The Duke Aeolian Organ:  
The Journey of an American Musical Instrument

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Abstract

The Aeolian Company built its last and largest church organ for Duke Chapel in 1932. The organ, one of the last examples of the Symphonic style of American organ building, survived three replacement attempts by the ideologues of the Neo-Baroque organ movement that swept the United States in the latter half of the 20th century. This organ reform movement apotheosized the mechanical-action organs of 17th and 18th century Europe, at the expense of early and mid-20th century American organs – many of which were heavily altered or entirely replaced. Fortunately, the Duke Aeolian was largely spared from such atrocities and was fully restored in 2009. This paper examines the rich cultural history of Duke’s Aeolian organ, including the efforts of those who sought to replace it, others who fought to preserve the organ, and the cultural and historical significance of the Aeolian as an American musical instrument. It is a fascinating and important story that needs to be told.
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Introduction

The Aeolian Organ in Duke Chapel is the last of an era. Having survived numerous replacement attempts by its detractors, the Aeolian organ has served the University, congregation, and choir of Duke Chapel since 1932. The Duke pipe organ was the largest church organ built by The Aeolian Company, once the world’s largest musical instrument manufacturer, and remains the largest of the four pipe organs in the Chapel. Today, it serves as an exemplar of the American Romantic style of organ building, a style that American instrument builders pioneered in the early 20th century.

The Duke Aeolian is a product of a progressive company that built its business around the use of technology and innovation to make live music accessible to its listeners. Electricity and pressurized air enabled the expressiveness and depth of tone of a full symphony orchestra, all from a single instrument. Built in the American Romantic style, the organ exudes the ethereal sounds of shimmering strings, rich but mellow woodwinds, snarly and brilliant brass ensembles, and penetrating and rumbling low bass. Pneumatic action freed the organ from many other restrictions that low wind pressure and mechanical action necessitated. As the last organ, and one of the few extant installed by the Aeolian Company, the Duke organ is a unique, period instrument that has important historic and cultural significance.
Further, the Duke organ had a profound impact on young people. Church and concert organist Frederick Swann recently recalled in an e-mail hearing the Duke Aeolian in 1935:

One of my first organ memories was sitting on the Aeolian bench at age 5 while my brother played a service. He was a student in the Theology School and evidently did some playing frequently in the Chapel. As much as anything, that made me decide to become an organist. After I grew up and got known I was invited to play two – maybe three (at 85, memory fades at times) recitals on the Aeolian. I loved that organ.
(Swann, Email to Author)

Boston organ restorer Nelson Barden emailed a similar story. While researching the Aeolian Company in the 1970s, he asked members of the American Guild of Organists if they knew anything about the Duke organ. A prominent Boston organist said:

In grade school I was one of hundreds of kids who were bused to Duke Chapel for the annual Handel’s Messiah concert. We were sitting down front, and when the choir stood up to sing Worthy is the Lamb, organist Mildred Hendrix played the first chord on FULL ORGAN. I’d never heard such a sound — it literally shook my world. That single chord on the Duke Aeolian made me decide to be an organist.
(Barden, Email to Author)

Barden said that when he told this story at a subsequent Guild Meeting, another Boston organist said, “Yes, that exact same thing happened to me at Duke. That one chord on FULL ORGAN is the reason I’m an organist today” (Barden, Email to Author). Most certainly, the passion for music and the organ that so many experienced through the Aeolian is in part a response to the instrument’s exquisite sound.
In this paper, I explore the history of the Aeolian Company through information gathered by historians and the examination of company advertisements in order to provide historical context of the company’s work and creditability as a musical instrument builder. I also review the history of Duke Chapel and its decision to choose the Aeolian Company over a competitor. I garnered this information through primary research in the Duke University Archives, the Organ Historical Society Archives, and documents relating to the Duke Aeolian provided by historians from personal collections.

To gain a greater understanding of the organ’s history, I evaluate many notable organists who played the Aeolian over the years. More specifically, I look at the type of music played on the instrument, what purpose the instrument served, and the technical and maintenance issues reported. Again, I rely heavily on archival material from collections in the Duke University Archives, technical documentation from repair contracts, and personal correspondence from people closely associated with the Aeolian.

After World War II “a wave of musical tourists and Fulbright scholars” made their way through Europe’s Cathedrals and churches, bringing back to America a new zeal for early music, specifically the Baroque style instruments in Holland, Germany, France and elsewhere (Douglass, A Historical Perspective). Through this movement’s efforts, American audiences rediscovered once forgotten works of early organ and orchestral music. This same movement sought to replace many of the American organs
built in the late 19th and early 20th centuries in favor of instruments that more closely resembled those of Europe. I reference works written by historians and organ consultants to give context to the sentiment, especially among academics, of American Organs in the mid-20th century, and the influence of E. Power Biggs and Fenner Douglass. I reference archival material, including committee reports, essays, and program recitals from Duke University, regarding the prevailing philosophy on organs, organ literature, and performance practice.

I examine three instances in the Aeolian organ’s history where its demise was imminent: in the late 1960s with a planned Aeolian-Skinner organ, in the mid 1970s with a planned Fisk organ, and in the late 1980s with a planned Brombaugh organ. I challenge the notion that American Romantic organs are of limited historical and aesthetic value, to be destroyed in favor of newer instruments that would, at best, be reproductions of a past era of organ building. I present and analyze select responses of the Organ Historical Society, alumni, organists, and concerned citizens regarding the planned replacement of the Duke Aeolian organ. I cite letters, petitions, newspaper articles, committee reports, and personal accounts as evidence of the extensive, strong and personal support of the Aeolian. I then look at the multiple restoration efforts, their interruptions, and the eventual completion of the instrument’s restoration. I conclude by examining selected examples of the organ’s use in performances, Chapel services, and its outlook as an American treasure at Duke University.
The Duke Chapel Aeolian organ possesses recognizable historical and aesthetic value. From a 21st century perspective, it seems clear that the Organ Reform Movement was misguided and devastatingly wrong to assert that American organs of the early and mid 20th century could not coexist with the organs of the Baroque revival. It is my hope that this paper contributes to an increased understanding of the historical importance of the instrument, and explains why so many value the Aeolian organ in Duke Chapel.
Chapter 1: The God of the Winds

“The appreciate of the Aeolian by those who have had an intimate association with the instrument...centers attention on that which constitutes the chief value of the Aeolian – the inexhaustible source of pleasure it provides....” (Appreciation of Aeolian)

In 1878 the Mechanical Orguinette Company (precursor to The Aeolian Company) was formed in New York City and sold tabletop reed organs called Orguinettes. These hand-cranked devices played asthmatic ditties from paper-rolls that had a twelve-note range. A year later, the company introduced a larger, floor model called the Musical Cabinet that had an expanded range of thirty-nine notes. By 1883 the novelty of these devices had worn off and sales were virtually non-existent due to the poor quality of the rolls and the pedestrian sound of these glorified music boxes. The stockholders of Mechanical Orguinette Company became increasingly unhappy with the company’s performance and ousted its President. They contacted local piano builder and businessman, William Tremaine, to overhaul the company and the product line (Smith 3).

During Tremaine’s first months as President, he reengineered the Musical Cabinet, adding a keyboard and expanding its range to 48 playable notes, from a smaller paper roll. The new model resembled an upright piano and Tremaine named it the Aeolian – derived from the Greek god of the winds. Author and historian Rollin Smith writes in his book *The Aeolian Pipe Organ and Its Music*:

1The hand crank created air pressure (or wind) which positively pressurized a hollow wood cylinder that had 12 holes in it, corresponding to each note.
The importance of the Æolian cannot be overemphasized. Until this time except for barrel organs, hurdy-gurdies, and mechanical novelties, music could only be heard in live performances. Indeed, of all the arts, music had always been the most temporal—vanishing as soon as it was created by the performer. A musical performance became a historical event as soon as it was heard. With the Æolian, not only could all of music history’s literature be played—albeit often in elementary arrangements—but the music could be repeated as many times as desired. (5-6).

Although the Æolian was still rudimentary and quite expensive ($140, or approximately $4,000 in 2015), its ability to self-play a wide range of repertoire made it a success (Friedman). Tremaine furthered its popularity by winning the Gold Medal at the 1885 Inventions Exhibition near Royal Albert Hall in London. Tremaine returned from London invigorated and began heavily promoting the Æolian to American aristocrats.

Figure 1 Aeolian Advertisements (Mechanical Instruments) – 1895
Core to Tremaine’s success was a keen business sense. He was a master of marketing and for the first twenty years, the company did not build a single instrument it sold. The company patented an automatic player mechanism\(^2\) for paper rolls that was installed in reed organs manufactured by the Munroe Organ Reed Company. As part of the arrangement with Munroe, Tremaine’s firm stenciled the Æolian name on the front of the instrument’s case. The Mechanical Orguinette Company was essentially a re-seller of Munroe’s reed organs, but with the addition of the player mechanism the company gained a competitive advantage and a secondary revenue stream from the sale of paper rolls (Smith 3).

On July 27, 1887, riding the success of the Æolian, Tremaine renamed the company The Æolian Organ & Music Company. Soon thereafter, the company would replace the Æ ligature with the digraph “Ae” as modern typesetting machines such as the typewriter came into more prominent use. The newly rebranded company embarked on a period of significant growth and began a process of vertical integration as it acquired many of its suppliers, including the Automatic Music Paper Company and the Munroe Reed Organ Company. Tremaine’s tenacity for business catapulted Aeolian into a musical superpower. Through its acquisitions, The Aeolian Company quickly transformed from an instrument seller to an instrument builder, eventually evolving into a large-scale manufacturer of player pianos, reed organs, and pipe organs (Smith 6).

\(^2\) Player Mechanisms are attached to keyboard instruments that work on a concept similar to a music box by activating corresponding notes when perforations are detected in the unwinding paper roll.
Less than 10 years after Tremaine invented the Æolian player mechanism, a rival Detroit-based firm Farrand & Votey built a sixty-three stop organ for Festival Hall at the Chicago’s World’s Fair. The organ successfully demonstrated the promise and reliability of electric action for large organs. The Farrand & Votey organ won the gold medal for its use of electricity and technologically advanced design. More importantly, the organ’s innovation caught the attention of William Tremaine (Smith 6-7).

Aeolian’s interest in pipe organs was officially sparked in 1894 when they purchased a two-manual, eleven-rank organ from Farrand & Votey to display in their New York showroom. Barely more than a decade in business, Farrand & Votey was a relatively new but wildly successful pipe organ building firm, shipping close to 600
organs per month in 1886 (American Industries: The Farrand & Votey Organ Company 101-02). Rollin Smith writes that:

Farrand & Votey was the most famous name in American organ building in 1894. [Tremaine’s choice] of a recently-established Detroit firm over several established organbuilders in New York City was probably because of one of the partners, the brilliant Edwin S. Votey, whose many patents testify to his inventive genius. (6)

One of the first public mentions of an Aeolian pipe organ appeared on October 31, 1894 in the trade publication *The Musical Courier*:

The effect of the Æolian attachment as a part of a pipe organ can be appreciated by musicians, who can study the subject at 18 West Twenty-third Street, New York, where the pipe organ is played with the Æolian attachment [sic]. (Blumenberg 34)

The first patron – Aeolian’s official term for a customer – to request and purchase an Aeolian Pipe Organ was Oliver Belmont who had recently completed his home “Belcourt” in Newport, Rhode Island. Belmont owned an Aeolian reed organ but believed a pipe organ would be better suited to his fifty-two-room Louis XIII-style home. Belmont approached Tremaine about the possibility of installing an organ with an Aeolian roll player in his home, and on August 14, 1894, Belmont signed a contract with Farrand & Votey for a two-manual, thirty rank pipe organ with an Aeolian fifty-eight note roll player (Smith 7-9, 17).
Tremaine was not convinced that Aeolian should venture full force into pipe organs since the market was saturated with builders, and he envisioned the company refining the player mechanisms for pianos and reed organs. He agreed to work with Farrand & Votey and supply an Aeolian player if a patron requested a pipe organ but the company would not make them part of their core product offerings. Over the next two years, Aeolian had its player attached to, and name stenciled on, fifteen pipe organs in homes, churches, and Aeolian showrooms across the United States. Tremaine started to rethink his position on pipe organs as he had done years ago with the Mechanical Orguinette Company (Smith 8-9).
Edwin Votey was inspired by the success of Aeolian roll players installed on his pipe organs and began experimenting with automatic roll players on pianos. On January 25, 1897, Votey filed a patent application for a device he called a “Pianola.” The Pianola was a player piano that was able to reproduce varied dynamics by regulating the pneumatic action’s wind pressure. Essentially, the greater the wind pressure, the harder the hammer would strike the piano strings. The same year, Farrand and Votey went their separate ways and Edwin Votey founded the Votey Organ Company (Smith 11).

Aeolian had been trying for years to refine their roll-player mechanism for pianos with little success. Tremaine recognized the innovativeness of Votey’s Pianola and in 1899 contracted with him to build the first 1,000 Pianolas for Aeolian in his Detroit factory. The following year Aeolian acquired Votey’s Pianola division, however Votey continued to provide pipe organs to Aeolian under his Organ Company (Smith 11).

In 1901, Votey partnered with Boston organ builder George Hutchings to form the Hutchings-Votey Organ Company. The company built organs independently and supplied organs for Aeolian until the Hutchings-Votey factory burned down in 1904. This tragedy was the impetus that Aeolian needed to begin building its own organs. The company hired Votey to oversee its organ division, a move that also landed him a seat on Aeolian’s board of directors. The company’s Pianola factory in Garwood, New Jersey
was expanded to accommodate the organ building facility under Votey’s direction (Smith 12).

It was obvious that residence player organs were in popular demand and the company could charge a premium for them. Historian and author George Audsley notes in his book, *The Art of Organbuilding* that:

> The intelligent and growing taste for the organ, combined with the national love of home-life and elevating social enjoyments, are leading toward a widespread introduction of the instrument, in one form or other, into the private dwellings of the wealthier classes. (Audsley 309)

Arguably, Votey proved to be one of Aeolian’s most valuable assets. By the early twentieth century Aeolian was the world’s largest manufacturer of player organs (Smith 12). Further, Aeolian’s own advertising asserted that the company was “the largest manufacturer of musical instruments in the world” (The Aeolian Company 45).

