to denote the category with which their patented mechanism was associated. At that time, however, it was the autoharp that was the most widely known example of this type in the United States. In its standard form this instrument combines a zither body, made in the characteristic "wing" shape, with a chording mechanism that causes bars with felt dampers to come into contact with the strings that do not belong to the desired chords in each case, thus allowing only the wanted pitches to sound when the entire group of strings is strummed. Patented as a "Volkszither" by C. A. Gütter of Markneukirchen, Germany, the instrument was first made in quantity in this country in 1885 by Charles Zimmermann of Philadelphia, who held a U.S. patent for the chording mechanism.[29] Zimmermann's instruments bore the name Autoharp, a combination of the Greek term for "self" (surely alluding to the great ease with which the instrument could be played) and the romantically evocative name of one of the most legendary of instruments—a name long misapplied to instruments of the zither family, especially those with wing-shaped bodies.

The term "harp" was also used as a combinative element in the names of several instruments produced in the early twentieth century that had

27. U.S. patent no. 857,380. The application was filed on April 4, 1906, and renewed on May 21, 1907.

28. U.S. patent no. 719,641. The application was filed on May 6, 1902. Both brothers also received Canadian patent no. 87,401 (filed February 3, 1904; issued May 31, 1904) for the same mechanism.

29. Ivan Stiles, "The True History of the Autoharp," *The Sonneck Society Bulletin* 17, no. 2 (summer, 1991): 52.

characteristics in common with the Dolceola. One such instrument, the Harp-O-Chord, was also made in Ohio, manufactured by a company that bore the name of its product and set up business in Columbus in 1899.[30] In this case the "harp" feature referred to a "mouth harp" (mouth organ or harmonica, thus representing a further misapplication of the term), which was fitted into the side of a zither in such a way that it resonated into the latter's hollow body. Another instrument made by the Harp-O-Chord Co. was called the Harp-Zither, and was in fact a combination of the two instruments in question, each with its own set of strings. The overstringing of these two sets led to the instrument's alternate name, Piano-Harp. Two other instruments of the time, both far more closely resembling the Dolceola, also bore the name Piano Harp. One, shown in an advertisement of unknown origin, had both a two-octave diatonic keyboard for the right hand and a rudimentary harmonic keyboard for the left (producing I, V, and IV chords in C major), both evidently controlling hammer actions. The other Piano Harp is found in the collection of the Händel-Haus in Halle, Germany.[31] Of German origin and made about 1900, it has a two-octave chromatic keyboard on the right, activating wooden hammers that strike double courses of melody strings. On the left are sets of four strings each for six chords (evidently diatonic in C major) that have no keyboard and are therefore intended to be plucked or strummed by the left hand.

An instrument called the Pianophon, manufactured in Germany about 1910, is in the City Museum of Cologne, Germany.[32] It combines a chromatic keyboard of two octaves (all such examples have a range of c′ to c‴, just like the Dolceola) with two keys each for six chords on the left (again, diatonic in C major). The keys control hammer actions, and the melody strings are strung in double courses. A later instrument with the name Marxophone was produced by Henry C. Marx of Boston and featured a unique action of his own invention, consisting of lengths of spring steel with lead weights on their tips designed to bounce on the

30. The Harp-O-Chord Co. is listed in the Columbus, Ohio, directories starting in the 1899–1900 volume and ending in the one for 1904–05. See *Columbus City Directory* (Columbus, Ohio: R. L. Polk & Co.).

31. Konrad Sasse, *Musikinstrumentensammlung: Besaitete Tasteninstrumente,* Katalog zu den Sammlungen des Händel-Hauses in Halle, 5 (Halle an der Saale: Händel-Haus, 1966), 224–25.

32. Helmut Hoyler, et al., *Die Musikinstrumentensammlung des Kölnischen Stadtmuseums,* Beiträge zur rheinischen Musikgeschichte, 148 (Kassel: Merseburger, 1993), 114–16.

strings. The instrument had diatonic melody strings and a limited set of chord strings; for the latter, Marx's system of harmonic notation combined the assigned chord numbers with symbols indicating the root and other members of each chord.[33] An even later device of related design, made from the late 1910s through the 1920s, had a different feature. Called the Triola, it was a mechanical zither whose melody strings were sounded automatically by means of a mechanism with a moving, perforated paper roll, while the chord strings on the left (six groups of four strings each) were strummed by the player's left hand.[34]

In fashioning the name Dolceola (pronounced DOLE-see-OH-la), the Boyd brothers clearly avoided any direct association with other instruments, basing it instead on a term that called to mind the sweet quality they evidently heard in the instrument's sound—the Italian word "dolce." It was a term that musicians would have recognized through its frequent use as an interpretive instruction by composers whose works were popular at the time. The euphonious suffix "-ola" seems to have had a diminutive connotation, but it may already have taken on the additional indication of a musical instrument or mechanical device producing music, as in the later name Triola cited above.[35]

My Dolceola

The Dolceola in my possession (see figs. 7 and 8) was acquired in 1980 in northwestern Pennsylvania, where it had been part of the contents of a large household for many years. With a few minor exceptions (chiefly the wire music rack), all of its original parts are preserved. The instrument is made up of two main units, the lower of which is a zither-like body (see fig. 9) resting on four small feet (not original; pictures of

33. "The Marxophone," *Mugwumps: The Magazine of Folk Instruments* 3, no. 4 (July, 1974): 14–16. See also Bart Hopkin, "Instruments from the Marx Colony," *Experimental Musical Instruments* 9, no. 1 (September, 1993): 34–35.

34. Q. David Bowers, *Encyclopedia of Automatic Musical Instruments* (Vestal, N.Y.: The Vestal Press, 1972), 356.

35. As documented by Bowers, ibid., the following eighteen trade names ending in "-ola" were used for related instruments—automatic pianos, organs, and orchestrions, or the playing mechanisms employed in them—during the first three decades of the twentieth century (those that were early enough to have influenced the Boyds are italicized here): *Claviola,* Clavola, *Coinola,* Concertola, Concertrola, Ducanola, Duola, Duophonola, *Fonola,* (*Pianella*) *Mandola,* Marveola, Organola, *Phonola, Pianola,* Solophonola, *Symphoniola,* and Triphoniola. Trade names for phonographs included the Grafonola and the well-known Victrola.

FIGURE 7. Dolceola. Photo by Michael Goudket. (The ruler shows inches.)

the Dolceola in the promotional literature show the original feet to be tapering). The lower body measures $22\frac{1}{2}$ inches long, $17\frac{1}{16}$ in. wide, and $2\frac{1}{8}$ in. high, not including the feet or the nut, bridge, strings, and tuning pins mounted on the top of the soundboard. The soundboard is about a quarter of an inch thick and has a round soundhole whose current measurement of $2\frac{3}{4}$ in. from front to back (in the direction of the grain) probably represents the original diameter (the hole is now about 3 in. from side to side, this larger dimension being the result of warping and longitudinal cracks in the soundboard). The soundhole is decorated with an ornamental decal, still well preserved, applied to the surface of the soundboard and radiating out about $\frac{3}{4}$ in. from the circumference of the hole. Its design features scrollwork and stylized flowers in cream and graduated shades of light gray over a background of gold and dark green.

The second main unit of the instrument consists of the keyboard and the mechanical action, both contained in an outer wooden housing,

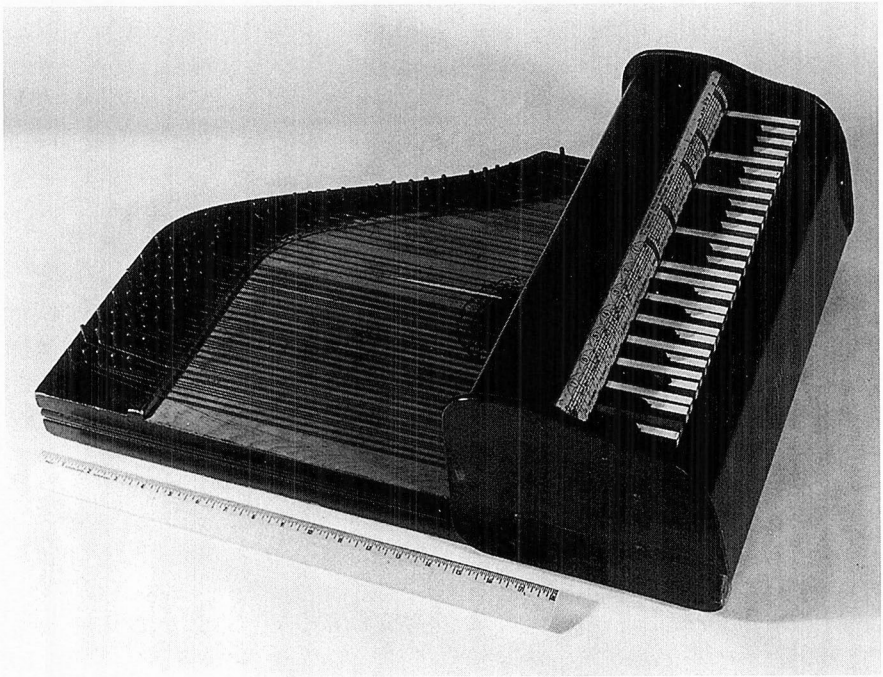


FIGURE 8. Dolceola. Photo by Michael Goudket.

itself made of several parts. This housing has a slanting, swept-back design in front that is reflected in the curved outline of the two side pieces. The side pieces are attached by screws over and around the front end and sides of the lower body. The housing measures 17 3/4 in. across (thus representing the composite width of the entire instrument) and 8 3/4 in. from front to back. Since it overhangs the lower body in front, the length of the entire assembled instrument comes to 23 1/2 in. The side pieces of the housing, measuring 7 1/8 in. high, are mounted with their lower edges slightly above those of the sides of the lower body, thus bringing the total height of the instrument to 7 3/8 in., not counting the feet.

