

THE DIAPASON

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Cook Grand Hall
Indiana Landmarks Center
Indianapolis, Indiana
Cover feature on pages 26–28

Cover feature

**Thomas Prentice Sanborn (1892)
Goulding & Wood, Inc. (2011)
Cook Grand Hall
Indiana Landmarks Center,
Indianapolis, Indiana**

Downtown Indianapolis is home to a number of architecturally distinguished churches from the last quarter of the nineteenth century. In addition to locations within the mile square of the city's planned downtown, a few "sub-urban" churches line the periphery of the historic district. One of the latter is on Central Avenue, one of the city's main conduits, a mile and a half from city center. Built as the Central Avenue Methodist Episcopal Church, the building was the second church to serve the congregation. Following a tornado that severely damaged the original wooden structure, the congregation began planning the current church in 1886. The cornerstone was laid on 12 September 1891, and the building was completed in the following year.

Central Avenue Methodist Church continued to grow in the early part of the twentieth century, and by the 1920s it was the largest Methodist congregation in the state of Indiana. Accordingly, it played a large role in local Methodism, and two of its pastors later became presidents of DePauw University in nearby Greencastle, Indiana. Although the changing demographics of the neighborhood brought a steady decline in membership in the second half of the twentieth century, the striking architecture of the building and the ardent commitment of the membership maintained the church as an important institution in downtown Indianapolis.

The church interior follows the Auditorium Plan popular in mainline Protestant churches in the last quarter of the nineteenth century. The original intent of this architectural design was providing a speaker with unobstructed visual and aural access to a large number of people. The sanctuary achieves this admirably; even without electronic amplification, a speaker in the pulpit can be heard clearly throughout the 1,300-seat room. Curved walls, a rigid dome ceiling, and avoidance of absorptive material all contribute to the efficacy of the acoustics for this purpose. The room is then finished in an appropriate and aesthetically pleasing manner, with graceful carved elements in the chancel furnishings and pews and elegant stained glass windows. The organ, which stood behind the pulpit, shares the most prominent position in the room, visually and acoustically. Although the room is clearly designed for worship in the mainline, non-liturgical Protestant tradition, it also supports musical performance involving the pipe organ.

The pipe organ was present at the dedication of the building in 1892, with indications that the instrument was new rather than retained from the previous building. The prior church building held an organ built by William H. Clarke & Co. of Indianapolis, and this organ had been relocated there from another house of worship. The organ in the new 1892 church was misattributed to Clarke for many years, and identification of the builder was further clouded by the fact that after less than thirty years of service, the organ's mechanics were significantly altered. Any builder's plate or other placard naming the builder seems not to have survived this project. Several identifications within the organ led conclusively to identifying the builder as Thomas Prentice Sanborn.

Sanborn worked as the shop foreman for William Clarke, and it makes sense that he would have been familiar with the church. Unfortunately, little is known about Sanborn other than the fact that he did go on to work under his own name at a shop on Massachusetts Avenue, the same address of Goulding & Wood. It is unclear how many organs he built after he left Clarke, and only one other extant instrument is known to be by him. Sanborn did sign many of the pipes in the organ, either with his full name or his



Cook Grand Hall organ, Indiana Landmarks Center (courtesy Indiana Landmarks)



Finished console (courtesy Indiana Landmarks)



Indiana Landmarks Center (copyright © Susan Fleck Photography)

initials, a practice he did not follow on instruments he built with Clarke.

The organ is quite large for its time, and it has many classical elements that were atypical of late-nineteenth century tastes. Both divisions feature complete principal choruses, including mixtures. The Great chorus is based on 16' pitch, and the Swell on 8' pitch. The stoplist includes a wide variety of flutes, both stopped and open, as well as an interesting choice of reed stops. The manual compass is 61 notes, which was quite forward looking, while the Pedal compass is much more typical of its time, with a

27-note span. It is tempting to imagine that Sanborn was eager to make a bold impression with this well-designed and robust organ. Perhaps he even thought of it as a crowning achievement, a testament to his skill, as well as a calling card to attract more customers.