The company’s vast collection of player rolls for pianos, reed, and pipe organs combined with an Aeolian instrument enabled people – for the first time – to hear any number of musical compositions performed live and on demand, in high-fidelity inside their own homes. An Aeolian roll, which had become the world’s most popular and technically advanced automatic roll-playing system, could capture a composer playing his own work, and reproduce all the nuance of tempo and dynamics as the composer or performer intended. Rollin Smith explains that the Aeolian was beginning to transcend itself as a mechanism for personal entertainment as it not only “preserved an
interpretation of a musical score,” it also “provided a practical means of musical education and appreciation” (Smith 12).

The Parisian organist and composer, Charles-Marie Widor, in the journal Revue Éolienne, describes the historical and cultural significance of the Aeolian player a year before the turn of the century:

Is it not truly admirable to be able to record the interpretation of a musical work with absolute exactitude and to know that this record will remain as an unalterable document, a certain testimony, rigorously true today, which will not change tomorrow—the quintessential interpretation that will not vary for all eternity?

The Aeolian, which has a greater sensitiveness than an orchestra or organ, has already rendered signal services in America. It has carried the good message into regions previously ignorant of artistic matters, and has enabled far-off communities to glimpse the horizon of high art. (qtd. in Smith 12)

Indeed, the automatic player piano made both classical and popular music more accessible to the masses. Referring to the Aeolian, the Italian composer Giacomo Puccini explains “All who do not know a note of music, but who are gifted with a refined musical taste, can readily become familiar with what is most elevating in the musical art. It is to music what a vast encyclopedia is to science” (Smith 13).

Aeolian published a catalogue of its musical rolls that included descriptions of composers, works, and artists’ biographies. These catalogues give a glimpse into the styles of music that were popular around the turn of the century. Kevin McElhone cataloged Aeolian’s entire fifty-eight-note roll offerings – 7,390 titles in all – and Smith lists the ten most popular composers by number of works available (qtd. in Smith 13):
Wagner & 172 \\
Beethoven & 125 \\
Gounod & 107 \\
Mendelssohn & 101 \\
Tchaikovsky & 94 \\
Bach & 87 \\
Herbert & 79 \\
Mozart & 72 \\
Verdi & 67 \\
Handel & 61 \\

Table 1 Number of Aeolian titles available by Composer

Of particular note from McElhone’s list are Wagner and Herbert. Wagner regained popularity in the second half of the 19th century after his exile from Germany in the middle of the century. Bayreuth and Parsifal added to people’s renewed interest in the composer and Aeolian responded to this demand by recording his works more than any other composer. Similar to the popularity of Wagner, Victor Herbert’s rise in popularity in the early 20th century is evident from this list. Nestled between Mozart and Bach, Herbert was the first composer The Aeolian Company commissioned to compose an organ work. Herbert’s style of composition complimented the Symphonic nature of the Aeolian organ culminating in a grand showcase of vibrant tonal coloring and dynamic expression. Over the years Aeolian commissioned several works for its
organ and player rolls by notable composers including Saint-Saëns, Lemare, Humperdinck, Florio, and Moszkowski (Smith 12-13, 167).

Starting in the early 1900s, Aeolian constructed music halls and showrooms as a way to showcase their instruments and provide an upscale concert venue. The company opened an Aeolian Hall, as they were known, in several cities around the world – including New York, London, Paris, and Berlin. The New York location moved three times – as the company grew larger and relocated its headquarters to more prominent locations in the city. Each Aeolian Hall featured an Aeolian Pipe Organ in the front with a movable console and roll player. As a concert venue, the Aeolian Hall in New York was different from other venues, such as Carnegie Hall, because it provided an intimate setting for musicians to perform, and on many occasions an opportunity for composers to debut new works. Notable premiers included Nadia Boulanger playing Aaron Copland’s *Symphony for Organ & Orchestra* and George Gershwin’s *Rhapsody in Blue* (Smith 13).

By 1914, the company decided to narrow its focus on the residence pipe organ market. Arguably, this decision was largely based on the success of Aeolian Hall. The patrons of Aeolian Hall performances were often those with a refined musical taste and could afford the luxury of hearing live performances. At the time, musical performances were considered something of high-society, with the only real exception being at a church or synagogue (Smith 15).
The traditional limitations of size, cost, and musical ability were suddenly opportunities for Aeolian. Many patrons of Aeolian Hall had the space – or the means to build a space – for a pipe organ in their homes. Cost was not a concern for those who could afford a space large enough to house an organ, and the invention of the roll player and the vast collection of music rolls required little or no musical ability (Smith 15-17).

Another reason for their residential focus, was that many churches often could not afford pipe organs. The churches that could afford them had their pick of many organ builders, who were willing to compete heavily on price. The same was true, although to a lesser extent, for theater organs. The residence organ market was relatively untapped, required a more tonally diverse and symphonically imitative sound than a typical church organ, and Aeolian did not have to worry about price sensitivity because the people who wanted these organs could afford them. As Smith put it “…the Aeolian Company targeted its market [to] the wealthiest stratum of society,” and the Aeolian residence organ patron list “…read like a veritable ‘Who’s Who’ in American business, industry, and finance (15-17).” The Aeolian Residence Organ became a status symbol among the world’s wealthy elites.

points out that Aeolian never advertised residence organs in academic or music journals. Aeolian targeted readers who were better able to afford the comforts of life by advertising in magazines such as Harper's, Munsey's, and Cosmopolitan (17).

Aeolian’s most valuable marketing tool was not found in any print advertisement, but rather in its reputation. As a status symbol of the wealthy, the company relied on conspicuous consumption to sell their organs. In conjunction, they built relationships with prominent architects, and The Aeolian Company became as much of a staple of the Gilded Age as the homes in which the organs were housed. It was customary for the architect’s fee to be a percentage of the entire cost of a project including interior furnishings such as an organ. Because the cost of a residence organ was almost always considered as part of the architect’s fee, architectural firms were increasingly willing to incorporate an organ into a home’s design. Aeolian was not the only company to build residence organs but they were a favorite among architects, in part because of the premium price they commanded (Smith 17).

The year 1915 marked a significant turning point for the Aeolian Company, arguably the height of their success, Aeolian introduced their next-generation player mechanism called the Duo-Art, which was billed as a “fully-automatic” self-playing organ. The Duo-Art organ achieved this by adding roll perforations for stop
registration\(^3\) and expression.\(^4\) Smith writes, “...like the Duo-Art Reproducing Piano (introduced in the fall of 1913), [the Duo-Art Organ] was able to reproduce performances of living artists” (17).

In order to faithfully reproduce performances, the Duo-Art captured the many nuances of a performance that were often lost in two-dimensional music notation. Furthermore, the Duo-Art was able to record the evolution of artists and composers at different points in their lives and capture improvisations that would have previously been lost as soon as the reverberating sounds of a live performance had ended.

Other organists...recorded organ rolls more than twenty years before their phonograph recordings and by comparison document the changes in their playing styles. Marcel Dupré, the incomparable French organist and “the greatest improviser since Bach,” recorded an improvisation at the height of his career, and famed theater organists Emil Valezco and Lew White demonstrated their unique talent [on Duo-Art organ rolls]. (Smith 17)

Aeolian was earning recognition for their quality musical instruments, extensive collection of player rolls (for both piano and organ), and technological innovation. In 1924, Aeolian held a conference for its Duo-Art Organ recording artists where the company solicited ideas for improvements in console designs, pipe specifications, and Duo-Art repertoire. The conference served also as an occasion for the company to celebrate and thank the artists in a “never-to-be-forgotten” event at the Ritz-Carlton

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\(^3\) Choosing and combining stops on a pipe organ to produce a particular sound.

\(^4\) The opening and closing of wooden shutters (similar to Venetian blinds) on one or more sides of an enclosed box that houses one or more sets of pipes. The effect adjusts the perceived loudness of the sound into the room.
and Plaza Hotels in New York City (Smith 19). Duo-Art recording organist Clarence Eddy recounts the splendor of the event:

Many of the noted organists both in this country and abroad who have made records for the Aeolian Company will recall a most delightful dinner given a few years ago at the Hotel Plaza, New York, by special invitation of Mr. Taft. It was a “never-to-be-forgotten” occasion of good fellowship with Frank Taft the princely host. Each guest was presented with a unique souvenir of the occasion – the individual photographs of all present, individually autographed, and photographed collectively. I have mine framed and hanging in my room and it gives me great pleasure to recall the time, the place, and old friends. (qtd. in Smith 19)

Annual sales in Aeolian’s organ division doubled in 1924 with thirty organs contracted, and again in 1928 with sixty-two organs contracted (Smith 21). Although the Organ department was reporting strong earnings, the rest of the company was beginning to decline. With the advent of radio and phonograph, the popularity of player pianos was steadily deteriorating. Music in the home was no longer a luxury of the rich, as it became more accessible to the general public. On top of the uncertainty in the marketplace, Aeolian’s English subsidiary was embroiled in a scandal that would ultimately cost the company almost $2 million. The organ department was single-handedly keeping the company afloat (Smith 22-23).

In 1927, Aeolian realized that it needed to diversify its operations in order to reduce its liabilities. The organ department was divided into two entities: one that was

5 Frank Taft was the general manager of the Aeolian organ department and director of the Aeolian, Weber Piano and Pianola Company, the parent organization of the Aeolian Company. When Aeolian and Skinner merged in 1932 he became a vice president of Aeolian-Skinner. Taft was a gifted musician, serving as the first organist at the Wannamaker Department Store in Philadelphia, he was an ardent Bach scholar, and founder of the American Guild of Organists (Smith 459-61).
devoted to residence organs with Duo-Art players, and a new department “devoted entirely to the building of church, concert, and theatre instruments” (Smith 23). Aeolian hired Robert Pier Elliot as “Vice President of the Votey Organ Company Division, builders of Aeolian-Votey Organs” to run the new department and Frank Taft remained the managing director of “The Aeolian Organ Department, builders of Aeolian Duo-Art Organs” (23).

With the creation of Elliot’s new organ division, The Aeolian Company was now in direct competition with another American Romantic Organbuilder, the Skinner Organ Company of Boston, a move that marked the beginnings of an infamous rivalry between the two companies. The exact evolution of the Aeolian Organ Department is unclear from this point, but Elliot only stayed with Aeolian for about a year before he moved on to Wurlitzer. Smith notes that it is likely that the company essentially re-folded the separate divisions into one, as they did not hire a replacement for Elliot (23). Taft is quoted in the March 1930 issue of The American Organist promoting non-residence organs:

The Aeolian Organs now being installed in large auditoriums are of the same high standard of construction we have always maintained, but they are radically different as regards tonal and mechanical features from Aeolian Residence Organs, well known in in many countries. We are most anxious that the readers of The American Organist who are not acquainted with the organs we are building for churches, concert halls, and other large auditoriums are aware of the marked difference between our residence and our public organs. (Taft 170)
The diversification was a short-term success for the company. Taft worked diligently to sell organs across all markets for Aeolian and secured many important contracts for the company. Smith writes:

Dozens of two- and three-manual residence organs were built by Aeolian from 1926 to 1931, including its largest, the four-manual, 146-rank organ for the conservatory at Pierre S. du Pont’s estate, “Longwood,” near Kennett Square, Pennsylvania. Its $122,700 price made it the most expensive organ Aeolian ever sold. (23)

In 1930, Taft energetically pursued a contract with The Duke Endowment to build an organ for Duke University Chapel – still under construction at the time – which only served to increase the Skinner Organ Company’s animus towards Aeolian since the Skinner firm sought the Duke contract also (Duke Endowment Building Committee Meeting Minutes of September 30 1930).

Aeolian eventually won the contract and subsequently built its largest church organ. The four-manual, 121-rank organ, built for the Duke University Chapel, would end up being the last organ the company ever installed. The effects of the Depression, although delayed, were too much for Aeolian to overcome alone. The company had already merged its Piano Division with The American Piano Company to form Aeolian-American, and on January 2, 1932 the Pipe Organ Division of the Aeolian Company and the Skinner Organ Company officially merged to form The Aeolian-Skinner Organ Company (Smith 25).
Chapter 2: The Gothic Wonderland

“I want the central building to be a great towering church which will dominate all of the surrounding buildings, because such an edifice would be bound to have a profound influence on the spiritual life of the young men and women who come here.” – James B. Duke, 1924

One of the few large building projects in the United States during The Great Depression was Duke University’s West Campus. Construction began in 1925 and culminated with the Chapel’s dedication in 1935. Endowed by James Buchanan Duke with the 2015 equivalent of $550 million, it was at that time the largest construction project in the history of the American South (Kathleen Upton Byrns McClendon Rededication Program 5). Architectural firm Horace Trumbauer’s masterful Neo-Gothic design included plans for “a great towering church” (as envisioned by Mr. Duke) in the center of the new campus. Indeed, the 210-foot-high tower of the modestly named “Chapel” dwarfs all that surrounds it and the cathedral-like interior demanded an equally impressive organ to fill the space with music.

The Duke family created a separate entity from the University called The Duke Endowment to oversee and fund the construction of West Campus. The Endowment was charged with making the major decisions regarding construction of the campus, and its board members included the Duke family, University officials, and others who were entrusted to carry out the vision of James B. Duke. The board established the Duke Construction Company in the mid 1920s to oversee the construction of the West Campus. A.C. Lee was appointed Vice President and Chief Engineer of the company and reported directly to The Duke Endowment. By early 1930, the board had to make a
decision about the organ that was to go into the Chapel. They contacted The Skinner Organ Company of Boston, Massachusetts, who built the revered organ for Princeton Chapel in 1928, and who was known as the preeminent American organ builder for churches at that time. (A. C. Lee)

The stock market crash of 1929 had a devastating effect on the already declining residence organ market. The Aeolian Company had experienced the decline in the public’s interest in player rolls, and after the stock market crash many of its prospective patrons of residence organs were no longer in a position to afford such a luxury. To mitigate some of the impact to the firm, Aeolian expanded into the church and concert hall market – putting them in direct competition with Skinner (Smith 23). Author, consultant, and organ historian, Jonathan Ambrosino, describes in the April 2012 issue of The Diapason that by 1930, Aeolian was wrapping up work on its largest residence organ for Pierre DuPont’s estate at Longwood Gardens, and the company knew they would be finishing their only other large organ project – a concert hall in White Plains New York – later that year (Ambrosino 25). When the firm learned that Duke was looking for an organ for its new Chapel, Aeolian saw the opportunity as a financial necessity for the company to remain afloat through The Great Depression (25).