The hammer action in my Dolceola is an identical reproduction of the diagram included in the *Dolceola Instructor* (see above, fig. 6). What the diagram does not reveal are the thicknesses (widths) of the jacks and the hammers. For all keys controlling single strings (all of the right keyboard and the single notes of the left keyboard), the jacks measure 3/16

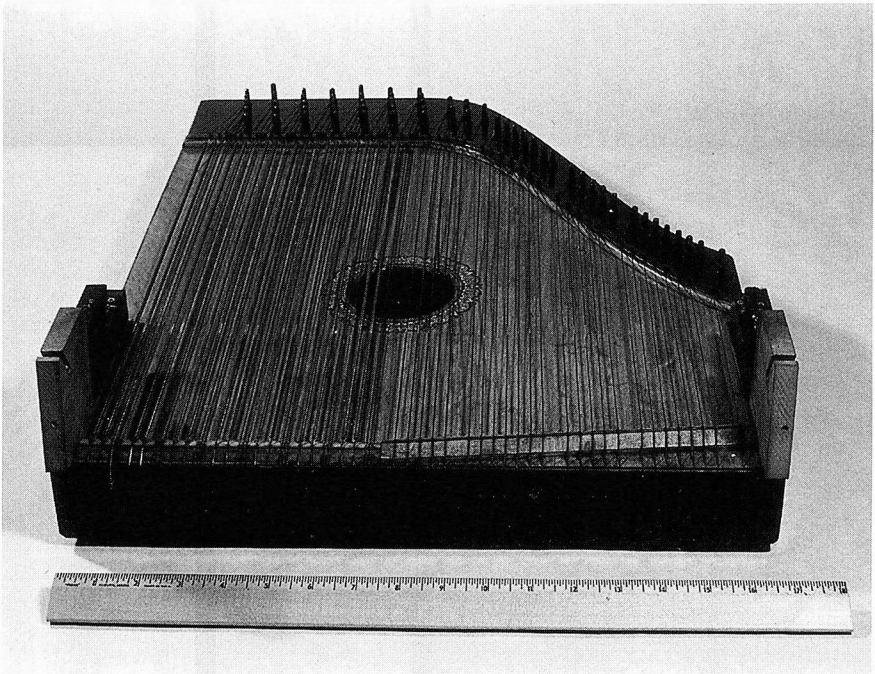


FIGURE 9. Dolceola with action, keyboard, and most of housing removed. Photo by Michael Goudket.

in. and the hammers $\frac{1}{4}$ in. For the keys of the left keyboard that control three notes each, the corresponding jacks and hammers are both $\frac{5}{16}$ in. thick, allowing the ends of the latter to strike all three corresponding strings simultaneously. The wooden keys are painted either black or white (as described above), the latter being covered on their top surfaces with strips of shiny white veneer, apparently made of celluloid (one whole strip and a portion of another, both at the left end of the keyboard, are missing in this example). The white keys extend $2\frac{1}{2}$ in. out from the housing and measure $\frac{5}{16}$ in. across at the front, less than one-half of the white-key width on a regulation piano keyboard. The shorter black keys are $\frac{5}{32}$ in. wide, also less than one-half the width of black keys on a piano. The relative smallness of the Dolceola's keyboard is also apparent in the width of a one-octave span in the right-hand section. Taken from the left edge of the c′ key to the left edge of the c″ key, the measurement is $4\frac{1}{16}$ in., about five-eighths of the piano's corresponding

span of $6\,{}^{7}/_{16}$ in. The white keys for the left hand are even closer together.

The sixty wire strings of the Dolceola are all fastened with hitch pins on the front surface of the lower body. They run up and over the upper front edge of that body, which is protected against the pressure by a metal rod set in horizontally. The strings continue back over a nut in two sections (corresponding to the two sections of the keyboard), each of which has a similar horizontal rod at the bearing point, and then run over the curved bridge, likewise containing a rod as well as spacing pins. The tetragonal tuning pins are set into the top of the body at the back and the diagonal right side. The twenty-five individual strings for the right keyboard are graduated in thickness, with those for the lowest eight pitches being lightly wound. All of the thirty-five strings for the left keyboard are wound; those producing the individual bass notes played by the left-hand index finger are the heaviest, and their several degrees of thickness correspond to the pitches in question.

A horizontal part of the Dolceola's housing curving up and back directly behind the keyboard bears a similarly curving sheet-metal plate carrying a decal that covers its entire surface. This decal identifies the notes produced by the corresponding keys both by their letter names and in musical notation, including even the symbols + O – for the left-hand keys. It is identical to the illustration in the *Dolceola Instructor* shown above (see figs. 3 and 4). Directly in back of the curving horizontal part of the housing just described, there is a lower piece, also horizontal, that extends back $2\,{}^{3}/_{4}$ in. and then turns down to cover the hammer mechanism at the back. On the flat upper surface of this piece, in each of the two front corners, there is a hole lined with a metal bushing. These holes are designed to receive the feet of a wire music rack, which is shown in the Dolceola literature but is missing in this example. Another decal is placed on the front surface of the housing below the keyboard (see fig. 10). Very well preserved, it is an ornate emblem that identifies the name of the instrument and its manufacturer in gold letters edged in black.

With the exception of the soundboard, which is left in its natural color, all visible wooden surfaces of the outside of the body and the housing of my Dolceola were treated with a redbrown stain and covered with a glossy finish, apparently lacquer. (The stain and finish are missing in several places on the sides of the housing because parts of the veneer on these pieces have come off.) Inked stamps on the upper side of the

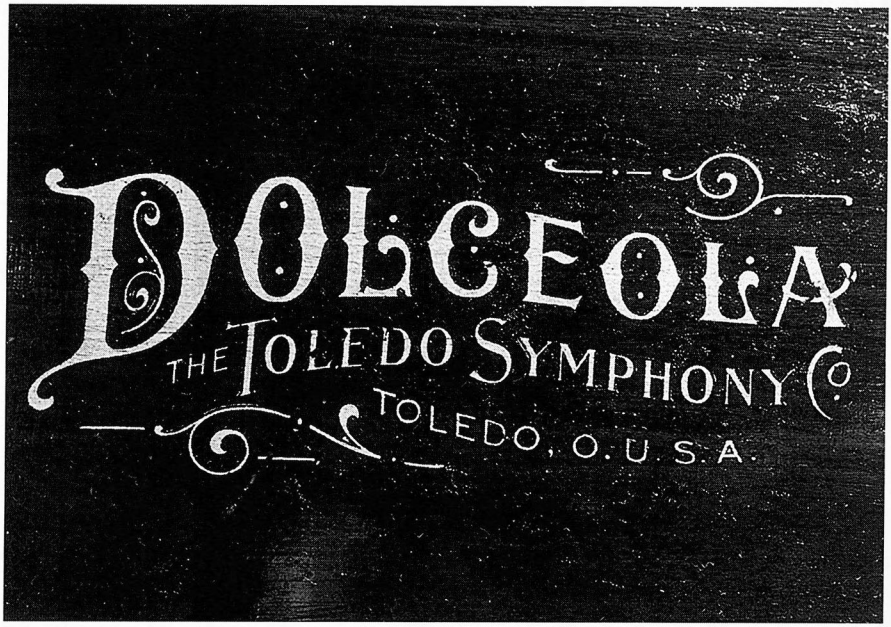


FIGURE 10. Dolceola front decal. Photo by Michael Goudket.

bottom of the body (visible through the soundhole) and on hidden parts of the structure under the housing give the serial number 4775. Another stamp, quite faint, located underneath the middle of the keyboard assembly, cites the patent of 1903 and refers to other patents pending. Assuming that the Toledo Symphony Co. kept its stamps up to date, this instrument was therefore made between April 4, 1906, when Leander F. Boyd's second Dolceola patent (no. 857,380) was first filed, and June 18, 1907, when it was issued.

Finally, my Dolceola retains its original stiff, multi-ply canvas case—its present color of drab brown surely darker than its initial shade of almost a century ago—with a lining of soft cloth whose blotchy reddish appearance also shows the effect of decades of age (see fig. 11). Opening at the front, it provides a snug fit for the Dolceola, having outside measurements of 19 ½ in. wide, 25 ½ in. long, and 8 in. high. Metal snaps and rivets are still in place, but only vestiges remain of the original leather straps, which held the front of the case closed, and of the leather carrying handle, which was attached to the right (slanted) side.