In 1921 the church engaged the Seeburg-Smith Co. of Chicago to modify the mechanics of the organ to employ electrical switching. Justus Percival Seeburg was a Swedish-born piano maker and Frederick W. Smith was an English-born organ builder who apprenticed with Robert Hope-Jones. Their partnership,



Façade pipe stencil shadows (courtesy Goulding & Wood)

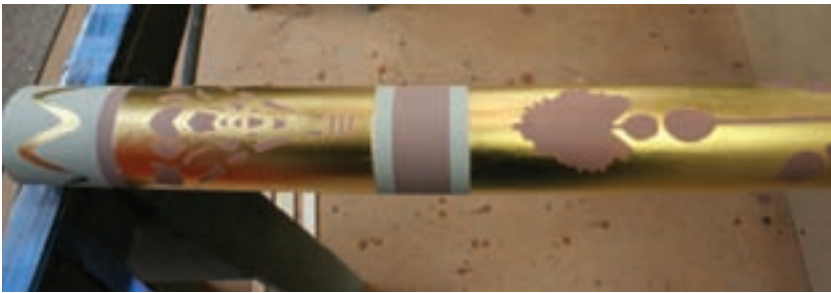


Façade pipes after stripping (courtesy Goulding & Wood)

which lasted from 1916 to 1921, combined Seeburg's skills as a piano builder and Smith's knowledge of contemporary English organ building, equipping them for building and maintaining theatre organs, player pianos, and orchestrons. Evidence of their work on church organs is sparse, and the timing of the Indianapolis project near the dissolution of their firm may imply that they were willing to accept work outside their focus since the firm was in trouble. They removed all of Sanborn's console controls and whatever actuating system interfaced with the windchest mechanics. In their place, they installed a cumbersome electrical switching system and electro-pneumatic action for the chest mechanics. They also installed a new detached console that is not extant. Their work shows a fair degree of competency and care, although the design of their mechanical systems lacked responsiveness, reliability, and sensitivity.

The congregation at Central Avenue UMC dissolved in 2006, and the unused room fell into disrepair until Indiana Landmarks, a historical preservation foundation, took interest in the building. Bloomington, Indiana philanthropists William and Gayle Cook funded a comprehensive restoration project, including completely refurbishing the interior and exterior of the church along with the pipe organ. The building now serves as a civic performance space and as Indiana Landmarks' headquarters. In 2010 Bill Cook and Indiana Landmarks chose Goulding & Wood to carry out a project to bring the organ back into usable condition.

The first step in reviving the organ was to assess its history and current condition. The sole known photographic documentation of the installation prior to any



Façade pipe stencil (courtesy Indiana Landmarks)



Façade toe stencil (courtesy Indiana Landmarks)



Stop jamb left (courtesy Indiana Landmarks)



Stop jamb right (courtesy Indiana Landmarks)

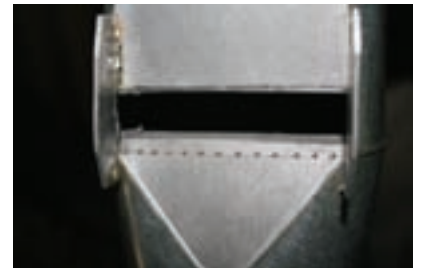
alteration does not depict the console controls with any usable clarity. One of the first questions, then, was the original placement of the console in relation to the organ case. Nineteenth-century organs typically have keydesks *en fenêtre*, that is, placed within the apron of the instrument's front façade case. Given that Thomas Prentice Sanborn was a local builder of limited accomplishment, it is unlikely that he would have had the technological proficiency to engineer a detached mechanical console. On the other hand, the façade paneling in the apron seems to be original. There is no visible sign of alteration in the central panel,

and its carving detail, wood grain, stain, and condition match exactly the panels on either side. If the organ initially had a keydesk *en fenêtre*, the central panel must have been entirely replaced. Given the quality of the first renovation work from 1921, it seems unlikely that the Seeburg-Smith Company had the wood-working resources to match the rest of the paneling with such precision.

If the console controls were remote from the main body of the organ from the beginning, and if the mechanical engineering required of a mechanical action arranged thus would have been beyond Thomas Sanborn, the natural



Sanborn lower lip with signature visible (courtesy Goulding & Wood)



Sanborn lower lip (courtesy Goulding & Wood)

conclusion is that the organ was never purely mechanical. Sanborn is known to have been awarded a U.S. patent No. 465,208 for a valve mechanism that was a mechanical-pneumatic assist, facilitating playing keys that operate large pallet valves from a distance that would otherwise cause heavy action. Such pneumatic assists were somewhat common in the late nineteenth century as organ builders endeavored to make instruments of unprecedented size and in arrangements that would have been impossible for purely mechanical key action. Another pre-electrical innovation to address these issues was tubular pneumatic action, whereby key action is conveyed to the pallet and slider windchests via lead tubes. Due to the complicated and elaborate nature of this action, plus its dependence on lead for semi-flexible tubing, this system remained in use for a very short period.

Although the other known Sanborn organ is a tracker instrument, it is entirely possible that he would have had an awareness of tubular pneumatic organs. Indeed, given the implication of his mechanical leanings as suggested by his procurement of a patent, Sanborn may have had motivation to employ the most recent design technology in such a prominent instrument. Unfortunately, the restoration project yielded no evidence in the organ that either proves or disproves the original actuating mechanism. One can only surmise, given the apparent placement of the console and the size of the organ, that a purely mechanical installation was never in place.

