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VOTTELER TO HOLTKAMP (1855-1934): THE STYLISTIC EVOLUTION
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VOTTELER TO HOLTKAMP (1855-1934): THE STYLISTIC EVOLUTION
OF AN AMERICAN ORGAN BUILDING COMPANY, EXPLAINED

A DOCUMENT APPROVED FOR THE
SCHOOL OF MUSIC

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Zoar United Church of Christ, Zoar, Ohio

Zion Evangelical and Reformed Church, Winesburg, Ohio

First Congregational Church, Rootstown, Ohio

St. Adalbert Church, Berea, Ohio

Lakewood Masonic Temple, Lakewood, Ohio

Notre Dame College, Cleveland, Ohio

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Abstract

The purpose of this study is to examine the early years of the Holtkamp Organ Company and show how the design philosophy of Walter Holtkamp, Sr., had its roots in these early instruments. The study will track the evolution of the Holtkamp Organ Company from its beginning as G. F. Votteler through the time Walter Holtkamp, Sr, assumed total control. The research focuses on understanding of how the organs were designed, what they sounded like, and how they were used by organists, as well as the changes Holtkamp went through on its way to becoming one of the premier organ building firms in the United States during the mid Twentieth Century. Case studies of five representative instruments include discussion of design elements and function, and how both changed over time. Early instruments followed an English Model common at the time,¹ and were based on principal chorus and ensemble blend. Later instruments became more Romantic, focusing on individual colors and gradually abandoning the chorus completely. During the tenure of Walter Holtkamp, Sr, the company came full circle, returning to the chorus and ensemble concept as it became an important player in the Organ Reform Movement. Throughout its history, however, the company kept a basic philosophy of building small, well-designed and crafted instruments that require minimal repairs and remain usable for generations.

¹ Cook, James H. "Organ History, The Nineteenth Century, The United States of America." (<http://faculty.bsc.edu/jhcook/orghist/history/hist065.htm>, accessed May 5, 2014).

Chapter I: Introduction and Background

Introduction

On Sunday, September 11, 1977 at 2:30 in the afternoon an audience assembled in Notre Dame College's Christ the King Chapel to witness an event that had not occurred for at least three years. The chapel pipe organ, silenced by the need for extensive repairs, drew breath once again and made its presence known. Karel Paukert, Musical Arts Director at the Cleveland Museum of Art, presented an organ rededication recital in celebration of the commitment by the college to preserve an important part of its history.²

Built by the firm of Votteler-Holtkamp-Sparling in 1930, the organ was installed within the first year of the school's opening as an integral part of a complete course in church music offered to students.³ Generations of students, staff, and the general public heard the organ at concerts and religious services, and it became firmly rooted in campus life. While it sat quietly, waiting for a chance to fill the room with beautiful music once again, a small electronic instrument had to act as a substitute for the mighty pipe organ.⁴ Salvation came in the form of a matching grant from the Kulas Foundation of Cleveland, Ohio, which made it possible for Notre Dame to pay for the work needed for the organ

² "Rededication Recital of Holtkamp Organ." Notre Dame College, September 11, 1977. Archives Department, Notre Dame College.

³ "New Manual Organ Installed at N.D.C." *Notre Dame News*, October 8, 1929. Archives Department, Notre Dame College.

⁴ "Chapel Organ Silenced Repair Funds Lacking." *Notre Dame News*, October 31, 1975. Archives Department, Notre Dame College.

to sing once again.⁵ The Holtkamp Organ Company performed the work, still in business and more than happy to give one of its masterpieces a second chance at life. The organ is still in use today, a musical gem tucked away in a small college in Northeast Ohio, inspiring and uplifting new generations of listeners.

While seemingly tonally underwhelming by modern standards, the Notre Dame instrument represents an important period in the development of the Holtkamp organ. Modern organists associate the name with the work of Walter Holtkamp, Sr. (1894-1962) and his son, Walter Holtkamp, Jr. (Chick) (b.1929),⁶ who brought the company to fame and made it one of the most visible names in American organ building in the second half of the twentieth century. A story not as well known, however, is that of the early days of the company. Instead of grand concert instruments small country church organs were leaving the factory, and the company had to seek out clients instead of the other way around. While many of these instruments have been lost or altered, there are some that have been carefully preserved, windows of sound, allowing us to look back to an earlier time. Where are these instruments, what do they sound like, how were they used, and how did their development set the stage for the work done by Walter Holtkamp, Sr? How can modern-day organists use this information when playing or overseeing repairs on these instruments? These and other

⁵ "Kulas Foundation Awards Grant For to NDC for repair of pipe organ." *Notre Dame Today*, October, 1976. Archives Department, Notre Dame College.

⁶ Ferguson, John, *Walter Holtkamp, American Organ Builder* (Kent, Ohio: Kent State University Press, 1979) 1,5.

questions will be answered in the course of this study, illustrating the humble beginnings of a true American success story.

Purpose of the Study

The Holtkamp Organ Company is one of the most widely recognized names in organ building in the United States. The purpose of this study is to show how early instruments built by the company laid the foundation for Holtkamp's later development, and without them the company would not have become one of the most prominent names in American organ building by the mid-twentieth century. I will examine the company's beginning by analyzing a cross section of instruments from 1855-1934, starting with the original Votteler organs and ending at the time Walter Holtkamp, Sr. began experimenting with new ideas inspired by the Organ Reform Movement. While tonal ideas changed over time, the basic design philosophy remained the same: relatively simple instruments little emphasis placed on complicated technology, streamlined keydesks and consoles, and mechanical components designed and built to work with minimal problems. This design philosophy led to a style of building that was consistently successful in its approach and execution.

The instruments built between 1855-1934 tell us the tonal and physical design aspects and development of organ building during that period, how the organs were used by organists, and provide the background for later work by Walter Holtkamp, Sr., and his descendants.

Background and General History

The Holtkamp Company history is indebted to the Holtkamp Company Archives,⁷ Chris Holtkamp, John Ferguson,⁸ and William Osborne.⁹

The pipe organ is one of the oldest continuously used instruments in western music, and many existing organs have been in use for centuries. Their size, longevity, and mechanical complexity, require pipe organs to be repaired or rebuilt as mechanical parts wear and damage occurs from environmental changes or other mechanical or structural problems. Often, these repairs lead to changes in the tonal or mechanical specifications of the organs due to the introduction of new technologies or prevailing aesthetic preferences of the time. As time passes and more changes are made, much of the original character of an instrument can be lost, changing perceptions of how they were originally designed and used. To illustrate this idea, let us look at a hypothetical organ built for a small church newly formed in Northeast Ohio in 1850.

Our hypothetical organ is mechanical action with six ranks over one fifty-six note manual and an eighteen note pedalboard: Principal 8, Octave 4, Superoctave 2, Gedeckt 8, Dulciana 8, and Bourdon 16 (pedal). It was purchased from a catalogue and is a basic model suitable for most church needs. The organist is a member of the congregation who has some keyboard training

⁷ "History." Holtkamp Organ Company, http://www.holtkamporgan.com/Pages/Item/200/history_timeline.aspx accessed December 2, 2010).

⁸ Ferguson, John, *Walter Holtkamp, American Organ Builder* (Kent, Ohio: Kent State University Press, 1979).

⁹ Osborne, William, *Music in Ohio*, (Kent, Ohio: Kent State University Press, 2004) 55-57.

and mainly accompanies congregational singing. Thirty years pass and the original organist retires. The church has grown to the point where they can afford to hire a more skilled player. The organ is in need of some repairs and the new organist, frustrated with the limitations of the original instrument, asks for additions. A thirty-note pedal board is added, the Bourdon 16 is replaced with a new Bourdon, and a Vioncello 8 is added to the pedal.

The organ remains this way until 1905, when it is once again in need of repair. A wealthy member of the congregation offers to finance the project, and the organist sees an opportunity to bring the organ into the twentieth century. The instrument is completely rebuilt: tubular pneumatic action replaces the original mechanical action, a swell division is added, pedal ranks are added, and an electric blower replaces the hand pump. The old pedal ranks are completely replaced and the original Dulciana loses its place to a Salicional. Everything is top of the line, and the organist shows off the latest music by the great French organist Louis Vierne.

This organ remains relatively unaltered until 1955 when the church decides to launch a capital campaign, which will include a new sanctuary and updates for the entire music program. The organist, who has just returned to the United States after studying for a year in Germany, decides to throw the entire organ out and replace it with a brand new three manual neo-Baroque instrument suitable for playing Bach, Buxtehude, and other Baroque masters. The new organ ends up keeping the Octave 4 and Superoctave 2, but nothing else. Those ranks are re-voiced and installed in the Positiv division but retain little of their

original character. The other ranks are scrapped and pipes are destroyed or taken as souvenirs. This organ, still bearing the name of the family who donated the money for the 1850 instrument, gets regular maintenance and is in good condition. The present organist, who has a fondness for popular music, does not often make use of seventeenth and eighteenth century repertoire. Whenever a visitor inquires about the instrument a long time member of the congregation likes to tell the story about the time his grandfather helped put the organ together in 1885 and his father pumped the bellows before they added electricity. Poor record keeping means there is no useful information about the organ, and nobody thinks about questioning one of the church elders.

In this story, it is easy to see how in just over a century an instrument can be altered beyond recognition or destroyed completely. The organ was first added to, then changed, and eventually thrown out all together. There are no documents relating to the original organ, and the oral history is only marginally accurate. For modern organists and builders interested in studying old instruments, this situation can present a challenging task. While many instruments have been lost, there are some that remain in original or nearly original condition. They act as tonal time capsules, allowing us to hear what our predecessors heard and giving us insight into how they might have played.

The Organ Reform Movement, or Orgelbewegung, was a twentieth century trend in pipe organ building concerned with historical performance and building practices, eventually inspiring a new philosophy of organ building

guided by seventeenth and eighteenth century principles.¹⁰ Organs were judged by their ability to play Baroque music, particularly Johann Sebastian Bach, and desired qualities included articulate pipe speech (chiff), open standing pipework, and Werkprinzip, in which each division is based on a principal rank of different pitches.¹¹ Starting in Germany, the movement was prominent in the United States from the 1940s through the 1980s. A reaction to the perceived excesses in Romantic and Orchestral instruments and music, the reform movement has inspired an interest in not only creating new instruments based on historic principles, but also preserving old instruments in relatively original condition. The movement's impact can be seen in the work of builders such as Walter Holtkamp, Sr, Dirk Andries Flentrop, Herman Schlicker, John Brombaugh, and Charles Fisk, as well as in organizations such as the *Göteborg Organ Art Center* in Göteborg, Sweden, which conducts research in organ building and performance, builds historically inspired instruments, and develops preservation methods for historic instruments. These builders and organizations are mainly focused on European models, largely ignoring historic instruments in the United States.

Changing liturgical styles, church closings, and aging organs that are costly to maintain are all posing an enormous threat to America's pipe organ heritage. Study of these instruments is becoming more important because we are faced with the prospect of losing many of them completely. As this happens,

¹⁰ Phelps, Lawrence, *A Short History of the Organ Revival* (St. Louis, Concordia Publishing House, 1967) 20.

¹¹ Phelps, Lawrence, *A Short History of the Organ Revival* (St. Louis, Concordia Publishing House, 1967) 21.

we are losing a record of the tonal transition from the warm, smooth sounds of the late nineteenth century to the sharp and aggressive sounds of the mid twentieth. Also at risk is a physical record of technology, which has continuously been used to increase efficiency when playing the organ. This includes the change from mechanical action to tubular pneumatic, electro-pneumatic, and all electric action. Design elements such as the number of divisions, keyboard compass, and registration aids have a major impact when deciding what repertoire to play on an individual organ and how to interpret hymns. Historic instruments provide valuable clues to the daily life of working musicians and by studying them we can learn what kind of music they played as well as how they played it.

While many old companies are no longer in business, the organ-building giants of the twentieth century such as Skinner, Möller, Austin, and Holtkamp would not have existed without their predecessors, who often were early versions of what the companies would become. Pipe organs are built by hand and different builders developed different ways of instrument design including sound, console layout, and how they intended different ranks to be used alone or in ensemble. Focusing on one builder provides the opportunity to track those changes over time, using the company as a control.

The Holtkamp Organ Company has played a significant part in the lives of both past and present organists as North America's oldest continuously operating pipe organ manufacturer as well as the oldest pipe organ maker outside of Europe. Generations of students have learned on and from Holtkamp

instruments in churches, concert halls, and schools across the country. The company's reputation is primarily due to the work of Walter Holtkamp, Sr., who in addition to being a leading figure in the organ reform movement in the United States, developed the company's signature visual and aural characteristics that include a lack of casework, minimalist console design, relatively low wind pressures, and standardized dispositions. These characteristics dominated the company under the leadership of both Walter Sr. and Walter Jr. (Chick), who maintained the company's signature style throughout his tenure. In an interview with John Ferguson, Chick expounded on some of these hallmarks of the Holtkamp organ:

Yes, the smaller the design the fewer choices you have. You aren't talking about frosting or fun sounds, you are talking about essential black bread . . . I'm afraid I must be very boring to stoplist specialists. I don't play games or historical anagrams in my tonal designs. I don't change my style just for the sake of change.¹²

Continuity of style defines the Holtkamp organ known to the majority of organists and audiences, but it was the product of a continuous evolution from the beginnings of the company. Organs built by the company between the 1860s and 1930s are significant not only because they are excellent examples of organ building during their respective times, but also because of what the Holtkamp Company would become during the 1950s, 60s, and 70s.

Generations of organists, builders, and audiences have been influenced by Holtkamp's work, which can be found across the country in churches,

¹² Ferguson, John, "A Conversation with Walter Holtkamp, Jr." *The American Organist* (February 2001): 57.

schools, and homes. The shop has been at its present location at 2909 Meyer Avenue in Cleveland, Ohio, since 1922.

The Holtkamp Organ Company's origins can be traced to the mid-nineteenth century. In 1855, German immigrants Gottlieb and Henry Votteler (birth dates unknown) established Votteler Brothers Music Store in Cleveland, Ohio. Gottlieb trained as a pipe organ builder in Reutigen, Wittenburg, Germany, and continued to practice his craft in the United States, possibly constructing his first instrument as early as 1853 for First Methodist Church in Cleveland, OH, in collaboration with a partner named Siedle. Gottlieb eventually left the retail business to form Gottlieb F. Votteler and Company and was joined by his son Heinrich around 1870. The two would work together until Gottlieb's death in 1894.¹³

In 1903 a local brewer named John Hettche became a partner in the company, which changed its name to Votteler-Hettche.¹⁴ 1903 also marked the year that Herman Heinrich (Henry) Holtkamp (b.1858) joined the firm, which would eventually come under his control when Henry Votteler retired and Hettche, who had primarily been an investor, lost interest in the company in 1905. Holtkamp had been a church organist and the owner of a music retail business in St. Mary's, Ohio selling pianos, reed organs, and pipe organs until Votteler, impressed by his salesmanship, invited him to become part of the

¹³ "History." Holtkamp Organ Company, http://www.holtkamporgan.com/Pages/Item/200/history_timeline.aspx accessed December 2, 2010).

¹⁴ Ferguson, John, *Walter Holtkamp, American Organ Builder* (Kent, Ohio: Kent State University Press, 1979) 2.

company.¹⁵ Holtkamp and Votteler may have known each other through business interactions but more than likely had had personal connections within the German community.¹⁶

In 1911 Allen Gordon Sparling joined the company to manage the shop and take care of mechanical details, while Henry Holtkamp dealt with tonal work, sales and business. Sparling had previously worked for several Canadian organ builders in a similar capacity, most recently as superintendent of the Stevens Organ and Piano Company of Marietta in 1908 before moving to Cleveland.¹⁷ Votteler-Hettche changed its name again in 1914 to Votteler-Holtkamp-Sparling Organ Co. to reflect this new arrangement, with Heinrich Votteler acting as a paid consultant and Henry Holtkamp's daughter, Mary, managing the office.¹⁸

Henry Holtkamp's son, Walter Sr., began working with his father in 1913. Initially uninterested in organ building he enlisted in the United States Army in 1917 and was stationed in Europe during World War I. After being discharged in 1919 returned to the company and decided to remain, assuming control in 1931 when Henry died while on a business trip in Minot, North

¹⁵ Ferguson, John, *Walter Holtkamp, American Organ Builder* (Kent, Ohio: Kent State University Press, 1979) 3.

