

Tannenberg Clavichord Identified

Laurence Libin

Laurence Libin is a Research Curator at the Metropolitan Museum of Art.

During a visit to the Moravian Historical Society in Nazareth, Pennsylvania, in October, 2004, I discovered that a hitherto anonymous clavichord in their collection is actually a product of the Moravian organ builder David Tannen- berg, the most important organ builder in colonial and Federal America.* I



Tannenberg signature, 1761

found Tannenberg's manuscript label, "David Tanneberger im Junii 1761 bey Bethlehem" ("Tanneberger" was the spelling he used at that time) on the baseboard under the soundboard, and I confirmed the instrument's authenticity by comparison with the Tannen- berg clavichord plans and instructions preserved in the Moravian Archives and Moravian Music Foundation in Winston-Salem, North Carolina.

The documents specify several distinctive features that are present in the instrument, among them an elevated transverse reinforcing bar and two screws securing the wrestplank. In addition, the clavichord is strikingly unusual in having unfretted A's and E's (rather than D's), twin mouseholes, a thin, seemingly resonant baseboard enclosed by the walnut case walls and raised off whatever table

(Continued on p. 6)

The Clavichord as the Key to All Other Keyboards

Bernard Brauchli

Editor's Introduction: Bernard Brauchli has spent many years promoting the clavichord through publications, performances, and the activities of the International Centre for Clavichord Studies in Magnano, Italy, which he founded and co-directs with Christopher Hogwood. Bernard was interviewed in the November 2004 issue of *Clavichord International*. In that interview he expresses his disappointment that in spite of the many gains the clavichord has made in the world of music and musicians in recent years, the music schools and conservatories have yet to include the clavichord "in the normal curriculum of any keyboard student."

As Bernard notes, "The clavichord as a learning device was justly considered essential during near three hundred years, as can be verified in innumerable pedagogical treatises." He quotes from one of the earliest of these treatises: *Musica getuscht* by Sebastian Virdung (Basle, 1511). In English translation: "First take the clavichord, then the lute, and finally the flute, because what you will have learnt on the clavichord you will then be able to play easily and well on the organ, harpsichord, virginal, and all other keyboard instruments."

In a long article entitled "The clavichord as the key to the study of all other keyboard instruments," published in *de Clavichordio V: Proceedings of the International Clavichord Symposium [Magnano, Italy, 2001, pp. 45-61]*, Bernard provides extensive documentation of his claim that the clavichord was long considered essential to the training of a keyboardist. Excerpts (slightly edited) from this article follow.

Paulus Paulirinus, born in 1413, in his *Liber XX Artium*, states that "the clavichord with its pedalboard is an excellent introduction to the study of the organ and other instruments, and it is through the clavichord that one acquires this science, as it is the instrument of true music, bringing knowledge of consonances." As no music with a pedal line was specifically written for the clavichord in this period, it is obvious that the pedal-clavichord was used by

organists for studying, but Paulirinus adds that it is also an excellent introduction "to other instruments." The treatise *Musica getuscht* (1511) inspired works in French and Dutch, which also recommended the study of the clavichord.

The next important treatise on this subject was written by Tomás de Santa Maria, a Dominican friar who served as

organist in various monasteries in Castile. He wrote in a treatise published in 1565: "It is impossible to be an accomplished performer without having first acquired complete knowledge and a certain understanding of clavichord playing ... " Moreover, Santa Maria's treatise gives precise technical rules and principles of performance practice to be followed first

on the clavichord, and only then transferred to other keyboard instruments.

In Germany, Michael Praetorius (1571-1621), a very important theorist, composer and organist, published in the last years of his life his treatise *Syntagma musicum*. There he wrote: "Beginner organ students are first taught the clavichord. This is chiefly because the clavichord has no quills—and these usually cause much trouble and displeasure to the player; and it is also because its strings remain more constant than those of the harpsichord or spinet, which require many and frequent tunings. Clavichords often do not need to be tuned for long periods of time, and this is particularly advantageous for beginner students who are not yet able to tune and quill instruments." Thus, Praetorius underlines its value as a study

(Continued on p.3)



INSIDE THIS ISSUE

BEMF 2005p.2

Fortino Publishing Project .p.2

A Very Small Dolmetsch . .p.4

Duo Recitalp.6

The BCS at BEMF, 2005

In collaboration with the Boston Early Music Festival, the BCS will present two recitals and a symposium of talks and demonstrations concerning the clavichord during the June 2005 festival. As in the past, the Department of Musical Instruments of the Museum of Fine Arts will co-sponsor the Symposium, which will take place at the MFA. A schedule of events follows.