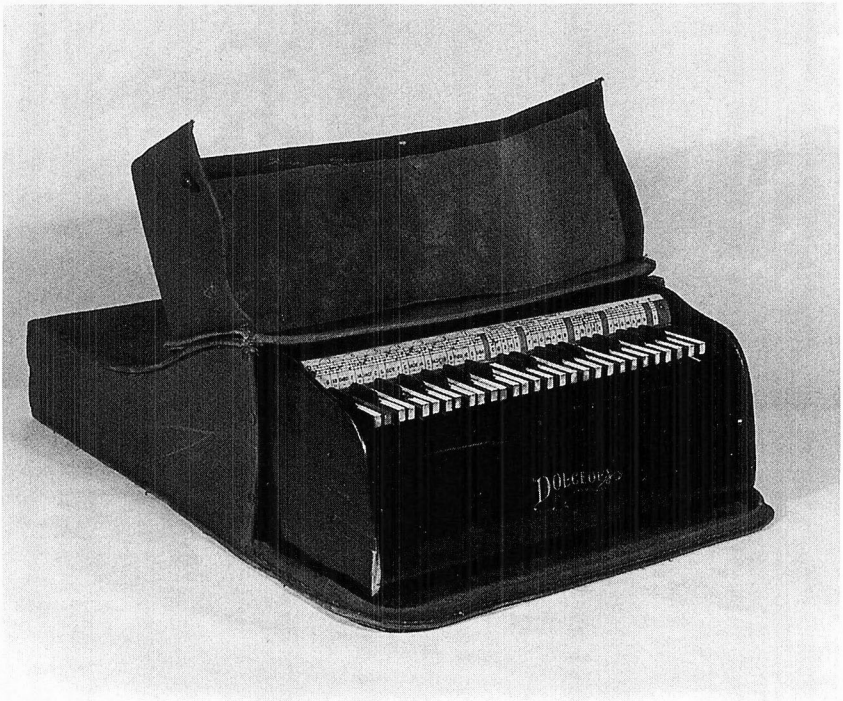


FIGURE 11. Dolceola in canvas case. Photo by Michael Goudket.

Dolceola Brochures

Following the *Dolceola Instructor* of 1904, the Toledo Symphony Co. produced a promotional brochure entitled *Dolceola: A New Musical Instrument Made by the Toledo Symphony Company,* likewise consisting of sixteen pages plus cover. It contains some remarkable illustrative material, of which the flamboyant front cover, shown here in figure 12, is a good example (the outside back cover has a similar, complementary picture). Although this brochure is not dated, the following evidence (mostly internal) suggests that it was published no earlier than mid February, 1905—more likely several months later—and no later than November of the same year.

First, there can be no doubt that the photograph on page 1, identified with the caption "The Toledo Symphony Company . . . Where the famous Dolceola is Manufactured," shows the four-story building known

FIGURE 12. *Dolceola: A New Musical Instrument* (Toledo: Toledo Symphony Co., undated), front cover. Courtesy of James E. Garber.

FIGURE 13. *Dolceola: A New Musical Instrument,* p. 1: factory building. Courtesy of James E. Garber.

as the Berlin Block, situated at the northern corner of Jackson St. (left) and St. Clair St. (right) in downtown Toledo. It is shown here in figure 13.[36] The earliest evidence that the Toledo Symphony Co. had leased the third and fourth floors of this building is the report, cited above, in *The Music Trades* of February 18, 1905 (written on February 13). The Toledo Symphony Co. is first listed in the Toledo directory for 1906, and the address is given as 404 Jackson St., the number by which the frontage of the Berlin Block on that street was identified. This surely corresponds to the arched doorway shown in the picture at the middle of the left side of the building, just past the large white awning. The

36. This photograph shows signs of having been altered before its publication. Surely the flying banner too perfectly revealing the company's "T. S. Co." insignia was added. The several signs on the building and even the sides of the three wagons may likewise have been retouched or even added. Graphic embellishments like these are a typical feature in published pictures of commercial buildings in the late nineteenth and early twentieth centuries. The Berlin Block no longer stands.

second piece of internal evidence of the brochure's earliest date of publication is the list of officers printed on page 16. In addition to S. C. Schenck (president), F. P. Chapin (vice-president), L. F. Boyd (sales manager), and D. P. Boyd (superintendent), H. S. Robinson is identified as the secretary and treasurer. The Toledo directory for 1906 gives the same information, which indicates that Harry S. Robinson had succeeded Edward T. Affleck in these two positions at least by July of that year.[37] Assuming that Affleck's departure came at least a few months after he first took office in February, 1905, an earliest publication date of approximately May, 1905, can be conjectured. The latest possible date of the initial publication of this brochure is revealed in the text of an advertisement for the Dolceola placed by the Toledo Symphony Co. in the November, 1905, issue of the magazine *Primary School.* It proudly announces "OUR FREE BOOK," describing it as "9 inches by 6 inches, beautifully printed on satin coated paper and illustrated from vignetted engravings." Thus, copies of *Dolceola: A New Musical Instrument* must have been available to send out to prospective customers by November, 1905.

The text of *Dolceola: A New Musical Instrument* begins with an extremely condensed survey of the historical development of stringed instruments from their origins in antiquity down to the contributions of L. F. and D. P. Boyd, who are credited with having successfully combined the "perfection of the piano" with the "sweetness of the mandolin and guitar" in their Dolceola (pp. 2–3). The text continues with a full description of the instrument, its method of playing, and the notation of its music, including also a number of testimonials from performers and teachers, mostly from Toledo. Mention is also made of the "complete instruction book" accompanying each instrument, referring certainly to the *Dolceola Instructor.* A picture illustrating a case[38] in carrying position is included; it is shown here in figure 14. Of interest also are nine photographs of scenes inside the factory, which reveal work benches, storage and clamping racks,[39] power machines with transmission belts looped

37. H. S. Robinson was president of the Ohio Cooker Co. The last listing of the Toledo Symphony Co. with these officers (although with no mention of L. F. Boyd) in the Toledo directories is in the issue of 1907.

38. With a rounded top-front edge and large metal fasteners without leather straps, this case is different from the one that came with my Dolceola.

39. A photograph on page 3 shows ten rows of shelving on two walls meeting at a right angle in a corner. Six spaces in each row are seen in the left section and four are seen in the right, making a total of 100 visible spaces. Almost all of these are filled with boxes whose fronts are of equal size, roughly twice as wide as they are high. It is logical to assume that these boxes are meant to contain Dolceolas, positioned front-to-back, in which case the fronts of the boxes would measure approximately 20 inches wide by

around pulleys on overhead shafts, several workers, and a number of Dolceolas in various stages of construction.

Surviving copies of *Dolceola: A New Musical Instrument* reveal that two different versions of this brochure were produced. They are identified in the following discussion by the symbols **W** and **H,** referring to their respective printers.[40] With a few minor[41] and several major exceptions, the

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9 inches high (allowing for an inch of space or padding on the top and each of the two sides of the instrument), and the entire shelving unit would stand over 8 feet tall. The boxes are dark in color, and most have four-digit numbers handwritten in white (chalk?) on their fronts. The approximately forty numbers that are legible range from 1420 to 1905, with most being in the 1500s, 1600s, and 1700s. The surviving Dolceolas listed by Andy Cohen, "The Dolceola: The World's Smallest Grand Piano," *Experimental Musical Instruments* 14, no. 3 (March, 1999): 22–23, all bear four-digit serial numbers ranging from 1426 to 5452. If the numbers on the boxes coincided with serial numbers of stored Dolceolas, and if such numbers were assigned consecutively by the manufacturers starting with 1000 or more likely 1001, the photo must represent an inventory of instruments from an early stage in the production. Could this photo have been taken at the factory of the Symphony Manufacturing Co. at Prouty and Hiett Avenues?

40. Version **W** of this brochure is indicated (on p. 16, bottom left) as having been printed by the B. F. Wade Printing Co. Version **H** has "page sixteen" at this spot, and the identification of the printer as the Hackedorn Press is placed centered at the bottom of page 1. A copy of version **W** is found in the National Museum of American History, Division of Cultural History (Smithsonian Institution), Washington, D.C. A copy of version **H** is in private possession.

Toledo directories show that the B. F. Wade Printing Co. (Benjamin F. Wade, president) had long been active in that city. A full-page advertisement in the 1901 directory reports that the company had been established in 1870 and incorporated in 1881. Under the name B. F. Wade and Sons, the company was one of the leading Toledo businesses mentioned in Scribner, *Memoirs* (1:610), and it was still active well into the 1930s. On the other hand, the Hackedorn Printing Co. had a shorter life span and appears to have been a smaller company. Its founder, (Miss) Margaret L. Hackedorn, is first listed in the Toledo directories in the 1892 volume, identified as a bookkeeper for another firm. In the same year her future partner, Claudia Q. Murphy, is listed as the publisher of *Woman's Recorder,* evidently a local periodical. By 1893 Hackedorn and Murphy had joined forces as the proprietors of the Recorder Publishing Co., whose listings appear in the directories for the next five years. The Hackedorn Printing Co. is documented in the directories from 1899 through 1909 (at first Hackedorn is given as the manager, but from 1907 on, under the name Margaret Hackedorn Rockhill, she is president and treasurer), after which there is no trace of the company or its founder under either name.

