Mechanics Hall • Worcester

E. & G.G. Hook • Opus 334 • 1864

The Worcester Organ: A Retrospective

– The Rev. Richard F. Jones, Mechanics Hall Curator and Development Officer 1983-1991

There is an arch adorned with cherubs that has been hidden since 1864 behind the tops of the central façade pipes of the organ in Mechanics Hall. It is an artifact of the seven year period when there was no pipe organ in the Great Hall. In 1857, Mechanics Hall was built to house the activities of the Worcester County Mechanics Association and as a place for the community to gather for lectures, concerts, and social events. Space was created for a pipe organ, but there was no money. Until Ichabod Washburn's gift of $1000 in 1863 spurred his fellow industrialists to give the funds necessary to build and install an organ, twisted Solomonic columns and false façade pipes filled the space where the organ is now. (The columns exist and are in storage at the Worcester Historical Museum.)

A pipe organ was a standard accoutrement of large concert halls in nineteenth century America. Orchestral concerts were rare. In Worcester, as Dvorak lamented when he conducted here, orchestras were heard only one week each autumn when the Worcester Music Festival convened. Pipe organs filled the gap. With their many different sounds, they allowed for the performance of music people would otherwise be unable to hear.

It is probably no coincidence that funding for an organ in Mechanics Hall was made available the same year the magnificent Walcker organ was installed in the Boston Music Hall. Worcester can be justly proud of its contributions to American life, from the first National Women's Rights Convention to the suits that astronauts donned for space flights. It was an important goal of the Mechanics Association that every detail in the Hall, including the pipe organ, be American made.

So the Mechanics Association commissioned the finest American organ builders at the time, E. and G.G. Hook, to create the largest pipe organ that had ever been constructed in the United States. The choice of an American firm was significant. At the organ's dedication, its "superiority over all other organs in this country" was claimed, a poke at Boston and its foreign-built Walcker instrument. The Hook brothers were probably eager to show what their firm was capable of as well, and provided the instrument essentially at cost.

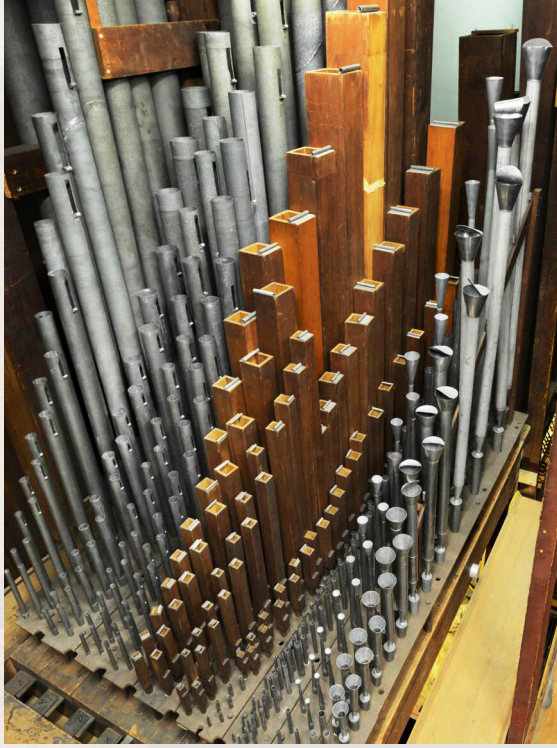
However, the Hooks were not pleased with the result. The records of the Mechanics Association recount the battle they had with the Association's board of directors. Aware that the sound and impact of the organ would be compromised by its chambered location, they pleaded with the board to bring the organ's Great and Solo divisions out into the concert hall, with the Choir and Pedal projecting outward as well from twin cases where the portraits of Lincoln and Washington are today.