• **Wednesday, June 15, 2pm, Sally Fortino in Recital**, Fugues and Sonatas: Telemann, Marburg, Haydn, and others. Chapel, First & Second Church in Boston

• **Thursday, June 16, 10am to 1pm, Symposium, David Schulenberg, moderator, Remis Auditorium, Museum of Fine Arts, Boston**

Darcy Kuronen (*Curator of Musical Instruments, MFA, Boston*): *Welcoming Remarks*

Laurence Libin (*The Metropolitan Museum of Art, New York, NY*): *New Light on Tannenberg's Clavichords*

Teri Noel Towe (*independent scholar, Amenia, NY*): *A Demonstration of Rare Early Clavichord Recordings*

John Koster (*National Music Museum, Vermillion, SD*): *From Virginal to Clavichord: Technical and Social Transition in the Sixteenth Century*

Peggy F. Baird (*independent scholar, Huntsville, AL*): *Quiet Music for the Eye: The Clavichord in Art* (a multimedia presentation)

Fortino Publishing Project

Sally Fortino has unearthed a substantial number of songs for clavichord and voice that make use of texts that "sing the praises" of the "clavier" ("An das Klavier" texts). Two volumes of these songs will be published by Drake Mabry Publishing Company of San Diego. Volume I will include songs in which the texts and/or the music are by women. Volume II will include songs with texts and music settings by men. Each volume will contain about ten to fifteen songs, in German with text translations into English (and possibly French), and an introductory text. Volume I is expected out by the spring of 2005. §

• **Friday, June 17, 10:30am, A Duo Recital, Goethe Institute, Boston.**

Sally Fortino, clavichord, and **Laura Marshall**, soprano: "Lieder beym Clavier zu singen"

David Schulenberg, clavichord, and **Mary Oleskiewicz**, flute: C.P.E. Bach performed on Baroque flute and clavichord. The recital will be followed by a buffet reception at the Goethe Institute.

The above events are free & open to the public.

Throughout the week of the festival, the Boston Clavichord Society will have a Clavichord Room on the 24th floor of the Radisson Hotel, where instruments will be exhibited and literature and CDs will be displayed.

Several BCS Friends will perform in official BEMF concerts or in fringe events (for which there may be a charge). We have been informed of the following:

• **Thursday, June 16, 11pm, Jordan Hall:** **Peter Sykes** and two Russian violinists in a program of 18th-century Russian chamber music.

• **Friday, June 17, First Lutheran Church, Boston:** **William Porter** in a day-long exploration of the fantasia in organ music.

• **Friday, June 17, 1pm, Boston Center for Adult Education:** **Henry Lebedinsky** with Saltarello in a program entitled "The Birth of the Cosmopolitan: German Music from the Stylus Phantasticus to the Galant."

• **Friday, June 17, 3pm, First & Second Church, Boston:** **Carol lei Breckenridge** in a program including music of C.P.E. Bach and "An das Klavier" poetry. §

Andrus Madsen at Spring House *Peter Sykes*

On February 26, Andrus Madsen, a BCS Friend and graduate of the Eastman School of Music, played a recital at Spring House, a retirement community in Jamaica Plain, MA. The recital was arranged by the BCS with the encouragement of Michael Bernard, a BCS Friend, who is currently a resident there. Andrus sensitively performed music directly or indirectly inspired by the French lutenists—works of Gaultier, Froberger, Louis Couperin, J.S. Bach, and S.L. Weiss—on a harpsichord and a clavichord before an appreciative audience. §

TANGENTS

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(*Brauchli, continued from p.1*)
instrument, principally, however, because its maintenance is much easier than that of the other keyboard instruments.

In a treatise written in 1626, the famous Spanish organist and composer Francisco Correa de Arauxo, makes the first mention of the adaptation of the ornamentation of a work to the instrument, clavichord or organ. He wrote: "And note that when the right hand starts with only one voice, it must do it with the third finger, and with a mordent on the organ, and trill on the clavichord."