41. Referring to the grouped chords on page 3, version **W** has "in the base" (line 19), while version **H** has the correct "in the bass" (line 21). On page 13, **W** has "Church entertainments" (4 lines from bottom), while **H** has the preferably lowercased "church entertainments" (5 lines from bottom). Finally, in **W** the last paragraph on page 15 begins: "If you prefer we can supply you with the Dolceola through your local music dealer." The corresponding spot in **H** is more definite: "We should much prefer to supply you with the Dolceola through your local music dealer."

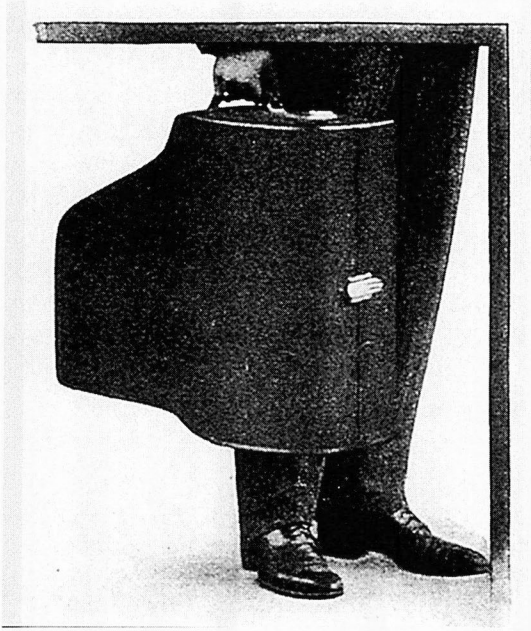

FIGURE 14. *Dolceola: A New Musical Instrument,* p. 6: carrying case. Courtesy of James E. Garber.

content of the text is identical in both versions (including the items cited above), but they represent separate jobs of typesetting in slightly different fonts, with resulting variation in spacing between words. The major textual differences between the two versions are found on p. 15; they yield significant information about the Dolceola, its accessories, and related products. Version **W** offers three different Dolceola cases: no. 1 (price $7.00), "A good substantial case with especially strong carrying handle; covered with binder cloth and lined with soft cloth"; no. 2 (price $8.00), "Similar to case no. 1, with velvet lining"; and no. 3 (price $10.00), "Very handsome leather case with plush lining." Following this list, the price for a Dolceola, "including heavy pasteboard box," is given as $25.00, all charges prepaid (thus $10.00 less than the anticipated price announced in 1903). In version **H,** the corresponding material offers fewer choices. The instrument itself is listed first, its price likewise given as $25.00, all charges prepaid. Only one carrying case is presented (price $3.00), described as "A good heavy canvas case with leather fastenings." No pasteboard box is mentioned, although the following

statement is made: "We would advise everyone to purchase a carrying case as many times you will want to take the Dolceola with you to places of amusement or on your vacations. By having this case it can be checked as baggage." Finally, Dolceola music is offered: "Lists of latest music furnished on application. New lists every month. Price 5¢ a page."

The graphic material presented in the two versions of the brochure is likewise largely identical, but two differences can be observed, one minor[42] and one major. The latter is found on page 7, where the two-page spread of music shown on the rack of the Dolceola in version **W** is the old favorite "The Mocking Bird," written in the mid-nineteenth century by "Alice Hawthorne" (Septimus Winner). The Dolceola arrangement is indicated as having been published by the Symphony Manufacturing Co., copyright 1904. The music reproduced at this spot in version **H** is "Coax Me," a much more recent song by the successful Tin Pan Alley composer and publisher Harry Von Tilzer (copyright 1904). This arrangement is shown as having been published by the Toledo Symphony Co. The copyright date is difficult to decipher but appears to be 1906.[43]

It is logical to assume that one version of *Dolceola: A New Musical Instrument* superseded the other because of the difference in the listed products and their prices, which was surely the result of a decision by the officials of the Toledo Symphony Co. When the brochure was reprinted, for some reason the job was given to a different printer, who completely reset the text. It is tempting to interpret version **H** as the later publication because its text is more correct than that of version **W,**[44] it offers a cheaper carrying case,[45] and it depicts an arrangement of a more up-to-date song. Although the order of appearance of these two

42. The picture of the Dolceola on page 5 includes the top of a table in version **W,** while the instrument appears alone in version **H.**

43. A letter from the United States Copyright Office of the Library of Congress (dated November 29, 1999) reports that no separate registration for this song was made by the Toledo Symphony Co. "Coax Me" was entered under the name of the Harry Von Tilzer Music Publishing Company on November 8, 1904. Under its alternate title, "Go On and Coax Me," it was entered under the name of the same publisher on November 15, 1904.

44. See note 41, above. It is, of course, the progressive view that the second typesetter corrected the work of his predecessor rather than corrupting it.

45. This reasoning is based on the conjecture that the company decided to discontinue the three more expensive cases because customers had chosen overwhelmingly not to purchase them, making do instead with the "heavy pasteboard box" that came with the Dolceola at no extra cost, as mentioned in version **W.**

versions cannot be determined conclusively from the available information, a later, different publication issued by the Toledo Symphony Co. contains evidence (presented below) that version **W** was still in effect after mid-June 1906—approximately one year after the earliest possible appearance of the brochure in its first version (whichever one that was).

The other publication in question is a small brochure of sixteen unnumbered pages bearing no printer's identification or production date.[46] Its title, *The Toledo Symphony Co.: Makers of "The Dolceola,"* appropriately emphasizes the name of the company, as this brochure seems intended not only to induce the interest of prospective agents in the instrument, but also to instill their confidence in its manufacturer. Pictures are found only on the first and last pages, and a reference on the third page to an "illustration on this page" goes unfulfilled. The text includes descriptions of the instrument and its musical properties drawn largely from the publication *Dolceola: A New Musical Instrument,* along with testimonials from teachers and performers,[47] of which six are also repeated from the same source. Unique to this brochure, however, are testimonials from Dolceola agents in Massachusetts, New York, Ontario, Pennsylvania, Ohio, Illinois, Manitoba, Arkansas, Indian Territory,[48] Colorado, Washington, California, and Mexico. Their enthusiasm for the marketability of the Dolceola is amply revealed in the following excerpts: "I shall advertise the Dolceola and will send in a good sized order the first of the month." "I am sure that I can make a good many sales with it." "I can see that this instrument will be a very easy sale, and am very anxious to have the agency for this territory." A correspondent identified as Prof. O. H. Hartung indicates his anticipation of great success:

> I have sold the last dozen Dolceolas and they are all out giving great satisfaction. I leave here in a few days for Tacoma where I will open a large store and have a good office crew and will swing these three states. I am getting out some special posters and expect my next order will be about a hundred instruments. In the fall I will probably be ordering them in carload lots.

The company's man in Mexico City, William A. Parker, reports having sold twenty-five Dolceolas there in a month's time and expecting to be able to increase sales soon to twenty-five per week.

46. A copy of this brochure is in private possession.

47. Some of the testimonials bear dates, which range from June 7 to September 22, 1904.

48. The Indian and Oklahoma Territories merged to become the State of Oklahoma, which was admitted into the Union on November 16, 1907.

The text of this brochure also contains evidence of its approximate date of production. The fact that descriptive passages are excerpted from the longer text of *Dolceola: A New Musical Instrument* suggests that that publication came first. Moreover, one page of this brochure has text that coincides exactly with the material (on p. 15 and the top of p. 16) in version **W** of that source, including the listing of the three styles of carrying cases (at $7.00, $8.00, and $10.00) and the Dolceola (at $25.00) complete with pasteboard box. Finally, the date of June 18, 1906, is given with a testimonial letter from a certain E. M. Bender in Austin, Pennsylvania—the man who was "anxious to have the agency for this territory," as quoted above. This evidence provides an earliest possible date for the publication of this brochure. It also shows that the text of version **W** of the brochure *Dolceola: A New Musical Instrument* was still considered valid on that date (and probably for several months thereafter, since the company would not likely have printed up material it did not expect to remain in effect for a reasonable amount of time).

Dolceola Music

In addition to the *Dolceola Instructor* and the two promotional brochures described above, the manufacturers of the Dolceola also published separate sheet-music arrangements in their effort to increase the popularity of the instrument. The four examples that have come to light are presumed to be representative of a larger repertoire. "The Mocking Bird" and "Coax Me," as illustrated in the two versions of *Dolceola: A New Musical Instrument,* are cited above. Another arrangement, which is included as an example in both versions of that brochure (on p. 11), is "The Palms" by Jean-Baptiste Faure. It is indicated as having been published by the Symphony Manufacturing Co. with a copyright date of 1904. A later example is the song "I'm a Dreaming of You" by J. B. Mullen, arranged for Dolceola by one "J. H. K." and copyrighted and published by the Toledo Symphony Co. in 1906.[49] The striking front cover (see fig. 15) was surely meant to serve for all other publications in the series as well, the title of each tune being supplied (in this case in

49. This arrangement is indicated as having been made with the permission of P. J. Howley Inc. of New York, the publishing firm that copyrighted the standard version of this song, also in 1906.