The Seeburg-Smith electro-pneumatic actuating system was obviously a retrofitted attempt to incorporate electricity into the action of the organ. Aside

MIXTURE COMPOSITION

Great:	Rank I	Rank II	Rank III
C1	1 1/3	1	1/2
C# 26	1 1/3	1	2
C# 38	5 1/3	1 1/3	2

Swell:

	Rank I	Rank II	Rank III
C1	2	1 1/3	1
C# 14	2	2 2/3	1
C# 38	2	2 2/3	1 1/3
C 49	4	2 2/3	4

PRINCIPAL SCALES

Rank	Scale (mm)	Mouth Width	Cut-up	Remarks
Gr. 16' Tenoroon	272	1/4	1/4	
Gr. 8' Diapason	163	2/9	2/7	
Gr. 4' Octave	89	1/4	1/4	18 th halving
Gr. 2 2/3' Octave Quint	63	1/4	1/4	
Gr. 2' Super Octave	49	1/4	1/4	
Gr. 1 1/3' Mixture	39	1/4	2/7	
Sw. 8' Violin Diapason	149	1/4	1/4	17 th halving
Sw. 4' Principal	85	1/4	1/4	
Sw. 2' Mixture	53	1/4	1/4	

from telltale signs such as a difference in wood species used, the interface between the Seeburg-Smith mechanics and the Sanborn mechanics was clumsy and contrived. This work was done near the advent of using electricity in organs, and the action has a rudimentary design. The practice of retrofitting an improvised action onto tracker action chests was somewhat common during this period, but rarely was the attempt successful. The tolerances of the added action are so slight, a product of working within

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Thomas Prentice Sanborn (1892) Goulding & Wood, Inc. (2011) Cook Grand Hall Indiana Landmarks Center, Indianapolis, Indiana

GREAT

- 16' Tenoroon
- 8' Diapason
- 8' Melodia
- 8' Doppel Flute
- 8' Gamba
- 8' Dulciana
- 4' Octave
- 4' Concert Flute
- 2 3/4' Octave Quint
- 2' Super Octave
- 1 1/2' Mixture III
- 8' Trumpet
- 8' Clarinet
- Tremulant
- Harp
- Swell to Great

SWELL

- 16' Bourdon Bass (1-12)
- 16' Bourdon Treble (13-61)
- 8' Violin Diapason
- 8' Unison Bass (1-12)
- 8' Gedeckt Treble (13-61)
- 8' Salicional
- 8' Celeste (former Aeoline)
- 4' Principal
- 4' Flute
- 4' Viola
- 2' Flageolet
- 2' Mixture III
- 8' Bassoon (1-12)
- 8' Oboe (13-61)
- 8' Vox Humana
- Tremulant
- Swell Super

PEDAL

- 16' Diapason
- 16' Bourdon
- 8' Cello
- 16' Trombone (new)
- Great to Pedal
- Great to Pedal Super
- Swell to Pedal
- Pedal Combinations on Divisionals

Other remarks

Entire organ on 76 mm wind (except 16' Tenoroon #1-12 and the 16' Trombone, both on 101 mm)
8' Trumpet: 120 mm, German taper shallot
8' Clarinet: 40 mm
8' Oboe: 89 mm
8' Vox Humana: 40 mm
16' Trombone (new): 152 mm scale, metal



2010 façade (courtesy Indiana Landmarks)

a predetermined spacing of the existing chest, that the new actuating systems rarely operate the chest actions properly. It is likely that the Seeburg-Smith mechanics never worked entirely satisfactorily, although they did permit the use of electrical key contacts in the console, thus reducing the weight of the keys for organists. In sum, however, these components compromised the organ's action.

With restoration of the original chest action impossible, Indiana Landmarks elected to replace the windchests. Goulding & Wood's electro-pneumatic slider chest design shares much in common with tubular pneumatic action, in that a traditional chest grid interfaces with remotely actuated pallets and sliders. This choice then restored the instrument to a similar musical condition, as pipes receive wind much as they did originally.

On early site visits a harp stop was discovered, although no written documentation of such an addition has been found. Given the wood species and stain color, it seems that this unit was installed with the other Seeburg-Smith components. Seeburg-Smith built theatre organs and orchestrons, thus the addition of a harp is solidly in line with their main output. While it is clearly not original to the organ, the donor and oversight committee elected to retain this interesting addition. Fellow Indianapolis organ builder Carlton Smith Organ Restorations refurbished the 37-note harp unit.