Initially, the Hall's remarkable architect, Elbridge Boyden, who designed the current organ façade, sided with the board. Eventually, the Hooks won him over, and Boyden pressed their case. (Boyden deserves a separate essay. Half a century before Boston's Symphony Hall was constructed, Boyden employed all the elements of design that made Symphony Hall a landmark. He also created ventilation systems that moistened the air in winter and cooled it in summer.)

The board of directors did not budge. The Hooks' scheme would cost too much. The organ remained deep in its chamber, the majestic sound its builders intended forever muffled. As significant as the organ in Mechanics Hall was, the Hooks never promoted it.

Nonetheless, Worcester loved the organ, dubbed "The Worcester Organ," because of the many contributions toward its installation from citizens of the city. Following its dedication in October 1864, B. D. Allen, later to be a founding member of the American Guild of Organists, was named the Hall's primary organist. He instituted a series of free concerts for schoolchildren that were the inspiration of the "Brown Bag Concerts" conceived a hundred years later. Those who funded the organ in 1863 had made free concerts a condition of their gift.

For five or six years after the organ was installed, it was the centerpiece of concert after concert. By the 1870s, though, "The Worcester Organ" had fallen into disuse, and was heard primarily at the week-long music festivals. In 1889, and with minimal notice, the Mechanics Association asked George S. Hutchings, formerly of Hook and Hastings, to perform major repairs and



give the instrument a thorough cleaning in advance of that year's Music Festival. This work included repitching the pipes from "Boston pitch" A=449 (one note sharp) to A=435, just flat of today's A=440 worldwide standard.

In 1914, Hook and Hastings made significant alterations and, nine years later, George W. Reed electrified the action and introduced other "improvements." The pattern of neglect and last-minute refurbishment continued until the Music Festival moved to the new Memorial Auditorium in 1933.

In the ensuing forty years, the organ was hardly ever heard, George Faxon presenting the only recital of note in 1961. Mechanics Hall relied on wrestling matches and roller skating to pay the bills. I remember coming to the hall to roller skate when I was in high school. The building, frankly, smelled like a rest room in a bus station, and decades of dust and dirt obscured the glories of the Great Hall. There was a proposal to tear down Mechanics Hall, and replace it with a parking lot. It nearly succeeded.

Enter Julie Chase Fuller, a popular local radio show host, who had become president of the Mechanics Association. She saw the awareness and appreciation of history engendered by the nation's bicentennial as an opportunity and, with the Worcester Heritage Society and Richard C. Steele of the *Telegram & Gazette*, began a campaign to restore Mechanics Hall. No one was better than Julie Chase Fuller at raising funds from rich and important people. Mrs. Fuller wanted the organ restored, too, and enlisted the help of the Worcester Chapter, American Guild of Organists.

Bids were received. Andover Organ Company, which had restored more Hook organs than anyone else, submitted the lowest bid. However, because Fritz Noack proposed to re-create the instrument as it was in 1864, the contract was awarded to Noack Organ Co. Stephen Long, chair of the organ restoration committee, led his committee to spearhead the oversight and rededication concert celebrations.

As was the case when the Hall was built, there wasn't enough money. Mechanics Hall, restored and resplendent, reopened in 1977. The organ was silent. By 1980, funding was in place, and Noack went to work. On September 25 and 26, 1982, the organ was re-dedicated in two concerts utilizing only Worcester musicians, echoing the parochial pride of 1864. The concerts played to packed houses and generated a memorable headline in the newspaper: "*Mechanics Hall Organ Rededicated: Worcester Pride Bursts Forth.*"

Fritz Noack executed a remarkable restoration. A more accurate restoration has probably never occurred. For example, there was no clear photo of the original console. Fritz re-created what he thought had been there. In 1985, I attended a meeting at GAR Hall on Pearl Street. I noticed a photograph of a group of Civil War veterans sitting on the stage of Mechanics Hall. In the center of the photograph was the original console of the Worcester Organ. This photograph is the only one of the original console close-up in existence. Fritz had gotten everything right. On the basis of research and intuition, he re-created the console exactly as it was, down to the last stop-knob and combination pedal.