¹⁶ "History." Holtkamp Organ Company, http://www.holtkamporgan.com/Pages/Item/200/history_timeline.aspx accessed December 2, 2010).

¹⁷ "History." Holtkamp Organ Company, http://www.holtkamporgan.com/Pages/Item/200/history_timeline.aspx accessed December 2, 2010).

¹⁸ "History." Holtkamp Organ Company, http://www.holtkamporgan.com/Pages/Item/200/history_timeline.aspx accessed December 2, 2010).

Dakota. By that time, the company had grown considerably, with installations ranging from the east coast to the Dakotas.¹⁹ Allen Sparling retired in 1943, and by 1951 the company was exclusively a Holtkamp family business, changing its name a final time to The Holtkamp Organ Company, which it remains today.²⁰

Under Walter Holtkamp, Sr., the company gained national prominence, building many notable instruments for churches and colleges across the country, including Christ Church Cathedral in Cincinnati, Ohio, Syracuse University, Yale University, and the Massachusetts Institute of Technology. The Syracuse University Organ was particularly important because of its association with Arthur Poister,²¹ who used it to teach many of the most prominent organists of the late twentieth century. In 1956, Walter Holtkamp, Jr. (Chick) joined the firm, eventually assuming leadership in 1962 when Walter Sr. unexpectedly died, like his father before him, of a brain aneurism.²² F. Christian Holtkamp joined the company in 1987, becoming president and assuming all responsibilities for sales and visual design in 1995 upon the retirement of his father, Walter Holtkamp, Jr.²³

¹⁹ Ferguson, John, *Walter Holtkamp, American Organ Builder* (Kent, Ohio: Kent State University Press, 1979) 6.

²⁰ Ferguson, John, *Walter Holtkamp, American Organ Builder* (Kent, Ohio: Kent State University Press, 1979) 2.

²¹ Ferguson, John, *Walter Holtkamp, American Organ Builder* (Kent, Ohio: Kent State University Press, 1979) 53.

²² Ferguson, John, *Walter Holtkamp, American Organ Builder* (Kent, Ohio: Kent State University Press, 1979) 14-15.

²³ History." Holtkamp Organ Company, http://www.holtkamporgan.com/Pages/Item/200/history_timeline.aspx accessed December 2, 2010).

In the early years of the company, many of the organs were small mechanical-action instruments with one or two manuals and pedal between eight and twenty ranks. One of the best-known examples of this period is the organ built in 1873 for Zoar United Church in Zoar, Ohio. This instrument has a one manual divided keyboard of fifty-six notes and a flat, eighteen-note pedal. Low wind pressure (around 3”), modest design, and an abundance of eight-foot ranks are characteristic of the period.

The twentieth century brought both new technology and new ideas. Hydraulic motors, then electric blowers replaced hand-pumped bellows, wind pressures increased to 5” by the early 1930s, and tubular-pneumatic and electro-pneumatic chests followed mechanical action. Unlike emerging builders such as Austin, Möller, and Skinner, who were taking advantage of advances in technology to produce increasingly larger organs, Votteler-Holtkamp-Sparling continued to build relatively small instruments throughout the early twentieth century. Mechanical action was primarily used well into the 1920s, probably because of the size of the instruments, which would not have benefitted from the addition of remote action,²⁴ and the lack of electricity in some rural churches. The company transitioned from mechanical to remote action during the late 1920s and even briefly experimented with player mechanisms, but these were not used in any installations.²⁵

²⁴ Ferguson, John, *Walter Holtkamp, American Organ Builder* (Kent, Ohio: Kent State University Press, 1979) 2-3.

²⁵ Ferguson, John, *Walter Holtkamp, American Organ Builder* (Kent, Ohio: Kent State University Press, 1979) 3.

The mid-1930s brought changes in both ideas and style. Walter Holtkamp, Sr. was an early pioneer in the organ-reform movement, which abandoned the aesthetics of the nineteenth and early twentieth centuries and sought a return to baroque practices including the implementation of clean, clear sounds inspired by historic European organs. Independent ranks replaced duplexing (making one rank available on more than one stop knob or division) and unification (extending a rank of pipes by one or more octaves to make it playable at multiple pitch levels) that were in common use at the time, wind pressures were lowered, and a greater emphasis was placed on building independent ensembles made up of discrete ranks. Walter Sr.'s style of organ building is instantly recognizable by both appearance and sound, and can be seen in performance instruments as well as in the many "Martini" practice organs produced for schools of music across the country. The Martini, named after the cocktail being consumed during its conception, was designed by Walter Holtkamp, Sr, Fenner Douglass, and Grigg Fountain. It is a small, easily accessible practice instrument distinguished by its clear tone and efficient design.²⁶

Throughout Walter Holtkamp, Sr.'s tenure and continuing with his son, the company was one of the leading designers and builders of organs in the United States. The company remains active today building instruments for churches and schools across the country, with recent installations including Boe Chapel at St. Olaf College in Northfield, Minnesota (2006). The 1922 shop

²⁶ Ferguson, John, *Walter Holtkamp, American Organ Builder* (Kent, Ohio: Kent State University Press, 1979) 60-61.

building continues to be used as the place of business for an organ building company that began over one hundred and fifty years ago.

Chapter II: Explanation of Methods

Selected Instruments for Study

1. Zion Evangelical And Reformed Church, Winesburg, Ohio (1871)
2. Zoar United Church of Christ, Zoar, Ohio (1873)
3. First Congregational Church of Rootstown, Rootstown, Ohio (1896)
4. St. Adalbert Roman Catholic Church, Berea, Ohio (1903)
5. Lakewood Masonic Temple, Lakewood, Ohio (1916)
6. Notre Dame College, Cleveland, Ohio (1930)

The instruments selected for this study accurately represent the time period in which they were built and are typical of the company's work as a whole. They are each in original condition or as close to original as possible, and have not been subject to tonal or mechanical changes in that the pipework, action, and console layouts are all in an original or restored state. The Zion and Zoar organs are among the earliest known instruments in existence built by Votteler. The First Congregational and St. Adalbert organs fall within the middle of the selected time period, and while they have been restored, they were not altered in any significant way. The Lakewood Masonic Temple organ was used by the company for demonstrations and is of special interest because of its functioning tubular-pneumatic action. The Notre Dame organ was built on the cusp of the changes begun by Walter Holtkamp, Sr. in the 1930s and was described as being an important representation of its time by Walter Holtkamp, Jr.

Methodology

In order to understand the instruments included in this study, I will focus on a brief history of each instrument, how they sound, how they look, and how they can be used. While the organs in this study predate the adoption of a standard console design in 1933, I have provided those specifications in Appendix C and will use them as a standard for comparison. Methods of collecting data will include analysis of sound recordings, photographs, and tests of a variety of repertoire, including hymns, on each organ. When combined, these will provide an accurate description of how the organs were designed, how they were used, and how they relate to the Holtkamp style of the 1950s.

Sources of historical information for the instruments will come from the Holtkamp Company archives and archives of the individual churches. These include contracts, letters, newspaper clippings, and any other documents that might be available.

Sound analyses will be drawn from personal recordings of every individual stop, combinations of stops, effects such as expression shades and tremolos, and repertoire representing different genres of organ music: Baroque counterpoint such as Bach fugues, small scale nineteenth century works such as Vierne's harmonium pieces, large scale works such as the finals from Widor's symphonies, and hymns. Exact repertoire played on these particular instruments is not generally known, but a variety of music would have been available at the time and these types of pieces will show what the organs were and were not capable of playing. I will describe the sound of individual ranks (the amount of

ambient attack characteristics (chiff) of pipe speech, roundness of tone, etc.), how well they work as solo and ensemble stops, and how effective the organ is in playing repertoire and hymns. Individual notes will be designated with a number and letter combination, with the letter representing the note itself and the number representing the location in relation to the bottom of the keyboard or pedalboard. For example, if C is the lowest note on the keyboard, that note will be designated C 1. The notes immediately following will be C# 2, D 3, and so on. This will show what the organ is capable of playing, what it was most likely designed to play, and how the organist used it. For example, what kinds of sounds were available and were registration changes possible when playing repertoire and hymns?

Visual and physical analysis will consist of photographs and measurements taken on site. Elements include manual compass, stop layout, and aesthetic design (case ornaments, etc.), and registration aids (pistons, etc.). This will show how the organs were visually designed and support the sound analysis, particularly in discussing how the instruments were used. If a particular stop was out of reach on a mechanical action organ it most likely would not have been used during registration changes while playing a piece of music without the aid of an assistant.

Finally, I will compare and contrast the information on each instrument to show how they changed over time and make further comparisons to the style of instruments Holtkamp was building in the 1950s. This will provide a timeline

of development and show the influence of the early instruments on those that came later.

Chapter III: Features of Late Nineteenth and Early Twentieth Century One and Two Manual Organs

Pipe organs have been in existence in the United States for hundreds of years, brought by European colonists as part of their musical and religious traditions. As communities grew and stabilized, an organ building industry sprang up to satisfy the demand for instruments in churches. By the mid eighteenth century, colonists in Pennsylvania and Boston had established organ building as a skilled trade, with immigrants acting as the first builders, and later training native-born colonists, the most well known being David Tannenberg (1728-1804). After the United States became an independent nation, organ building as an industry began to grow and was firmly established during the nineteenth century. Most instruments were built according to English models, and most builders worked in small shops, with new employees learning the trade as apprentices. By the end of the nineteenth century, hundreds of builders were working across the country, some of which were quite prominent and produced instruments in factories with large numbers of employees. Many of these builders, while not in business anymore, are well regarded today as masters of their craft, including Roosevelt, Erben, Hook, and Koehnken.²⁷

Initially, builders followed English models with one or two Diapasons on the Great, a small Pedal, and a Sesquialtera as the first mixture. While designs changed as the industry grew, many builders continued to rely on

²⁷ Cook, James H. "Organ History, The Nineteenth Century, The United States of America." (<http://faculty.bsc.edu/jhcook/orghist/history/hist065.htm>, accessed May 5, 2014).

English models as a starting point. Instruments were primarily built to accompany singing in a church, with installations in concert halls, theaters, and private homes coming as society became more stable and wealthy.

Many churches, particularly those built in the nineteenth-century, had very dry acoustics and low reverberation times. Organs were placed in a rear gallery, if one existed, or in the chancel. As new technologies were developed, the early twentieth century saw freestanding cases give way to enclosed pipe chambers. The visual aspect of the organ gradually disappeared as elaborately carved cases were replaced by decorative pipes (stenciled), then plain pipework hidden in chambers.

Tonally, organs contained traditional principals, flutes, and reeds, with the principal chorus being the starting point for instruments. As builders developed their craft, more colorful stops were included, such as different types of flutes and reeds. While names of certain stops remained the same, their sound characteristics did not. Principals from the early part of the nineteenth century were brighter than those of the late nineteenth and early twentieth. Other ranks may have had the opposite transformation. The same rank may also sound completely different depending on the acoustical environment in which it is placed.

Organists were originally educated by private teachers, and until the second half of the nineteenth century major American organists studied in Europe. Many local church organists had limited training, however, and often improvised rather than play from printed music. In addition, as organs were

primarily used in churches, organ recitals were practically unheard of until the later part of the century. As schools such as the New England Conservatory (1867) and the Oberlin Conservatory (1865) began offering organ study as part of their curriculum, American organists had the opportunity to learn and develop at home rather than abroad. Many of the teachers were the very same organists who had previously studied in the Europe, such as Horatio Parker and John Knowles Paine. Organists continued to travel to Europe, however, and often influenced builders by asking for more color stops resembling those they heard in Germany and France. Larger instruments were built allowing organists to demonstrate their ability, and concert organs were installed in halls across the country. Transcriptions of orchestral and choral music were popular, as were variations on well-known tunes of the day.²⁸

While large concert hall instruments were magnificent showpieces, many builders built their business by continuing to provide instruments and maintenance service to small parishes. Small one and two manual organs made up the bulk of their output, some of which are still in existence today. Some of the most prominent included E. and G.G. Hook and Hastings, Henry Erben, Roosevelt Pipe Organ Builders, and Koehnken and Grimm. Representative stoplists from these builders can be found in Appendix B.

E. and G.G. Hook and Hastings was founded in Salem, Massachusetts in 1827, moving to Boston in 1832. The company became one of the largest and

²⁸ Owen, Barbara. "Nineteenth-century American Concert Organ Music." (New World Records, <http://www.newworldrecords.org/linernotes/80280.pdf>, accessed May 5, 2014).

most prominent American organ builders, building church and concert instruments for institutions across the country. Increased competition from firms such as Möller, Austin, and Skinner as well as economic hardships from the Great Depression overwhelmed the company, which closed its door in 1935.²⁹

Henry Erben (1800-1884) was the largest and most prominent American organ builder in the middle part of the nineteenth century. Nationally known, the majority of his instruments were built in his home state of New York. Erben was known for the high quality of work and materials used in his instruments. He resisted changes in technology and taste, only building organs in cases rather than chambers, and using traditional choruses without imitative orchestral stops.³⁰

Roosevelt Pipe Organ Builders, founded by Hilborne and Frank Roosevelt in 1872 in New York, was one of the leading American organ builders and during its existence, building some of the largest organs in the United States. The company was among the first to use electro-pneumatic action and combination pistons. Instruments were more orchestral and Romantic in nature, focusing more on individual color and less on ensemble.

²⁹ Ochse, Orpha, *The History of the Organ in the United States*. (Bloomington, Indiana: Indiana University Press, 1975) 217-228.

³⁰ Ochse, Orpha, *The History of the Organ in the United States*. (Bloomington, Indiana: Indiana University Press, 1975) 145-149.

After the death of Hilborne in 1866, Frank took over control of the company. He continued to build instruments until 1893 when the company was closed.³¹

Johann Koehnken was a German born cabinetmaker who came to Cincinnati, Ohio in 1839. After apprenticing with Matthias Schwab, Koehnken took over the company in 1860, building under his own name, and eventually partnered with Gallus Grimm, changing the name to Koehnken & Grimm in 1876. The company achieved success both in the growing city of Cincinnati, with its many Roman Catholic churches, as well as nationally, shipping organs by boat as far away as New Orleans. The Plum Street Temple organ, built in 1866, is considered the most important mid-nineteenth century organ in Cincinnati. Koehnken & Grimm continued to build organs until 1896, when the founders retired.³²

³¹ Ochse, Orpha, *The History of the Organ in the United States*. (Bloomington, Indiana: Indiana University Press, 1975) 262-274.

³² Ochse, Orpha, *The History of the Organ in the United States*. (Bloomington, Indiana: Indiana University Press, 1975) 122, 144-45, 183-188.

Chapter IV: Zion Evangelical and Reformed Church

Zion Evangelical and Reformed Church in Winesburg, Ohio, organized in 1832 under the name Evangelical Zion Congregation to serve the German and Swiss Lutherans who settled in Holmes County, Ohio during the 1820s. Construction of the original building began in 1833, but was not completed until 1841. In 1869 the congregation decided to replace that structure with a new one, which was finished and dedicated in 1871. Major renovations occurred in 1949 and again in 1955. In 1934, Zion church merged with the Reformed Churches of America and became Zion Evangelical and Reformed Church. The church is currently affiliated with the Presbyterian Church of America.

The organ, built by Gottlieb Votteler, was installed in 1871 and used for the building dedication on September 24th and 25th of that year. It is estimated that approximately four thousand visitors were present for the dedication of the building, which consisted of seven services over the course of two days. The organ is located in the rear gallery of the sanctuary and is in original condition with the exception of a tremolo and an electric blower that replaced the original hand pump (fig. 4.1), which is still in place although it no longer functions.³³

³³ Zion Evangelical and Reformed Church, Notes and Records. Archives, Zion Evangelical and Reformed Church.