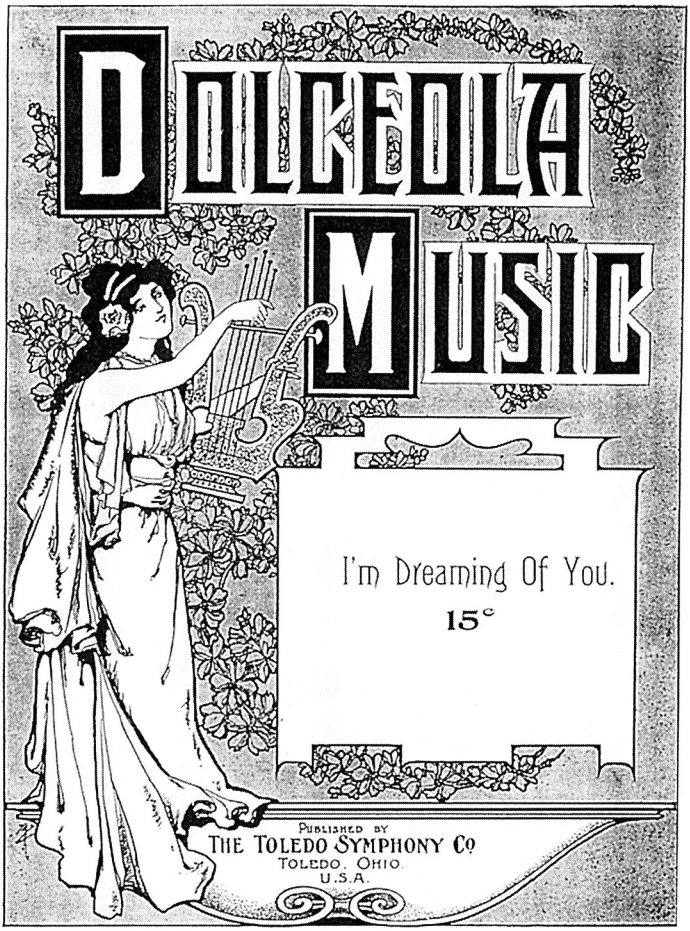

FIGURE 15. *Dolceola Music,* "I'm a Dreaming of You" (Toledo: Toledo Symphony Co., 1906), front cover. Courtesy of Arthur Sanders.

abridged form), along with its price,[50] in the space provided. All four of these arrangements offer greater challenge to the performer than the music presented in the *Dolceola Instructor.* In "I'm a Dreaming of You," the challenge is considerable. Its first page (see fig. 16) shows almost constant additional activity for the right hand below the melody line and

50. The arrangement fills three pages of music and its price is indicated as 15 cents. This is surely an example of the Dolceola music advertised on page 15 of version **H** of *Dolceola: A New Musical Instrument* as being available at 5 cents per page.

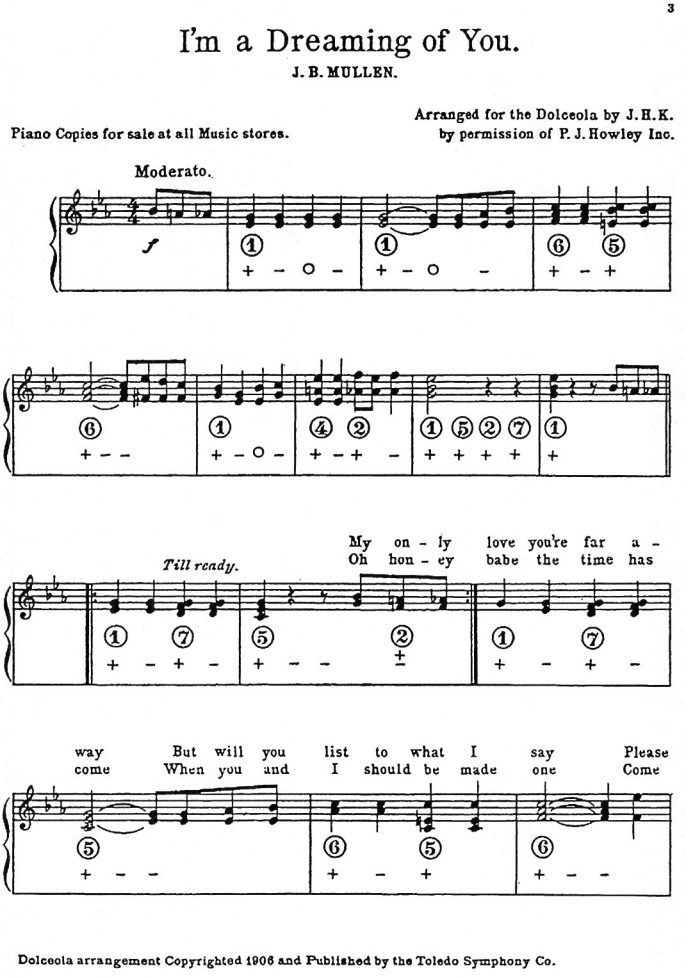

FIGURE 16. *Dolceola Music,* "I'm a Dreaming of You," p. 3. Courtesy of Arthur Sanders.

a number of measures containing two successive chords in the left hand. It also includes (in meas. 7) a four-note melodic passage in the bass, played by the left-hand index finger sounding the roots of chords 1, 5, 2, and 7 in succession. The range of the right-hand part covers the entire compass of that keyboard, from c′ to c‴. The inclusion of text in this arrangement, a typical feature of popular sheet-music, denotes the part of the melody line that was intended for singing.

A recurring theme in the Dolceola promotional literature is the claim that the instrument is the equivalent, in tone and volume, of two guitars and two mandolins. Both were popular amateur instruments of the time, the mandolin being the wire-strung Neapolitan type. The harmonic function (left-hand keyboard) of the Dolceola evidently was meant to represent the guitar effect with its characteristic alternation of bass notes and chords, while the melodic (right-hand) keyboard played the role of the mandolin. The sound of the Dolceola may be described as metallic, remarkably similar to the tone qualities of both instruments, especially if the guitar in question is also wire-strung and played with a pick. Whether or not the Dolceola's volume justifies the comparison to an ensemble of four instruments is, then as now, a subjective opinion.[51]

A puzzling aspect of the Dolceola is the reason why the instrument was designed to play primarily in the keys of E-flat major and its relative C minor. In this context, the *Dolceola Instructor* makes it clear that the instrument's intended pitch level coincided with the standard tuning of the piano or organ ("Organ preferred, as they are usually in better tune than a Piano"; p. 7). One hypothesis concerning the choice of keys might be that E-flat major presents a melodic range from the lower dominant to the upper tonic—thus b-flat to e-flat″ for women and an octave lower for men—that is comfortable for most voices. Yet the right-hand keyboard goes down only to c′, and a number of the melodies in the abovementioned Dolceola arrangements go up as high as g″ (even the portion of the melody line intended to be sung in "I'm a Dreaming of You"). Another proposition might be that the selection of keys with flats in their signatures would have made the Dolceola easier to combine with wind instruments of the time that were pitched in B-flat or E-flat (the possibility that the winds in question might have been tuned to the old high-pitch standard would have to be considered as well). This seems unlikely, however, for there is no evidence in the Dolceola literature that the instrument was intended for anything other than solo

51. An extant advertisement for the Harp-O-Chord makes the statement that the instrument is "Twice as Loud as Both Mandolin and Guitar" (communication from Kelly Williams, February 8, 2000). The resemblance between this claim and the one made in Dolceola advertising is striking (although perhaps less applicable to the Harp-O-Chord, since it included a mouth organ), especially as both instruments were produced in Ohio. The ad in question has been removed from its original source and bears no date other than that of the patent (1899), and therefore it cannot be known which slogan came first and whether, perhaps, the advocates of one instrument copied the claim made on behalf of the other.

performance or to accompany singing. In the final analysis, the answer may be simply that the Boyd brothers chose the keys that they thought sounded best on the string lengths and other acoustical features of their Dolceola.

Marketing the Dolceola

The eagerness of the officers of the Toledo Symphony Co. to secure agents in the field has been demonstrated above. It is also shown in two surviving letters that reveal the company's sales techniques. Both are typed on letterhead stationery that lists the officers (S. C. Schenck, F. P. Chapin, D. P. Boyd, H. S. Robinson, and L. F. Boyd) at the top, followed by a line cut of the Dolceola, the name of the company, its further identification as "manufacturers of the Dolceola," and a listing of its financial credentials: "References: Dunn's or Bradstreet, First National Bank or any Bank or Business Firm in Toledo."[52] Both letters are signed by H. S. Robinson.[53] The first,[54] dated December 29, 1906, and addressed to a Mr. N. C. Isaacson of Nataga, Illinois, refers to his having been sent "full particulars and a list of our discounts on Dolceolas" two weeks before. He is offered "exceptionally low terms on our goods" in the form of $12.50 for a Dolceola and $14.00 for the instrument and a "#0" carrying case.[55] The letter goes on to mention the "enclosed sixteen page book-

52. During the entire existence of the Toledo Symphony Co., its president, Schuyler C. Schenck, was also president of the First National Bank in Toledo. This connection may indicate that the former company received a significant amount of its capital, in the form of business loans, from the latter.