In re-creating the original action, Fritz also unintentionally restored the insufficiencies of the instrument. Despite the use of the Barker Lever to assist the Great division, the action was heavy, and, in some respects, almost unplayable. Those who played the organ between 1982 and 1989 will remember the Herculean effort required to play on the Swell and the Choir, particularly when they were coupled. The restored double-shutters on the Swell severely limited its effectiveness. The same complaints were voiced in the nineteenth century.

The dry heat of the restored Mechanics Hall didn't help. Elbridge Boyden had originally installed an innovative system to humidify the Hall. His successors in the 1970s were not as prescient. The air was so dry, the keyboards of the organ froze during the heating season, and the hundreds of leather nuts that regulated its action shriveled. The soundboard of the Hall's previous Steinway also cracked.

The Worcester Organ was busy in the years following its restoration. Between 1983 and 1987, thirteen free "Brown Bag" organ recitals held on Wednesdays at noon attracted a thousand people for each concert, making the series one of the most popular organ concerts in the United States. The Fuller International Organ Festival in 1985 attracted attendees

from more than a dozen countries. Simon Preston appeared at a Worcester Music Festival concert, and a formal evening series presented Peter Hurford and David Higgs among other luminaries. An organ education program was designed in cooperation with the Worcester Public Schools.

Because it was my job to promote the organ as well as oversee its maintenance, I did make some changes. The first was to remove the inner set of swell shades. The second was to try a new seating configuration for recitals. I left as much of the center part of the Mechanics Hall floor as possible empty to allow for more reflective surface.

As the organ approached its 125th anniversary in 1989, I oversaw important changes. The care of the organ was transferred to the Andover Organ Company, and Robert C. Newton in particular. No one knew Hook organs as well as Bob, or had restored as many. Straightaway, Bob replaced most of the leather nuts on the Barker Lever.

Bob installed relief pallets in the Hook style on the Swell and Choir. Relief pallets are tiny pneumatic assists for each key. The Hooks had begun to use them shortly after they built the Mechanics Hall organ.

Just this month through a generous grant from the Fuller Foundation, a second blower (electric air pump supplying wind pressure for the pipes) was added so that the organ's pitch and volume would not sag when many notes and many stops were used for a chord held more than a few seconds. This second wind for the organ resolves one of the perennial problems with supplying it enough air to power all its pipes.

We are all grateful that Mechanics Hall's board's commitment and prudent management has ensured the preservation of the Hall and its organ, but the heavy rental schedule that keeps the Hall afloat also limits time available for organ rehearsal and performance.

Nonetheless, when the organ is heard, the sound is unique, not perhaps the sound the Hooks originally desired, but a sound that has come down to us one hundred and fifty years later almost exactly as it was, and that is eminently worth celebrating. The Worcester Organ Concert Series was begun in 2007 to showcase the instrument in concert, and the organ is used at other times during the year at graduation ceremonies, memorial services, and wedding ceremonies and it is a focal point of the Concerts for Kids: *Introduction to American Composers* concert program. It's not able to be used every week for sure, but its use is commendable for a non-church organ and for continuing to offer free concerts for the public.

A final note: The one thing the organ does best is the thing it has done least. In recordings, the organ is everything the Hooks wanted and more. But only a handful of recordings have featured the instrument. My hope, on this 150th anniversary, is that the extraordinary sounds of this organ, among the finest the Hooks ever produced, will be captured and shared with a wider audience. They deserve to be heard.

RFJ

2014 REDEDICATION PROGRAM NOTES

This afternoon's program re-creates the atmosphere of a nineteenth century concert in Mechanics Hall. It is an eclectic mix of repertoire with several transcriptions. The audience will even be invited to participate by singing "The Battle Hymn of the Republic." At the organ's dedication, the audience sang "America." Appropriately, the organ is joined by members of the Worcester Polytechnic Institute Brass Ensemble (Hook organ benefactor Ichabod Washburn was a founder of WPI).