4.1 Zion Hand Pump

The stop and key action are mechanical, with wind provided by the aforementioned electric blower. The case is relatively plain, with three groupings of facade pipes symmetrically arranged (collectively and individually) with the taller pipes in the middle and shorter ones on either side. Beneath the pipes, running the length of the case, is a decorative pattern. The keydesk (fig. 4.2) consists of a fifty-six key manual keyboard with stop knobs in vertical lines on either side. The music rack is fixed in position and carved with an open filigree pattern. Keys are made of ivory in block piano style with no overhang. A music light plugs into an outlet on the left side of the keydesk, and a switch to operate the blower is located on the upper right side of the keydesk. Doors on either side can swing closed and lock to provide security as needed.

The pedalboard (fig. 4.3) is flat and straight with a foot-rest centered above the keyboard and two levers to activate and cancel a pre-set combination consisting of Principals 8', 4', and 2'. The combination lever was most likely intended for use with hymns or opening and closing voluntaries because it creates a full principal chorus.



4.2 Zion Keydesk



4.3 Zion Pedalboard

The stop knobs on either side of the keydesk are labeled with a cursive script indicating the name and pitch level of their respective ranks. In addition, there is a knob for coupling the bass to the pedal and a knob marked “signal,” originally used to let the calcant (the person who manually operated the bellows to provide wind for the organ) know when to start operating the bellows. The signal knob currently operates the tremolo.

The sound of the organ is, in general, clean and well balanced. Ranks blend well with each other and work as an ensemble without individual voices

overpowering the whole. There is no noticeable chuff in any of the ranks. The design follows the model of a Principal chorus, Sesquialtera, and small Pedal. This particular organ also features a Gedeckt and Dulciana.

The 16' Bourdon consists of eighteen pipes and is the only rank in the pedal division. The pitch of the bottom five notes are barely discernable, except for a rumble of indefinite pitch or quality. F 6 is the first pipe that can be actually heard, although it is slow to speak and drafty. In general, the volume is uneven throughout the rank, varying from loud to soft with no identifiable pattern. As with F 6, all the pipes are slow to speak and an audible "whoop" is constantly present. Pitch definition does improve with each ascending note, with D# 16, E 17, and F 18 producing a sound recognizable as coming from an organ pipe. Although it is the only 16' rank as well as the only independent pedal rank, the Bourdon is for all practical purposes unusable. It does not speak quickly enough for quickly moving lines, and does not provide enough pitch definition for slowly moving lines. It was probably intended to be used for accompanying hymn singing, but it is also possible the organist did not have sufficient technique to play the pedals, in which case the rank may not have been used at all.

The 8' Principal contains fifty-six pipes and has two distinct sound sections. From C 1 to G 20 the pipes are slow to speak, slow to settle into pitch, and airy. The bass octave is round, with a soft "pah" sound, and in general the pipes sound more like flutes than principals. After G 20, the pipes speak more quickly, become more incisive and aggressive, and provide a sound one would

expect from a principal rank. Sound quality becomes narrower, but remains clear through G 56 at the top of the register. Volume is relatively even throughout the entire rank, but there is a noticeable decrease at F# 19 and G 20, with a slight decrease continuing afterward. Treble descendancy (volume decreasing as pitch increases), as will be seen, is a general tonal characteristic of Nineteenth Century American organs.

The 8' Dulciana shares a common bottom octave with the Gedeckt Bass and only has forty-four independent pipes. Because of the shared bass, there is a noticeable change in quality as you move from the Gedeckt to the Dulciana. The roundness of the Gedeckt gives way to a pinched, nasal, and forward tone produced by the Dulciana. The pipes are slow to speak throughout, with a slight decrease in volume going up through the register. There was however, significant sound from the action as notes were released, which could almost be mistaken for a speech issue. The Dulciana sounds more like a soft principal than a string and is the softest stop in the organ, similar to the traditional English Dulciana, which was built to be an "echo" diapason.

The 8' Gedeckt contains fifty-six notes, and is divided at C 12; with two knobs named Gedeckt Bass and Gedeckt Treble. Using a common bass (the Gedeckt Bass) with two ranks (Gedeckt and Dulciana) allowed savings in both space and cost. Larger pipes are exponentially more expensive and the bottom octave is not often played on the manual. With limited funds and space, this is an efficient way to solve both problems. The sound is round in general until the

top octave, where it becomes thinner, noticeably softer, and not as robust, with an airy quality. Pipes are slow to speak throughout.

The 4' Octave is similar in character to the 8' Principal. It is round, incisive, with a slight stringy sound, although less so than the Principal. There is a gradual decrease in volume from the bass to the treble, and pipe speech is clear throughout. The Octave is softer than the Principal at the same pitch.

The 2' Superoctave is different from the other principal ranks in the organ in that it is much slower to speak and does not have as much string quality. It does have a round tone, and, like the other ranks, exhibits a slight decrescendo as you ascend from the bass to the treble.

The Sesquialtera consists of two ranks (2 2/3' and 1 3/5') and fifty-six notes. There are two breaks, the first occurring at C 13 and the second at G# 45. In the first break the 1 3/5' rank drops an octave and in the second break the 2' drops an octave. The sound is clean and not shrill, allowing for the Sesquialtera to combine smoothly in ensemble with other ranks as both in multi-voice textures and solo sounds. Like the other ranks in the organ, the Sesquialtera has a gradual decrease in volume from the bass to the treble.

The Zion organ handles a variety of simple repertoire fairly well. The single manual and short pedalboard put limitations on what repertoire can be played, and the original organist could not have performed large scale or virtuosic pieces, nor would they have been trained to do so. Slow pipe speech, especially in the flute and lower registers of the principals, demands more relaxed tempi, but the upper end of the 8' Principal and the entire 4' Principal

are fast enough to work with slightly more aggressive tempi. Two main registration schemes for the organ are the Principals building up to the full chorus with the Sesquialtera and the Gedeckt and Dulciana, alone or in ensemble. While the organ does not have a wide variety of different colors, it can easily create a variety of dynamics, from pianissimo to forte.

When playing counterpoint, the lines are clear but the pipes are slow to speak. Moderate tempi must be used for a clean sound, and the player must adapt to the organ in this regard. The pedal sounds weak in general, but is not as problematic with the full principal chorus as much as with the 8' Principal alone.

Small-scale pieces are quite effective on the Zion organ. Combining the 8' Gedeckt with the 8' Dulciana gives a sound that is both warm and clean. The organ is slightly under-winded and unsteady, giving the impression of a manually pumped organ, with full chords will tending to sag.

When playing full organ, the limitations of only one manual and a short pedalboard makes it all but impossible to play a large percentage of the repertoire, but with an extra octave in the pedalboard the organ could be used quite effectively as long as manual changes were not needed. This type of change could be justified because it will not fundamentally change the way the organ sounds, but will make the organ more efficient for modern players.

Hymns can be accompanied quite easily on the Zion organ. At times the attacks are a little slow (such as when using 8' and 4' Principals), but the sound is full and strong. Building up the principal chorus from 8' through the Sesquialtera is smooth and gradual. The combination lever makes it easy to set

the chorus for hymns, but any other registration changes other than adding or subtracting from the chorus are difficult given the small number of ranks and the lack of any other combination action. Bass lines must be adjusted if the pedals are used, or the manuals can be used alone.

A comparison to an instrument built by Henry Erben shows many of the same characteristics. The 1865 instrument in First Presbyterian Church of Cass City, Michigan is similar in size (nine stops verses eight on the Votteler) and design. The Erben instrument starts with Principals as its foundation, has a Dulciana, small Pedal (16' Bourdon), split rank (bass and treble), and includes a coupler and two combination levers. The split rank is a Stopped Diapason instead of a Gedeckt but the organ does have a flute (Clarabella), but no mixture and includes a Gamba. The Erben instrument is also under expression, using a hitch-down pedal, while the Votteler is not enclosed.

Chapter V: Zoar United Church of Christ

Immigrants from Wurttemberg, Germany, originally settled Zoar, Ohio, in 1817. The first church was constructed in 1820, and replaced by a larger building in 1853 to meet the needs of the growing congregation. Materials such as sandstone, bricks, and wood used in construction were all locally available, and work was performed exclusively by local craftsmen.

The G. F. Votteler organ was purchased in 1873 for \$1400.00 (\$26,923³⁴). It was transported to Zoar Station (Zoarville) by railroad and then brought to Zoar by horse and wagon. According to church documents, the first organist, Levi Bimeler, was not a trained musician and played by ear. Prior to that time, the music during worship services was sung without instrumental accompaniment. Early hymnals used by the church did not contain music, but only the text for each hymn.³⁵

The organ currently stands at the center front of the sanctuary. The case is decorative, giving the impression of columns inlaid with filigree (fig. 5.1). The top features filigree woodwork containing a harp in the center and two cups on either side. The facade pipes are painted and stenciled, and also feature the image of a harp across the center three pipes. The keydesk consists of one fifty-six key manual with stop knobs in vertical lines on either side (fig. 5.2). Keys are block style with no overhang. The pedalboard is flat and straight, with the

³⁴ Converted to 2013 dollars using the formula $A=B/CF$ where A is the value in 2013, B is the value in the initial year, and CF is the Consumer Price Index Conversion Factor from the year B is taken.

³⁵ *Zoar United Church of Christ*. Archives, Zoar Evangelical and Reformed Church.

swell shoe located on the right hand side and two levers (one combination and one cancel) in the center (fig. 5.3). The original pump handle is located on the right hand side of the case. Since the organ currently utilizes an electric blower the handle is no longer used.



5.1 Zoar Case

The stop knobs on either side of the keydesk are labeled with a cursive script indicating the name and pitch level of their respective ranks. Each rank divides at C 25, with knobs on the left hand side of keydesk controlling C 1 to C 25 and knobs on the right hand side controlling C 26 to G 56. Divided registers always contain two stops, one to control the upper section of the keyboard and one to control the lower section. Different registrations can be set for each section, allowed greater flexibility with one manual organs. In addition, there is a knob for coupling the manual to the pedal and a knob marked “signal,” used to let the calcant know when to start operating the bellows. As with the pump handle, the signal knob no longer functions and is decorative only. Console

measurements are almost identical to the Zion organ, indicating a company standard was in use at the time.



5.2 Zoar Keydesk



5.3. Zoar Pedalboard

The sound of the organ overall is both clean and pleasant. Chiff is almost completely absent through all the ranks, which adds to the gentle tone. In almost every rank, a subtle and smooth decrescendo can be observed from the bottom to the top of the register. All of the pipework is original to the organ, and this particular instrument offers an authentic look into the sound aesthetics of the time when it was built. All of the pipes are enclosed except for the 8'

Open Diapason, which can be found in and directly behind the facade, and the 16' Sub Bass, located in the rear of the case. The mechanical shades are hung directly behind the 8' Open Diapason in a vertical position.

Although similar in size to the Zion organ (nine ranks versus seven ranks and identical manual and pedal compasses), the Zoar instrument offers much more flexibility in terms of registration. The split manual keyboard allows for the limited illusion of two manuals as well as giving options for differing pedal and manual registrations. A 4' or 2' rank used on the low section combined with an 8' rank on the upper allows for two independent lines at the same pitch level. Activating the pedal coupler gives added flexibility, although registration is limited in order to keep the same register in the bass and treble. The combination lever activates the Open Diapason 8, Principal 4, and Piccolo 2 on both sides, and adds the Violin 8, Quintaten 16, and Cornet to the treble side. This provides a brilliant solo sound with an accompanying registration that can be played on both the manual and pedal.

Although the Zion organ offers more flexibility than the Zoar, it is still limited in its use by one manual and a short pedalboard. Repertoire often requires one registration across an entire manual, making the split useful for hymns, choral accompanying, and improvisation.

The 16' Sub Bass consists of eighteen pipes and is the only rank in the pedal division. The speech of the pipes is slow and drafty through the first seven notes, with decent speech not being achieved until G# 9. The tone has an unstable quality that is especially noticeable in the lower pitches and, in contrast

to the rest of the organ, never reaches a point where it is either round or full. A vibration in the case caused by this particular rank further obscures the tone. Volume is even throughout the entire rank, which is expected in that it is a pedal rank and only C1 through F18 are represented. These characteristics are shared with the 16' Pedal rank on the Zoar instrument, indicating the company either did not know how to build 16' Bourdons (of which this rank is also an example) or did not think them important enough to put any real effort into their construction and voicing.

The 8' Open Diapason contains fifty-six pipes and has a tone that is both clear and strong, although the quality of sound changes several times. C 1 through D# 4 are less incisive, have a drafty quality, and are slower to speak than the rest of the pipes. Ascending through the rank, the tone becomes smoother and less drafty. By G# 21 the tone quality is clear and consistent through the rest of the rank.

The 8' Stopped Diapason also consists of fifty-six pipes and has a consistent tone that is clear, round, and unaggressive. The bottom octave has a slight breathy quality when compared to the rest of the rank, but it is not overly offensive.

The 8' Dulciana shares a bottom octave with the 8' Stopped Diapason, and so only has forty-four independent pipes. It sounds much like the 8' Open Diapason, only softer and more delicate in tone, which makes it very pleasant to listen to. The tone is gentle, clear, and has a slight string quality, which makes it

easy to hear despite its softness. The Zoar Dulciana, as on the Zion organ, is the softest rank and has the qualities of a small-scale principal.

The 8' Violin contains thirty-two notes, starting at C 25 and continuing up to G 56. The Violin sound is similar to the Dulciana, but louder with a tone that is both narrower and more focused and incisive. It is clear and even throughout the register. The pipes speak well and are not slow, with a smooth even attack.

The 16' Quintaton, like the violin, consists of thirty-two notes (C 25 – G 56). It shares many tonal characteristics with the Open Diapason, including a clear round tone that is both pleasant and unaggressive. The second harmonic can be easily heard, although it is not as pronounced as those produced by stops of the same name in the 1950s and later.

The 4' Principal has a singing quality that does not become shrill, even in the top octave. Much like the 8' Diapason, the tone is round, and clean. The pipes speak easily, and are strong without being overly loud. The 4' Principal is both softer and less round than the 8' Diapason, which allows for the two to be used in ensemble with a strong foundation and weaker treble.

Unlike the other ranks, the 4' Flute (stopped) is fairly consistent in volume from the bottom to the top of the register. While it has a smooth decrescendo that is consistent across this organ, it is not as large of a change compared with the other ranks. The tone is even throughout the entire rank, however, it is not as clean as the 8' Diapason or other ranks and sounds more

like a quint than a flute, with the fifth being more prominent than one would expect.

The 2' Piccolo is similar to the other principal ranks in the organ, but like the 4' Principal is slightly softer and less aggressive. The top octave exhibits a definite change in tone quality, with a sound that is softer, not as round, and somewhat airy. The pipes speak quickly, with chuff that is noticeable over the sound of the action.

The Cornet consists of two ranks (a 2 2/3' twelfth and a 1 3/5' seventeenth) and 32 notes, starting at C 25. There are no breaks, with the exception of the F# 55, where both ranks break down one octave to 5 1/3' and 3 1/5' respectively. The sound is clean and not shrill, allowing for the Cornet to combine smoothly in ensemble with other ranks, making the fifth especially prominent.

When playing repertoire, the Zoar organ handles a variety of styles fairly well. When playing counterpoint, the 8' Diapason alone delineates clarity of lines but the attacks are not as sharp as perhaps they should be. Adding the full principal chorus brings sparkle and cleaner attacks while maintaining the clarity of each individual line. In both cases, the pedal is weak and not balanced with the hands, but given the size of the organ that is not unexpected. Given the limited range of the pedalboard, any contrapuntal piece that demands a pedal part is almost impossible to play, restricting the organist to music for manuals only.