53. The fact that the signer was not L. F. Boyd, sales manager, is probably an indication that he had left Toledo by the time these letters were written. As indicated above, he is last listed in the Toledo directory of 1906. Possible evidence of his activity in California is found in a letter in my possession, dated April 7, 1972, sent to the Stearns Collection of Musical Instruments at the University of Michigan and forwarded to me for reply. The writer, a resident of Carson, California, requests information about the Dolceola on behalf of a friend, Mrs. Leanore F. Maessel of Torrence, California, who is identified as the 76-year-old niece of the inventors, "Mr. David Boyd & his brother." She is reported to own a Dolceola that she received at the age of five in about 1903 from one of the Boyds (not identified), who had come to California with about thirty-five of the instruments. (My attempts, a decade later, to reestablish contact with the writer of this letter to gain further information about Mrs. Maessel were unsuccessful.) An L. F. Boyd is listed in the *Los Angeles County Telephone Directory* (Los Angeles: The Pacific Telephone and Telegraph Company) beginning in 1910.

54. This letter was recently acquired by a private collector.

55. There is no other reference in any of the known Dolceola literature to a style of case with this numerical designation. It probably indicates the least expensive model, made of stiff canvas with a soft cloth lining.

let" (referring to the brochure *The Toledo Symphony Co.,* which was included with the letter) and ends with strong advice:

> Now we would like to hear from you by return mail, otherwise we will have to give the territory out to others. If you do not take this up, you will be losing one of the best opportunities you ever had in your life, of getting the agency of an article that will make you lots of money.

The second letter,[56] dated April 17, 1907, and addressed to a Mr. W. F. Meggers of Clintonville, Wisconsin, informs the recipient that the company "wants only one agent in a town," but if he "can handle any adjacent territory," it will gladly be given to him. The Dolceola "will not be sold through jobbers," as the company will have exclusive control of the territory. The following prices are quoted for the Dolceola: $12.75 each in lots of three, $12.50 each in lots of six, and $12.00 each in lots of twelve. A discount of 2% is given if payment is made within ten days; otherwise the arrangement is thirty days net. A 50% discount is given on carrying cases, F. O. B. Toledo. The company further offers to furnish a sample at $15.00 and give a rebate of $2.50 if two or more are ordered within thirty days. The following advice is given on moving the merchandise:

> Now, the best way to sell this instrument is to get a man to go out and canvas the same way you sell pianos. That is, have one that can play a few tunes on the "DOLCEOLA" and this will work up a quick interest. Then have some one demonstrate the instrument who can play on it. If you can arrange to place the "DOLCEOLA" out on the installment plan at $5.00 down and 50 cents or a dollar a week, you will find that dozens or more instruments can be sold. Where people do not have $25.00 to pay down, most of them will have $5.00.

The letter goes on to report that the company is receiving inquiries from Mr. Meggers's territory "every day or so," and these will be referred to him once he takes the agency. Finally, reference is made to large ads that will be run "in a number of the leading magazines" in the following month. Copies will be sent to Mr. Meggers on request.

The advertising campaign for the Dolceola in national musical and educational magazines had already begun in late 1905.[57] Advertisements

56. This letter is in the Warshaw Collection at the Archives Center, Smithsonian Institution, Washington, D.C.

57. In addition to the factory location at 404 Jackson St., several addresses on Jefferson Avenue (occasionally identified as "Street") are given for the Toledo Symphony Co. (evidently referring to office locations) in published advertisements, listings in the Toledo directories from 1906 through 1908 (no listing for 1905), and in

placed by the Toledo Symphony Co. were aimed as much at potential teachers and agents as at individual purchasers. The ad shown here in figure 17, taken from the issue of *Primary School* for November, 1905, is similar to those that appeared in *The Etude* in late 1905 and early 1906. It includes testimonials from Toledo music teachers, who were presumably among those who received the promised "handsome profit" for selling Dolceolas. *The Etude* also ran the ad shown in figure 18,[58] in which the Dolceola is characterized as "The only Practical Musical Instrument Invented since the Mandolin, Twenty years ago,"[59] and an agent in Los Angeles is quoted as having sold a dozen Dolceolas in only ten days. In July, 1906, a Dolceola ad appeared in *The American Musician and Art Journal* that offered "a handsome souvenir napkin ring, free of charge" to anyone who wrote for the promotional literature. A different illustration of the Dolceola was used in ads that appeared in a number of issues of *The Etude* from October, 1906, to March, 1908; four times in *The Musical Observer* (January to April, 1908); and at least once in *The Review of Reviews*.[60] The same picture is found in eighteen nearly identical

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the brochure *The Toledo Symphony Co.* Although some of these numbers may be erroneous misprints, they are all listed here: 705 (1905 ad), 708 (1905 ad), 734 (1905 ad), 742 (1906 ad), 760 (ad of unknown date), 780 (1906 ad), and 1042 (1906 ad), as well as 609 (1907 directory) and 609–611 (brochure: specifically indicated as "offices"). The numbers 609–611 identify the Snow Flake Building, a six-story structure erected in 1906 and named after the Snow Flake Laundry Co., which occupied the first three floors and the basement, the space on each floor measuring 60 by 120 feet (see Harvey Scribner, *Memoirs,* 1: 619). The following numbers in this building are given for the Toledo Symphony Co. in advertisements of 1907 and 1908: 627 (*The Musician*), 932 (unidentified periodical), and 1274 (*The Musical Observer*), as well as the series 242, 342, 442, 542, 642, 742, 942, and 1042, which appears in successive issues of *The Etude* from February through October, 1907 (742 was used in both July and August, the latter obviously in error). This plethora of numbers, clearly not identifying separate rooms in the building, may be evidence of a plan to test customers' response to advertising in different magazines and different months. The ads in the February and March, 1908, issues of *The Etude* give the address as 242 Berlin Block; this corresponds to 404 Jackson Street.

58. In the illustration of the Dolceola in this ad, the entire instrument is reversed, although the identifying decal at the front is correctly depicted.

59. The Neapolitan mandolin became popular in the United States as a result of the Italian immigration that began in the 1880s, but it had been known in its present form in the eighteenth century.

60. A copy of this ad in private possession is cut out of its source and contains no date. The ad describes the souvenir napkin ring further as "ivory-finished." Another ad with the same illustration of the Dolceola—likewise in private possession and removed from its source—is taken from the September, 1907, issue of an unidentified periodical.

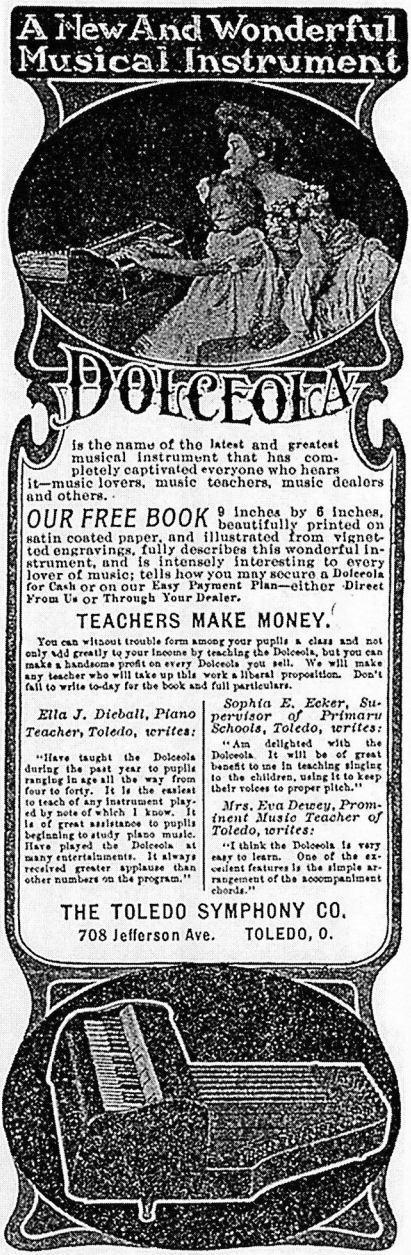

FIGURE 17. Advertisement, Toledo Symphony Co., *Primary School,* November, 1905. Courtesy of Paul J. Christian.