In Spain again, but around one hundred years after Correa de Arauxo, Fray Pablo Nassarre, a blind organist, published a treatise of more than a thousand pages, *Escuela musica*, which covers all aspects of music. (The treatise was published in 1724, but probably had already been conceived during the last decades of the seventeenth century.) Nassarre asserts once again that the clavichord is an indispensable prerequisite to the study of the organ: "Of all stringed keyboard instruments invented by human ingenuity the clavichord is the most essential and useful, though not one of the most resonant ... it is essential, because those who learn to play the organ could not learn so well without it; the organ is suited to churches, but not to home practice. It is an instrument which requires much agility of the fingers, therefore demanding

much study and practice, and for this the clavichord is more suited, as it is simpler and has less sound, thus not irritating those who hear it, but having enough sound so that those who study can understand what they are doing."

The thought that the clavichord was the ideal for studying other louder keyboard instruments, as it would not disturb anybody, had already been expressed in the

“Of all stringed
keyboard instruments
invented by human
ingenuity,
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the most essential
and useful...”

Traité des Instruments de Musique by Pierre Trichet, published in about 1640, where the author mentioned the clavichord as an excellent instrument for novices "who are beginning to practice the chords of instrumental music and to train their hands on the keyboard so that they might later play with more confidence and suppleness

on the harpsichord, spinet or organ ... for who does not know those who are jealous of their honor and are ashamed to fail too often when playing or keeping the beat? This is why apprentices are well at ease having an instrument which does not make much noise, so that one cannot easily perceive and notice their mistakes."*

To be continued in the fall 2005 issue of Tangents with quotations from 18th century treatises on the usefulness of clavichord study for playing other keyboards, including the pianoforte, and some concluding reflections on the particular qualities of the instrument that give it this important function.

Editor's Note:

*George Bernard Shaw, writing more than 250 years later, noted that "clavichord music is mostly of that sort in which every wrong note or rough touch betrays itself at once, unlike your modern thickly harmonized pieces, in which one fistful of notes is as good as another when a grandiose chord is wanted." He also stated, however: "There is no sort of doubt that the pianoforte must succumb sooner or later to the overwhelming objection that you can hear it next door." (*The World*, London, 11 January 1893.) In short, wrong notes or a wrong touch on a clavichord are obvious to the player and contribute to the development of a sensitive technique. They are not a plague to the next door neighbors! §

Irwin-Brandon & Sykes Present Benefit Recital

On March 20, Margaret Irwin-Brandon, a member of the BCS Advisory Board, and Peter Sykes presented a house concert in Newton, MA, to thank Boston-area contributors to a fund to support the BCS' activities at BEMF this year (see p. 2). The recital was played on a resonant 63-note unfretted clavichord (after Hass) made in 1972 by Robert Goble, which Peter Sykes recently acquired from Howard Schott. The recital was followed by a buffet reception. Their program follows. The second and third pieces were played by Irwin-Brandon, the fourth and fifth by Sykes and Mozart's four-hand pieces by both. §

W. A. Mozart 1756-1791
Sonata in C Major, K. 19d
(*Allegro*)
Minuetto
Rondeau - Allegretto

Manuel Blasco de Nebra (? - 1787)
Sonata V (published c. 1780)
Adagio
Presto

Giovanni Benedetto Platti (1690-1763)
Sonata VIII
Fantasia
Adagio
Allegro

Timothy Broege b. 1947
Fantasia for solo clavichord

Josef Haydn 1732-1809
Sonata in B-Flat Major, Hob. XVI:42
Allegro
Allegro di molto

W. A. Mozart
Sonata in F Major, K. 497
Adagio
Allegro di molto
Andante
Allegro

A Very Small Dolmetsch

Dolmetsch Portable Clavichord No. 107

Tim Hamilton

Tim Hamilton is a restorer and conservator of keyboard instruments in Boston.