Music that is written for a single manual is very effective on the Zoar organ. Louis Vierne's Arabesque and Berceuse both work extremely well. The solo line called for in the Arabesque easily sings out over the accompaniment, and the flute ensemble gives a very warm and rich sound. The relative abundance of 8' ranks creates a clear, robust sound of moderate dynamic level that is acceptable for a variety of small-scale pieces.

As with the Zion instrument, when playing full organ, the pipes speak quickly and cleanly. Manual and pedal limitations prevent large-scale pieces requiring a thirty or thirty-two note pedalboard.

Although small, the Zoar organ offers a variety of options for hymn accompaniment. Soloing out the melody is possible through use of the split keyboard, and a registration can be easily achieved with the combination lever. The attacks are slow, but the principal chorus is full and more than capable of leading boisterous singing. Mechanical stop action and the size of the instrument make extreme registration changes difficult if not impossible, but a general build up or reduction in sound can be done smoothly and efficiently.

The Zoar organ sounds very similar to Zion. Both the principals and flutes have similar qualities, and the Dulcianas on both instruments sound like small principals. Principal choruses are clear and easily able to both accompany congregational singing and play repertoire. This is not a surprise given the dates of their construction (1869 and 1873), but the Zoar organ is pointing toward more complex instruments built for similar spaces.

As with Zoar, a comparison to a similar instrument by another builder yields interesting results. The Roosevelt organ built for the College of Mount St. Vincent in New York in 1873 is one of that firm's early projects (opus 4). While larger than Zoar, with two manual divisions and a pedal division, the organs share a similar tonal scheme. Both instruments have a 16' in the manual. Roosevelt places it in the Great, while Votteler places it in the treble section of the split keyboard, with the 16' in the pedal available for the bass end if desired. Both instruments have Open and Stopped Diapasons. Votteler uses complete ranks for both while Roosevelt uses the Stopped Diapason as a bass only which can be paired with the 8' Viol di Gamba in the Swell. Votteler also has a treble 8' Violin which can use the Open or Stopped Diapason as a bass. 4' flutes and principals and 2' flutes are common to both instruments, with the Roosevelt adding a 2' Principal. Both instruments make use of combination levers as registration aids, with one on the Votteler and two on the Roosevelt. The primary difference in the two instruments is the sesquialtera on the Votteler organ and the reeds on the Roosevelt organ. Votteler was still following the English model focusing on ensemble while Roosevelt was developing a more romantic and orchestral sound where individual colors were emphasized more and compound were not as desirable.

Chapter VI: First Congregational Church of Rootstown

Rev. Giles H. Cowles founded First Congregational Church of Rootstown, Ohio, in 1810, the same year Rootstown Township was officially organized. The congregation, which consisted of fourteen members, met in the school/public meetinghouse until 1832 when a new church building was officially dedicated. That building is still in use today, having undergone several additions and renovations throughout the years. Originally part of the Presbyterian Church, the Rootstown congregation joined the Puritan Conference in 1853 and is presently affiliated with the United Church of Christ.

A melodion (small reed organ) was the first instrument used in the church, and the first pipe organ was purchased in 1866. That instrument was replaced in 1896 when, thanks to a gift by Mrs. John D. Rockefeller, the current organ built by G.F. Votteler was purchased and installed in the sanctuary. Gottlieb Votteler died in 1894, meaning this organ was built under the direction of his son, Heinrich. This is supported by the nameplate on the console, which identifies H.B. Votteler as proprietor of the company as well as builder of the organ. The organ was used for morning services as well as monthly concerts and other events. Originally operated by manual bellows, the organ now utilizes an electric blower to supply the wind. A set of chimes was added at some point during the organ's history, but the exact date could not be confirmed.³⁶

³⁶ *First Congregational Church of Rootstown, Ohio: Sesqui-centennial Anniversary, 1810-1960*. Archives, First Congregational Church of Rootstown: 1-4.



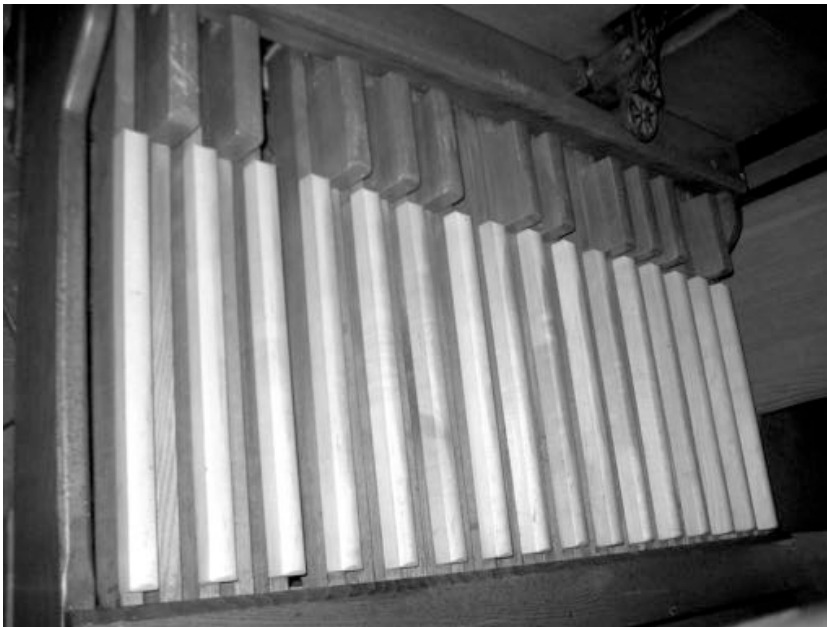
6.1 Rootstown Facade

The organ currently stands at the center front of the sanctuary. It is set inside an arched chamber, with only the facade principal pipes exposed (fig. 6.1). The case has almost no decorations of any kind with the exception of a carved pattern directly below the pipes that extends across the front. The two manual keydesk is attached to the case, with three tiers of draw knobs on either side of the keyboards and an added chime keyboard below the Great manual (fig. 6.2). The Great stop knobs are located on the right hand side of the keydesk and arranged by pitch level ascending from the top tier down. The Swell stop knobs are organized differently, with the 2' and 4' ranks located on top tier (along with the 8' Stopped Diapason) and the other 8' ranks on the second tier. The pedalboard is flat and straight, with a shoe-shaped swell shoe (fig. 6.3). The Great and Swell manuals have fifty-eight keys each, the pedal has twenty-seven keys, and the chime keyboard has twenty-one keys. The stop and key action are both mechanical. Stop names are written in script, with ranks in black and couplers in red. A curiosity is the "pedal check" knob, which prevents the pedals from being depressed thus allowing the organist to stand on

the pedals without playing them. This is the only instance of such a device in all of the organs examined. The calcant signal now operates the tremolo.



6.2 Rootstown Keydesk



6.3 Rootstown Pedalboard

The Rootstown organ has significant upgrades from Zion and Zoar, most notably a larger pedal compass and two manual divisions instead of one. The

organ has no registration assists or mixtures, and only one 2' rank (flute) located in the Swell division. The larger size (12 ranks) and tiered stop layout may have made a combination lever overly expensive, and the added flexibility of a second manual meant it was not as necessary because two independent registrations could be set up at one time. Console measurements are similar to both Zion and Zoar, and any changes can be attributed to the larger manual and pedal compass as well as the addition of a second manual.

The Rootstown organ is able to play a much wider variety of repertoire than Zion or Zoar. Two-manual pieces can easily be played, and the larger pedalboard allows for much more of the standard organ repertoire to be played, although the pedalboard does not have a large enough compass to play repertoire written around the time the organ was built. For example, Widor's Symphony No. 5, composed in 1879, requires at least a 30-note pedalboard to play (C1 to F30). The Swell Division is significantly softer than the Great, making coupling the manuals mostly ineffectual. The difference in volume also means the Swell expression pedal is useful primarily when playing on the swell alone because even with the shades open the Swell is difficult to hear when played with the Great.

The organ shares many of the warm and round sound qualities with Zion and Zoar, but unlike those instruments Rootstown introduces a small amount of chuff in the Swell 8' Diapason. No other rank in the organ exhibits this characteristic, making it useful as a contrast to the Great Open Diapason or other 8' ranks.

The 16' Bourdon has twenty-seven pipes and is the only independent pedal rank in the organ. In general, the Bourdon produces a small sound and the pipes are slow to speak, particularly in the bottom octave. Through D 15 the tone is very airy and drafty, producing a burble when the pipe begins to speak before it settles into pitch. From D# 15 up, the pipes speak more clearly and easily, with volume even throughout the entire rank. While the lower octave exhibits the same problems as the Zoar and Zion organs, this rank is a significant improvement in that the pipes can be heard speaking and the actual pitch can be determined.

The Swell 2' Flautina has fifty-eight notes and is located in the front of the swell chamber. It has a clear, even sound throughout the rank. The sound loses some of its quality in the top octave becoming pinched-sounding, most likely due to the small scale of the pipes producing sound. A gradual decrescendo exists from the bottom to the top of the rank.

The Swell 8' Stopped Diapason is divided into the 8' Stopped Diapason Bass (C 1 – B 12) and the 8' Stopped Diapason (C 13 – A 58). The 8' Stopped Diapason Bass is shared among the 8' Stopped Diapason, 8' Viola, and 8' Salicional. The tone is round, forward, and bright. Pipes speak quickly and with a small amount of chuff. Sound quality is even throughout the rank, with a barely noticeable decrescendo from the bottom to the top.

The Swell 4' Fugara has fifty-eight pipes. Speech is moderately fast and clean through the entire register with no chuff. The tone is round and even, with a gradual decrescendo from the bass to the treble.

The Swell 8' Salicional has forty-six pipes, using the 8' Stopped Diapason Bass for its bottom octave. Its sound is gentle yet incisive, with a warm even tone throughout the rank. The bass octave has a breathy quality, but would not be used alone as would the other ranks that share the 8' Stopped Diapason Bass.

The Swell 8' Viola, like the 8' Salicional, has forty-six pipes, drawing its bass from the 8' Stopped Diapason. It is not as incisive or stringy sounding as the Salicional, and has a more moderate tone. Speech is moderate after the bottom octave, and is not too fast or too slow.

The Great 8' Open Diapason contains fifty-eight pipes and has a tone that is both clear and strong, although the quality of sound changes several times. C 1 through D# 4 contrast with the rest of the rank in that they are less incisive, have a drafty quality, and are slower to speak than the rest of the pipes. Starting at D 15 the tone starts to become smoother and even less drafty. By G# 21 the transformation is complete, and the tone quality is consistent through the rest of the rank. The dynamic level stays constant, although some pipes are louder and some softer with no discernable pattern..

The Great 8' Dulciana shares a bottom octave with the Unison Bass, and so only has forty-six independent pipes. As with the Zion and Zoar Dulcianas, it sounds much like the 8' Open Diapason, only softer and more delicate in tone, which makes it very easy to listen to. The tone is gentle, clear, and has a slight string quality that allows it to be heard despite its softness, making it useful as

an accompanying stop or as part of a soft ensemble. There is a gentle decrescendo (treble descendancy) throughout the rank.

The Great 4' Principal has a clear, round, even tone and no chuff. Pipes are slow to speak from C 1 through F# 7, then become more consistent and reliable, although not extremely fast. There is a crescendo until C 25, at which point the sound begins to taper off and has a slight decrescendo until the top of the rank.

The Great 8' Melodia has forty-six pipes, starting at C 13 and utilizing the Unison Bass for its bottom octave. The character of its sound changes several times, starting off slow and tubby from C 13 to F 18, then becoming rounder and smoother from F# 19 to C 37, and finally becoming softer and thinner from C# 38 to A 58. The volume is even throughout with some change in dynamics at the top, but not much. Speech is moderately fast.

When playing repertoire, the Rootstown organ handles counterpoint moderately well. Due to the speed of pipe speech extremely fast tempi must be avoided or the texture becomes muddy. Higher ranks adds clarity, but the player must keep in mind the tempo the organ is capable of playing. This holds true for larger scale pieces as well. The organ cannot quite keep up with the desired tempi for fast-paced music, although playing with manuals uncoupled allows for faster tempo and cleaner lines.

Smaller scale pieces work very well on the organ. The divisions balance with each other and easily create a solo and accompaniment texture. The Swell box brings the volume down very well, although it only really works with the

Swell alone due to the overwhelming power of the Great when manuals are coupled.

Hymns work very well on the Rootstown organ. The size of the instrument does not allow for a great variety in registration, but one can create an even crescendo and decrescendo to get loud and soft verses. The sound is warm and easy to sing to, as most hymns are not sung at a pace that will test the limits of the organ.

With its relatively abundant 8' sounds, one 2' flute, and no mixture, the Rootstown organ exhibits a significant change from the previous Votteler instruments. Not only was the company using different stop names, such as Melodia, Fugara, and Flautina, they were moving away from the previously established model of ensemble building starting with a Principal Chorus and moving into a variety of sounds, especially with 8' pipes. This movement toward a more romantic sound can be seen in other builders of the day as well, such as the Koehnken & Grimm organ built in 1895 for Clifton United Methodist Church in Cincinnati, Ohio. While the Koehnken organ does have a full principal chorus through mixture on the Great (including a Twelfth 2 2/3'), indicating a Germanic influence, the Swell consists of 8' and 4' colorful stops such as the Oboe & Bassoon 8', Flute a Cheminee 4', Violine 4', and 8' string celeste. In both organs, 8' stops account for over half of the manual ranks, slightly more than the previous Votteler organs, but a trait that would continue in future instruments.

Chapter VII: St. Adalbert Roman Catholic Church

St. Adalbert Roman Catholic Church in Berea, Ohio, holds the distinction of being the oldest Polish Catholic Church in Ohio. Polish immigrants who came to the area to work at the Cleveland Stone Company quarries founded it in 1873. The sanctuary was completed in 1874, and the church organist, Julius Krygier, taught music classes in the rear gallery until the school building was completed in 1876. Due to structural defects, the original church building was demolished and replaced in 1938.³⁷

In 1904 a pipe organ was purchased from Votteler-Hettche for \$1500 (\$38,461 in 2013 dollars). It was moved to the new building upon its completion and renovated in 2006 by James Leek Pipe Organ Co. of Oberlin, Ohio. The organ, consisting of two sixty-one note manual overhanging keyboards and a thirty note flat pedalboard, is located in the rear gallery of the sanctuary. It was most likely an older instrument rebuilt and enlarged by Votteler-Hettche. One indication of this is the discrepancy between the thirty-note compass of the pedalboard and the eighteen-note compass of the pedal 16' Bourdon. The top octave of the pedalboard (F# 19 to F 30) repeats F# 7 to F 18.. This created a larger pedalboard without the expense of adding an extra octave to the single pedal rank, although it also introduces an odd “break” in the pedal.³⁸

³⁷ St. Adalbert Parish, *Our Faith and Heritage 100 years: St. Adalbert's Parish*. (Berea, Published by the church, 1973) 1.

³⁸ St. Adalbert Parish, *Our Faith and Heritage 100 years: St. Adalbert's Parish*. (Berea, Published by the church, 1973) 1-3.



7.1 St. Adalbert Keydesk



7.2 St. Adalbert Pedalboard

Stop knobs are arranged horizontally and terraced on three levels located on either side of the keydesk (fig. 7.1). Stop names are indicated by machine engraving and are arranged with the right side consisting of the Great 8' ranks on the top level, 4' on the middle level, and all the couplers on the bottom level. The left side contains the Swell 8' ranks on the upper level, 4' rank on the

middle, and the Tremolo, Bellows Signal, and 16' Pedal Bourdon on the bottom level. The case is plain, with few ornaments, extra toe-holes in the facade, and a slot for a hand pump on the right side. A single swell shoe, in the shape of a shoe, bears the name Votteler-Hettche and is located directly above the center of the pedalboard (fig. 7.2). This is significant because previous swell shoes did not bear the company name and were located to the extreme right side.