FIGURE 18. Advertisement, Toledo Symphony Co., *The Etude,* July, 1906. Courtesy of Paul J. Christian.

ads that ran in *The Musician* from June, 1907, to December, 1908 (see fig. 19). Here the advertising copy makes some irresistible statements: "If you can whistle a tune, you can play it on the Dolceola." "You must have one." "Take a Dolceola on your summer trip." "Agents make from $100 to $500 monthly." Perhaps the most imaginative technique dreamed up for the promotion of the Dolceola was the one presented early in the advertising campaign in the December, 1905, issue of *Everybody's Magazine.*[61] Beneath a picture of a well-dressed lady playing the instrument and looking back at an admiring gentleman, equally well attired, there is an announcement of a cash prize of $100 for "the best musical composition arranged to play on the Dolceola." Interested persons are encouraged to write for the free illustrated book, *The Dolceola* (i.e., *Dolceola: A New Musical Instrument*), whether or not they wish to compete for the prize. Those who do enter the competition are assured that "Every contestant will receive a handsome souvenir, even if they don't win the big prize, and every composition which we retain we will pay a liberal price

61. An additional ad, similar to the one published in *Primary School* (fig. 17), was also run in *Everybody's Magazine,* reportedly in 1905. A copy, removed from the source, is in private possession. Although the month is not identified, it must have been late in the year, since the ad refers to the Dolceola as "A Royal Christmas Gift."

FIGURE 19. Advertisement, Toledo Symphony Co., *The Musician,* September, 1907.

for." Amounting to four times the retail price of a Dolceola, $100 was a substantial prize. No evidence has been found that it was ever awarded.

An interesting record of Dolceola advertising is preserved in a book entitled *Does Magazine Advertising Pay?* published by The Review of Reviews Co. (New York, 1909). Designed in fact to promote the advertising business of only one magazine, the one produced by the book's publisher, it contains facsimiles of testimonial letters from satisfied clients. Included among these is an undated letter from H. S. Robinson (p. 80) typed on the same Toledo Symphony Co. letterhead stationery as the two letters (from 1906 and 1907) to prospective agents described above. Robinson writes:

> We have found that the Review of Reviews is a good medium in which to advertise our Dolceola and we have gotten good results from it.
>
> It is one of the best mediums we are using for our results.

To judge from the letters reproduced in this book, the Dolceola was in good company among the products represented in the magazine. In addition to the Toledo Symphony Co., the following advertisers are listed under the heading "Musical Instruments" in the table of contents: Aeolian Co., Cable Co., Chickering & Sons, Duplex Phonograph Co., Wm. Knabe & Co., Sohmer & Co., Steinway & Sons, Vocalion Organ Co., Victor Talking Machine Co., Weber Piano Co., and Rudolph Wurlitzer & Co.

Despite the extensive marketing campaign described above, the sad conclusion to this story of invention, industry, and expectations is that the Dolceola business failed. The Toledo directory published in July, 1908, reports the Toledo Symphony Co. only at its factory location on Jackson Street and in the hands of a receiver, one William F. McGuire. That year's personal listings for David Boyd and Harry Robinson no longer identify their association with the company. The 1909 directory contains the final trace of the Toledo Symphony Co.,[62] still in receivership at another address, having lost its factory building and presumably no longer producing Dolceolas. Surviving sources do not document the reason for the company's failure. The officers may have experienced difficulties in raising sufficient capital, possibly as a result of the financial panic that occurred in late 1907, or in maintaining production and distribution. Agents may have fallen short in delivering anticipated sales. The instrument may have lost the battle of competition from other devices for home entertainment, such as the new, relatively inexpensive talking machines.[63] Whatever it was that caused the company's downfall, the evidence shows that the Dolceola men produced an instrument that was well designed and constructed, and they strove diligently to make the enterprise successful.

62. The Toledo directories of 1908 and 1909 incorrectly list the Toledo Symphony Co. as having been incorporated in 1895.

63. The Toledo-made Talk-O-Phone was evidently not among these, for its company was last listed in the city directory of 1906. The Toledo piano manufacturer mentioned above was last listed in 1908.

The Family Connection

My own interest in the Dolceola stemmed originally from the fact that David P. Boyd (1872–1929) was the husband of my great-aunt Adelaide, née Hettrick. They were married in 1905 or 1906 at a time of considerable activity and expansion of the Dolceola business.[64] During their first several years together, the newlyweds lived with Adelaide's parents (my great-grandparents), Lydia and Edward C. Hettrick. After the Toledo Symphony Co. failed, David spent most of his active life working in the canvas-products firms of Adelaide's brother (my grandfather), William E. Hettrick (Sr.).[65] William died at the age of fifty-eight on January 19,

64. Adelaide is last listed under her maiden name in the Toledo city directory of 1905. She is missing in the 1906 directory, but appears as Mrs. David P. Boyd from 1907 on. There are no surviving Hettrick family records of the date of the Boyds' marriage. The wedding did not take place in Toledo, as there is no listing of the event in the Lucas County marriage records for that period.

65. Toledo directories show that by 1909 the Boyds had moved to their own home, the first in a series of at least ten dwellings in which they would reside in Toledo until 1925, the last year in which they appear in the directories. About 1910, Adelaide opened up her own business, Boyd Advertising Co., specializing in multigraph typewritten letters, mailing lists, and addressing. At about the same time, David took a job as clerk at Hettrick Bros. Co., the firm that had been founded in 1893 by William E. Hettrick (Sr.) and his younger brother, Edward F. Hettrick, who had died at the age of 26 in 1899. (On the history of that company and the Hettrick family's earlier manufacture of sails and other canvas products, see Scribner, *Memoirs,* 1: 563–64.) In 1914 David was working as manager at Adelaide's advertising company and also as president of his new Boyd Tire & Supply Co. Adelaide sold her business a year later, possibly in anticipation of the success of David's tire venture. He had been experimenting with tire design for a number of years. On April 20, 1909, he had received a U.S. patent (no. 918,820; the application was filed on November 23, 1907) for a vehicle tire with an outer casing "made of woven fabric treated with waterproofing substance with no india rubber used." David's invention was surely connected with a business interest of his brother-in-law, William, who at that time was reported to be "perfecting an automobile tire of cotton fiber of many plies, which may eventually replace the high priced rubber product on the market today" (Scribner, *Memoirs,* 1: 564). The Boyd Tire & Supply Co. apparently enjoyed as little success as the nonrubber tire, for the company is last listed in the city directory for 1917. David then went back to work for my grandfather, whose thriving business had been renamed the Hettrick Manufacturing Co. following the death of his father, Edward C. Hettrick, in 1916. A historical survey of canvas businesses owned by members of the Hettrick family, with an account of the Hettrick Manufacturing Co., is found in Killits, *Toledo and Lucas County,* 1: 436. A biography and photograph of William E. Hettrick (1870–1929) are presented in the same source, 2: 526–33.

1929. David survived him by only a few months, dying in his fifty-seventh year on May 10, 1929.[66]

I first heard about the Dolceola during my childhood in Toledo. One of the favorite stories of my father, William E. Hettrick, Jr., was an account of the invention of the instrument by his uncle, David Boyd, early in the century. According to the story, Uncle Dave made and sold a number of Dolceolas, but they were hard to tune, and only he could do the job properly. Unable to keep up with the demand for his services, he was forced to stop production, and he subsequently went to work for my grandfather. The Hettrick family legend of the Dolceola was later dispersed to a wider audience by Frederick J. Kountz, a popular writer on musical subjects for *The Toledo Times*. An article by Kountz in the issue of December 24, 1957, describes a Dolceola that he had acquired and invites readers to supply information about it.[67] My father's prompt response formed the basis for Kountz's column of January 6, 1958,[68] which mentions David Boyd and credits him with the invention of the Dolceola. The text goes on:

> In due time, quite likely between 1900 and 1910, Mr. Boyd had completed about 100 of [the] odd little instruments. So far as Mr. Hettrick or anybody else knows, Mr. Boyd did all the work himself. Whether he sold them to those who would buy or gave them away to those who were interested is still undiscovered. . . . Of other matters relating to the instrument however we can be quite certain. Mr. Boyd made his approximate 100 and stopped production about 1910. And his reason was an excellent one. The instru-

66. Both brothers-in-law are buried in the Hettrick family plot at Woodlawn Cemetery in Toledo.

67. "Who Can Call the Tune on This Odd Contrivance?" Kountz's citation of the name of the Dolceola company, found on the decal applied to the front of the instrument, as the "Toledo Symphony Orchestra" is surely in error.