There are two points worth noting about the organ building industry that were true at the time of Aeolian and still hold true today. Economic swings tend to have an immediate impact on most businesses, however, organ builders are often insulated from economic changes because their contracts guarantee work for the next year or
two. Pipe organs, especially larger instruments, take a relatively long time to build. A contract signed this year for an organ may take a year or more to design, build, and install. A portion of the total cost of the organ is required up front and the rest of the money is paid either over the course of building in specified intervals or at the end of a project, although most builders require that the majority (if not all) of the funding be identified and secured before a contract is signed. For Aeolian this meant that the beginnings of the Great Depression did not necessarily have a crippling affect, but long-term there were far fewer contacts coming in to replace those completed.

The second point worth noting about the organ building industry is that large organs are often unprofitable for the builder. The bread-and-butter of most organ builders is small to medium-sized instruments – fewer than forty-five ranks. Typically, the larger the organ, the longer it takes to build, and the more human-capital and material resources are required. Larger organs also feature more opportunities for their parts not to work exactly as they were intended. There are also limitations as to what any company can do at one time, given the number of employees, the size of the factory, and the other obligations that the company is simultaneously working to meet. Often, the costs associated with a very large instrument are underestimated or the bid does not take into consideration the other issues that might arise from the size of the instrument. It is difficult to know all the variables ahead of time, and it is even more difficult to go back to a client and ask for more money. Despite all of this, many
companies still build large organs because there is a great deal of brand recognition to be gained from large, high-profile projects.

With the Duke Chapel organ, it is unknown whether Aeolian approached Duke or if it was the other way around, however, what is clear is that Aeolian would almost certainly have been a natural contender for the Duke organ. The Aeolian Company had many things working in its favor: it had significant experience building large organs; both Aeolian and The Duke Endowment were headquartered in New York City; Aeolian had previously worked with architects Horace Trumbauer on a number of residence organs, and would have quite likely received a favorable recommendation from the architect; and Aeolian was one of the most well-known names in music among America’s wealthy elite. The Skinner Organ company also had experience and success on its side, as well as a number of large, high profile church organs in its portfolio. It is unclear if any other organ builders were considered for the Duke Chapel organ but there is evidence that Skinner and Aeolian were the top two contenders. In fact, folklore and historical research both indicate that The Duke Endowment initially favored Skinner over Aeolian.

Many stories surround the telling of the Duke organ’s birth. The analysis of these stories, and the infamous feud between Aeolian and Skinner as a direct result of the Duke organ, became one of my research interests. For example, I first heard the following tale as an undergraduate studying music and working with a local pipe organ tuner and technician, Allen Harris.
In the autumn of 1930, Duke Chapel was being built and it was time to decide on an organ for the Chapel. Mary Duke Biddle was in charge of making the decision for the organ and had been in talks with the Skinner Organ Company of Boston. Skinner wanted Mrs. Biddle to sign the contract right away but she was about to set sail for Europe and said that she would sign the contract upon her return.

Aeolian, who wanted the Duke contract, arranged for Vice President of Sales, Frank Taft to be on the same ship as Mrs. Biddle and sit with her at dinner one evening. Somewhere in the middle of the Atlantic Ocean, Mrs. Biddle and Frank Taft strike up conversation over after-dinner drinks, and Frank Taft presents Mrs. Biddle with a contract for an Aeolian organ that is an exact replica of the Princeton University Chapel Organ that Skinner had recently built. Later that evening, Frank Taft telegrams Aeolian headquarters in New York and says that he has a signed contract for the Duke Organ. Skinner finds out about this and is enraged. (Harris, Story of the Duke Aeolian)

The story has the makings of an actual event that has been embellished over time. Indeed, there are parts of the story that are true, but many of the details are not.

After researching immigration records and passenger ship manifestos from August to December of 1930, I was able to conclude that neither Duke nor Biddle – nor anyone from the Aeolian Company – embarked on a transatlantic voyage during that time period. However, I did find evidence that Mary Duke Biddle traveled from New York to the Biddle summer home in Florida by train, for a family interview conducted for a magazine article about the Biddle estate.

Over the summer of 1930, the Duke Endowment Building Committee had been in talks with The Skinner Organ Company of Boston, MA for an organ to be installed in the Chapel. Due to circumstances still unknown, the committee abruptly ended the negotiations with Skinner in a tersely worded letter:

6 The letter was approved by the Duke Endowment Building Committee on Tuesday, September 30, 1930 as described in the meeting minutes.
The contract and specifications tendered by you covering an organ for the new Chapel has been considered and found unacceptable. They do not conform to my letter of August 8th and the resolution which I showed you and which constituted my authority. They do not have what we consider a satisfactory installation of this kind for the new Chapel. So please regard these negotiations at an end. Yours very truly, DUKE CONSTRUCTION COMPANY A. C. Lee, Vice President & Chief Engineer. (A. C. Lee)

Less than a month after ending negotiations with Skinner, the committee met again on October 21, 1930 and the same day the Aeolian Company received a signed contract to build a IV-manual, 121-rank organ for the Chapel. Ironically, Aeolian’s organ specification was an exact replica of the 1927 Skinner Organ at Princeton Chapel with the exception of an 8’ Gemshorn in the Great and an 8’ Quintadina in the Choir (Organ Historical Society). Skinner was furious. As Jonathan Ambrosino writes:

The 1932 Aeolian at Duke University Chapel has as colorful a history as any American organ. In 1930, at a time when contracts had grown scarce, Aeolian wrested the job from Skinner, only to plagiarize the stoplist and layout of Skinner’s 1928 organ for Princeton University Chapel. By the time Aeolian installed the job, their brazen move had evolved into the bittersweet reality of a merger with Skinner. Thus, the Duke organ became Aeolian’s last statement of what a grand organ should be. (25)

The original Aeolian specification for Duke did not include the Echo and Antiphonal divisions. A month after Aeolian was awarded the contract for the organ, the committee approved an amendment to the contract which included both echo and antiphonal divisions to be installed above the entrance to the nave at a cost not to exceed $10,000 (Board of Trustees Records). The final specification of the organ

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7 The Skinner Organ at Princeton Chapel did not have a rear division (Echo, Antiphonal, or Rear Pedal Division).
included a total of eight divisions consisting of: Choir, Great, Swell, Solo, Echo, Antiphonal, Pedal, and Echo/Antiphonal Pedal at a total cost of $65,314.26 (approximately $1.136 million in 2015) (A. Lee).

Further evidence to show how unusual this job was for Aeolian is found at the organ console. Aeolian organs typically used rocker-tabs oriented in horizontal position along the sides of the console. This configuration made it easier for non-organists, particularly those who owned residence organs, to understand which stops should be activated at the instruction of the music roll. Aeolian modified this design when building church organs, as Ambrosino writes:

Aeolian first rotated the tablets to the more usual vertical arrangement, then developed a distinctive type of drawknob console, with natty celluloid moldings around departments and large ivory stopknobs on thick ivory shanks rather than the usual ebony. Some peculiarities migrated from the residence consoles: expression shoes with little excursion, spongy key action without tracker touch, non-AGO pedalboard and clavier relationships, and placement of the Sforzando piston directly next to Great to Pedal (surprise!). The Duke console was Aeolian’s tallest of this model: impressive as a forest of ivory, if tending to noisiness with its vacuum-action stopknob motors. (26)

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8 The Aeolian was $1,314.26 over budget (approximately $22,861.98 in 2015) (U.S. Bureau of Labor Statistics).
9 Figures from the CPI Inflation Calculator (U.S. Bureau of Labor Statistics)
The Aeolian factory had the organ completed by the autumn of 1931 but construction of the Chapel had not progressed sufficiently for the organ to be installed. The company stored the organ in its factory in Garwood, NJ until the spring of 1932 when installation could finally begin. Although there is little direct evidence for Duke, it was not uncommon for Aeolian to store an instrument if a space was not ready, and Aeolian certainly would have charged the patron storage fees for the delayed installation. This might account for the organ going over budget.
On January 2, 1932, the pipe organ division of the Aeolian Company and Skinner Organ Company merged to form the Aeolian-Skinner Organ Company. Immediately following the merger, almost all of the Aeolian employees were terminated, the Garwood factory was closed, and operations were consolidated to the Skinner factory in Boston. All outstanding contracts were transferred to Aeolian-Skinner, were completed under the Aeolian-Skinner name and were given corresponding Aeolian-Skinner opus numbers.

The exception to all of this was of course the Duke organ. The Skinner people wanted nothing to do with the organ and decided to retain some of the former Aeolian employees in order to complete the organ’s installation once the Chapel was ready. The Aeolian nameplate was the only one attached to the console, and the organ never received an Aeolian-Skinner Opus number. Although the company had officially merged by the time the Duke organ was installed and voiced, it was completely and totally an Aeolian organ – and officially the last organ the Aeolian Company ever built.

The Chapel organ made its premier on June 5, 1932 at University Commencement and the first organ and carillon recitals took place the following day with organist Lawrence Clark Apgar\(^\text{10}\). The works chosen for the recital were works meant to showcase the organ’s symphonic sonorities, especially Lynnwood Franam’s transcription of William Byrd and the two French Romantic works by Widor and Dupré. (See Figure 5)

\(^{10}\) Notably missing from the recital program is any organ work of J.S. Bach.
ORGAN RECITAL

BY

LAWRENCE CLARKE APGAR

PROGRAM

Sonata No. 1 in F Minor

Allegro con fuoco

Andante

Recitative

Allegro con fuoco

Two pieces from the Fitzwilliam Virginal Book:

Pavane, "The Earle of Salisbury"

A Gigg

{ William Byrd

[Arr. by Lynnewood Farnam]

Gothic Symphony

Charles-Marie Widor

2. Andante

4. Final

The final consists of variations on the Latin theme "Puer natus est," which is announced at the commencement of the movement.

Brittany Suite

Marcel Dupré

Berceuse

Spinning Song

The "Spinning Song" depicts most quaintly and humorously old women spinning and gossiping.

Toccata on "O Filii et Filiae"

Lynnewood Farnam

This is the only original composition by the late Dr. Farnam discovered among his music after his death in 1930.
The Raleigh News & Observer ran the following article on May 28, 1932 marking the spectacular event. (See Figure 6)

Figure 6 (Big Organ to be Played at Finals) – May 28, 1932
The Aeolian Organ quickly became a much beloved part of the chapel. It was used regularly for weekly worship services, weddings, funerals, and weekly recitals. The Duke Aeolian was at the time the largest organ in North Carolina and perhaps the American South. Yet, despite the high profile nature of the organ, the University did not have a full-time organist in place for several years.

Edward Broadhead served the University as the first Chapel Organist. His tenure unexpectedly ended on November 30, 1944 under queer circumstances that left the Chapel desperate for an organist for the upcoming Messiah performance and Christmas season. A letter from the Dean of the University, William H. Wannamaker dated April 26, 1949, noted that the University wished to hire Paul Robinson as the Chapel Organist when Mr. Broadhead resigned, but they were unable to because he had entered the armed forces. Due to Mr. Robinson’s unavailability, a recommendation was made to hire Greensboro, NC native Mildred Little Hendrix (Wannamaker).

Mildred’s contract stipulated that her position was temporary and could be terminated at any point. This agreement finally changed in 1949, when her appointments were made on a year-to-year basis. This is certainly partially due to Mildred’s commitment to the chapel and organ, and her skill as a musician. Her short stature and Southern façade was in direct contrast to her no-holds-barred personality and musical talent. It was said that she could sight-read any piece of music put in front of her and she used the Aeolian to its fullest potential.
Mildred literally wore out the Aeolian console only four years after her arrival. By 1947, many of the keys had been worn down to bare wood because the ivory had worn away. The pistons\textsuperscript{11} on the console, which enabled a player to recall specific organ registrations, had stopped working and she was forced to draw each stop by hand at the time she needed it. For a choral accompanist this proved a very difficult task on an organ the size and configuration of the Aeolian. It has been said that for large works that required frequent registration\textsuperscript{12} changes, she would have four Chapel Choir members – two on either side of her – to manually change the stops while she played.

When utilizing Chapel Choir members was not a viable option, as was often the case, she would use the crescendo pedal\textsuperscript{13} on the console to change registration. This rudimentary method was far from ideal because the order in which the stops come on and off could not be changed and was quite limiting. Nonetheless, Mildred made it work. In fact, she made it work so well that she wore out the crescendo pedal on the organ.

It was evident that after fifteen years, the Aeolian needed significant repairs and maintenance. Aeolian-Skinner had become American’s premier organ builder by this point and Mildred knew that they were the company to perform the work. Aeolian-Skinner was subsequently contacted to repair the organ. The company, still chafed

\textsuperscript{11} Buttons that are programmed by the organist to easily change stop registration.
\textsuperscript{12} The combination of organ stops.
\textsuperscript{13} A foot-pedal that is used to quickly increase or decrease the organ’s volume by engaging or disengaging organ stops from loudest to softest; typically the order of stops cannot be changed.
about the Duke organ, was hesitant to do the work but they finally agreed in July of 1947 to repair the ailing console at a cost of $10,70014.

Aeolian-Skinner did not immediately begin work due to a backlog of jobs that was created as a result of rationing material during World War II. While waiting for work to begin, Aeolian-Skinner and the Chapel agreed on October 19, 1948 to perform other “Tonal Improvements” and “Refinish and Tune the Entire Organ.”

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1. 14 “The Console to be disconnected and shipped back to the plant for the purposes of carrying out the following work:
   - New Contacts to be applied to all drawstops and tablet actions.
   - The manual keys to have new ivories fitted.
   - The Pedal keys to be replaced
2. Entirely replace the remote control combination action with a new mechanism of latest design, the new machines to be capable of handling all the console pistons and toe studs. The new machines are to be placed in the basement under the console.
3. The starter pneumatics of the six Tremolos to be releathered. The gussets of all reservoirs (25 in all) to be releathered and all reservoir panels to be lighted.” (Aeolian-Skinner Repair Contract – 1948)
Each summer, Mildred would leave Durham to spend a couple of months studying under a renowned organist, be it Arthur Poister in Syracuse, New York or Pierre Cochereau in Paris. Mildred spent the summer of 1949 at the Andover Institute in Andover, Massachusetts. While there, she made a trip to Boston to the Aeolian-Skinner factory to check on the progress of the console. On July 26th, she sent a handwritten letter to the president of Duke University, Dr. A. Hollis Edens, saying:

Today, I visited the Aeolian-Skinner factory in Boston and saw the work being done on the Duke organ console. I had a long talk with Mr. Harrison, the president of the company. We covered every possible angle of the work and I am sure that Mr. Harrison is going to see that the work will be satisfactory in every respect. He is coming to the University when the console is returned and will personally supervise and help on the final tonal and other adjustments. Mr. Harrison usually leaves this work to his head voicer and I am extremely gratified that he is coming to see it completed.... (Letter to Dr. Hollis Edens)

The only item missing from the repair list is the crescendo pedal, because G. Donald Harrison, President of Aeolian-Skinner allegedly could not believe that Mildred had worn out the pedal; indeed, he had never met anyone who had worn out a crescendo pedal. In addition to the issues with the organ console, other parts of the organ were starting to show wear and some pipes needed to be reworked or replaced.