A portable 4-octave + 2 notes clavichord so small that it could go in the trunk of even the smallest car or with a decent case be checked with the rest of your luggage for a flight! When Beverly Woodward sent her small Dolmetsch clavichord in for repair recently I thought that, as these are rare on this side of the Atlantic, a description of the instrument might be interesting. This is not the better known and larger 4-octave + 2 notes instrument designed by Dolmetsch when at Gaveau in Paris before World War I, but a smaller, more portable instrument

(with a length of less than 34"). This one, dated 1933 on the name board and elsewhere, seems to have been the only type of fretted clavichord he made. So far, neither Beverly nor I have had much luck finding out how many were made,

exactly when and for how long. There is a passing reference to them in an article by Carl Dolmetsch* but at the present time we have found little else. Peter Bavington informs us that he overhauled such an instrument in 1998. It was signed "Arnold Dolmetsch, 1940," the year that Dolmetsch died. Dr. Brian Blood of the Dolmetsch family and Dolmetsch Musical Instruments thinks that the instrument made for Lord Berners, which fit into a panel in the back of his Rolls Royce, may have been one of this model.**

The serial number does not provide much information. According to Dr. Blood, the numbers for Dolmetsch's later keyboard instruments (to be distinguished from the large models he made early in his career) were not broken up. The serial numbers cover all early keyboard instruments in this later phase. These numbers can be misleading in any case, as instrument makers have been known to start their numbering anywhere from 1 to 100, especially the latter, which could mean that no. 107 was just the eighth in the series.

Dimensions: length 859mm [33¾"], width 289mm [11½"], depth 101mm [4"]. Keyboard: The compass is C to d", 51 keys, 4 octaves and 2 notes. The key levers are carved lime wood with ebony accidentals and boxwood naturals. The naturals, measured from the tips of the accidentals, are short: 32mm [1¼"]; the accidentals are 49mm [2"]. The octave span is slightly narrow at 158 mm. The keys are bushed at the balance pin with bushing cloth somewhat in the manner of a Viennese Giraffe piano and bushed in their yoke at the tails. The tails are guided with brass pins about 3 mm in diameter. The proportions of the action are C: 90 mm key front to balance pin, 85 mm balance pin to tangent; d" 101 mm key front to balance pin, 150 mm balance pin to tangent. Perhaps because they are so short, the keys are well weighted with lead

and deeply undercut at the front to improve touch and speed. The balance rail is laminated; the upper layer is beech, the lower is softwood. Tangent thickness is .92 mm throughout. As set up, the depth of touch is 6.5 mm in

the bass lessening to 3 mm in the treble. The top ten notes are fretted in pairs. The majority of the tuning pins are set along the back of the case in a single line; however, as space is limited, sixteen are set at the soundboard end. This arrangement is not ideal, for when stringing the instrument great care must be taken to ensure that the two strings in each pair are at the same height on the tuning pin so that the tangent strikes each string equally. The oblong tuning pins are smaller than the common zither pin used on many modern instruments, although stouter than an authentic style harpsichord pin. Each pair of tuning pins is lettered with its note.

Case: The case is solid English or French walnut, a traditional wood for keyboard instruments in 18th century Europe, although less common for clavichords. The

case sides are 7.85 mm thick with reinforced mitered corners. The baseboard is mahogany 7.85 mm thick with the grain running front to back. The base under the soundboard is left open. The case is plain with just a simple molding around the lower edge. The lid is a plain jointed plank with the same type of molding around its edge. There is a narrow ledge glued on the underside of the lid, which when the lid is fully opened and leaning away from the player forms a music rest. There is also a prop stick. The hitch pin rail and wrest plank are laminated beech on softwood. The stand is plain square section walnut. The case appears to be finished with linseed oil, at this time Dolmetsch's preferred finish and well suited to walnut.

Soundboard: The soundboard wood is quarter sawn spruce, 2.5 mm thick where measurable. The bridge is beech. There were originally two soundboard ribs but one has been removed, I think deliberately, possibly to give the board a rounder freer sound; with the second rib in place the sound might be more astringent. I did not replace it. The soundboard is lightly decorated.

The stringing scale is very short which allows for low tension brass strings in the tenor and treble section. The scale is so short in fact, that Peter Bavington—and I am inclined to agree with him—thinks it possible that the instrument was tuned to a higher pitch than A440. The wound strings in the bass are traditional Dolmetsch pattern. He liked to use close wound strings wherever possible, or at least closely wound open strings. With closely wound open

strings, each turn of the wrapping wire does not quite touch the next, so that less wire of a slightly thicker gauge can be used than with close wound strings. Nevertheless in this case, there are as many as fifty or sixty turns per inch which required using wrapping wire as thin as .10 mm [about .004"]. This would have made difficulties for the string maker. I think that if the case were a little more robust, I would be inclined to try heavier strings with wider spaced windings in the bass. There is a wooden stop rail over the after length of the strings to limit key travel. I have included a stringing report below.