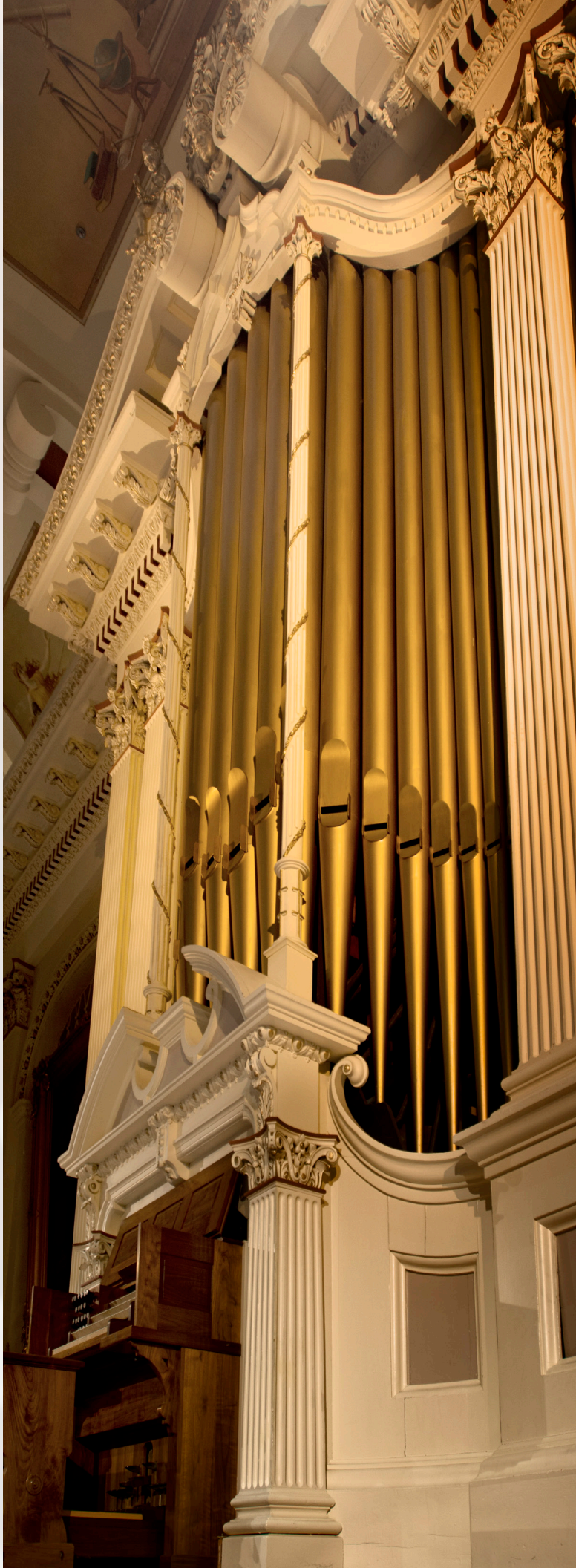
The concert begins with Gigout's "Grand Choeur et Dialogué," a majestic conversation between organ and brass. Bach's "Toccata in F Major," BWV 540 follows. This is the only work at today's concert that was heard at the 1864 dedication and at the rededication in 1982, when Ronald Stalford won the "Fred Astaire Award" from *Worcester Magazine* for tackling the bravura pedal passages with such ease. The Worcester Organ was the first American-built organ on which the work could be played, thanks to its extended pedal compass.

Two arrangements of works by Mussorgsky and Rimsky-Korsakov provide the sort of fireworks that would have delighted Victorian audiences. One of the most commented-upon aspects of the 1864 concert was the introduction of the "Vox Humana" stop in an improvisation and this is a feature of the 150th anniversary concert.