The reason for replacement, and a common problem for many organ builders, was the use of Hoyt metal for several ranks of pipes. The use of this metal provides the ideal “string” or soft flute tones that are the backbone of orchestral organs. However, the same qualities of Hoyt metal allowing it to evoke the ethereal string tones also
make the metal very soft. Pipes made from Hoyt metal tend to collapse under their own weight over time\(^\text{15}\).

Typically, the toes of the pipes are the first to deform, but over time the languid (or mouth of the pipe) begins to sag and deform as well. This deformation causes the speech of the pipe to become slow and eventually the pipe will not sound at all. At this point, the pipes have to be reshaped and the mouths rebuilt. Aeolian-Skinner, knowing that the solution was only temporary, decided to replace those ranks altogether with pipes made out of a metal that was less likely to deform. Jonathan Ambrosino writes:

Ten new string ranks were installed, probably not to provide a different type of tone as much as to correct speech deficiencies common to ranks built from Hoyt metal, as the originals were. Some sounds were changed. New Choir mutations did not precisely replicate the Aeolian originals, and the Antiphonal chorus was remodeled, using new 8′ and 4′ ranks, a revoiced chorus reed, and a de-tiered and brightened mixture. Finally, the chancel Great chorus underwent a bit of reshuffling: the 51/3′ Quinte became a third 4′ Principal, the III–VI Plein Jeu was

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\(^{15}\) Hoyt metal is made from a combination of lead and tin that is pressed together. Lead is rolled out to a certain thickness and a layer of tin is placed on top of it and sent through a machine that presses the tin onto the lead with significant force. The high pressure pressing of the tin onto the lead causes them to physically bond together and gives the metal a shiny finish. The advantage is that Hoyt metal can be produced in almost any thickness that is desired and has applications across many industries, not just organ building. Aeolian used Hoyt metal for its string pipes and some of its reed pipes because they considered the tone produced by this metal, especially for the string pipes, superior to other metals. Skinner, on the other hand used spotted metal – also a mixture of lead and tin but the metal is melted together to form a chemical mixture instead of an alloy. When the metals cool, the tin appears throughout the metal in spots, instead of a solid coating.

Both Hoyt metal pipes and spotted metal pipes, due to the softness of the lead, have a tendency to deform over time. The deformation is a very slow process that typically takes many decades to become noticeable. With both metals, the foot of a pipe can crush itself under its own weight. In Hoyt metal pipes, the lower lip of the pipe can begin to protrude. This protrusion is a result of the pipe-making process, during which the body of the pipe is cut from metal in a single direction but the lips are formed from the leftover cross sections in order to reduce metal waste. The cross sections that are used for the mouth are manually molded in order to form the correct shape; however, over time the “memory” in the metal causes the metal to push back to its original shape and thus the lip bows out. The bowing causes the speech of the pipe to ultimately degrade. This effect was accelerated for Aeolian because they used very thin Hoyt metal to achieve the tonal color they wanted. (Barden, Telephone Conversation with Author)
returned to the factory to be loudened, and the chorus was rebalanced somewhat on site. (25)

This marked the beginning of changes to the tonal characteristics of the Aeolian. Aeolian-Skinner, under Harrison’s leadership, had moved away from the Symphonic Organ sounds that Aeolian and Skinner, as separate companies, had pioneered in America and focused more on Harrison’s American-Classic style of organ building. Many of the same principles of the Orchestral style were retained in the American-Classic style, but emphasis was shifted towards a brighter and clearer tone in the treble registers. Harrison also favored the traditional Diapason sound, and “shimmering” mixtures that articulate the partial-tones – more commonly found in the typical church organ sound.

Many of these tonal changes were purely opportunistic “enhancements” riding on the back of necessity. Many of the changes were improvements of unsuccessful sounds – due to construction practices and the acoustical limitations of the organ chambers and the chapel – and others were changes to bring the organ more in line with organ building practices of the time and an opportunity for Harrison to change what he considered to be unfashionable.
Harrison ordered further pipes to be replaced after hearing and revoicing the organ. On December 9, 1949, a further twenty-three ranks were sent back to the factory; two ranks were replaced, five ranks re-planned, and sixteen ranks revoiced. Organ builder and restorer Mike Foley of Foley-Baker, Inc. – the eventual Duke Aeolian
restoration firm, writes about the relationship of Aeolian Skinner to the Duke Aeolian and the work they performed in *The American Organist* Journal:

Not yet delivered to the Chapel, Duke's organ was already an orphan, its foster parents having little investment in something they doubtless felt should have been theirs all along. Aeolian-Skinner was called to make repairs in 1949 after some water damage. The firm's president and noted tonal expert G. Donald Harrison then made his first visit, and Opus 1785 finally met its surrogate parents. Several sets of Hoyt metal strings, which had fatigued their way into speech troubles, were replaced with spotted-metal equivalents; a few changes were made to the Great chorus; the Antiphonal principal chorus was replaced wholesale; and a new remote-control combination action was provided. Otherwise, no attempt was made to emasculate the instrument's unabashedly late-Romantic tonal heroism. (Foley 78-81)

After the Aeolian-Skinner alterations, the organ worked well for the better part of a decade. For regular tuning and maintenance Harrison recommended a “Mr. Whitford of Texas” to come four times a year to tune and maintain the organ. The Chapel adopted this recommendation – a decision that under normal circumstances would be acceptable, but not for the Chapel. (Hendrix, Letter to Dr. Edens) There were issues with the construction of the Chapel that caused water and other leaks to enter into the organ chamber. These issues needed to be addressed quickly in order to mitigate extensive damage, but they were not. As a result, the organ was operational for little more than a decade. (Aeolian Organ)

By 1965, Mildred again contacted Aeolian-Skinner about completely rebuilding or replacing the organ. She also reported that she secured funding for the project from the Mary Duke Biddle foundation and from the President of the University, Terry Sanford. It was at this time that an Executive Committee was formed to look into the
organ’s repair or replacement, as well as other issues with the Chapel, including sealing the sound-absorbing Gustavino-covered limestone walls to improve reverberation and installing air conditioning in the Chapel. (Administrative Committee of the Chapel)

The committee received the specification and recommendations from Aeolian-Skinner that would replace the 107-stop organ with a smaller 88-stop organ that would be more in line with the Neo-Baroque style of organ that was coming into fashion. By soliciting the proposal from Aeolian Skinner the movement to seriously consider the future of the Aeolian organ had begun. (Whiteford)
Chapter 3: The Trouble-Free Tracker

“Here truly, and at last...is an instrument built the way God intended organs to be built!”
– E. Power Biggs, March 31, 1975

Mildred Hendrix served as Chapel Organist until 1967 and continued on as University Organist,16 and Music Professor until she retired in 1969. The Chapel hired then University of North Carolina at Chapel Hill’s University Organist, Dr. Rudolph Kramer, as the interim Chapel Organist. Dr. Kramer was a highly capable organist and academic, who was a good fit for the Aeolian organ because of his experience playing on the 1929 Reuter organ at UNC. The Reuter is tonally similar and comparable in size to the Aeolian, and like the Aeolian was plagued with various problems due primarily to inadequate maintenance and neglect (Minutes of the Chapel Administrative Committee Oct. 26, 1967).

Later that same year, Duke hired George Ritchie as the Chapel Organist. In the meantime, the Chapel Administrative Committee essentially halted all progress on the Aeolian-Skinner replacement of the Aeolian after Mildred’s retirement. This pause in forward momentum was likely a result of the decline in Aeolian-Skinner’s quality and reputation after the death of G. Donald Harrison and the movement towards the “authentic style” of organ building that E. Power Biggs was spearheading across the country. Regardless, the Aeolian received little maintenance and its problems continued (Minutes of the Chapel Administrative Committee Jan. 17, 1966).

16 The position of University Organist was created and funded by the Duke Music Department.
On December 10, 1969, George Ritchie sent a memorandum to the Dean of the Chapel, James T. Cleland, and to the Chaplain, Chairman of the Board, The Chancellor of the University, and other University officials describing the organ’s precarious predicament:

The Chapel organ did not work last night for the first part of the choir rehearsal for the Messiah. Fortunately, it responded to threats and began to function. This is one of at least 15 similar occurrences this fall. We would not have had the use of the organ for one Sunday morning service and two Divinity School services if we had not discovered the malfunction in time to call an electrician to correct it. I thought I should bring to your attention the increasingly poor mechanical condition of the instrument.

Dean Cleland himself added at the bottom of the memorandum:

Gentlemen:
Let me share with you the perilous condition of the chancel organ. I am sufficiently endowed with original sin almost to wish that it goes kaput at the Founders’ Day Service this Sunday.

Seriously,
James T. Cleland (Ritchie and Cleland, Memorandum: Chapel Organ Dec. 10, 1969)

The situation with the organ was dire. A few months after Mr. Ritchie wrote to University officials about the state of the organ, he wrote a “progress” report on the organ and presented it to Chapel and University officials:

The problems with the generator have persisted. Every two to three weeks the organ will not start and an electrician must be called in. So far we have been fortunate that it has not happened just before a service or recital. Certain other occurrences; such as all the pedal stops sticking on in the middle of a Bach fugue (as happened to Dr. Kremer in his 1969 Commencement recital) or stops coming off in one’s hand during the playing of hymns in the Sunday morning services, are very frustrating, but are taken in stride by those of us who have had experience playing the Aeolian. However, it is very hard to try to explain to a student the day before the senior recital, which she has worked for all year, that
the coupler tabs on the right side of the organ have suddenly stopped working, and that the organ maintenance man will be unable to fix the problem until the day after her recital. It is very difficult to console other students, who, after having spent long hours working to make pieces sound just right, find that in the public performance the effect is ruined anyway by the stops that refuse to come on at a crucial time or by important notes that won’t sound when played. And it is quite discouraging even for one who has had more experience playing the Aeolian to be told three weeks before the Baccalaureate organ recital that a serious problem has arisen with the organ pistons that will take a good deal of money and two or three months to correct. I shall let you know about any further problems that occur. (Ritchie, Memorandum: Progress Report on Aeolian Organ May 15, 1970)

What was not publically known at the time of Mr. Ritchie’s memorandums was that the University and the Chapel had been approached by an anonymous donor offering to pay for half of a new organ; but this was nothing along the lines of what Mildred had envisioned. Flentrop Orgelbouw of Holland became involved in the Duke organ discussion at the invitation of Dr. Kramer in the summer of 1968. In the meeting minutes of the Administrative Committee of the Chapel for July 3, 1969, Dean Cleland reported that “…word had come, today, through James G. Ferguson, that the Mary Duke Biddle Foundation wishes to pay for half the cost of “filling” the [Gustavino] tile… and The Dutch organ builder, Mr. Flentrop, has proposed to build a tracker organ where the echo organ is now located. If this is done, a smaller organ will need to be located where the present Aeolean [sic] organ is situated” (Minutes of the Chapel Administrative Committee July 3, 1969). It appeared as though the tide was turning against any prospect for the Aeolian’s restoration.
Four months later, the committee met again and the Dean asked permission to “...seek funds to match offered funds to install a Flentrop Tracker Organ in the arch of the great jambs at the narthex.” The motion passed without opposition and thus began the Neo-Baroque movement at Duke University (Minutes of the Chapel Administrative Committee July 7, 1969).

The implications for the Aeolian organ became clear in this meeting. At the very least, the Echo and Antiphonal divisions of the organ would have to be moved to make room for the new Flentrop Organ. As the committee recommendations and reports would show, the people backing the Flentrop had very little interest in preserving the Aeolian; in fact, they saw it as a liability.

The Chapel presented a report entitled The Duke Chapel Aeolian Organ: Background and Recommendations. The first sentence of the report is indicative of the attitude of the committee and the sentiment put forward publically by the Chapel for the next approximately thirty-five years. The Chapel report begins, “To understand the limited musical value of the Duke Chapel Aeolian organ, it is important to take a retrospective glance at the early 1930’s – the period in which this organ was designed and constructed.” (Total Organ Committee of Duke Chapel). This report would become the manifesto of the Neo-Baroque movement at Duke.

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17 The coversheet of the report reads: “The Decline and Fall of the Aeolian Organ – The Ill Wind that Blows No Good” and was stylized so that each word is on a separate line in a downward trajectory.
In 1969, Duke Chapel invited E. Power Biggs to play the dedicatory recital of the new Holtkamp organ in the Memorial Chapel – the small side chapel. While there, Mr. Biggs$^{18}$ and Walter Holtkamp$^{19}$ – the organ’s builder – were asked for their thoughts on the organ situation at Duke and for a recommendation. Mr. Biggs and Mr. Holtkamp conferred on the situation of the organs in the Chapel and offered several recommendations, including a two-organ solution and replacing the Aeolian.

Emphasizing the correctness according to historical precedent of placing the major organ at the rear of the nave, [Mr. Biggs] also pointed out that a choral program in the chancel cannot be served by the same rear organ. Walter Holtkamp, Jr., at the same meeting, made it quite clear that the present design which includes a division at the back of the nave playable from the front console is at best a very unmusical electronic gimmick. The correct solution involves two separate organs of different designs for different purposes. (Total Organ Committee of Duke Chapel 4)

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$^{18}$ As I will outline later, E. Power Biggs, more than anyone else, was the father of the Neo-Baroque movement in the United States.

$^{19}$ Walter Holtkamp was an American Organbuilder and advocate of the organ-reform movement in the United States.
Edward George Power Biggs’ role in the Neo-Baroque movement in the United States cannot be overstated. Mr. Biggs almost single handedly pioneered the Neo-Baroque movement in the United States and is responsible for Dirk Flentrop building his first organ – and making a name for himself – in the United States. Craig Whitney, in his book *All The Stops: The Glorious Pipe Organ and Its American Masters*” writes in detail about Mr. Biggs and his influence on the pipe organ throughout the 1940s, 50s, 60s, and 70s. In short, E. Power Biggs was an educated and influential concert organist, who became a household name by way of his weekly radio program, numerous organ concerts, and “scores of albums he recorded for Columbia Masterworks” (81).