As an instrument, it is decently though



Dolmetsch Portable Clavichord No. 107



Detail of soundboard area

lightly constructed, the wood well chosen, the joints nicely made and, after more than seventy years, still in playing condition. However instruments made in Europe are set up for a more stable climate. In England there is greater humidity in winter and less in summer and the wood is not dried to the degree needed in this part of the USA. When instruments find their way here there are often shrinkage and warping problems with the consequent weakening of the glue joints, which can let the case twist further than is normal for a clavichord and also cause tuning problems. On this clavichord, the case has lifted 12 mm, and the baseboard joints have loosened, allowing the string tension to move the frame. It is also no longer quite rectangular having become something of a parallelogram. This movement has swung

the tails of the key levers a little to the right giving a stepped appearance to the key fronts. There is not a lot of room in the key well and the movement of the case, combined with the not very positive method of key bushing at the balance rail, allows the cranked keys, especially in the treble where space is especially tight, to roll slightly and strike a neighboring string. Because of this, care must be taken to ensure the tangents are exactly in the right place. Other damage included some cracks to the wrest plank and hitch plank, loose tangents, and cracked keys. The lid has also warped.

The instrument has surprisingly good volume with a taut slightly hard tone, as one would expect from such a small soundboard, and would not be out of place in a small recital locale.

*Carl Dolmetsch, "Plus fait douce que violence": Arnold Dolmetsch and the Clavichord," *The Consort: European Journal of Early Music*, vol. 52. no. 2, 1996, p.101.

**See Paul Monsky, "Lord Berners," *The Boston Clavichord Society Newsletter*, no. 7, fall, 1999, p. 3. "Many stories were told of him [Berners]—that he dyed the pigeons on his estate various hues; that he had a grand piano in the back of his Rolls Royce. The first was true. As for the second, in fact he had in the back seat a small 4 ½ octave clavichord, adorned with flowers and butterflies, that had been made by Arnold Dolmetsch." It is likely that in fact the span of the clavichord was 4 octaves + 2 notes, not 4 ½ octaves. §

Arnold Dolmetsch portable clavichord 4+ octaves, C to d, No107. Metric stringing list.

Tensions are approximate. All over wound strings are close wound except notes d# through f#. Their pitch is about 56 turns per inch

Note	Diameter in mm.	Length in mm.	Material	Tension in kg	Note	Diameter in mm.	Length in mm.	Material	Tension in kg
C	in .40 / out.21*	741	Steel / Copper	2.3	e'	.27	305	Brass	2.0
C#	.36 / .19	729	„	2.0	f	.25	288	„	1.7
D	.36 / .19	716	„	2.2	f#	.25	273	„	1.7
D#	.30 / .19	702	„	2.2	g	.25	257	„	1.7
E	.30 / .19	689	„	2.4	g#	.25	243	„	1.7
F	.30 / .19	676	„	2.5	a	.25	230	„	1.7
F#	.27 / .17	662	„	2.2	a#	.25	216	„	1.7
G	.27 / .17	648	„	2.4	b	.25	204	„	1.7
G#	.27 / .17	634	„	2.5	c''	.25	193	„	1.7
A	.27 / .17	620	„	2.7	c#	.25	181	„	1.7
A#	.25 / .17	606	Steel / Brass	2.9	d	.25	172	„	1.7
B	.25 / .15	591	„	2.7	d#	.25	161	„	1.7
c	.25 / .15	575	„	2.7	e	.25	151	„	1.7
c#	.25 / .15	558	„	2.8	f	.25	143	„	1.7
d	.25 / .15	544	„	2.8	f#	.25	136	„	1.7
d#	.25 / .15	529	„	2.8	g	.25	129	„	1.7
e	.25 / .15	515	„	2.9	g#	.25	121	„	1.7
f	.25 / .14	496	„	2.8	a	.25	112	„	1.6
f#	.25 / .14	481	„	2.9	a#	.25	106	„	1.6
g	.36	466	Brass	2.9	b	.25	101	„	1.7
g#	.36	451	„	3.1	c'''	.25	96	„	1.7
a	.33	434	„	2.7	c#	.25	90	„	1.7
a#	.33	418	„	2.8	d	.25	85	„	1.7
b	.30	402	„	2.4					
c'	.30	386	„	2.5					
c#	.30	365	„	2.5					
d	.27	345	„	2.0					
d#	.27	324	„	2.0					