The tiered stop knob layout is similar to the Rootstown organ, but all the St. Adalbert stop knobs are grouped by pitch level in ascending order from the top down, where the Swell knobs on the Rootstown organ are arranged in the opposite manner. Console measurements are similar to the Rootstown organ as well as stop disposition. St. Adalbert is one rank smaller, however (nine ranks as opposed to ten ranks), and does not contain a 2' rank.

The sound of the organ in general is clean and clear. The majority of 8' ranks gives a warm and full sound even though the organ is relatively small in size. Hymns as well as repertoire work well on the instrument, although registration options are limited due to the size and lack of registration aids. The room is fairly resonant, with about 2 seconds of reverberation that allows the sound to develop and grow

The Great 8' Open Diapason has moderately quick speech, but is quavery, unsteady, and the sound often wobbles. C 1 to D# 4 is quite slow to speak and soft, but after that the sound become bolder and easier to hear. Volume is fairly steady until D# 40, after which it drops noticeably. Due to its instability the Open Diapason is unusable as a solo stop.

The Great 8' Dulciana has a clear even tone throughout the register. The bottom octave is a slow to settle into pitch, but after B 11 the sound is more regulated and focused. Speech is moderate throughout, and there is a gradual decrescendo from the bottom to the top of the rank. Unlike previous Dulcianas, the St. Adalbert Dulciana is not the softest rank in the organ. It is also slightly narrower and stringier than the previous Dulcianas, although it continues to sound like a principal.

The Great 8' Melodia borrows its bottom octave from the Dulciana, and only has forty-nine pipes of its own. It is louder than the Dulciana, with a clean fluty sound. The octave starting at C 25 is the loudest and most prominent in the rank, slightly weakening after C 37. In general the tone is even and round, the bottom portion is clean, not tubby, and the entire rank is quick to speak and settle into pitch.

The Great 4' Principal is clean, clear, and much more stable than the 8' Diapason. It has a round even tone and is incisive and bold, similar to a German Baroque sound. When paired with the 8' Diapason, the Principal adds stability but does not overpower the lower rank.

The Pedal 16' Bourdon is quite slow to speak and often has more air than tone. As mentioned previously, it consists of eighteen pipes, breaking back at F# 19 to F# 7 to fill the thirty-note pedalboard.

The Swell 4' Flute Harmonique has fast speech and clear sound, but is slightly wavery in the bottom octave. Tone is even from bottom to top,

maintaining clarity and quality. It is generally relatively soft, and with little dynamic change throughout the rank.

The Swell 8' Oboe Gamba borrows its bass octave from the 8' Violin Diapason, and only contains forty-nine pipes. It has moderate speech, a very incisive tone, and is clean and thin, almost brittle sounding. The tone is even all the way through the register with a very slight decrescendo from the bottom to the top. It would be difficult to use it on its own, but it is quite effective in an ensemble. This rank is made of metal string pipes with a sound trying to approximate that of a reed. Since a reed would require tuning more often than a flue, this would be helpful in a space with limited climate control and little access to regular maintenance such as the gallery of a small parish in Northeast Ohio.

The 8' Violin Diapason is similar in sound to the Great 8' Dulciana. It is clean, clear, and somewhat thin sounding. The tone is even throughout the rank, and is generally soft like the other ranks in the Swell.

The Swell 8' Stopped Diapason sounds more like a flute than a diapason. This is not unusual, since this rank is traditionally similar to a Gedeckt, only larger. Speech is clean, and the sound is clear and warm. It is soft, with very little dynamic change.

Counterpoint works quite well on the organ, with the lines being quite easy to hear, although the action is quite loud and can be heard especially in fast moving lines. The 16' Bourdon tends to cloud the sound and speaks too slowly to keep up with the manuals, rendering it unusable. The relative abundance of

8' ranks creates a warm ensemble, especially in the Swell, and small-scale pieces work quite well, although it is sometime difficult to balance the manuals due to the difference in base dynamic level between the divisions. Large pieces can be effectively played, although the player will always be faced with the decision of whether or not to use the 16' Bourdon. As with the Rootstown organ, coupling the manuals is largely ineffective because the Swell can barely be heard in comparison to the Great. In addition, the added weight of the second keyboard can make it difficult to play cleanly. Hymns are quite effective and the organ is easy to sing with, although registration options are limited to the 8' and 4' ranks on the Great (a common 19th century disposition). The Swell alone is not powerful enough to lead singing and, as mentioned previously, coupling it to the Great does not produce additional enough sound to make it viable. It could have been used alone, as an accompaniment manual for an ensemble, or for a solo sound on the Great. This is a trait shared with the Rootstown organ, built less then ten years before, and showing a definite plan on the part of the builders of how they wanted their organs to be used.

St. Adalbert continues pushing toward the more Romantic sound seen over the previous instruments. Six out of eight manual ranks are 8', the other two being 4'. Neither mixtures nor 2' ranks are included in the disposition. The Dulciana is starting to undergo a definite change, while the principals are still bright and strong relative to earlier instruments. The lack of upper work may also have been due to the size of the instrument. The 1902 E. and G.G. Hook and Hastings organ in Bainbridge Street Baptist church in Richmond, Virginia is

slightly larger than St. Adalbert, and while it also primarily contains 8' stops, it features both a 2' and mixture as well. The Great divisions of both organs are identical except for the 2' Fifteenth on the Hook, and the Swell divisions, while different, both seem to be accompaniment or color manuals. The Hook organ also includes registration aids in the form of two combination pedals. While Votteler did use combination pedals, they are not found on this particular instrument. Both organs show a "romantic" influence, but Votteler has perhaps gone further by eliminating higher ranks and mixtures.

Chapter VIII: Lakewood Masonic Temple

Lakewood Masonic Temple in Lakewood, Ohio, is a Classical Revival-style building and is home to many groups in addition to the Lakewood Lodge. Designed by James W. Christford, the building was dedicated on September 30, 1916 and the Lakewood Lodge held its first meeting on October 2nd of the same year. At the time of its completion, the Temple was occupied by three other lodges in addition to the Lakewood Lodge: Gaston C. Allen Lodge, Free and Accepted Masons, Cunningham Chapter R.A.M., and Lincoln Chapter, Order of the Eastern Star. The two-manual, tubular pneumatic Votteler-Holtkamp-Sparling organ was completed August 9th, 1916 and cost \$2800 (\$58,333), and Holtkamp maintained the instrument for \$35(\$625) per year between 1917 and 1920 at which time the cost rose to \$60 (\$1,071.43).³⁹



8.1 Lakewood Organ

The organ is located in the rear gallery of the lodge room, which is decorated in an Egyptian motif featuring Lotus flower accents and carved

³⁹ *Lakewood Masonic Temple*. Archives, Lakewood Masonic Temple.

furnishings that also adorn the lower portion of the organ case (fig. 8.1). The facade consists of two rounded towers on either side, a rounded section in the middle, and straight connecting sections in between. Facade pipes are dummies except for those in the towers and outer edges. The two-manual sixty-one note keydesk is attached to the case, with color-coded stop tabs for flutes (dark brown), strings (light brown/blond) reeds (pink), and couplers (black for intermanual and white for intramanual) (fig. 8.2). This color-coding is rare on Holtkamp instruments, one other known example being the 1919 organ in Kensington Methodist Church in Buffalo, New York. Pistons provide combination action for the organ in the form of three divisionals each for the Great and Swell: 1, 2, and 0 (cancel). The pedalboard has a compass of thirty notes, and is concave but not radiating. The Great and Swell divisions are both enclosed, and an expression shoe is provided for each, as well as a crescendo shoe. The Lakewood organ uses a plain rectangle design for its expression shoes unlike the stylized shoe shape found on previous organs (fig. 8.3).



8.2 Lakewood Keydesk



8.3 Lakewood Pedalboard. The concave design is a marked change from previous instruments

An item of particular interest is the tubular-pneumatic action, which is kept in working condition and the organ is used regularly. This type of action was short lived and is relatively rare to be found in operational organs anymore. Sluggish response, time lags between divisions, and limitations on console placement led to many tubular-pneumatic actions being replaced with electro-pneumatic or all-electric action. The company was using mechanical action as late as 1906 (Crow River Lutheran Church, Belgrade Minnesota), and switched to tubular-pneumatic at least by 1910 (Trinity Lutheran Church, Vermillion, South Dakota). The use of tubular-pneumatic action was short lived, however, and by 1919 organs were being built with electro-pneumatic chests (Kensington Methodist Church, Buffalo, New York). The size of the Lakewood organ (thirteen ranks) and the attached keydesk create a situation where tubular-pneumatic action can function quite well, as evidenced by its continued use.

In 1926 Holtkamp requested a letter from the Temple to be shown to prospective clients. The Temple gave a positive recommendation, saying the organ was good for solo playing as well as accompanying solo and group singing and for use in the Masonic rituals. A short tubular gong is operated by a sprung tablet at the console, and is used for a specific ceremonial purpose that is a Masonic secret. Another curiosity is in the disposition for the organ; half of the twelve ranks are a variety of strings, a practice not found on instruments designed for churches at the time. Correspondence between Holtkamp and the temple as late as 1938 indicates Walter Holtkamp, Sr., always thought of the organ as being particularly effective.⁴⁰

The sound of the organ in general is mild to medium loud. In the contract documents the company gave descriptions of the sound of several of the ranks: Great Diapason Bold and Loud, Great Melodia very horny or stringy, and the Swell Stopped Diapason loud and fluty. On the console, only generic names of ranks are used (diapason, flute, reed, and viola (string) with relative strength or volume indicated as well (FF, M, MP, and PP). This is similar to stop nomenclature found on instruments built by The Aeolian Company. It was not common on Holtkamp instruments but can be found on other organs built during this period such as those in First Presbyterian Church of Bement, Illinois (1920) and Trinity Lutheran Church in Hayfield, Minnesota (1929). In addition, the majority of ranks are 8', with only two 4' flutes in the swell. While not installed in a traditional church setting, the organ is used for many of the same activities:

⁴⁰ *Lakewood Masonic Temple. Archives, Lakewood Masonic Temple*

accompanying group singing, vocal, and instrumental soloists, and providing solo organ music.

The Great 8' Diapason is round and full. It has no discernable chuff, but there is an audible click from the action as the pipes speak. Volume is even throughout the register, but it does decrescendo slightly as you ascend the keyboard. Pipe speech is a little slow, especially with the larger pipes. Speech improves as you move toward the top of the keyboard as expected. Tone is even throughout the rank with no real changes in sound.

The Great 8' Flute M has a round, "pah" sound and, like the Diapason, keeps the same tone throughout. The bottom of the rank is especially slow to speak, not really improving until C 25. Volume is fairly even throughout, getting softer starting from C 1 to C 25, then not changing much through the rest of the rank. The pipes do not exhibit any chuff which would not be expected at this time period, but, like the Diapason, the action can be heard clicking with each note.

The Great 8' Flute MP does not contain any actual pipes. Instead, the tab activates the Great 8' Viola (VL 8'). At the same time, a slider under a second toeboard of the Great 8' Flute M is engaged, blocking wind flow and lowering the pitch. When used together, an undulating effect similar to a celeste is created.

The Great 8' Violin F is not round like the flutes, but more incisive, more aggressive than the diapason, and in some ways harsh, being especially strident in the bottom octave. As with the other ranks, the Violin 8' F has a

noticeable decrescendo from the bottom to the top of the keyboard, but unlike the flutes and diapason, the volume continues to decrease evenly all the way to the highest note. The pipes get into pitch fairly quickly, allowing for faster moving lines than the other ranks. The pungent nature of the stop sounds “orchestral,” and is a clear indication of a more romantic sound.

The Great 8’ Violin is much softer than the Violin F, with a sound that is not nearly as incisive or aggressive. Instead, it sounds more like a diapason than a string, especially from C 25 up where the sound is rounder and smoother. The speech is slow in the bottom octave but increases after that as is normal for this organ. Even though the rank is relatively soft, it still has an even decrescendo from the bottom to the top.

The Pedal 16’ Flute FF is much softer than the manuals. The pipes are slow to speak as well as settle into pitch, especially C 1 through F 6. Pipe speech becomes quicker and cleaner as you ascend, giving the impression that the pipes are getting louder, but the sound is actually even and the top octave is slightly softer than the rest.

The Swell 8’ Violin PP has a clear incisive tone that has a pinched or nasal quality about it. The bottom octave is rounder and fatter than the rest of the rank, and starting at C 13 the tone becomes much narrower and thin sounding. The volume is consistent throughout the register, tapering slightly as you ascend.

The Swell 8’ Violin MP, like the Great 8’ Flute MP, does not have any actual pipes. In the contract, it is labeled “Celestial,” and drawing it activates

the Swell 8' Violin PP as well as a secondary slider that restricts air flow to that rank, causing the pitch to go flat and creating an undulating effect.

The Swell 8' Violin MF has a much less pinched sound than the PP. The top octave is distinctly different from the rest of the rank with a more narrow and pinched sound similar to the other Swell strings. The tone is even throughout, with moderate speech.

The Swell 4' Flute M consists of stopped metal pipes. It has a distinct change in tone at C 25. Prior to that the sound is clear and fluty, after that point it takes on a horny characteristic. The pipes are moderately slow speaking and settling into pitch, and the volume is fairly even throughout the entire rank except in the top twelve pipes (which are open metal) when there is a noticeable drop.

The Swell 8' Flute M sounds much flutier than the 4' Flute M, without the horny or nasal sound exhibited by the 4' Flute. The pipes are stopped and wooden, and the rank is listed as a Stopped Diapason in the contract. Overall, the tone is round and smooth, and unlike other ranks the volume stays quite even throughout until the top octave when it decreases.

The Swell 8' Reed PP is listed as a Vox Humana in the contract, and has a thin quavery sound that one would expect from that rank. There are forty-nine pipes (C 1 through C 49) with twelve metal flue pipes at the top octave (C# 50 through C 61). The quality of tone is consistent through the rank, with volume undulating louder and softer with no overall change. This particular rank is

placed in its own box in the chamber with a lid that provides access for maintenance.

The Swell 8' Reed MP is listed as an Oboe in the contract, and indeed sounds more like an oboe, although the sound is still thin like the Reed PP and the various strings in the organ. Pipe speech is moderate, and the tone remains constant throughout. There are forty-nine pipes, with the bottom octave (C 1 to B 12) borrowed from the Great VL. 8' PP. Unlike the Reed PP, the MP does exhibit a noticeable decrescendo from the bottom to the top of its range.

The organ is not ideal for counterpoint, but can play it when called upon to do so. To achieve this, a single 8' or 4' stop may be used with a slower tempo to accommodate the slow speaking pipes. Generally lines are clear and it is easy to make out ornaments, but inner voices can be lost. Pipe speech isn't always clear enough for full textures or fast enough to handle quick tempi, but moderate tempi and sparse registration can be effective. The organ handles smaller scale pieces very well, such as the *24 Pièces en style libre pour Orgue ou Harmonium, Op.31*, by Louis Vierne. These were written for Harmonium or Organ and work quite well on the Lakewood organ. The divisions are both under expression and therefore easy to balance, and solo lines are clear and singing. The Strings by themselves can be a little ragged, but adding flutes to the ensemble makes the sound warmer and richer. Large-scale works can be played as long as the player doesn't attempt too many registration changes. Both divisions may be used together because remote action removes the problem of manual coupling and the size of the organ does not create time lags

between divisions as with larger tubular-pneumatic organs. Pipe speech is fast enough to handle moderate fast tempi, but the reeds don't speak quickly enough and often chirp. The pedal is very weak, and even with both manuals coupled is difficult to hear. Group singing is practiced by the Masons and hymns can be accompanied successfully, but registration options limit creativity.

The Lakewood organ represents a definite change in building style for the Holtkamp Company. In addition to the change from mechanical to remote action, the organ has only one principal rank and nothing above 4' pitch, although a 2' pitch can be achieved by using a 4' coupler with the Swell 4' Flute. The principal chorus and ensemble model is completely gone, and the emphasis is more on individual sounds and effects, especially celestes. Both the Great and Swell are enclosed, allowing for more dynamic control. The sound of the principal and flutes are fatter than previous organs and has a much more romantic sound.