Biggs was one of the few English organists that had not grown up with the typical English traditions of boy choirs, cathedrals, etc. and his concerts were known for having very little religious influence. He said in an interview of the *Fort Worth Star Telegram*:

> The organ contains a vast range of orchestral color [and has] a vast literature for concert use. It is certainly good for something besides an accompaniment to hymns or the “Wedding March” from *Lohengrin*. (Whitney 87)

In fact, Biggs had a hard time with his relationship with the church and the organ. Whitney quotes a letter Biggs wrote to himself in 1931 saying:

> What can an organist do except get a position in a church? Practically nothing. A mere handful find positions as city organists and as recital organists. Herein lies the great disability of the organ – it is a mere prostitute to the church – bought for so much to attract people to the orthodox teaching. (85)
Whitney notes that in 1935 “For (at least) the second time, Biggs had been fired from a church job” (86). He valued his concert career far more than any church job. Whitney quotes him saying “[I] realized you can’t train choir, practice boys’ choir, etc. etc & [sic] find enough time to develop as a player” (86). But, it was the church that provided a steady and reliable paycheck. In May 1935, Biggs accepted the position of organist and choirmaster at Harvard Congregational Church in Brookline, Massachusetts. That same year the Boston Transcript wrote a review of one of Biggs’ recitals that was at the heart of Biggs’ internal conflict:

The history of the instrument is intimately associated with the church. The best organs have been, and usually are even today, in churches. Not all the “literature” written for the organ is ecclesiastical, but no matter how secular, it takes on a churchly tinge, because of association. Especially in our day such considerations have the effect of keeping potential listeners away from recitals of organ music because, they reason, a service is not likely to be entertaining. This is an unfortunate error. Organ music, well played, can be as engrossing as operatic or symphonic. The best tunes are not – in spite of the proverb – necessarily assigned to the devil. Last night’s recital by E. Power Biggs, in Appleton Chapel, Harvard University, was an instance in point. (Whitney 87–88)

Biggs was friends with G. Donald Harrison at Aeolian-Skinner and after a trip to Europe in the mid-1930s Biggs convinced Harrison to build an organ in the Germanic style that would be given on loan to the Germanic Museum in Harvard Yard. Aeolian-Skinner installed the “Baroque organ—Experimental” in 1937 as its opus 951, and as Whitney writes:

[The organ] was entirely unenclosed—no swellboxes or shutters bottling up the pipes, no shimmering celeste stops imitating the muted strings of an orchestra, no French-style trumpets with the power of orchestral brass. Instead, it had
stops that would have been familiar to Bach or Handel, from the German-style sixteen-foot bass posaune that undergirded the pedal section to the backbone section of the instrument, the Hauptwerke, up to the chirping stops of the one-foot sifflote on the positive. Where the conventional American organ of the 1920s and 1930s sounded deep, thick, and heavy, this one, with a center of gravity high in the treble registers, was light and piercingly clear. Though many of the pipes were conventional Aeolian-Skinner stock, and the windchests on which they sat were the usual electro-pneumatic ones, the air pressure that made the pipes speak was even lower than in the eighteenth-century German organs. Harrison’s main point may have been simply to show that the higher pressures then in vogue in American organs were not necessary to produce good organ tone. (90-91)
Biggs and Harrison remained friends until around 1948 when, as Whitney surmises, “Aeolian-Skinner finally demanded payment for the Germanic Museum Organ” (114-115). The friendship grew apart slowly but steadily and by 1953, the friendship was over. Whitney postulates “Perhaps the truth was that, for Biggs, Harrison and Aeolian-Skinner had served their purpose. Harrison’s Germanic Museum organ and...the radio broadcasts on it had launched him to national fame, and like the discarded stages of a rocket...Harrison had...fallen away behind Biggs’ rising star” (117).

In 1954, Biggs crossed the Atlantic for a tour of historic European organs. The first stop was in Portugal where he was enthralled with the horizontal “royal trumpets” that pointed out “like machine guns” from the case. In Holland Biggs remarked “What a tremendous revelation these Dutch organs are! Here surely in the organs of Holland...is the great tradition of organ building in its clearest form” (Whitney 161). Whitney also quotes Biggs on his trip to Oude Kerk in Amsterdam:

How magnificent are the sonorities of Sweelinck’s music as heard in his own church! One seems never to have heard the music before. Playing the great historic organs of Europe had, for me, the impact of a revelation. For the first time, I became aware of the enormous reservoir, the sum total, of the art of the organ in its building and tonal aspects from five or six centuries. The sound of these instruments was so enormously different and superior to what we were accustomed to, and the instruments, despite their age and different playing dimensions of the console and pedalboard, were so much more responsive. Many things thus suddenly come into focus – the importance of tracker action, of articulate voicing, of the organ case, of the windchest, and so on and on; and particularly the complete interaction of playing action and pipe sound. (161-163)
However, Biggs' excitement and reaction to the “authentic organ” was slightly misguided. Whitney notes that many of the sounds Biggs heard were not the sounds the composers heard in centuries past. In the case of Sweelinck’s church, the organ had long been replaced and the replacement organ that was built in 1738 had been tonally “modernized” in 1869. The organ at St. Jacobi in Hamburg – that Bach had played in 1720 – had been partially pillaged by the German authorities in World War I for the tin, and the church was bombed in World War II and completely burned to the ground, along with the original organ framework. (162)

Fortunately, prior to the bombing of the church much of what remained of the organ post-World War I had been removed. What Biggs played during his visit was a partially constructed, unrestored shell that hardly resembled the organ Bach played more than three centuries earlier. Indeed, the full restoration of the St. Jacobi organ would come forty years after Biggs’ visit. Even the organ at Johanniskirche in Luneburg, where Bach composed the famous *Toccata and Fugue in D minor*, had been replaced since Bach’s time, yet Biggs still fantasized about “how the sonorities of the church had inspired the young composer.” (Whitney 162-163) Not to be dissuaded, Biggs found inspiration from one of his tour guides, the organbuilder Dirk A. Flentrop.

Flentrop Orgelbouw was responsible for restoring many of the organs that Biggs played. The two formed an enduring friendship while touring organs across Northern Europe. This friendship would lead to monumental changes in America’s organ

In 1956, Biggs wrote to Flentrop asking if he would be interested in building a new organ for the Germanic Museum at Harvard. Biggs intended on selling the Aeolian-Skinner to make room for the new organ. He then worked with Flentrop on the design that would become the tonal epitome of everything he envisioned. Biggs wrote:

It seems to me that there could not be a better spot anywhere over here in which to set forth your philosophy! Naturally it would be tracker! If your organ can have a persuasive, outgiving mellow quality, and a rich but never ‘hard’ ensemble (yet very articulate in speech beginnings) I think it will just bowl people over! They will say THIS IS IT! It will be nothing less than an earthquake, for which America is ready right now! (Whitney 165)

Installation of the Flentrop organ at the Germanic Museum (renamed Busch-Reisinger Museum in 1950) was completed in the summer of 1958. Whitney notes that the Flentrop was not the first “reform” instrument in America, or the largest, but it was a monumental achievement for Biggs and a cause for celebration, nonetheless. Shortly after Biggs dedicatory recital, Columbia Records issued “The Organ” – a record that became a proclamation of the Neo-Baroque organ movement in America. The record included articles from Biggs, Flentrop, and others, featured pictures and illustrations of organs new and old and how they worked, and “…Biggs’s English-accented voice introduced snippets of music played on instruments in Europe and America and explained the complexities of organ tone, mechanics, and registration” (170). Certainly, this record had an enormous impact on the American organ scene (168-170).
Biggs must have felt empowered by the success of the Flentrop installation at Harvard. Certainly, his proselytization of the Neo-Baroque organ intensified, and all the while he advocated for the demolition and replacement of American Romantic and Neo-Classical organs, namely Skinner and Harrison’s Aeolian-Skinner instruments. Biggs’ essay, on his Columbia recording explaining his position, was also a rallying cry to American organists and organbuilders to change their ways.

The organ appears to possess a fatal appeal to ingenious but not necessarily musical minds. The organ, previously as responsive as a harpsichord, was turned into something approaching a machine. Its measure came to be volume and number of stops. Voicing ideals were based largely on imitation of the orchestra. Pneumatic and electric actions provided the player with a set of telegraphic ivories instead of the sensitive keyboard of direct tracker action...There is, of course, no reason why we today cannot build organs as well as, or better than, the men of the 18th century...To build tracker-action, slider-chest organs again is not to go back, but rather to put one’s feet on firm ground in order to go forward. A return to basic principles could mean that organs built in the coming decades will stand for centuries, as have their European counterparts. (Whitney 171)

Biggs believed the organ, king of all instruments, had “lost a courtly grace of speech” (Whitney 170). The organ’s tone should be “articulate and beautiful” and that its true accent is achieved through “a consonant before the vowel of sound, a sort of ‘chiff’” (170). Moreover, pipes that were in chambers20 with shutters (to make the sound swell and fade) were “trapped, absorbed, jangled, and scrubbled up” (171). He also believed that remote, electro-pneumatic action21 (the connections between key and

20 An organ chamber is a room (or rooms) that house the pipes of an organ.
21 Electro-pneumatic action is a control system that utilizes an electric current, activated by the keys on an organ console, to open and close valves in a wind-chest, that allow pressurized air to flow into pipes, thus creating sound.
pipe valve) was “a fine way to ring a doorbell” but inappropriate for making music (171). Tracker action22 (direct connection through a system of levers and pulleys between keys and pipe valves) was far superior, according to Biggs, because it made the keys “an extension of one’s own fingers, and responsive to touch” (171).

It was no surprise that the recommendations that Mr. Biggs and Mr. Holtkamp gave to the Chapel did not have a path forward for the Duke Aeolian. There was no attempt at an unbiased evaluation in the Chapel’s report The Duke Chapel Aeolian: Background and Recommendations. The document, and the wider Neo-Baroque movement, from which it derived, based its argument and subsequently gained its power from diminishing and discrediting the Symphonic and American Classic styles of organs and their builders. The original sin of such instruments was electricity and the diversification of music for which the instruments were intended. These organs were “…inappropriate for classical music in the church or concert hall” (Total Organ Committee of Duke Chapel 1).

In order to discredit the organ, the report criticized the Aeolian Company itself. The Aeolian Company’s experience in organ building was almost exclusively for the residence organ market, which the Chapel report argued limited the usefulness of the Duke Aeolian to playing secular, popular, or semi-classical music. The Aeolian

22 Tracker-action relies on a system of pulleys and levers to manually open and close pipe valves instead of electricity.
Company, was therefore incapable of building “instruments designed for traditional and liturgical organ literature” (Total Organ Committee of Duke Chapel 2). Despite being the Aeolian’s second largest organ and one of five organs they built with more than 100 ranks, the report claimed that “The Aeolian Company was never set up to build an organ of this scope” (Total Organ Committee of Duke Chapel 2). It goes on to claim falsely that the Aeolian was built with “inferior metal and factory leftovers...[and] the Aeolian organ for Duke was destined to be the instrument which forced the company into a life-saving merger with Skinner” (3).

Aeolian was the largest manufacturer of musical instruments in the world and the organ division was well-equipped to build multiple organs of significant size simultaneously. The claim about inferior metal most certainly stems from Aeolian-Skinner replacing the ranks of pipes made from Hoyt metal (a topic previously discussed in Chapter 2).

The tonal color of an Aeolian organ is stunningly different from almost any other organ of the period, including Skinner. The issues with Hoyt metal were something that needed to be addressed every decade or so, and the repair was not one of tremendous difficulty. Most organ servicemen or technicians could fix the lips by pressing them flat with a popsicle stick. The feet, on the other hand, required more time and skill with a soldering iron – but again, a problem that could reasonably be fixed onsite by an experienced technician.
The report’s assertions that Aeolian used factory leftovers and that the Duke organ forced the merger of Aeolian and Skinner are unfounded and suspect, considering the fact that the Duke organ was finished and ready for installation in 1931, almost a year before the merger. Additionally, Aeolian signed and completed a number of contracts between the time the Duke contract was signed and the merger with Skinner in 1932. The document goes on to say the following about G. Donald Harrison’s work on the Aeolian:

Shortly before his death in 1956, Harrison came down from Aeolian-Skinner to attempt some reworking of the organ, but the task was so monumental and expensive that he did not make any major modification. Feeling that the antiphonal organ was the only division of the instrument which could be heard clearly, he spent most of his time revoicing that part of the organ. Since then, the organ has deteriorated to the point that major rebuilding now amounts to more than the cost of replacing the old instrument with a new one (Total Organ Committee of Duke Chapel 3).

As discussed previously, Harrison’s tonal work was quite extensive and not insignificant for the Aeolian. The report is correct in asserting that the antiphonal (and echo) divisions were the clearest part of the organ. The Aeolian chambers in the chancel are poorly designed, but this is a reflection of Trumbauer’s design of the Chapel not a reflection on the workmanship or quality of the Aeolian organ. Due to their location along the axis of the Chapel and their clear speech, the Echo and Antiphonal divisions were fundamental to successfully leading hymns and garnering congregational participation.
The decision for two organs for the Chapel was made in this report. Biggs insisted that the main organ be placed in the rear of the nave, as a point of “correctness according to historical precedent” (Total Organ Committee of Duke Chapel 4). Biggs also noted that the choral program could not be served by that organ and Walter Holtkamp added that an organ in the front should not be able to play the organ in the back (and vice versa) that the organs must be independent in order to serve independent purposes. Furthermore, they argued, the scheme of two independent organs is well established in many European cathedrals and churches. However, there is no mention in the report of the many European cathedrals and churches where having only one organ is more than sufficient for organ literature and congregational leadership. (4)

The committee consulted Flentrop on the proposal and he agreed with the idea but suggested that the front organ should be built in the French style. The committee sought out proposals from Casavant Organbuilders of Montreal, Canada and Fisk Organbuilders of Massachusetts. The committee ultimately decided on Fisk because of their willingness to work with the existing organ casework. Coincidentally, Harvard had recently replaced their 1932 Aeolian-Skinner in Memorial Chapel with a Fisk organ, for which E. Power Biggs was the consultant. The report concludes by stating

For the following reasons there can be no doubt that Charles Fisk should be selected as the builder for the new chancel organ in Duke Chapel:
1) The precedent of the Harvard organ.
2) The unqualified endorsement of Fenner Douglass and John Mueller (Consultant to the Duke Chapel Organ Committee) These
endorsements being a result of detailed and sustained experience with Fisk organs.