Dudley Buck and Alexandre Guilmant were two of the most popular organ recitalists and composers of the 1800s. Although Guilmant travelled widely in America, he never appeared in Worcester. However, his engaging *First Symphony for Organ and Orchestra* received its American premiere at a Worcester Music Festival concert in 1882. Dudley Buck did perform and conduct in Mechanics Hall in 1873. Then, he played his "Grand Sonata in E Flat," featuring "Hail Columbia." Today, we hear variations on another patriotic tune, "The Star Spangled Banner," dedicated to Eugene Thayer, one of the organists from the dedicatory concert.

Finally, we are honored that the premiere of a new work, a set of variations of Handel's "Harmonious Blacksmith" theme will be heard today, having been composed especially for this concert.

RFJ



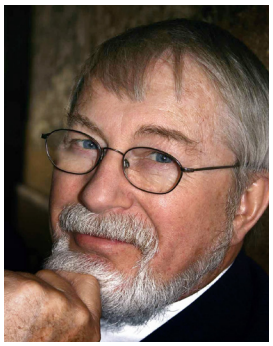
Timeline History of Mechanics Hall & the Hook Organ

Mechanics Hall **Building • Events • Hook**		*Historical Events* **Worcester • US & World**
	1722	Worcester Incorporated
Worcester County Mechanics Association established	**1842**	
	1843	College of the Holy Cross established
	1848	Worcester becomes a city; Free Soil anti-slavery party founded
	1850	First National Woman's Rights Convention held in Worcester
	1855	Steam calliope invented by Joshua C Stoddard
	1855	Eli Thayer founds Oread Institute, first four- year college for women
Mechanics Hall Dedicated	**1857**	
First Worcester Music Festival	1858	
Thoreau lecture "A Plea for Captain Brown"	1859	
	1861	American Civil War
Hook Organ Installed Op. 334	**1864**	Worcester YMCA founded
	1865	WPI founded
Charles Dickens speaks at MH	1868	Worcester population: 118,000
	1869	1st trans-continental railroad completed
Hook Brothers retire	**1871**	
	1880	Candlepin bowling invented in Worcester
	1887	Clark Univeristy founded
Dudley Buck soloist at the Worc. Music Festival	1895	
	1898	Spanish-American War
	1899	American Guild of Organists founded
Geroge Hutchings lowers pitch to A-435	**1901**	Assembly-line manufacturing concept introduced
	1904	Assumption College founded
	1908	First Model T Ford produced
	1909	Sigmund Freud lectures at Clark
Hook Organ "electrified"	**1910**	
	1914	WWI
	1920	Women's right to vote - 19th Amendment
	1926	Robert Goddard liquid fuel rocket first successful launch
	1938	NE Hurricane: unpredicted Category 5
	1941	WWII
	1947	Worcester Orchestra established
	1949	Worcester Chapter AGO founded
	1950	Korean War
Women Members in Mechanics Association	1953	June F4 Tornado: 94 killed
	1955	Vietnam War (1964)
	1963	Organ Historical Society founded; Harvey Ball: Smiley Face
Mech Hall on National Register of Historic Places	1973	
Hook Organ Restoration Committee formed	**1975**	
Mech Hall re-dedicated; Phase I restoration completed	1977	
Boyden Salon addition	1978	
Hook Organ restoration celebration Sept 25-26	**1982**	
Brown Bag Concert Series began	**1983**	
Fuller International Organ Festival	**1985**	
125th Organ Celebration Concert; Fuller Wing	**1989**	
Washburn Hall restored	1991	
	1999	Worcester Cold Storage fire kills 6 firemen
Promenade refurbished	2000	
Façade restored	2002	
Hook Organ cleaned/refurbished	**2013**	Worcester Population 182,544
Hook 150th Anniversary - *Year of the Organ*	**2014**	