Comparing the Lakewood organ to the 1915 instrument built by Hook and Hastings for Center Congregational Church in Northbridge, Massachusetts, one can see both similarities and differences. The Northbridge organ also only has 8' and 4' ranks (four and two, respectively), and one pedal rank (16' Subbass). The Northbridge organ also has two principals as opposed to Lakewood's one, with a 8' in the Great and a 4' in the Swell. A 2' pitch could be achieved by using a 4' coupler with one of the 4' ranks on the Swell. While the Holtkamp had seemingly cut all ties with past building practices, Hook and Hastings appears to be straddling old and new styles within their design.

Chapter IX: Notre Dame College

In 1922 the Sisters of Notre Dame founded Notre Dame College in Cleveland, Ohio. Originally an all women's school, the college is currently co-ed, and graduated its first male students in 1975. The original campus consisted of one building, completed in 1928. In 1929 the school signed a \$7000 (\$93,333) contract with Votteler-Holtkamp-Sparling to purchase a pipe organ for Christ the King Chapel. The organ was paid for by an anonymous donor, later revealed to be Sister Mary Catherine, S.N.D, and was part of a complete course in church music for students wishing to qualify as organists.⁴¹



9.1 Notre Dame Facade

⁴¹ "New Manual Organ Installed at N.D.C." *Notre Dame News*, October 8, 1929. Archives Department, Notre Dame College.

Although it was first used for Christmas Midnight Mass, 1929, the instrument was not officially completed until January of 1930, requiring four weeks of installation.⁴² In 1976 the Holtkamp Company renovated the organ for \$23,850 (\$96,169.35). The work included replacing the Great, Swell, and Choir chests and rewiring the organ, but no tonal changes were made under the advisement of Walter Holtkamp, Jr. who felt it represented an important time in American organ building and should be left in original condition as much as possible.⁴³

The organ has been particularly noted for its Ludwigtone, a stop invented by the Henry Holtkamp and Allen Sparling in the early 1920s that became hallmark of the company. Named after a monk known as Brother Ludwig, the rank was considered especially suited for the accompaniment of chant.⁴⁴ The Ludwigtone is an open wood flute rank, normally at 8' pitch, with two mouths. A center partition in the pipe allows for two vibrating columns of air to be produced, essentially creating two pipes out of one. One section of the pipe plays the unison (the note one would expect a single pipe to play at the given pitch level) and the other plays slightly out of tune (sharp), producing an undulating effect. The Ludwigtone was used during the 1920s and 1930s. It can be found as early as 1926 on the organ for St. John's in Mansfield, Ohio, and as

⁴² "New Manual Organ Installed at N.D.C." *Notre Dame News*, October 8, 1929. Archives Department, Notre Dame College.

⁴³ "Kulas Foundation Awards Grant to NDC For Repair of Pipe Organ." *Notre Dame Today*, October, 1976. Archives Department, Notre Dame College.

⁴⁴ Ferguson, John, *Walter Holtkamp, American Organ Builder* (Kent, Ohio: Kent State University Press, 1979) 3.

late as 1938 in St. Stephen's in Cleveland, Ohio. By the 1940s Walter Holtkamp, Sr. stopped incorporating it into his organs.⁴⁵



9.2 Notre Dame Manual



9.3 Notre Dame Pedalboard

⁴⁵ Ferguson, John, *Walter Holtkamp, American Organ Builder*. (Kent, Ohio: Kent State University Press, 1979) 3-4.

The organ has three sixty-one-note manuals (Swell, Great, and Choir) and a thirty-two-note pedalboard, and is installed in the rear balcony of Christ the King Chapel. The antique oak console was designed to match the Gothic motif of the wood trim in the chapel. The pipes are located in chambers with a bronze colored pipe facade consisting of two corbels on either side and one in the middle, divided by two groups of tapering pipes. The organ has electro-pneumatic action. The combination action consists of five Swell pistons, four Great pistons, three Choir pistons, four Pedal pistons, and four General pistons. The manual divisional pistons are located under their respective manuals, Pedal toe studs to the left of the expression shoes, and General pistons under the bass end of the Great keyboard. Pistons are marked with roman numerals. The organ also features a Sforzando (or full organ) and Great to Pedal Reversible, both located to the right of the expression shoes. The pedalboard is concave and radiating with three expression shoes located above the center: Choir, Swell, and Crescendo. Stop keys are arranged in a straight line across the top of the console (from right to left Swell, Pedal, Great, Choir) and are color-coded with black for couplers and white for all other tabs. Stop tabs are arranged in a straight-line symmetrical pattern above the Swell manual. The Swell and Pedal tabs are arranged, from left to right: couplers, high ranks, low ranks, soft to loud. The Great and Choir tabs are arranged, from left to right: low ranks, high ranks, and couplers, loud to soft. The organ contains a wealth of couplers, with 16', 8', and 4' couplers available for coupling the Swell to both the Great and Choir, and the Choir to the Great. 8' ranks from the Swell and Choir consist of seventy-

three pipes instead of sixty-one, allowing octave coupling to cover the entire keyboard. The current organ bench, featuring a drop leaf on the right side for an assistant, was donated in 1939 (fig. 9.4 and fig. 9.5).



9.4 Dropleaf Bench Up



9.5 Dropleaf Bench Down

Documents from the college describe the organ as “late romantic” and “an orthodox church organ,” with a full, rich, and dignified tone. Today, the organ in general has a warm, rich sound, helped both by the abundance of 8’ registers as well as the live acoustics in the room itself. The full manual and pedal compasses allow the organist to choose from the full list of organ repertoire, and registration aids in the form of pistons and reversibles give freedom to make changes while playing. As with the organs that preceded it, the Notre Dame instrument has mainly lower pitched ranks, with only two independent 4’ ranks and no 2’ ranks.

The Swell 8’ Ludwigtone starts at C 13. Notes C 1 through C 12 are standard open wood flutes. It has a fast vibrato, but at the same time the sound is gentle, with the vibrato slowing down as you ascend the rank (which is set by tuning). The tone is consistent and even throughout the rank, and produces a melodramatic effect similar to a theater organ flute with a tremolo. The Ludwigtone is very soft and does not combine well with other stops. It can be used alone to accompany chant, quiet moments of the mass, or possibly when playing repertoire when a celeste is called for.

The Swell 4’ Fugara is very soft, with a delicate and gentle tone. It has good speech and remains consistent throughout the rank. The Fugara can be played alone or combined with the Swell Gedeckt for a gentle solo or accompanying sound.

The Swell 8’ Salicional is thin and incisive. It gets to pitch quickly, but is more acidic than warm, similar to a string found on an orchestral organ. The

Salicional provides a contrast to the Gedeckt and Diapason, and when used together the sound is warm and clear, allowing moving lines to be heard.

The Swell 8' Gedeckt is very soft, and was most likely intended to pair with the Fugara. As with the Fugara, the sound is delicate and warm with good speech that is consistent throughout the rank.

The Swell Diapason 8, which is slotted, has a clean horny sound, with easily heard upper harmonics. Unlike the other Swell ranks it is brittle and cold, not very useful as a solo sound. When combined with the other 8' ranks, especially the Cornopean, it adds clarity and foundation to the ensemble.

The Swell 8' Cornopean is strong and clear, with a sound that is not buzzy or thin. The reed adds an extra layer of depth to the Swell division, and is useful as solo or ensemble sound. The Cornopean is the strongest rank in the Swell division, but it is not overly powerful as to make it unbalanced. Pipes change from reeds to flues at C 49 and continue as flutes until C 61.

The Pedal 16' Principal is very tubby and difficult to hear. It produces a low rumble that is especially prominent from C 1 through C 15, after which the tone smoothes out somewhat, but is still difficult to discern. It provides a low bass for slow moving music, but is not practical for faster tempi because of its slow speech and lack of clarity.

The Great 16' Bourdon is extremely airy and produces very little tone, much like the previous 16' Bourdons. C 1 through B 12 are particularly bad in this regard, and pipes don't produce a recognizable sound until C 13. Another change occurs at F 30, when the sound becomes a little cleaner but the air hiss

continues to be the dominant feature. Throughout the rank, the pipes have a slight burble in the sound, giving the impression they are out of tune when played in ensemble.

The 8' Great Diapason is much louder than the other ranks and very prominent in the room, which is common for Great Diapasons at this time. C 1 through G 20 are part of the facade, which partly accounts for the imbalance. After G 20, the Diapason calms down and the volume is more in line with the rest of the organ. The pipes are slightly slow to speak, but are round and clear, with a little chuff in the top octave. The Diapason can be difficult to use as a solo stop because of its speech, but works well in an ensemble providing a strong foundation.

The Great 8' Harmonic Flute is very soft and subdued, especially when compared to the rest of the Great division. This is in contrast to French Harmonic Flutes of the time, which were much more powerful, especially when part of the Great. Tone quality is uneven through the rank, sometimes smooth and sometimes more thin and jagged sounding, with a major change occurring at C 25 when the tone evens out. Dynamics are consistent throughout the rank and there is no discernable change from the bottom to the top.

The Great 4' Octave has a very clean and even sound. It is quite prominent in the room but not as strong as the Great Diapason, combining well with it to produce a round full chorus. Speech is relatively quick, with no wobbles or burbles, making it especially helpful to pair with the slower speaking Diapason.

The Choir 8' Geigen is a louder version of the Choir Dulciana. It has a gentle sound, which is thin and stringy, becoming flutier in the top of the register. The pipes are slow to speak, but clean and even throughout. The Geigen serves as the foundation stop for the Choir, and provides adequate support for upper ranks, especially when combined with the Dulciana.

The Choir 4' Concert Flute has a round, warm, and gentle sound, which is even throughout the register. The pipe speech is clean with no chuff, but pipes are slow to speak. There is a slight decrescendo from the bottom to the top of the rank, but overall the dynamics are very even. The action can be heard clicking when seated at the console, but this sound dissipates as it moves into the room.

The Choir 8' Dulciana has a very stringy, narrow sound, unlike the dulcianas found on earlier organs which sounded more like small scale principals rather than strings. The pipes are slightly slow to speak, but speech is incisive, clean, and steady. The tone quality is warm and gentle, and even throughout the rank. As with the Concert Flute, the action can be heard clicking when the pipes sound.

The Choir Flute Traverso 2 2/3 is slow to speak, but has a sound that is warm, round, rich, and gentle, not nasal or sharp as with some nasards. Tone is even through the rank, and a decrescendo from the bottom to the top results in the top octave being very quiet. Its gentle sound allows the Flute Traverso to blend with the other ranks on the choir without sticking out. This makes it less

useful use with solo lines, for example in a Buxtehude choral prelude, but it can be used when accompanying without making the 5th too prominent.

The Notre Dame organ can generally play most repertoire and is the most versatile of all the instruments examined. Counterpoint with a single stop is clear, but must be played slow due to the speech of some pipes. With an ensemble consisting of more than just the Principal chorus the texture tends to be muddy and individual lines are difficult to hear. Use of the Swell Cornopean in the pedal should be especially avoided when playing counterpoint because it does not speak quickly or clearly enough in the lower range to balance with the Great Principals.

The variety of contrasting 8' stops and the two divisions under expression make smaller works very easy to play on the organ. The organ is warm and divisions balance easily to create solo and accompaniment or warm full ensembles. Solo sounds can be created on every manual, but it is difficult to use the Great for accompanying because of the volume of the Principals and inconsistency of the flute.

Large-scale works can be performed effectively on the organ without having to worry about making changes because of a short compass or too few manuals. The pipes do not speak extremely fast, especially with full organ, and the player must find the point where the instrument sounds "happy." The resonance of the room can support slower tempi, making this less of a problem than it would be in an environment with dry acoustics.

Hymns can be accompanied quite well on the organ. Solo lines can be created, and a variety of dynamic levels can be achieved. It does not have the color options available on larger instruments but the sound is full and rich and can easily support congregational singing.

The Notre Dame organ was finished just one year before the death of Henry Holtkamp in 1931, and represents the mature Romantic design to which the company had been moving toward. Focus is on individual colors, especially in the Swell with its variety of 8' sounds. It is also one of the last instruments built before Walter Holtkamp, Sr. assumed total control of the company and began moving toward a radical new design concept. While generally the organ shows little concern for choruses or ensembles, the Flute Traverso 2 2/3' offers a glimpse in the direction Walter Holtkamp, Sr. was moving. A 2 2/3' can be used for solo lines or as part of an ensemble, and its inclusion on a division with only three ranks (8', 4', 2 2/3'), shows a clear intention in how that ensemble would be constructed. Throughout the rest of the 1930s, Holtkamp focused more on choruses and ensembles, including more principals, higher pitch ranks, and clear, light flutes.

Holtkamp's design for Notre Dame, while hinting at a new direction, was common for the time. The 1929 Hook and Hastings organ built for Jane Smith Memorial Chapel at Johnson C. Smith University in Charlotte, North Carolina shows many of the same ideas. Consisting of sixteen ranks over two manual divisions and pedal, the organ is primarily 8' pitch, with two 4' ranks (one flute and one principal), and two 16' ranks in the pedal. As with Notre

Dame, the design of the organ is mainly individual color stops, especially in the Swell. Hook and Hastings would close just six years later in 1935. While faced with similar difficulties, Walter Holtkamp, Sr, was able to keep his company alive in the face of a changing market and world.

Chapter X: Conclusion

In many ways, the Holtkamp Company made a full circle in its growth and development. Early instruments were based on a chorus and classic ensemble model. During the early 1900s choruses gave way to individual colors. By the 1930s, however, the company began moving back toward the unified ensemble approach and specialty stops were discontinued. The chorus and ensemble model came to define the company under Walter Holtkamp, Sr. and can still be found in instruments built today. While seemingly a new idea at the time, for the Holtkamp Company it was a return to its beginnings. The style that defined the company during its most prosperous time was firmly rooted in its past. Without this past, Holtkamp would not have developed the style of building that allowed it to become one of the dominant builders of the twentieth century.

Style and design in Holtkamp organs evolved steadily from the early days of the company through the 1930s. Small instruments, simple layouts, and a focus on 8' ranks are common elements to every instrument, with changes occurring in the form of console design, sound, and technology. Early organs were tracker action, single manual, and had short manual and pedal compasses. Later instruments had multiple manuals, remote action, and full manual and pedal compasses. Console design of the later instruments also matched the standard specifications later developed by the American Guild of Organists.

Casework, while never extremely ornate, became less decorative as time progressed. Zion and Zoar both featured ornamented cases, while First Congregational had very little and St. Adalbert practically none. Lakewood and

Notre Dame, installed in chambers, both have plain facades. Instruments built by Walter Holtkamp, Sr., would continue this unadorned style of plain case and facade designs.

Console design also underwent a variety of changes throughout the Votteler years. Zion and Zoar featured stop knobs arranged vertically on either side of the keyboard, First Congregational and St. Adalbert had tiered stop knobs arranged horizontally (also on either side of the keyboard), and Lakewood and Notre Dame featured stop tabs arranged above the top manual. The tab design would be continued by Walter Holtkamp, Sr., and became an easily recognized feature of later Holtkamp organs. Pedalboards were originally flat and straight, and it is not until the Lakewood organ that a concave pedalboard is used. Notre Dame has a pedalboard that is both concave and radiating, a design that became part of the standard set by the American Guild of Organists in 1933.

Comparing console measurements to the 1933 standard, Votteler organs were generally smaller, with shorter pedals, shallower key depths, and less distance between the manuals and pedals. Earlier organs had wider pedals spaced further apart, but there were fewer of them, giving space for their larger size. The Notre Dame organ, built three years before the Guild standard was published, comes the closest, especially in the distance between the lowest manual and pedalboard (29" verses 29 ½" respectively).