The pipework throughout the organ was in reasonably good condition, considering the age of the instrument. Most of the pipes were cone tuned, and a century of routine maintenance had taken its toll on the tops of most of the pipes. Surprisingly, most of the scroll-tuned pipes were in very good condition, and in general, the pipes were well built and very well racked.

Work began in February 2010 with the removal of the organ. The building had no heat or power, and the roof was collapsing. The Goulding & Wood crew, led by Mark Goulding, thus worked in heavy winter coats using only flashlights for illumination. In the following year, each pipe was washed, given new tuning sleeves, and regulated by G&W voicer Brandon Woods. The organ was preserved tonally, with only two slight pedal additions. The original specification included no independent pedal reed despite a large manual disposition including four reed stops. Goulding & Wood recommended extending the three original pedal stops from 27 to 30 notes and adding a metal-resonator 16' Trombone built by A. R. Schopp's Sons, Inc.

From the photograph of the church that was taken in 1910, it is clear that the display pipes were originally stenciled. They were subsequently painted a solid gold color on the front half of the pipes, but the original stenciling was still observable along the edges of the newer paint. Conrad Schmitt Studios of Milwaukee, the firm responsible for restoring the sanctuary interior, re-stenciled the pipes and added gold leaf.

Goulding & Wood restored all of the original casework, re-staining and toning the woodwork with only minor repairs required. The crew extended the apron paneling, including the whimsical carved motif, on either side to accommodate room modifications and constructed matching podiums for the platform. Staff draftsman Kurt Ryll designed a new two-manual console patterned after extant consoles from other tubular-pneumatic organs. The terraced layout and richly ornamented cabinet lends a strongly contemporaneous appearance, defying the anachronistic solid-state control system provided by Solid State Organ Systems.

As with all new organs by Goulding & Wood, the entire instrument was set up in the shop for testing and regulation. Given the heavy local interest (the church is less than a half mile from the shop), many visitors stopped in to see the progress, and the shop hosted festive open houses once the organ was playing.

With room renovations complete, Goulding & Wood reinstalled the organ in spring 2011 in time for the facility's grand opening. Many celebratory events marked the entire project, and the organ was featured in many varying roles. Sadly, Bill Cook, the donor whose vision and generous financial backing made the project a reality, passed away days before the dedicatory events. Tributes to the Cook family, all of whom are long-time patrons of historical preservation, took on added significance during the celebrations in the newly renamed Cook Grand Hall.

Although the activity inside the building has changed dramatically over the past century, its place as an anchor to the wider community continues. Cook Grand Hall is now a venue for concerts, recitals, weddings, and other community events. Many functions feature the organ, which contributes its unique and colorful voice as an echo from Indiana's past. Through such public prominence, the instrument is also contributing to the future of the pipe organ in the cultural life of the city.

—Jason Overall

Cover photo: Susan Fleck Photography

New Organs



a case of quarter-sawn white oak with walnut accents and panels of ¼-inch tempered glass. The winding is via a weighted wedge bellows, which may be fed either by a rotary fan blower or by hand pumping in the traditional manner.

The organ was designed with a total of five stops, all divided treble and bass, of which the Twelfth and Seventeenth are currently prepared. The manual naturals are grenadil with arched key fronts; reverse-skunktail sharps are made from ebony flanked by holly. The pedal keys are maple with walnut sharps. The iron drawknobs and bellows handle were fashioned by Louise Pezzi of Philadelphia, Pennsylvania; walnut pipe shades were designed and carved by Morgan Faulds Pike of Gloucester, Massachusetts. The dedicatory recital was played by consultant Kimberly Marshall on August 8, 2010. (More information on the museum is found in the "Here & There" column of this issue; see page 4.)

—Michael P. Rathke

MANUAL

- 8' Stopped Diapason
- 4' Principal
- 2½' Twelfth (prepared)
- 2' Fifteenth
- 1½' Seventeenth (prepared)

PEDAL

Permanently coupled to manual

Photo credit: Emil Dria

**M. P. Rathke, Inc.,
Indianapolis, Indiana
The Musical Instrument Museum,
Phoenix, Arizona**

During autumn 2008 we were contacted by Kimberly Marshall, director of the Arizona State University School of Music, who spoke of a museum that would be unlike any other: the Musical Instrument Museum (MIM), then being built on the northern edge of Phoenix, would showcase instruments of virtually every nation, culture, and musical style. Dr. Marshall had been retained as consultant to the museum in the planning of its pipe organ exhibit, for which she suggested a working chamber organ, with its interior parts completely visible to interested eyes, yet protected from curious hands.

This see-through instrument, dubbed "The Visible Organ" at the time of its commissioning by donors Floyd and Marie Ganassi, is the product of our intriguing and rewarding collaboration with Kimberly Marshall and William DeWalt, MIM's president. It features mechanical key and stop action and is housed in