3) The enthusiastic response to Fisk’s tonal concepts on the part of others concerned with this project.
   (Total Organ Committee of Duke Chapel 6-7)

On August 22, 1975, a publication from Duke University called *The University Letter* indicated that:

Workman have begun to erect scaffolding at the rear of the Duke Chapel in preparation for the removal of the antiphonal organ now there so that a new Flentrop organ can take its place by early next year.

The fully mechanical organ, being built by Dirk A. Flentrop at the renowned Flentrop Organworks in Zaandam, Holland, will rival both in sound and appearance the famous Flentrop organs in European churches and cathedrals. The antiphonal casework in front of the Chapel will be carefully removed and preserved, along with the organ itself, for its eventual rebuilding and restructuring of the original Aeolin [sic] organ by C. B. Fisk, Inc., noted American organ craftsman of Gloucester, Massachusetts. (The University Letter: Flentrop Organ to Come to Duke)
Figure 11 (Duke Aeolian Echo and Antiphonal Divisions)
The echo and antiphonal divisions of the Aeolian were removed in the summer of 1975 in preparation for the Flentrop organ. The pipes went into storage, to be later sold and the Flentrop was dedicated on December 12, 1976. The Flentrop organ was almost two years behind schedule, and *The Charlotte Observer* reported the cost of the organ was $519,000 – nearly 210% more than originally estimated (Powell). The Flentrop’s dedicatory recital program indicated that the Aeolian was to be replaced by a Fisk organ – with the details still being worked out.

There were two recitals that Sunday, one at 3:00 pm and one at 8:00 pm and the “trouble-free tracker” ciphered\(^ {23} \) at both – causing Fenner Douglass, now a Professor of Music and University Organist at Duke, to stop the recital until the problem could be fixed. Not only did the organ cipher, but it was also out of tune – a problem that would later necessitate the replacement of all the reed pipes.

\(^ {23} \) A continuous sounding of an organ pipe as a result of a mechanical defect.
Inaugural Recital of the Benjamin N. Duke Memorial Organ (Flentrop, 1976)

Passacaglio in D minor

Dietrich Buxtehude (1637-1707)

Duo sur la Trompète

Jean-François Dandrieu (1682-1738)

World Premiere: A Vision of Canopus

Iain Hamilton

Commissioned by the Mary Duke Biddle Foundation for the inauguration of the Flentrop organ.

Chorale Preludes

Johann Sebastian Bach (1685-1750)

Liebster Jesu, wir sind hier
In dir ist Freude
Von Gott will ich nicht lassen

Toccata in F major

Johann Sebastian Bach

Selections from Premier (1689) and Second (1700) Livres d’Orgue

Concert de Flûtes
Basse de Cromorne
Petit Cornet, ou Petite Tierce
Tierce en taille
Grand Plein Jeu à 5 Parties, à 2 Chœurs

Final, Opus 21

César Franck (1822–1890)
Chapter 4: Organ War

“It is another vogue of the moment, making the usual mistake of glorifying the past to the disparagement of the present.” – Ernest M. Skinner (November, 1932 The Diapason)

The excitement around the Flentrop was tremendous. In addition to the Duke students-only recital on December 6, 1976 and the two public recitals on December 12, 1976, the music department hosted a Symposium on December 13, 1976 entitled The Future Role of the Organ in the Rehearsal Hall of the Mary Duke Biddle Music Building.

Symposium speakers included:

- The Rev. Canon Jeffrey Cave: Rector of the Cathedral Church of St. Peter and St. Paul, Washington, D. C. (The National Cathedral);
- Robert Newman: acoustician; senior partner, Bolt, Beranek and Newman, (the firm that sealed the walls of the Chapel to increase reverberation time);
- Dr. Peter Williams: Professor, University of Edinburgh;
- Charles Fisk: President, Fisk Organ Company; and
- John Fesperman: Curator, Division of Musical Instruments, the Smithsonian Institution, Washington, D. C.

(Duke University Chapel)

In addition, the organ was formally named the Benjamin N. Duke Memorial Organ and organ builder Dirk Flentrop received an honorary Doctor of Fine Arts from Duke University. (Honorary Degrees 1970-1979)
After the dedication of the Flentrop, the tuning issues that plagued the instrument were insufferable. The problem was that the reed pipes had their resonators cut to exact length back in the Flentrop factory, leaving no room for a tuner to adjust the pitch of the pipes. Environmental factors such as temperature and humidity can
have a significant impact on the tuning of an instrument, and regular tuning is an integral part of any organ maintenance regime. Because the resonators had been cut to length, the tuner was left without any meaningful way to tune the pipes causing the organ to sound constantly out of tune. The intonation problems are readily heard in recordings of Chapel Sunday services in the weeks and months following the organ’s dedication. (Duke Chapel Recordings)

Arguably, the bigger issue was the inability to clearly hear either the Aeolian or the Flentrop from opposite ends of the Chapel. This issue was a direct result of the loss of the Echo and Antiphonal divisions of the Aeolian. The decision for the two organs to be controlled independently coupled with the increased reverberation of the Chapel acoustics created a delay in the sound reaching the other end of the Chapel. This has negatively impacted congregational singing as well as the choir. It is clear from early recordings, and an issue that is still present today, that the choir is almost always behind the organ when singing hymns – the same is true for congregants. This is an issue that could have been resolved by allowing the two organs to be playable from one console, but that would have compromised the purity of the instrument, as noted by Walter Holtkamp in the report and recommendations on the Aeolian Organ. (Total Organ Committee of Duke Chapel 3-4)

Three essays appeared in 1976 as part of the celebrations of the Flentrop’s installation: “Behind the Pipes” by Dirk Flentrop, “A Historical Perspective” by Fenner Douglass, and “What is Past is Prologue” by James Ferguson, Jr. Flentrop’s article
describes the organ’s construction and he includes a glossary of organ terms that make it easier for the layperson to understand the inner workings of the organ. Ferguson offers an account of the acoustical challenges in the Chapel, Mildred Hendrix’s ability to command the Aeolian to its best, and the palpable excitement that was present at the Flentrop’s dedication. (Douglass, Ferguson and Flentrop, A Historical Perspective; What is Past is Prologue; Behind the Pipes)

Fenner Douglass’ essay disguises itself as an historical overview of organs and their evolution. Curiously, mixed in with the evolution of the organ is commentary on the organ’s relationship to the church – which I believe to be one of the issues at the heart of the Neo-Baroque organ movement in America. Douglass writes at length about the organ’s placement in the church over time, shifting into a derogatory critique when describing electricity’s relationship to the history of organs. The detached console that made the American-Romantic style of organ building possible lead to the “sorry state” of organs, where the organ had lost “its physical identity and its historical relationship to the literature” and an organist could now be expected to help facilitate worship by conducting the choir. (3). Douglass writes:

...By the first decade of the 20th century, electric cables and contacts had been introduced as substitutes for all the traditional mechanical connections within organs of all sizes. Thus the instrument was granted freedom from all its previous limitations, paving the way for gross transmutation and abuse. To understand the hideous impact of electrical energy on organ building, just imagine a violin with an electrically operated bow or better yet, a pianoforte with electrical wires connecting the keys to the hammers, thereby enabling the player to remain on stage with his keyboard and pedals, while the rest of the instrument might be elevated above the heads of the audience or quite out of
sight, connected only by a cable….As soon as electricity made possible the physical disembodiment of the organ’s functioning parts, persuasive argument [sic] appeared for doing the surgery. Architects were quite comfortable removing the instrument’s increasing bulk to enclosures and chambers, while leaving the player and console in view. The detached console, innocently introduced in tracker organs, was discovered to answer the problems of the player-conductor. A special course was introduced to curricula in Church Music: “Conducting from the console.”

There was fascination in the discovery that a single player could control an instrument whose parts were located in remote corners of a great church. The Antiphonal, Echo, Dome, and Tower Organs had their day. But even more depressing to the instrument’s fading capacity was the fact that the ancient art of organ building was all but given over to electrical engineers, amateurs, and sloppy repairmen. Anyone could concoct an instrument from supply house parts. Even the “reputable” builders destroyed fine old mechanical action organs of the last century, replacing them with electro-pneumatic or direct electric action instruments with a life expectancy of about 40 years at best. (3)

The relationship between the church, the organ, and the organist is one that I believe that many leaders of the Neo-Baroque movement, including Professor Douglass wrestled with, and is one often overlooked in other analyses. Indeed, it was the church that fostered the organ’s inception, and it was the church organ that inspired many of the great composers, like J.S. Bach. However, it was the church and the role of the church organist – with its concomitant duties and responsibilities – that appeared limiting to those contemporary musicians, who saw themselves as primarily artists and academics. Other professors in the music department were not expected to attend weekly gatherings to play music chosen by church clergy for the general public’s consumption, nor were those professors expected to accompany a church choir on a weekly basis, let alone a choir composed of amateur musicians – whose music was
chosen by another musician, who was likely your boss and retained full artistic control. Other music professors were able to focus on their music, their students, their recordings, and their academic pursuits without the distractions of being the church accompanist. In the end however, the church organ could not be severed from the church. After all, even Bach himself was a church organist.

At Harvard, Biggs achieved the separation between church and organ with the Flentrop organ in the Busch-Reisinger Museum. At Duke, the Flentrop organ seemed to be the answer to the disembodied modern organ and the quandary of the organist’s role in the church. The physical characteristics of the tracker organ lent itself to the independent organist-performer, who could escape the duties of choral accompaniment and be hidden away from the congregation, choir, and choir director. The placement of the organ high up in the rear gallery, meant the organist was as far away from the choir as possible, while still residing in the same building. The organist is positioned high above the congregation, choir, and clergy and plays the instrument with his back to them (and to the alter) in a position of tonal superiority, centered along the axis of the church.

Access to the gallery organ at Duke is protected by two locked doors, a spiral staircase and a silent alarm directly connected to the Duke Police Department. Ironically, the Flentrop organ is the only part of the neo-gothic Chapel that has an alarm. The Aeolian console, by comparison, is sometimes guarded by a velvet rope at the top of the chancel steps.
On October 30, 1981, a frustrated Robert Young, who was then Minister to the University wrote to University President, Terry Sanford. The letter reads:

I am writing this memo to suggest as strongly as I can that we discontinue, as soon as possible, the title and position of University Organist.

Let me raise with you several options for consideration:
1. The most preferred and best option would be to re-work the present University Organist/Professor of Organ position and titles and perhaps make a position “University Professor of Organ” – and relieve the present person of all responsibilities connected with the Chapel.
2. If this cannot be done now, I would suggest that we redirect the current drive to raise funds to endow a combined position of “University Organist and Professor of Organ” and make it for “Professor of Organ” only.
3. Or, if neither of the above can be carried out, I respectfully suggest that when the present person’s contract runs out or he retires, any new professor of organ have no responsibilities in the Chapel.

The reason for this are simple, but, I think persuasive:
1. We do not need the University Organist position. All responsibilities now handled by the University Organist, connected with the Chapel, can easily and rightfully be handled by others on the Chapel Staff:
   a. Overseeing maintenance and tuning of organs can be done by Mr. Ben Smith, Director of Chapel Music, or Mr. Peter Marshall, Chapel Organist.
   b. Planning the Organ Concert Schedule can be done by Ben Smith or Peter Marshall, Chapel Organist.
   c. Playing once a month, or less, for worship services on the Flentrop (Mr. Douglass refuses to play under Ben Smith or to accompany the Choir, thus all he does is play the Flentrop while we still have to have another organist at the Aeolian) can be handled by the Chapel Organist and Associate Chapel Organist.
2. The situation now is very confusing as to who is in charge of the organs in the Chapel – University Organist, Director of Chapel Music, or Chapel Organist. It would simplify matters to have only the Director of Chapel Music clearly in charge.
3. The position is a very costly one. The funds now used to pay for the University Organist position could very helpfully go for other needy causes, in the Chapel or in the Music Department.
I must concede that many of the reasons listed above, and there are many more I could give, are compelling partly because of the personality of the person now in the position. However, even if there were not serious problems of this nature, there still should be no need for the position. The rest of us in the Chapel Staff can handle the Music/Organ work quite well, indeed much better, without a University Organist in the picture. Last Fall when the University Organist was on leave and this fall when he has not played for any services, the whole range of matters related to the organs and to the Chapel music has gone far more smoothly than at any time since we have had the position.

My urgent plea is that, as soon as possible and for the best interests of all the people and the program in the Chapel, we discontinue the position of University Organist. There are ways in which the contract for the University Organist has not been carried out, if that provides a means for dealing with this.

Thank you for letting me share this with you. (Young)

Despite these struggles, Fenner continued as University Organist at Duke until the mid-1980s when he retired. More interesting is that, after the fanfare of the Flentrop dedication faded, the organ committee was supposed to move forward with the Fisk organ to replace the Aeolian but the donor (believed to be connected, either directly or indirectly, with The Mary Duke Biddle Foundation) rescinded the offer. The exact reason for this is unclear, but evidence suggests that the over-budget and much delayed Flentrop, along with the disparaging remarks flung at the Aeolian, and a growing chorus of people who disagreed with the pretentious rhetoric of Duke’s Neo-Baroque movement, all conspired against the Fisk organ.

The inability of the Chapel to raise money for the Aeolian’s replacement left the plans for a new Fisk organ dead in the water. The decision was made to move forward with only minimal repairs to the Aeolian. However, with the Aeolian still in ever-worsening condition, the Chapel formed another committee in 1986 called the “Front
Organ Committee,” tasked to provide a fresh perspective on what should be done with the Aeolian. The committee included members who were not necessarily involved with the Flentrop and the previous Aeolian replacement efforts. As a result, for the first time since E. Power Biggs’ visit to Duke, the restoration of the Aeolian organ became a viable option. (Front Organ Committee)

The new committee commissioned various studies on the needs of the Chapel, the demands placed on the organ, the organ’s acoustics, and the ongoing issues with the organ and the building – namely that the roof was still leaking into the organ chambers. In 1988, the committee publically recommended that the organ should be replaced with an instrument built by John Brombaugh and furthermore, the Holtkamp in the Memorial Chapel should be replaced with another, small Brombaugh organ in the early Italian style and in meantone temperament. (Front Organ Committee)

This recommendation set off a firestorm of protests from a growing number of people who wanted to see the Aeolian restored. Organ builder Nelson Barden and other members of The Organ Historical Society organized a letter writing campaign urging the University to save the Aeolian. For the first time, the Aeolian was considered a valuable piece of history. A number of historians, academics, clergy, organists, organ builders, and alumni wrote in to Chapel and University officials to urge the committee to reconsider their replacement plans. Among the Aeolian’s supporters were people who had a strong personal, spiritual or emotional connection to the Duke Aeolian, there were others who had initially bought in to the Neo-Baroque movement but
became disenchanted after seeing many fine instruments destroyed, and there were still others who did not care for the sound of low-pressure tracker-action organs.