Accessories, such as couplers, swell shoes and combination action, were always part of Votteler designs. Zion and Zoar and pre-set combination levers, while Lakewood and Notre Dame used pistons. With the exception of the Zion

organ, all the instruments have expression shoes. Zoar and First Congregational have the swell shoes on the extreme right, while St. Adalbert, Lakewood, and Notre Dame place them in the center of the pedalboard where they are more easily accessible.

Principal ranks generally have round even sounds that are strong but not aggressive, and provide a solid foundation sound for ensembles. 8' principals generally had slow to moderate speech, while 4' principals were faster and cleaner. 2' principals were non-existent with the exception of Zion, which was also the earliest instrument in the study. The lack of 2' principals was possibly due to the size of the instruments. 8' and 4' ranks are most often used, so in order to make a small instrument as cost effective as possible less flexible ranks would be left out in favor of those that would be used more often. A one manual instrument is an exception because there more ranks are concentrated in one division, allowing for a greater variety of sounds in that division while still giving a variety of 8' and 4' stops. In addition, smaller pipes are more adversely affected by the weather and since many of these buildings would not have had adequate climate control the organs could have been designed to be as maintenance free as possible. Lastly, orchestral transcriptions and variations on popular tunes were considered usual musical fare during this time. These pieces did not necessarily require higher pitched stops. Parish organists may not necessarily have been playing these pieces, but their popularity could have influenced designs.

The principals are excellent for using as solo stops and clear enough to play counterpoint, although slow speech requires slower tempi. The 8' Open Diapason at St. Adalbert is the exception to this rule. It is relatively weak and unsteady and can only be used in ensemble with another 8' or the 4' Principal. Principal choruses provide strong accompaniments for hymns as well as opening and closing voluntaries. Often they are the only option because of the imbalance between the principal ranks and the other ranks on the organ. First Congregational and St. Adalbert are both two manual organs where the Great principal chorus is intended to be used alone because other ranks on the organ are not powerful enough to add anything of consequence to the sound.

Earlier organs, especially Zion and Zoar, have a more aggressive principal sound while later organs, specifically Lakewood Masonic and Notre Dame College, are smoother and not as clear, resulting in a more romantic sound and some difficulty hearing individual contrapuntal lines. Contrapuntal music was not favored or performed much in this time period, so this was most likely a matter of aesthetics. Dulcianas moved from a broad principal sound to a narrow, stringy sound, a trend that would reverse itself in mid-century Holtkamp organs when Walter Holtkamp, Sr. returned to the earlier idea of the dulciana as a principal.

Flutes are generally faster to speak than principals, more so in the earlier organs than later ones. They are never especially prominent, but there is a definite change from a more robust sound in the earlier instruments to a more delicate and gentle sound in the later instruments. As with the principals, 8' and

4' ranks are found on every instrument, with only one 2' rank on the Zoar organ. The Zoar 2' Piccolo is bright enough to be used with the 8' and 4' Principals or with 8' and 4' flutes to create a flute ensemble.

The flutes can be used as a contrasting sound with the Diapasons or in conjunction with them to round out an ensemble. Flutes on the Zoar, Zion, Lakewood, and Notre Dame organs may be added to the principals to fill out the ensemble sound, while the First Congregational and St. Adalbert flutes play the role of a secondary sound to be used in contrast to the principals, not in conjunction with them. All the flutes are well suited to playing softer solo repertoire or accompanying choral music, both requirements for organs primarily used in the context of a sacred service.

Strings appear exclusively at 8' pitch, although octave couplers on the Lakewood and Notre Dame organs allow them to be used at 4' pitch as well. String ranks on the Lakewood organ contain sixty-one pipes over a sixty-one note manual compass while all the 8' ranks on the Notre Dame organ have seventy-three pipes over a sixty-one note manual compass. The latter allows 4' octave coupling across the entire manual. At least one string appears on every instrument except Zion, making them a standard part of the company's designs through the 1930s. 1950s Holtkamps rarely featured string ranks of any kind except for Gambas and Celestes in Swell Divisions. The neo-Baroque aesthetic of the 1950s avoided true string stops, perhaps because they were too suggestive of the Romantic sound builders and organists were rejecting.

Early strings had a rounder sound closer to principals, while later strings were narrower and more aggressive, even to the point of sounding acidic as on the Lakewood organ. Lakewood has a variety of strings covering a range of sounds from round to thin, gentle to aggressive, and is an anomaly because almost half its ranks are strings, as opposed to the other instruments that only have one or two at the most.

String ranks on all of the organs are not useful as solo stops but work well in ensembles, especially when paired with a slower speaking principal or flute. They provide pitch definition and add stability to the sound.

Reeds can only be found on two organs, Lakewood Masonic and Notre Dame. The most likely reason for this is their greater cost and the difficulty of keeping them in tune in rooms with unstable climates, although it could also be due to lack of experience. This lack of attention to reeds would continue under Walter Holtkamp, Sr., who ordered them from Giesecke & Sohn of Germany instead of producing them himself. The Lakewood organ has two reeds, an Oboe and a Vox Humana, and Notre Dame has one reed, a Cornopean. In both cases the reeds are at 8' pitch but the Notre Dame reed has seventy-three pipes, allowing it to be coupled at the octave.

Mixtures, like reeds, only appear on two organs, but in this case they only appear on the earliest instruments. Early Nineteenth Century included the seventeenth (1 3/5') and sounded more like dolce coronets. The mixtures are gentle, and blend into the chorus without becoming shrill or overpowering. As with 2' ranks, mixtures are the least flexible stops on the organ and would only

have been used as an addition to the full chorus. Given the relatively small instruments being built, organists would benefit more from an extra 8' or 4' rank than a mixture. Walter Holtkamp, Sr. returned mixtures to his designs in the early 1930s and continued to use them thereafter, moving to a more classic Germanic style. The mixtures from the 1950s, however, were larger, more powerful, and more strident than their earlier counterparts, that could blend into the full organ sound without being noticed.

Walter Holtkamp's organs were known for their minimal designs and consistency of sound. In many ways, they are the opposite of the direction the company was headed until the 1930s, culminating with the Notre Dame Organ. Multiple expressive divisions, strings, a variety of couplers, and lower pitched ranks only seem to be at odds with the neo-Baroque organs with their thinner sounds, chuff, and relative abundance of mixtures. The Notre Dame organ in particular, described in documents as being late Romantic, is in direct conflict with the ideals of the Organ Reform Movement. Tonally, the company arcs toward the romantic organ as it approaches the 1930s and then away from the romantic organ as it leaves the 1930s, but large stoplists and orchestral sounds are never fully embraced. The relatively small sizes and simple design elements, however, can be seen throughout the work of Walter Holtkamp, Sr.

As an example of this, one can look at the organ of All Souls Unitarian Church in Indianapolis, Indiana, built in 1960, and one of the last instruments Walter Holtkamp, Sr. designed and supervised before he died in 1962. It is

typical of the period and contains all the hallmarks of the style developed through the 1940s and 1950s.

Visually, the organ is minimalist in design. The pipes sit on chests with no casework and both the layout of the pipes and the design of the console embraces clean, straight lines. There are three manual divisions (Great, Swell, and Postiv) and one Pedal division. Individual stops are activated by tabs, which are straight across the top of the console above the Swell keyboard. Registration aids take the form of five general pistons and four pistons each for the individual divisions. The organ consists of thirty ranks, a modest number for three manuals and pedal at the time. This is similar to earlier organs, especially those from the 1930s, in its modest size and use of stop tabs and minimal pistons.

These are the elements that characterized Holtkamp organs from the earliest days of the company. While tonal ideas changed over time, the basic design philosophy remained the same. Instruments were relatively simple with little emphasis placed on technologies such as registration aids. Keydesks and consoles were streamlined and easy for the player to use. Mechanical components were designed and built to work with minimal problems. That design philosophy led to a unique style of building which was consistently successful in its approach and execution. The Holtkamp name has endured as one of the oldest names in American organ building, and will continue to do so for the foreseeable future.

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Appendix A

Chronological Listing of Known Holtkamp Organs (1853-1934) Extant and Non-extant⁴⁶

Votteler and Siedle

1853. Cleveland, OH, First Methodist Church. 3 ranks

Gottlieb Votteler

1873. Zoar, OH, United Church of Christ. 1 manual. 12 ranks

1874. Detroit, MI, St. John's Reformed Church. 2 manuals

1876. Detroit, MI, St. John's-St. Luke's Evangelical UCC. 2 manuals. 21 ranks

1881. Dover, OH, St. John's United Church of Christ. 2 manuals. 800 pipes

1881. Opus 73. Napoleon, OH, St. Augustus R. C. 2 manuals. 12 ranks

1881. Dover, OH, St. John's United Church of Christ. Rebuilt by Holtkamp in
1938. 3 manuals. 27 ranks

1895. Opus 102. Haverhill, NH, Congregational. 2 manuals. 11 ranks

1896. Opus 116. Rootstown, OH, First Congregational UCC. 2 manuals. 10
ranks

1898. Alpena, MI, St. Bernard's R. C. 2 manuals

ca. 1900. Cleveland, OH, Franklin Circle Masonic Temple. 2 manuals. 13 ranks

Henry B. Votteler

1898. Opus 121. Sheboygan, WI, Calvin Christian Reformed. 2 manuals. 15
ranks

⁴⁶ Organ Historical Society, "Pipe Organ Database." Organ Historical Society, <http://organsociety.bsc.edu/> (accessed December 3, 2010). Complete information is not known for every instrument.

1902. Salix, IA, St. Joseph's R.C. 1 manual. 4 ranks

1905. New Kensington, PA, First Congregational. 2 manuals. 11 ranks

Votteler-Hettche

Date unconfirmed. Detroit, MI, Shiloh Free Will Baptist. 2 manuals. 12 ranks

Date unconfirmed. Hastings, MI, St. Rose R. C. 2 manuals

ca. 1900. Cleveland, OH, Independent Evangelical. 1 manual. 13 ranks

ca. 1900. Piqua, OH, Masonic temple. 2 manuals. 11 ranks

ca. 1900. Plymouth, OH, United Methodist. 2 manuals. 13 ranks

ca. 1900. Antioch, IL, St. Ignatius' Episcopal. 2 manuals. 8 ranks

1901. Bellevue, OH, St. Paul's Episcopal. 2 manuals. 15 ranks

1903. Clyde, KS, Presbyterian / Masonic temple / Clyde Historical Society.
2 manuals. 7 ranks

ca. 1903. Kane, PA, St. John's Episcopal. 2 manuals. 9 ranks

1904. Berea, OH, St. Adalbert's R. C. 2 manuals. 9 ranks

1904. Liberty, IN, Presbyterian. 2 manuals. 12 ranks

1904. Ripley, OH, Centenary United Methodist. 2 manuals. 10 ranks

1905. Originally built by Geo. H. Ryder, Opus 24 (1874). Cleveland, OH, First
Methodist Church. 3 manuals

1905. Chicago, IL, St. George's Episcopal. 2 manuals. 8 ranks

ca. 1905. New Haven, IN, Church of Christ. 2 manuals. 9 ranks

1905. Imlay City, MI, Congregational. 2 manuals. 9 ranks

ca. 1906. Belgrade, MN, Crow River Lutheran. 2 manuals. 8 ranks

1907. Belgrade, MN, Crow River Lutheran Church. Rebuilt in 1983 by
Hendrickson Organ Co. 2 manuals. 7 ranks

1907. Three Rivers, MI, First Methodist. 2 manuals

1913. Cleveland, OH, St. Procop R.C. Rebuilt by Votteler-Holtkamp-Sparling in 1947. 2 manuals

Votteler-Holtkamp-Sparling

1907. New Castle, PA, Second Presbyterian

ca. 1910. Vermillion, SD, Trinity Lutheran Church (ELC/ELCA). 2 manuals

1915. Cosby, MO, Hope UCC 2 manuals. 8 ranks

1916. Lakewood (Cleveland), OH, Lakewood Masonic Temple. 2 manuals

1919. Opus 1343. Buffalo, NY, Jordan Rivers Missionary Baptist / Hope-Kensington Methodist. 2 manuals. 9 ranks

1920. Opus 1369. Cleveland, OH, Cleveland Masonic and Performing Arts Center. 2 manuals. 7 ranks

1922. St. Paul, MN, Christ Lutheran on Capitol Hill. 3 manuals

1922. Tonawanda, NY, Augustana Evangelical Lutheran Church. 2 manuals. 10 ranks

1923. Originally built by Geo. H. Ryder, Opus 24 (1874). Cleveland, OH, First Methodist Church. 3 manuals

1924. Opus 1428. Cincinnati, OH, Westwood Methodist Church

1926. Mansfield, OH, St. John's United Church of Christ. 3 manuals. 27 ranks

1927. Mount Vernon, OH, Gay Street United Methodist Church. Rebuilt by Bunn=Minnick Co in 1977. 3 manuals. 42 ranks

ca. 1929. Hayfield, MN, Trinity Lutheran Church. 2 manuals. 10 ranks

1929. Opus 1528. Cleveland, OH, Cleveland Masonic and Performing Arts Center. 2 manuals. 5 ranks

1929. Opus 1529. Cleveland, OH, Cleveland Masonic and Performing Arts Center. 2 manuals. 5 ranks

1930. South Euclid (Cleveland), OH, Notre Dame College. Rebuilt by Holtkamp in 1977

1931. Opus 1566. Lyndhurst (Cleveland), OH, Messiah Lutheran Church.
Rebuilt in 1952 by Holtkamp. 2 manuals
1932. Opus 1576. Detroit, MI, Zion Lutheran. 3 manuals. 32 ranks
1933. Opus 1579. Originally built by Wm. Schuelke (1909). Cleveland, OH, St.
Stanislaus R.C.
- ca. 1934. Elyria, OH, First Church of Christ, Scientist
1934. Opus 1583. Chagrin Falls, OH, St. Martin's Episcopal. Rebuilt by
Holtkamp in 2001. 2 manuals. 25 ranks

Appendix B

Stoplists and Console Measurements of Selected Organs Stoplists are given as they appear on the individual instruments

Zion Evangelical and
Reformed Church
Winesburg, Ohio

G. F. Votteler, 1869
Mechanical Action

Manual:

Principal 8 ft
Gedeckt Bass 8 ft
Gedeckt Treble 8 ft
Dulciana 8 ft
Octave 4 ft
Superoctave 2 ft
Sesquialtera II

Pedal:

Bourdon 16 ft

Coupler (manual to pedal)
Combination Lever
Cancel Lever

Console Measurements

Pedal

Compass: 18-note, C 1 to F 18

Length between heelboard and toeboard: 20"

Length of playing surface of sharps: 5"

Height of sharps above naturals: 3/8"

Width of playing surface of natural keys: 3/4"

Total width of pedals: 27"

Pedal to Manual: 30 1/4" between playing surfaces of manual to pedal

Manual

Compass: 56-note, C 1 to G 56

Length of playing surface of sharps: 3 1/2"

Width of playing surface of sharps: 3/8"

Depth of sharps: 1/4"

Length of playing surface of naturals: 6"

Width of playing surface of naturals: 1"

Depth of naturals: 5/16"

Zoar United Church of Christ
Zoar, Ohio

G.F. Votteler, 1873
Mechanical Action

Manual Bass:
Open Diapason 8 ft
Stopped Diapason 8 ft
Dulciana 8 ft
Principal 4 ft
Flute 4 ft
Piccolo 2 ft

Pedal:
Sub Bass 16 ft

Coupler (manual to pedal)
Signal
Combination Lever

Manual Bass Split: C 1 to C 25
Manual Treble Split: C 25 to G 56

Manual Treble:
Open Diapason 8 ft
Dulciana 8 ft
Stopped Diapason 8 ft
Violin 8 ft
Quintaten 16 ft
Principal 4 ft
Flute 4 ft
Piccolo 2 ft
Cornet

Console Measurements

Pedal:

Compass: 18-note, C 1 to F 18

Length between heelboard and toeboard: 20"

Length of playing surface of sharps: 5"