BEHIND THE FAÇADE

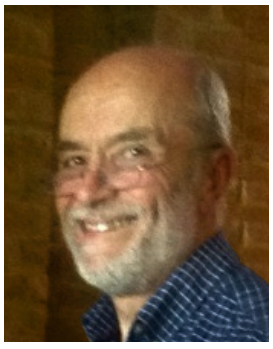
Elias and George G. Hook, sons of a prominent Salem cabinetmaker, were among a small group of gifted young craftsmen who apprenticed in the 1820s with William M. Goodrich, considered the founder of the organ-building industry in Boston. George built the first organ in 1827 (still extant in Salem's Peabody-Essex Museum) and Elias built his first soon after. By 1829 they had formed a partnership and were building church and chamber organs, probably in their father's workshop. In 1832 they moved to a larger workshop in Boston and a year later built their first 3-manual organ. By the 1840s their work could be found in all the New England states as well as New York and Pennsylvania, and by the 1850s in the South and Midwest as well. In 1854 they moved from their original workshop to a large new factory with steam-powered machinery in the Roxbury Crossing area of Boston, allowing an increase in the number of instruments built per year. Although the Hook firm by this time had some worthy competitors, they remained for several decades the leading organ-building firm in the country, and organs of all sizes, from small one-manual organs for country churches to instruments for large churches, concert halls and cathedrals in urban areas. In the 1860s, American organists who had studied in Europe began to request newer tonal directions, and the Hooks complied with the introduction of greater variety in strings, flutes and reeds, while maintaining the high quality of their well-balanced Diapason choruses. Mechanically they were more conservative, relying on well-designed traditional windchests and action components. Francis Hastings had joined the firm as an apprentice, but his talents soon raised him to greater responsibility in the firm, and in 1871 the aging Hook brothers made him a full partner under the name of E. & G. G. Hook & Hastings. Under his direction the company flourished, building some important organs in the 1870s, and when the Hook brothers died in 1880 and 1881, Hastings continued to successfully guide the firm into the innovative 1880s and 1890s, showing good business sense by introducing a line of smaller "catalog" organs while still attracting important commissions for large churches and halls. However, strong competition was increasing, and after Hastings's death in 1916 the Hook & Hastings firm declined, closing its doors in 1936 after building their 2,614th organ.

- Contributed by Barbara Owen



Fritz Noack was born in Germany and apprenticed with Rudolf von Beckerath in Hamburg, later working for Klaus Becker, Ahrend & Brunzema, and, after emigrating to the U.S., for Charles Fisk. He founded the Noack Organ Co. in Andover, MA in 1960, later retrofitting a former schoolhouse in Georgetown, MA for his workshop. His organs can be found throughout the United States, as well as in Iceland and Japan, and one of his earliest large organs was built in 1969 for Trinity Lutheran Church in Worcester. The Mechanics Hall Hook organ was his first major restoration project, but it kindled his interest in 19th century American organbuilding, and he has engaged in other restoration projects since. Fritz Noack is a Fellow of the American Institute of Organ Builders and a past President of the International Society of Organ Builders.

The Andover Organ Company was founded in 1955, and in 1961 established a workshop in Methuen, MA with Leo Constantineau and Robert J. Reich as directors. In 1997 Donald H. Olsen became President, with **Robert Newton** as Tonal Director. While the firm has built a number of new organs, it also specializes in restoration work, with an impressive number of projects in this field, many involving Hook or Hook & Hastings organs. Their experience in this area, especially under the direction of Newton, proved an invaluable asset during their renovation work on the Mechanics Hall organ in 1988.



Stefan Maier, a native of Germany, received his journeyman certificate there in 1987, working for John Brombaugh in Oregon and Yves Cabourdin in France before settling in Massachusetts as an organ technician and rebuilder skilled in all aspects of organ-related woodworking, metalworking, pipe voicing and design. He now services several organs in Boston and vicinity, and has been responsible for the maintenance and tuning of the Mechanics Hall Organ since 1994.