One of the many vocal opponents of the committee’s recommendation was the American concert and church organist Frederick Swann. Swann was the organist at Riverside Church, New York City alongside the flamboyant Virgil Foxx in the 1960s and 1970s. Mr. Swann wrote to Duke University President, Keith Brodie, on April 28, 1988 imploring him save the Aeolian:

I beg your indulgence, for this is yet another letter in regard to the furor that has resulted nation wide in response to the announcement of the proposal to replace the Aeolian organ in the University Chapel.

In my more than forty years in the organ profession...I have seen some alarming acts take place. But, until now I have lacked the courage, wisdom, or integrity to ever write a letter.

...The acoustical improvements made a number of years ago, and the installation of the Flentrop organ, were milestones artistically, educationally, and aesthetically. These things have indeed enhanced music and worship in that great building for “countless generations to come”.

But, before those improvements were made, there were other generations who managed to literally have their lives changed by what went on in the Chapel – and from personal experience I know that the sound of the Aeolian organ played no small part in this.

Countless great European organs your music staff so strongly espouse in principle have had an infinitely longer life than that of your Aeolian. But they also have gone through numerous rebuildings and restorings...rather than being unceremoniously consigned to the junk heap. So the fact that the present Chapel organ has a few years on it, is in a state of some (not major) disrepair, and would cost money to restore and “modernize” is really no reason to toss it out.

The Duke University Chapel Aeolian organ was at one time a very major instrument in this country, and one of the finest examples of organ builders’ art.

TO DISCARD IT IS TANTAMOUNT TO DISCARDING YOUR BEAUTIFUL STAINED GLASS AND STONE CARVINGS JUST BECAUSE THE CURRENT PROFESSOR OF ART PREFERENCES SOMETHING ELSE!
Of a much more serious nature, however, is the apparent condoning by University officials of the devious practices of the Duke Tracker Mafia (Front Organ Committee) who have:

1. Gradually assembled a music staff that, while of recognized scholarly standing, is entirely one-sided and united in their biased ideas about organs...although they are far from being a majority in the organ world.
2. Blatantly allowed – perhaps even encouraged situations that have caused the Aeolian organ to fall into a state requiring attention.
3. Asked for (or received) advice from outside experts, and then, when the advice did not agree with their desires, taking statements out of context and/or twisting facts to suit their purposes.

...IS NOT THE PURPOSE OF ANY EDUCATIONAL INSTITUTION TO TEACH, AND TEACH WITH INTEGRITY?

Would University boards stand by if entire centuries of English literature were deleted because of the desires of a few, or if medical breakthroughs of the past 100 years were scoffed, or if the theology of the Reformers was ignored? (Swann, Letter to Keith Brodie)

There were many more letters similar in nature that decried the prospect of losing the Duke Aeolian organ. Organ builders and restorers Nelson Barden and Jonathan Ambrosino personally met with members of the Front Organ Committee and the Chapel staff to “speak for the organ” at the request of Mary Duke Biddle Trent Semans (Barden, Telephone Conversation with Author). The local newspapers, the Duke Chronicle and the Durham Herald Sun, ran multiple stories on the organ depicting a swell of support for the Aeolian.

This was not the first time that a newspaper printed an article about saving the Duke Aeolian. On June 16, 1975 the Summer Chronicle ran an opinion piece by David Snyder titled A Charge of Organ Rape. Mr. Snyder voiced his frustration that Duke would allow an “American treasure” to be so readily discarded. He goes on to talk about
how many European countries have laws to safeguard organs from “contemporary trends, fascists in organ departments, and fast-talking organists and organ salesmen.” He also adds that the tonal properties of these organs, pioneered by Ernest M. Skinner and G. Donald Harrison, are worth revering – not removing. “Louis Vierne, when he heard the flute and flute celeste perfected by Ernest Skinner demanded one for Notre Dame.” Mr. Snyder concludes “When the Aeolian goes or is tonally RAPED, I suggest DUKE UNIVERSITY change its name to DUPED UNIVERSITY.” (Snyder)
The Organ Historical Society had officially declared war on the “Duke Tracker Mafia” and was determined not to let the Aeolian go down without a fight. William Van Pelt, the Executive Director of the Organ Historical Society, sent a letter to President Brodie on June 16, 1987 that reads in part:

Dear Dr. Brodie:

It has come to my attention through contact with several concerned musicians, organbuilders, music lovers, and many of the 2,500 members of our non-profit, educational Society, that consideration is being given to the removal of the 1932 Aeolian pipe organ, Opus 1785, in the chancel at Duke Chapel to make way for a new organ, perhaps a tracker action instrument of Romantic design, that may be installed using some architectural components of the existing instrument.

I write to inform you of this concern, and to request that you act with complete and independently-gained information before depriving future generations of this historically and musically important, unique, organ. The same mentality that destroyed so many organs over the centuries and throughout the world as they fell from style is at work in presaging the demise of the Duke Aeolian.

Though the academic community at Duke secured the stylish Flentrop organ for the rear gallery as the Organ Reform Movement reached its height more than a decade ago (the Movement began before World War II), that same community may be closed to recent turns of style. Interest now grows in large and comprehensive organs, such as the Duke Aeolian, that have resources sufficient to play the symphonic literature as well as the Romantic.

Romantic organ music and symphonic organ music (which was largely classified as “tasteless and decadent” during the era that included the installation of Duke’s Flentrop) now find ardent champions among the most distinguished organists in the nation and on the faculties of its most prestigious institutions.

At Boston University, a special laboratory has been established to study and restore symphonic pipe organs.... At Yale University, a comprehensive organ by Skinner in Woolsey Hall was virtually abandoned in the 1960s and early 1970s, but has since been fully refurbished and is in constant demand by students of two full-time professors of organ....

Though there is resurgence of interest in these organs, few of the extant examples are as large as the Duke Aeolian organ. And, the Duke Aeolian is
entirely unique as the largest organ that the Aeolian firm built for a university chapel or for a church....

One finds empty the criticism that the Aeolian is less than entirely original, and thus may not be worthy of preservation of use. That point of view is based on the fact that a few ranks of pipes that emulate the sounds of a string orchestra were replaced many years ago with new string ranks by the Aeolian-Skinner firm.... Those same detractors recall that about ten ranks of the rear gallery division of the Aeolian organ were discarded to make space for the Flentrop instrument. However, the Aeolian is still about fifty percent larger than the Flentrop.

If these changes constitute sufficient reason to discard the Aeolian, please consider that the same reason can be cited for discarding the Flentrop organ. Much of the Flentrop has been altered or replaced in the eleven years that it has existed: several ranks of flue pipes have been re-regulated or revoiced, many ranks of reed pipes have been rebuilt or replaced, the wind system has been modified, collapsing large pipes of high-lead content have been rebuilt or replaced...and the action has been somewhat modified.

To cite the cost of maintaining the Aeolian as a reason for its impracticality, please consider that the instrument has not received nearly as much expensive repair or alteration in recent years as has the Flentrop. Though the Aeolian may now benefit from a full-scale restoration, it still plays regularly and faithfully for chapel services in its 55th year. Without the constant attention that the Flentrop receives, it may not play acceptably at all....

Practical church musicians widely favor a comprehensive organ where the primary application is to modern worship in leading hymn singing and in choral and solo accompaniment. Such was a major consideration in design of the Aeolian, as seen in its specification. A replacement may have as many pipes, but if it is not designed with the same concern for its primary use in worship, it will not function as well for that purpose as does the Aeolian. Such a hard lesson was learned at Harvard University in its chapel.

Considering the quality, artistic merit, inherent reliability, growing interest in and unique nature of the Duke Chapel Aeolian, I implore you to discourage plans to discard it, to consider eventual restoration of it, and to seek consultations from parties who have a true and thorough knowledge of Aeolian organs and who are not biased against them. (Van Pelt)

Letters continued to pour in to Duke. The former Prime Minister of Great Britain (and organist) Sir Edward Heath wrote a letter to the University urging the University to save and restore the Aeolian. There was a separate petition organized by Duke
University’s class of 1938 to “Save the Great Aeolian Chapel Organ” which garnered nearly 200 signatures. (Class of 1938)
Despite all the letter writing and public pressure to restore the Aeolian, the Committee’s recommendation would stand – but there was another problem. The committee attempted for several years to find funding for the $1 million, seventy-six-stop Brombaugh organ, but no one would come forward. Suddenly, financing an organ for Duke had become a toxic endeavor that almost everyone wanted to avoid. (Griffith)

The turning point and arguably what ended the decades-old debate came in late September 1988 when the Director of Chapel Music at Duke, Benjamin Smith requested that his estate be given to the restoration of the Aeolian. Smith, who was 58 years old, was dying. He conducted his last service at the Chapel for University Baccalaureate in May 1988. His health was in steady decline and he knew death was imminent. (Griffith)

The Vice President for Student Affairs at Duke, William Griffith, wrote Smith on October 6, 1988 very receptive to his generous gift, but stated that the Chapel would need to raise $500,000 of the roughly $1 million estimated cost of restoring the Aeolian, before going public with the plan. Griffith also noted that finding a donor to meet the remainder of the $500,000 threshold was going to be challenging due to the circumstances and climate around organs and the Chapel. (Griffith) Smith contacted Frederick Swann and asked him to play a recital on the Aeolian to help raise part of the remaining funds for the organ’s restoration. Swann happily agreed and the concert was scheduled for November 9, 1988. (Swann, Letter to J. Benjamin Smith)

The concert was put on hold as the University quietly started looking for donors to help reach the $500,000 threshold for the restoration. As the search was on, the
letter writing from the public continued. William Brame of Kinston, North Carolina wrote to Ben Smith in November offering his assistance in fundraising for the Aeolian. For the past fifty years, Mr. Brame had been an organist and involved with organ building and selling organs. Mostly retired, he wrote that he had spare time and was willing to donate it to helping raise money for the organ. (W. F. Brame)

The decision was made to move forward with the benefit concert and for the first time Duke publicly acknowledged that its intentions had shifted, and that it was now focused on restoring the Aeolian. On April 6, 1989, Fred Swann performed a split concert, half on the Flentrop and half on the Aeolian. (Swann, Email to Author) This concert brought the fundraising campaign public attention and the University officially transitioned the front organ project from one of replacement to one of restoration. The “Save the Aeolian” campaign worked. The excitement from the campaign was sadly tempered because that same spring Ben Smith died. However, it was because of Ben Smith’s death that the Aeolian lived.
ARTS IN DUKE CHAPEL
presents an
Organ Recital
by
FREDERICK SWANN

Thursday, April 6, 1989  8:15 p.m.  Duke University Chapel

I
(On the Aeolian Organ)

Cortège et Litanie, Opus 19  Marcel Dupré
                        (1886-1971)

Sonata in f minor, Opus 65, Number 1  Felix Mendelssohn
                        (1809-1847)
                          Allegro moderato e serioso
                          Adagio
                          Andante recitative
                          Allegro assai vivace

Chorale in E Major  César Franck
                        (1822-1890)

(Brief Interval)

II
(On the Fuentrop Organ)

Fanfare  Frederick Lewis
                        (b. 1931)

Magnificat primi toni  Dietrich Buxtehude
                        (1637-1707)

Choral Vorspiel  Johann Ludwig Krebs
                        (1713-1780)
                          "Ach Gott! erhöri mein Seufzen"

Fugue in E-flat Major, S. 552b  Johann Sebastian Bach
                        (1685-1750)

(Brief Interval)
III

(On the Aeolian Organ)

Sonata on the Ninety-fourth Psalm  

Julius Reubke  

(1834-1888)

Grave

O Lord God, to whom vengeance belongeth; O God, to whom vengeance belongeth, show Thyself.  

Lift up Thyself, Thou Judge of the earth: render a reward to the proud.  

(Psalm 94:1-2)

Larghetto—Allegro con Fuoco

Lord, how long shall the wicked, how long shall the wicked triumph?

They slay the widow and the stranger, and murder the fatherless.  

Yet they say, the Lord shall not see, neither shall the God of Jacob regard it.  

(Psalm 94:3, 6, 7)

Adagio

Unless the Lord had been my help, my soul had almost dwelt in silence.

In the multitude of my cares within me thy comforts delight my soul.  

(Psalm 94:17,19)

Allegro—Allegro Assai

But the Lord is my defence; and my God is the rock of my refuge.

And He shall bring upon them their own iniquity, and shall cut them off in their own wickedness; yea, the Lord our God shall cut them off.  

(Psalm 94:22, 23)

This evening's concert is presented by Fred Swann, eminent American church and concert organist at Riverside Church and presently Director of Music at The Crystal Cathedral, in memory of his long-time friend, J. Benjamin Smith. This recital is Mr. Swann's contribution to the J. Benjamin Smith Endowment. The J. Benjamin Smith Endowment was established at Duke Chapel by friends and associates of Mr. Smith. Funds generated from this endowment are used for the general support of music in Duke Chapel. Contributions may be sent in care of Mrs. Mary Parkerson, Duke Chapel, Durham, NC 27706.

Words from British Composer Iain Hamilton about J. Benjamin Smith:

I shall always remember Ben as a true and concerned personal friend and also as a highly respected professional showing such enthusiasm and excellence in many performances of my works both with the Chorale and the Chapel Choir. However, let us all remember him for so much that he did, through music, for the University and for the Chapel in particular during those twenty years when thousands, either singing or just listening, had their lives enriched by his rare gift, warm heart and bright spirit.

On Friday, April 14, and Saturday, April 15, the world-renowned Jose Limon Dance Company will perform in Duke Chapel with music provided by the Duke Chapel Choir and the Duke University Chorale. The Company will perform Kodaly's Missa Brevis and their "signature piece", The Moor's Pavane, with music by Purcell. Both performances will begin at 8:00 p.m. Tickets priced at $14 for the general public and $10 for Duke students and groups are available at Page Box Office. Further information is available by calling 684-4444.