Height of sharps above naturals: 3/8"

Width of playing surface of natural keys: 3/4"

Total width of pedals: 27"

Pedal to Manual: 32" between playing surfaces of manual to pedal

Manual

Compass: 56-note, C 1 to G 56

Length of playing surface of sharps: 3 1/8"

Width of playing surface of sharps: 3/8"

Depth of sharps: 1/4"

Length of playing surface of naturals: 5 1/2"

Width of playing surface of naturals: 1"

Depth of naturals: 1/4"

First Congregational Church
Rootstown, Ohio

G. F. Votteler, 1896
Mechanical Action

Great:
Unison Bass
Dulciana 8
Open Diapason 8
Principal 4
Melodia 8

Swell:
Flautina 2
Stopped Diapason 8
Fugara 4
Salicional 8
Stopped Diapason Bass 8
Viola 8

Pedal:
Bourdon 16
Pedal Check

Couplers:
Sw/Pd
Gt/Pd
Sw/Gt
Sw/Gt Octave

Signal

Console Measurements

Pedal

Compass: 27-note, C 1 to D 27

Length between heelboard and toeboard: 20"

Length of playing surface of sharps: 5"

Height of sharps above naturals: 1/4"

Width of playing surface of natural keys: 1"

Total width of pedals: 37 3/4"

Pedal to Manual: 28 3/4" between playing surfaces of manual to pedal

Manual

Compass: 58-note, C 1 to A 58

Length of playing surface of sharps: 3 1/2"

Width of playing surface of sharps: 3/8"

Depth of sharps: 1/4"

Length of playing surface of naturals: 5 3/4"

Width of playing surface of naturals: 1"

Depth of naturals: 1/4"

Distance between playing surface of manuals: 3 1/4"

St. Adalbert Church
Berea, Ohio

Votteler-Hettche, 1903
Mechanical Action

Great:

Open Diapason 8

Dulciana 8

Melodia 8

Principal 4

Swell:

Flute Harmonique 4

Stopped Diapason 8

Oboe Gamba 8

Violin Diapason 8

Pedal:

Bourdon 16

Bellows Signal

Couplers:

Sw to Gt

Gt to Ped

Sw to Ped

Console Measurements

Pedal

Compass: 30-note, C 1 to F 30

Length between heelboard and toeboard: 15"

Length of playing surface of sharps: 4 3/4"

Height of sharps above naturals: 1/4"

Width of playing surface of natural keys: 1"

Total width of pedals: 38"

Pedal to Manual: 29 1/8" between playing surfaces of manual to pedal

Manual

Compass: 61-note, C 1 to C 61

Length of playing surface of sharps: 3 1/2"

Width of playing surface of sharps: 3/8"

Depth of sharps: 1/4"

Length of playing surface of naturals: 5 3/4"

Width of playing surface of naturals: 7/8"

Depth of naturals: 5/16"

Distance between playing surface of manuals: 3 1/4"

Lakewood Masonic Temple
Lakewood, Ohio

Votteler-Holtkamp-Sparling, 1916
Tubular-pneumatic Action

Great:
DIAP. 8' FF.
FL. 8' M.
FL. 8' MP.
VL. 8' F.
VL. 8'.

Pedal:
FL. 16' FF.

Couplers:
SW. 16' GT.
SW. 8' GT.
SW. 4' GT.
GT. 4' GT.
GT. 8' OFF
SW. 4' SW
GT. 8' PED.
SW. 8' PED.

Swell:
VL. 8' PP.
VL. 8' MP.
VL. 8' MF.
FL 4' M.
FL. 8' M.
Reed 8' PP.
Reed 8' MP.

Bells

Console Measurements

Pedal

Compass: 30-note, C 1 to F 30

Length between heelboard and toeboard: 18"

Length of playing surface of sharps: 5 1/4"

Height of sharps above naturals: 1/4"

Width of playing surface of natural keys: 1"

Total width of pedals: 45"

Pedal to Manual: 29" between playing surfaces of manual to pedal

Manual

Compass: 61-note, C 1 to C 61

Length of playing surface of sharps: 3"

Width of playing surface of sharps: 3/8"

Depth of sharps: 1/4"

Length of playing surface of naturals: 5 1/4"

Width of playing surface of naturals: 7/8"

Depth of naturals: 5/16"

Distance between playing surface of manuals: 5"

Notre Dame College
Cleveland, Ohio

Votteler-Holtkamp-Sparling, 1930
Electro-pneumatic Action

Great:

Bourdon 16
Diapason 8
Harmonic Flute 8
Octave 4

Pedal:

Super Octave 4 (Bourdon)
Flute 8 (Bourdon)
Principal 8 (Basso 16)
Bourdon 16 (Great)
Basso 16

Couplers:

Swell Great 16
Swell Great 8
Swell Great 4
Choir Great 16
Choir Great 4
Great Great 4

Swell Pedal 4
Choir Pedal 8
Swell Pedal 8
Great Pedal 8

Swell:

Ludwigs Tone 8
Fugara 4
Saliconal 8
Gedeckt 8
Diapason 8
Cornopean 8
Tremolo

Choir:

Geigen 8
Concert Flute 4
Flute Traverso 2 2/3
Tremolo

Swell Choir 16
Swell Choir 8
Swell Choir 4
Choir Choir 4

Swell Pedal 4
Choir Pedal 8
Swell Pedal 8
Great Pedal 8

Console Measurements

Pedal

Compass: 30-note, C 1 to F 30

Length between heelboard and toeboard: 20"

Length of playing surface of sharps: 5 1/2"

Height of sharps above naturals: 1/4"

Width of playing surface of natural keys: 1"

Total width of pedals: 45"

Pedal to Manual: 29" between playing surfaces of manual to pedal

Manual

Compass: 61-note, C 1 to C 61

Length of playing surface of sharps: 3 1/2"

Width of playing surface of sharps: 1/2"

Depth of sharps: 1/4"

Length of playing surface of naturals: 4 1/4"

Width of playing surface of naturals: 7/8"

Depth of naturals: 1/4"

Distance between playing surface of manuals: 2 1/2"

All Souls Unitarian Church
Indianapolis, Indiana

Holtkamp, 1960

Great:

16' Quintadena
8' Principal
8' Gedeckt
4' Octave
2' Hohlflöte
IV Mixture
8' Trumpet

Pedal:

16' Principal
16' Quintadena
16' Soubasse
8' Octave
8' Flauto Dolce
4' Chorale Bass
16' Fagott

Swell:

8' Rohrflöte
8' Dulciane
4' Gemshorn
2' Doublette
II Sesquialtera
8' Cromorne
4' Schalmey

Choir:

8' Copula
4' Flûte á Cheminée
2' Principal
1 1/2' Quinte
III Cymbal

Couplers:

Sw/Gt 8
Sw/Ch 8
Ch/Gt 8
Sw/Pd 8
Ch/Pd 8
Gt/Pd

Console Measurements conform to AGO Standard

First Presbyterian Church
Cass City, Michigan

Henry Erben, 1865

Manual (enclosed):

8' Open Diapason
8' Stopd Diapason Treble
8' Stopd Diapason Bass
8' Clarabella
8' Dulciana
8' Gamba
4' Principal
2' Flageolet

Pedal:

16' Bourdon

Manual to Pedal Coupler

2 unlabeled composition pedals, manual and forte

Hitch-down Swell Pedal

College of Mt. St. Vincent
Bronx, New York

Hilbourne L. Roosevelt
Opus 4, 1873

Great:

16' Double Melodia

8' Open Diapason

8' Dulciana

8' Gamba

8' Clarabella

4' Octave

2' Fifteenth

8' Cornopean

Swell:

8' Viol di Gamba (treble)

8' Doppel Flöte

8' Stopped Diapason Bass

4' Flute Harmonique

2' Piccolo

8' Oboe

Pedal:

16' Double Open

16' Bourdon

8' Violoncello

Swell to Pedal

Great to Pedal

Swell to Great

Pedal Combination 1

Pedal Combination 2

Clifton United Methodist Church
Cincinnati, Ohio

Koehnken & Grimm, 1895

Great:

Dulciana 8'
Viol di Gamba 8'
Open Diapason 8'
Melodia 8'
Principal 4'
Flute Harmonique 4'
Twelfth 2 2/3'
Fifteenth 2'
Mixture III

Swell:

Stopped Diapason 8'
Celeste 8'
Salicional 8'
Geigen Principal 8'
Oboe & Bassoon 8'
Flute a Cheminee 4'
Violine 4'
Tremolo

Pedal (later addition):

Bourdon 16'
Flute 8'
Diapason 8'
Bass 4'

Great to Pedal

Swell to Pedal

Swell to Great

Bainbridge Street Baptist Church
Richmond, Virginia

E. and G.G. Hook and Hastings
Opus 1969, 1902

Great

8' Open Diapason

8' Dulciana

8' Melodia

4' Octave

2' Fifteenth

Swell

8' Open Diapason

8' Stopped Diapason

8' Salicional

8' Voix Celeste

4' Flute Harmonic

II Dolce Cornet

Pedal:

16' Bourdon

Pedal Composition Settings:

Great Piano (Dulciana, Melodia)

Great Forte (Dulciana, Melodia, Diapason)

Swell to Great Reversible

Tremolo

Center Congregational Church
Northbridge, Massachusetts

E. and G. G. Hook and Hastings
Op. 2523, 1915

Great:
8' Diapason
8' Dolce

Swell:
8' Viola
8' Unison Bass
8' Gedackt
4' Principal
4' Octave Flute

Pedal:
16' Subbass

Couplers:
8' Swell to Great
4' Swell to Great
8' Great to Pedal
8' Swell to Pedal

Johnson C. Smith University
Jane Smith Memorial Chapel
Charlotte, North Carolina

E. and G.G. Hook and Hastings
Op. 2564, 1929

Great (Enclosed):
8' Open Diapason
8' Melodia
8' Dulciana
4' Octave
8' Clarinet
Cathedral Chimes
Tremolo

Swell (Enclosed):
8' Open Diapason
8' Stopped Diapason
8' Quintadena
8' Salicional
8' Voix Celeste
8' Aeoline
4' Orchestral Flute
8' Oboe
Tremolo

Pedal (Enclosed):
16' Subbass
16' Lieblich Gedeckt
8' Flute

Couplers:
Great to Pedal
Swell to Pedal 8, 4
Swell to Great 16, 8, 4
Swell 16, 4
Great 16, 4
Swell Release 8
Great Release 8

Appendix C

1933 American Guild of Organists Console Specifications⁴⁷

PEDAL CLAVIER

Compass: 32-note, CCC to G.

Radiation: 8' 6'' radius. Maximum Permissible, 9' 6''; minimum 8' 6''.

Concavity: 8' 6'' radius. Maximum 8' 6''; minimum 7' 6''.

Length between heelboard and toeboard: 27''.

Length of playing surface of sharps: 6 ½''.

Height of sharps above naturals: 1'' at players end, slightly higher at the other.

Width of playing surface of natural keys: 7/8''.

Radius of curve of sharps: Fronts, 8' 6''; back, 9'.

Distance, center to center, of adjacent natural keys at front ends of sharps: 2 ½''. This makes the octave 17 ½''.

PEDAL TO MANUAL

Left to right location: Centralized under the manuals.

Front to back: Pedal DD-sharp's front end 8 ½'' to 10'' back of plumb-line dropped from front edge of white keys of lowest manual of 2m or 3m console; 11'' on a 4m.

Vertical: 29 ½'' between playing surfaces of natural keys of lowest manual and middle natural key of pedal.

⁴⁷ American Guild of Organists, *AGO Story*. (New York, American Guild of Organists, 1933) 75-80.

PEDAL ACCESSORIES

Knee-panel and toe-board carrying the pedal accessories to follow the 9' radius curve of the distant end of the sharp keys.

Crescendo shoes: Heel end of playing surface of shoe to overhang sharp keys by 1 ¼" maximum forward position, or by placed ¾" maximum distance back of them; these dimensions are for the shoes in closed position.)

Swell shoe to be located directly in front of the E-F gap.

Choir shoe to left of Swell.

Solo shoe to right of Swell.

Register-Crescendo shoe invariably to the right of all others, and slightly raised.

Great shoe to displace Solo in three-manual organs. (Position not indicated in 4 ms.)

Bench: 20 ½" above middle E of pedal clavier; adjustable in each direction.

MANUALS

Compass: CC to c4, 61-note. But 16', 8', and 4' registers of divisions having 4' couplers on themselves shall extend an additional octave up-ward, with the exception of the Great Organ in large instruments.

Overhang: 4".

Surface-to-surface: 2 3/8" if possible; 2 ½" maximum.

Inclination: On 4m consoles, bottom and top two manuals inclined gently toward center; other manual level.

Depth of touch: 5/16" to 3/8" scant.

Weight of touch: 4 ounces, with "tracker-feeling" recommended.

DEVICES RECOMMENDED

Swell Shoe Arranger: A device enabling the organist to couple any set of shutters at will to any shoe. Recommended when there are more than three chambers.

Crescendo Indicators.

Device coupling all shutters to master shoe. (Committee suggests placing it to right or left of the couplers so that it can be controlled by the combons.

Crescendo Percussion and Tremulant Cut-Out: To operate when shoe is 1/3 or 1/2 open, without moving stops.

Pedal Combons to Manual Combons: On-or-offs by which the organist may have the manual combons operate also the Pedal combons of like number.

Coupler control system on large organs so that one-section and two-section couplers can be operated independently at will from the manual combons.

At least four full-organ combons to be duplicated by duplicate toe-studs.

Pedal Organ combons shall be duplicated and exist as toe-studs and manual pistons.

Two ensemble pistons on large organs, ff and fff.

Capture System of combon setting.

ORDER OF STOPS

The order within each division is that already established: 16' flues, 8' flues, 4' flues, 2' flues, mixtures, 16' reeds, 8' reeds, 4' reeds. Stops not mentioned in

the above take their normal position according to pitch in the respective flue and reed divisions. Loudest to softest is the order within pitch-groups.

Stop-tongue consoles, two rows over top manual: Top row, left to right: Swell, Choir, Solo or Echo, with couplers of each divisions following the stops. Lower row: Pedal, Great.

Stop-tongue consoles, stops in side jambs: Left: Pedal and Swell; right: Great, Choir, and Solo. One-section couplers may be located with the stops; two-section couplers in a row over top manual.

Recommended in 4m consoles that only one row or stops by located over the top manual, the others being placed in the side jambs, so that the music-rack may be kept low.

Stop-knob consoles: Left jamb: Pedal and Swell; right: Great, Choir, Solo. Order within the division as given, from bottom to top. Tremulants at the top. One-section couplers above each division of stops.

Logical Sequence: Great, Swell, Choir, Solo, Echo. This logical sequence is very wisely recommended in all cases where possible, “as the families are then in the same relative position, be the organ a 1m or a 4m.” And this fundamental principle for couplers is one of the most valuable endorsements of the committee.

COMBINATIONS

Capture System required.

Absolute Combons only; if Duals are supplied they shall be in addition to the Absolute.

Tutti Combons: Shall operate full organ with no omissions. Pistons located under left Swell and Great Manuals, or under left Swell, Great, and Choir.

Manual Combons: Shall control Pedal stops through Pedal combons operable from manual combons by on-or-offs or by double-touch (with insistence that if a builder does not know how to make second-touch pistons the on-or-off method is to be used).

Three-way Pistons: The committee suggests adding to the organ, after the standard combons have been supplied in adequate number, a supplementary system of pistons which are adjustable by triggers-in-drawers to on, off, or neutral position. These, as we understand I, are to provide suitable basses for the manual combons, and to afford control of the couplers, through supplementary action operated from the normal combons. Two cut-outs are to be provided to eliminate this complication for organists who do not want it.

Appendix D

Additional Pictures



Zoar United Church of Christ



First Congregational Church Rootstown



St. Adalbert Church



Lakewood Masonic Temple



Notre Dame College



First Congregational Church Rootstown



St. Adalbert Church