E & G G Hook
Opus 334 1864

52 stops, 64 ranks, 3504 pipes

I Choir (C-a3, 58)

Aeolina & Bourdon	16
Open Diapason	8
Melodia	8
Keraulophon	8
Dulciana	8
Flauto Traverso	4
Violin	4
Picolo	2
Mixture	III
Clarinet	8

II Great (C-a3, 58) *

Open Diapason	16
Open Diapason	8
Stopped Diapason	8
Viola da Gamba	8
Claribella	8
Principal	4
Flute Harmonique	4
Twelfth	2 2/3
Fifteenth	2
Mixture	III
Mixture	V
Trumpet	16
Trumpet	8
Clarion	4

III Swell (C-a3, 58)

Bourdon	16
Open Diapason	8
Stopped Diapason	8
Viol d'Amour	8
Principal	4
Flute Octaviante	4
Violin	4
Twelfth	2 2/3
Fifteenth	2
Mixture	V
Trumpet (tenor C)	16
Cornopean	8
Oboe	8
Clarion	4
Vox Humana	8

IV Solo (C-a3, 58)

Philomela	8
Salicional	8
Hohl Pfeife	4
Picolo	2
Tuba	8
Corno Inglese	8

Couplers

Swell to Great *	8
Swell to Choir	8
Choir to Great *	8
Solo to Great *	8
Choir to Solo	8
Great to Pedale	8
Choir to Pedale	8
Choir to Pedale	4
Swell to Pedale	8
Solo to Pedale	8

Pedale

(C-f1, 30, straight, flat pedalboard)

Open Diapason	16
Violone	16
Bourdon	16
Quinte	10 2/3
Violoncello	8
Flute	8
Posaune	16

** Barker lever assist*

- The tallest pipe is 16 feet tall, and made of Eastern Pine. The largest pipe creates a very low pitch of 32 Hertz.
- In 1864, the cost of the custom-built Hook organ was $8000, equivalent to $5 million today.
- Organs were the most complex large machines invented before the Industrial Revolution. (Clocks were complex small machines.)
- At the time, this was the Hook's largest instrument.
- The Mechanics Hall Hook was built during the Civil War, and the one main shortage was of good old-growth southern pine. Hook's reserve of this material seems to have gotten them through the period when utilized for important components like windchests and smaller wood pipes, but in this organ, as in its near-twin at Immaculate Conception Church in Boston, there is evidence of the use of inferior northern pine with occasional knots in structural parts and in the very largest pedal pipes. Otherwise their use of wood for Pedal Division pipes and certain manual stops was little different from their normal practice. The use of Belgian zinc, begun around 1850 for front pipes and larger interior pipes, seems also not to have been greatly affected, and the majority of their metal pipework larger than 3' continued to be made of tin & lead alloy into the 1870s, when higher-content tin spotted metal was sometimes used.
- New to American organs, the *Vox Humana* (a pipe rank introduced just the year before in Boston's Music Hall organ) caught the fancy of the press and was accorded much praise for its beauty.
- The swell chamber originally had two horizontal sets of swell shades because organists desired a substantial softening effect when the shutters were closed. Unfortunately the Hooks did not account for the sound-blocking casework - we fear the resulting overall low Swell volume (even at open shutters) was not really intended. The second set of shutters therefore has been (reversibly) removed over the years.
- The Swell was praised in Dwight's *Journal* as not only the largest Swell Division outside Europe, but also being easy to play (not to modern standards). While the restorer's intent was to restore all original aspects of the organ as closely as possible, Noack approved the (reversible) keyboard action modifications made by Andover Organs after the 1982 restoration.
- The original (and current) stop list and voicing still remains valid and useful today because the Hooks at the time had refined a sound that was eminently suited to the use with choirs and audience singing, and was clear, warm, never forced, and was effective in the less-reverberant American churches and halls.

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