68. "Odd Instrument Traced to Toledo Piano Tuner." This article also reports my father's account of the sad fate of the Dolceola that the Hettrick family had once owned. After my grandfather died in 1929, my grandmother moved out of the large house that the family had occupied for some fifteen years. The family's Dolceola was one of the possessions that she could not accommodate in her new home, and my father, having graduated from the University of Michigan in 1923, thought it would be appropriate to donate it to the Stearns Collection of Musical Instruments, which he remembered from his student days in Ann Arbor. The preparation of the instrument for its trip northward was entrusted to my grandmother's cleaning lady, whose industry evidently exceeded her caution, for she proceeded to dunk it in a pail of water and wash it with one of the new detergent products. The result was the ruining of the Dolceola, and there was nothing left to do but to discard the bedraggled object.

ment was—and still is, as I have discovered since one came into my hands—the devil's own labor to tune. And Mr. Boyd was the only known person who could tune them. He had to quit, as he said, because it was impossible for him to be everywhere at one time.[69]

My father had been just a boy when the production of Dolceolas ceased, and I suspect that his information came from anecdotal accounts told by his Uncle Dave in subsequent years. Actively working with increasing responsibility and authority in the family business from 1924 on,[70] my father had neither the time nor the inclination to make a historical study of any musical instrument, let alone one that by then was

69. Apparently still misreading the decal on his instrument, Kountz ends his article with a statement of his "hope that it will be possible [in] weeks to come to unearth the connection between some version of the Toledo Orchestra and the instrument that is in my home." Kountz's information on the number of Dolceolas that were produced probably came from my father's story. It is a subject that has generated much debate among Dolceola enthusiasts, and estimates range from the proverbial 100 to as many as 6000 (see Cohen, "The Dolceola," 22–24). In the absence of surviving factory records, the only evidence consists of the serial numbers found on extant Dolceolas and the photograph described above in note 39, which shows boxes with numbers mostly in the high 1000s. The following conjecture is based on this evidence, but requires several assumptions: (1) that the numbers in the photo are indeed Dolceola serial numbers; (2) that all such serial numbers were of four digits, beginning with 1001; and (3) that these numbers were assigned consecutively to instruments made during the five-year period of the Dolceola's production (1904–1908), beginning each year with the lowest number in the corresponding series of a thousand (thus, starting with 1001 in 1904, 2001 in 1905, 3001 in 1906, etc.; this theory is supported to a degree by the evidence of my Dolceola, serial number 4775, probably made between April, 1906, and June, 1907). The highest number in the photo is 1905, thus indicating that at least 905 instruments were produced in that series. Cohen (ibid., 22–23) reports the following highest serial numbers in each successive series among Dolceolas he has seen or has been informed of: 2793, 3811, 4775 (my instrument), and 5452. The first number is topped by the serial number 2835, found on a Dolceola in a private collection of which I am aware. Thus, a process of addition yields a minimum of 3778 Dolceolas actually produced. According to the assumptions presented above, the maximum production (not going beyond serial number 5999) would have been 4995. Altogether, about two dozen Dolceolas seem to have survived. Andy Cohen (ibid.) has observed and reported variations in the design of extant instruments that reflect changes made over the course of their production. The most apparent of these is that the narrow, straight white keys for the left-hand index finger (as illustrated in the *Dolceola Instructor;* see above, fig. 3) were changed to keys that extend to the left in front of the adjacent black keys, also for the index finger, starting with the serial numbers in the 2000s and continuing into the 5000s (they are found on my Dolceola).

70. My grandfather lost financial control of the Hettrick Manufacturing Co. in 1927, and he subsequently started a new firm, W. E. Hettrick & Son Co.

considered only a curiosity from the past.[71] Decades later, he simply told the Dolceola story as he remembered it. My own experience is that Dolceolas are sturdily made and hold their pitch quite well, living up to the promise made in the brochure *Dolceola: A New Musical Instrument:* "The Dolceola does not have to be tuned under ordinary circumstances, any oftener than a piano, and it is not like other small stringed musical instruments that have to be tuned nearly every time they are used" (p. 7). The text of the brochure also states, accurately, that "Any one with a knowledge of music can tune the Dolceola for himself,"[72] and this process is facilitated by the musical notation provided above the keyboard for each of the sixty strings. Although the brochure assures the reader that "any piano or music dealer will tune it for you at a small cost as it only takes a few minutes time," a trained piano tuner is not actually required, since the Dolceola's strings are considerably fewer in number and are strung at far less tension than those of the ordinary piano. I have come to the conclusion, therefore, that the legend of David Boyd's unique Dolceola-tuning ability is highly exaggerated.[73] As a result of the 1958 article by Frederick J. Kountz, however, it has entered the bloodstream of published information about the instrument and has been accepted as fact. It has even been given an extra twist in a recent article on the subject.[74]

71. On the other hand, with his experience as a professional writer and musical expert, Frederick J. Kountz was in a good position to locate and report historical information about the manufacture of the Dolceola, readily available in Toledo city directories and in the archives of several Toledo newspapers. Had he done so, he would have discovered evidence of the true extent of the Dolceola enterprise.

72. The brochure also indicates that "the necessary tools and instructions" for tuning the Dolceola at home are provided (p. 7). Presumably the former included a wrench (key) for tightening the pins, perhaps a pair of pliers and a supply of stringing wire, and possibly also the "regulating key" for turning the screweye positioned in the bottom of each key and bearing down on the jack, as illustrated in the diagram at the top of page 4 in the brochure.

73. No doubt David Boyd was an expert Dolceola tuner, but why did my father's story contain no hint of the extensive manufacturing and marketing of the instrument? The answer may lie in the fact that Boyd had twice been closely involved with companies that had failed (the Dolceola business and his tire dealership), and after each of these failures my grandfather had provided him employment. We cannot know the degree of Boyd's embarrassment at this record, but it most likely was sufficient to cause him to downplay the full extent and initial promise of the Dolceola enterprise (and thus the magnitude of its failure) in the stories he told his nephew, the son of that employer. I wish I had asked my father more about this.

74. Cohen, "The Dolceola," 21–22, in explaining why the company failed, states that David Boyd offered to tune the instruments free if they were sent back. I have found no concrete evidence of such a generous offer.

Epilogue

A most intriguing case of the possible use of the Dolceola after its brief heyday in the first decade of the twentieth century is that of Washington Phillips, an accomplished preacher and gospel-blues singer active in Dallas, Texas, in the late 1920s. He recorded a number of songs there in 1927 and 1929, accompanying himself on an instrument that he reportedly called a "dulceola." Whether this was in fact the Dolceola remains to be proved. The only known photograph of Washington Phillips shows him holding two pentagonal zithers.[75] Yet the instrument heard in the recordings seems to have struck strings, and several rapid scales and arpeggios in the performance point to its also possessing a keyboard (or, somewhat less likely, its being a dulcimer of the "hammered" type). The recordings also reveal that if Phillips did use a Dolceola, he retuned it, at least in the chords for the left hand.[76] At any rate, growing appreciation

75. Cohen, "The Dolceola," 18.

76. Washington Phillips's accompaniments consist of two aspects: (1) chord patterns, including a bass line, and (2) a melody line either doubling the sung melody or providing a countermelody or arpeggios matching the underlying harmony. All of his songs are in the major mode. With one exception his harmonic vocabulary consists of the primary chords I, IV, and V. The exception is the song "But Remember Jesus," presented in two sections, in which the V/VI and VI chords (the latter a minor triad) are also employed. If it was in fact a Dolceola that Phillips used for these recordings, he would have had all five of these chords available to him among the seven sets of keys for the left hand. The notes in his bass lines, however, do not all coincide with the bass notes supplied for the chords in question on the Dolceola, assuming that it was tuned as intended. Phillips's notes are available on the instrument to be sure, but some of them belong to other chords, and it seems rather unlikely that he would have chosen to go out of his way to complicate his left-hand fingering patterns. Thus, if Phillips performed his songs in the "home key" of the Dolceola, he may have retuned at least some of the bass notes in the chords.

The situation is complicated by the matter of pitch. The home key of the Dolceola, to which its entire chord scheme is related, is E-flat; yet, the songs in the Washington Phillips recordings are at higher pitch levels, ranging from approximately F up to G. Thus, two pitch discrepancies are evident: (1) among the various levels in the recordings and (2) between these levels as a group and the intended pitch of the Dolceola. Considering the first point, it seems most likely that each of the recordings (produced over a two-year period) represents Phillips's tuning of his instrument to the same nominal key, so that the fingering patterns would remain the same whenever he played. The variation of pitch over as much as a whole step in these recordings may be the result of fluctuating speeds of turntables and other anomalies in the equipment used in the transmission of these late-1920s recordings down to the versions I have heard; it may also indicate that Phillips simply tuned his instrument by ear each time he considered it necessary, without regard to a specific pitch standard. These two explanations may also provide a solution to the second problem stated above: the difference between the recording levels as a whole and the E-flat standard of the Dolceola. A third

for the recorded performances of Washington Phillips during the last two decades has sparked an enthusiasm for the Dolceola that has added considerable interest to its continuing story.

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possibility, which may have acted in combination with either or both of the others, is that Phillips could have been influenced by the old high-pitch standard found in American band instruments of the late nineteenth century and still in use by many bands in this country up to the end of World War I. On the other hand, Phillips may have completely retuned his left-hand chords, thus releasing his Dolceola from the confines of the E-flat regimen. Andy Cohen ("The Dolceola," 21) subscribes to this theory and has worked out an alternate Dolceola tuning in which all seven chords are major and follow a pattern strictly in the circle of fifths from E-flat, as chord no. 1, to A, as chord no. 7. (His method does not entirely account for Phillips's bass line and minor VI chord, however.)

The foregoing discussion has shown that if Washington Phillips did indeed use a Dolceola in his recordings, he must have retuned at least some of its strings. This, in turn, leads to the conclusion that he was probably musically illiterate (taking that term in its narrow meaning and not implying any criticism of his obvious talents as a creator of text and music) and therefore was not fettered by the musical notation provided above the keys on the Dolceola to indicate the official tuning of its strings.