*in= core wire; out= wrapping wire

Schulenberg & Oleskiewicz in a Duo Recital

Peter Sykes

Peter Sykes plays nearly all keyboards and is president of the Boston Clavichord Society

On October 24 the Boston Clavichord Society presented David Schulenberg and Mary Oleskiewicz in a duo recital in the Hastings Room of First Church in Cambridge. The program, entitled "From Leipzig to Hamburg" featured works by Johann Sebastian, Wilhelm Friedemann, and Carl Philipp Emanuel Bach performed on the clavichord and baroque flute. The

concert made a persuasive case for this particular instrument configuration as a medium for intimate chamber music. The balance between the instruments was very well handled; the dynamic and expressive flexibility of the performance was impressive. The room was a well sized and sited location for a clavichord concert (far from noisy streets!). This duo will perform again under the auspices of the BCS at the Boston Early Music Festival (see "The BCS at BEMF, 2005," p.2). §



David Schulenberg and Mary Oleskiewicz

(Tannenberg, continued from p. 1)

the instrument sits on by an overhanging lower edge molding, a rib running roughly parallel with the bridge rather than under it, a flat-topped, double-pinned bridge, an elevated balance rail, and what appears to be a soundpost coupling the soundboard and baseboard.



The Tannenberg clavichord

Courtesy of the Moravian Historical Society

Encompassing C-d3, the now unstrung clavichord seems originally to have been strung with brass throughout, as a loop of fine brass wire and many larger-gauge brass strings or coils were found with it. Many of these structural features are shared by two unsigned American clavichords, in the Smithsonian Institution and the Schubert Club of St. Paul, Minnesota, which can now be associated with Tannenberg's circle if not attributed to him directly.

The 1761 instrument is now the oldest known American clavichord, as well as Tannenberg's oldest extant instrument of any kind and the only one now bearing his signature. Surprisingly, Tannenberg built it while still working with his mentor, Johann Gottlob Clemm, who died the following year. Thus this clavichord seems to represent an effort toward independence at a time when Bethlehem was still gov-

erned by the communal General Economy that limited individual enterprise. Using as its basis the English foot rather than a German unit of measure, this clavichord offers potential evidence for the temperament used by Tannenberg before he turned to equal temperament as advocated by the German theorist Georg Andreas Sorge, whose treatise Tannenberg obtained in 1764. The possibility that he intended this clavichord's unique design as an acoustical experiment deserves consideration, and its musical properties remain to be tested through construction of a replica, since the original should not be restored.

I have long been engaged in a study of Tannenberg's stringed keyboard instruments as revealed by documentary sources. Tannenberg is known to have built clavichords, harpsichords, and possibly pianos,



The twin mouseholes

but until this discovery none had been recognized. In comparing the Tannenberg with the Smithsonian's anonymous example, I found that their rack slot positions match exactly except for the lowest unfretted octave, even though most other dimensions and their string scalings differ.

Further study of the St. Paul clavichord is now underway, with formal reports to be delivered later this year at the American Musical Instrument Society's annual meeting in Las Vegas, at the Boston Early Music



The soundboard and coils of brass wire.

Festival under the auspices of the Boston Clavichord Society, and at the International Clavichord Symposium in Magnano, Italy, followed by publication.**

Editor's Notes:

*The largest surviving Tannenberg organ, completed in 1800 for Home Moravian Church in Salem, North Carolina (now Winston-Salem) has recently been restored and rededicated in a recital by Peter Sykes. It is recognized as a masterpiece of international significance.

**An article by Peter Bavington about Libin's discovery appears in the current issue of *The British Clavichord Society Newsletter* (No. 31, Feb. 2005), pp. 23-24. For discussion of the Tannenberg clavichord plans and instructions, see Thomas McGeary, "David Tannenberg and the Clavichord in Eighteenth-Century America," *Organ Year-Book*, 1982 (Vol. XIII). §