On Wednesday, April 19, at 8:15 p.m., the Duke Chapel Choir and the Duke Symphony Orchestra will join in a concert of sacred music for choir and orchestra. The performance is under the direction of Mr. Lorenzo Muti and Mr. Grigg Fountain. The program will feature Four Sacred Songs by Giuseppe Verdi, Kyrie by W. A. Mozart, and the flamboyant Te Deum Laudamus of Anton Bruckner. Tickets, free to students and $5.00 to the general public, are available at Page Box Office.

Figure 17 (Swann, Organ Recital Program April 6, 1989)
“The Aeolian Organ is a historic treasure not only because it is one of the last great instruments of its kind, but because it was the original organ in the Duke University Chapel. I believe that my mother, a musician, assisted in selecting it. Its soaring voice in that cathedral-like space will resound in our memories forever. What a privilege to have it available and in use today. We hope that those in tomorrow’s generation will have the same good fortune. – Mary Semans”
The Chapel embarked on a fundraising campaign over the next few years dubbed “A Voice for the Ages” and the restoration job was awarded to Norman Ryan, the in-house organ curator at the Chapel. Seemingly, the ending of the Duke Aeolian’s story should be apparent, and this should be a tale of happily ever after, but as we know with this organ, nothing is quite so simple.

Throughout the 1990s, Ryan worked part-time on restoring the organ, along with his other duties of maintaining the Chapel’s Flentrop organ as well as the practice and studio organs in the Music building, and the University harpsichords. In 2001, the Organ Historical Society (OHS) chose North Carolina as the location for their annual convention, and slated a recital on the Duke Aeolian. This was an exciting opportunity for Duke. However, with the convention just months away, the organ’s restoration was still far from complete, and the money raised for the restoration was almost entirely spent. The 32’ Bombard, and the entire Solo division were non-operational and the organ was still in a state of disrepair.

Chapel officials made the decision to replace Mr. Ryan in the spring of 2000 and hired local organ repairman and tuner, Allen Harris of Chapel Hill to focus on the short-term goal of preparing the Aeolian for the concert. Harris had approximately two months to perform major work on the organ, including deciphering and reconnecting the wiring of the entire Solo division and 32’ Bombard, identifying and fixing other underlying issues of the organ, and tuning the entire instrument. In conversation with the author, Harris said that to complicate matters, almost all of the work had to be done
during late night hours when the Chapel was not in use. Despite the constraints, Harris pulled off a huge feat, with the entire organ playable and fully tuned just in time for the AGO convention in June. (Harris, Information Related to Author)

After the convention recital, the University turned its attention to long-term solutions for the organ. The Chapel hired a new curator of organs, John Santoianii, and made the decision to hire a restoration firm that specializes in electro-pneumatic organ restorations to complete the organ’s restoration. The most well-known of these companies was the Connecticut-based firm of A. Thompson-Allen.

Thompson-Allen was the organ curator for the famous IV-manual, 197-rank, 1928 E. M. Skinner organ in Woolsey Hall at Yale. The New Haven-based company is known for insisting on authentic organ restorations with minimal modification from the originally intended sound and specification. This seemed a terrific fit for the Chapel, as it was decided that the restoration should return the Aeolian as close to its original sound as possible – reverting the tonal changes that had been made by G. Donald Harrison decades earlier.

With most of the $1 million from the 1989 fundraising campaign now gone, the Chapel embarked on another round of fundraising. In the fifteen or so years since the restoration process began, the cost of restoration had significantly increased. The restoration was now estimated to cost $1.776 million, which included addressing almost all of the issues that had plagued the instrument for more than 50 years (Aeolian Farewell Recital 9).
This list included:

- Addressing present and potential water leaks from internal leaders and flat roofs above all the pipe chambers, including the possibility of adding a pitched roof.
- Repairing past water damage to the organ chamber walls and ceilings.
- Updating lighting and electrical outlets (110v.) within the chambers.
- Changing the slope of the ceiling towards the bulkhead of the Great chamber to improve tonal egress, and addressing other “dead” spots.
- Treatment of the sound absorbing Acoustolith or Guastavino tile in the chancel area. (Santoianni)

The Chapel commissioned a study of the acoustics of the chambers, choir stalls, and crossing in an attempt to brighten the organ’s sound and help it project more clearly into the room. The roof leaks that had plagued the Chapel for many decades were finally being addressed. In 2004, just as the project seemed to be moving forward, A. Thompson-Allen withdrew their offer and proposal to the Chapel. Once again the organ’s future became uncertain.

Both the official and unofficial reasons that Thompson-Allen withdrew from the project are numerous and range from Duke wanting changes to the organ that were not authentic to the original specification, to the project being so large and time consuming that the company would not be unable to undertake other financially-lucrative projects at the same time.

Whatever the reasons, the Chapel was back to the proverbial drawing board looking for other restoration companies to take on the job. While the search for a new restoration firm commenced, the project was not at a complete standstill. It was
determined that building a new console for the organ was more practical than restoring the large original console, so work on a new console began. (Houghten)

In September 2006, the restoration contract for the Aeolian was awarded to another Connecticut-based firm, Foley-Baker of Tolland. (Foley-Baker, Inc.) By this time, the cost of the restoration had increased to $2.2 million. The “Farewell Recital” for the Aeolian on September 10, 2006 itemized the cost of the restoration:

- $343,000 – Console Work
- $1,568,000 – Pipes, chests, blowers, regulators, chimes, wind lines, etc. refurbished
- $250,000 – New chamber ceilings, new chamber lighting and wiring, refurbish blower starter equipment
- $39,000 – Administration and fundraising (Aeolian Farewell Recital 9)

The Aeolian’s entire inner workings – ranks of pipes, wind chests, wind lines, swell boxes and swell shades – were removed from the organ chambers and relocated to Foley-Baker’s shop for repair and restoration. The twenty-month restoration was a mammoth undertaking and involved twenty-four work items. The following is an example from the contract indicative of the detailed and thorough work performed on each component of the organ:

1. · Manual chests (Pitman and Unit) (total of 14)
   a. All existing leathered and gasketed surfaces will be stripped and properly prepped for recovering work
   b. Interiors will be cleaned
   c. Magnets will be replaced
   d. All tubing will be replaced
   e. Pitmans will be replaced
   f. Edges of pouch wells will be lightly sanded to remove any sharp edges
   g. All pouch rails and channels will be blown out with compressed air
h. New pouches and valves will be applied  
i. New pitmans will be cut and installed  
j. New silicone tubing will be used for the stop action exhausts  
k. New silicone tubing will be used for the unit actions  
l. Any sealing strips will be replaced using materials that replicate or exceed Aeolian's originals  
m. All gaskets will be replaced  
n. Stop actions will include all new pouches, valves and nuts  
o. Chest exteriors will be repainted or shellacked as appropriate  
p. New, connectorized cables will be soldered into place  
q. Rack boards will be cleaned and clear coated to replicate the Aeolian originals  
   i. Aeolian's rank identification stampings will remain  
   ii. Aeolian's rank identification labels will be replaced with replicas  
r. Sky racks will be reconditioned, painted or finished as original and refelted  
s. Chests will be totally assembled and tested (Foley-Baker, Inc. 4-5)  

After almost 2 years of total silence, the Aeolian organ made an unannounced return to the Chapel in the Fall of 2008. After months of unceremoniously accompanying the Choir and Congregation, the Aeolian organ was formally rededicated in February 2009 as the Kathleen Upton Byrns McClendon Organ. The McClendon family had given $600,000 between 2002 and 2003 to name the reconditioned organ. (Kathleen Upton Byrns McClendon Rededication Program 18)  

The program for the dedicatory recital provided great detail from Foley-Baker about the work they performed on the instrument. One notable example is the Harp – a percussion stop on the organ that resembles a xylophone or marimba – required more than 600 man-hours to recondition, or more than 3 ½ months of work with one full time technician. (Kathleen Upton Byrns McClendon Rededication Program 9) The
recital was magnificent, with Dr. Robert Parkins, University Organist, playing the first half, and Dr. David Arcus, Chapel Organist and Associate University Organist, playing the second half. This time only the Aeolian organ was played.

After three unsuccessful efforts to have the organ replaced, and later two restoration efforts, the Aeolian organ finally sounded again – much as it did more than 70 years ago. A year after the organ’s re-dedication, a new unenclosed solo stop was added to the organ in memory of the late Benjamin Smith. Known as the “Festival Trumpet” the new high-pressure reed was modeled after extant examples from early 20th century organs, whose sound speaks directly into the congregation and soars above the full organ. (Kathleen Upton Byrns McClendon Rededication Program 2-3)

The Aeolian organ has enjoyed a tremendous success and use since its restoration. It is now used for recitals and is a more prominent part of Sunday services. An example of one of America’s finest organs, the treasured Aeolian will now be enjoyed for generations to come. If only it had not taken so many decades for this instrument to be appreciated, it might have been preserved in its entirety. Yet, it is important to look forward and not backwards – a lesson that is well-learned from those who sought to destroy the Aeolian in the 1970s and 1980s.
Conclusion

There is no doubt that the McClendon organ in Duke Chapel has a history of significant problems, and it is even understandable that on first glance the logical solution to these problems was to replace the instrument. This solution, though, is erroneous because it approaches the organ from a pragmatic perspective and narrowly views these problems as self-inflicted. The Aeolian became the sounding board for failures in the design and construction of the Chapel, underfunded and reactive maintenance philosophies, and multiple identity crises. Perhaps one might also note that the Aeolian is a complex keyboard, and as with all keyboard instruments, needed, and still needs, regular maintenance.

The replacement of the Aeolian would have represented the disregard of the decision made by non-academics in the 1920s that reflected an American cultural ethos, of the interdisciplinary nature that the American Romantic organ embodied, and of the symbiotic relationship of the organ and the church. The rhetoric used by those, who later argued for a Neo-Baroque aesthetic and against the Duke Aeolian, represented a short-lived ideological attack when seen from a twenty-first century vantage and in light of the sweep of the McClendon organ’s history. At Duke, the Aeolian for a short time was a sacrificial martyr and rallying point for an impassioned philosophical and aesthetic movement, whose objective included its removal and replacement. Fortunately, better sense prevailed, influenced by an equally impassioned groundswell in support of the Aeolian.
What the leaders of Neo-Baroque movement did not realize is that an instrument that was so central to music and worship at the Chapel could have created such strong emotional and spiritual ties to students, congregants, and choristers over the decades. It is the electrifying and sublime sounds of the organ that have endeared it to so many who have heard it over the years, and ultimately their support is what saved an icon of American history and culture and of Chapel life.

The Duke McClendon organ is a beautiful instrument with deep roots in American culture and history. It is musically and intrinsically beloved and I hope that its continued existence shows the importance of questioning ideological dogma: the replacement of the McClendon organ in the Duke Chapel would have been an irreparable loss. The entire story of the Aeolian cannot possibly be told in one paper, but perhaps others will examine other aspects of this organ and culture that I have not. This is a story only partially told but certainly worth telling in its entirety.
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Appendix A: Aeolian Advertisements & Company Related Pictures
Figure A-1 (Advertisement of the Mechanical Orguinette) – 1878
THE ÆOLIAN.
THE GREATEST MUSICAL INVENTION OF MODERN TIMES.

WHAT IT IS.
The ÆOLIAN is the result of an attempt to make an instrument that would simplify the act of playing, so that a person could learn without devoting years to study and practice.

WHAT IT WILL DO.
On the ÆOLIAN, any one, without regard to any knowledge of music they may or may not have, can, after a week's practice, play any piece of music ever composed.

THE GREAT FEATURE.
All selections for the ÆOLIAN are arranged from the full orchestral score, and its rendition, therefore, of the higher grades of Operatic and Classical music is more perfect than that of any other instrument.

The Highest Possible Endorsements:
I consider your instrument the greatest musical educator I have yet known. I find in my own case that my children, young as they are, develop good taste in the selections they like, and the ease and facility with which the instrument is played will, I am confident, educate the musical taste of the general public to a very high degree, since it enables them to become, without previous musical training on any instrument, early familiar with the work of the best composers.

Very truly yours,
EDMUND C. STANTON,
Director German Opera, New York City.

My Æolian has interested me greatly; so much so that I take no hesitation in saying that I regard it as a very useful and meritorious invention. I can readily conceive that it will enable even those who cannot play to produce on the "Æolian" everything to which they would wish to listen, for the manual skill is necessary should be easily and quickly enough acquired by everybody. I think I can safely predict a widespread popularity for this instrument. Believe me, that this is the very sincere wish of,

ANTON SWALLE.
Leader German Opera, New York City.

The ÆOLIAN is on daily exhibition at any of the following places, and you are earnestly invited to call and see it:

THE ÆOLIAN COMPANY,
*831 Broadway, New York City.*

Chicago:
LEON & HALL,
State & Monroe Sts.

Pittsburgh:
MEYER & HENSE,
17 Fifth Ave.

Boston:
F. W. BAILLIE,
180 Tremont St.

Cincinnati:
ALBERT KRALL,
14 W. 4th St.

Philadelphia:
C. J. HOPKINS & Co.,
111 Chestnut St.

Toledo, Ohio:
WHITNEY & CHERREF Co.,
111 Summit St.

San Francisco:
KOEHLER & CHASE,
28 O'Farrell St.

Montreal, Canada:
L. E. N. PEAKE,
1576 Notre Dame St.

*After May 1st, 18 West 23rd St.*
SEE WHAT OUR INVENTIVE GENIUS HAS ACCOMPLISHED

THE ÆOLIAN

is conceded by the World’s best Musicians to be without question the greatest musical invention of modern times.

Any one, regardless of their knowledge of music, can learn, in a few days, to play upon an Æolian, with correct expression, any piece of music ever composed.

The Musical Expression, or tone color, can be varied entirely at the will of the player, the Æolian responding as promptly to any change in tempo, or degree of power, from the softest pianissimo to a loud fortissimo, as a well-trained orchestra under the baton of an experienced director.

Æolian Repertoire

is unlimited. Any piece of music ever published can be obtained for this wonderful instrument. All music for the Æolian is arranged from the full orchestral score, and is therefore more perfect than a simple piano or organ arrangement.

“As an Educator, the Æolian Stands Unrivalled.”

is the verdict of all who have used them, or watched their use in the home. Even children soon develop a taste for and acquaintance with the best compositions, and ignore the mass of musical trash with which the country is flooded.

THE ÆOLIAN

is on daily exhibition at any of the following places, and you are earnestly invited to call and see it.

THE ÆOLIAN COMPANY,
18 West 23d Street, New York City.

Chicago:
LYON & HEALY,
State and Monroe Sts.

Boston:
F. W. BARTLETT,
130 Tremont St.

Philadelphia:
C. J. Herro & Son,
117 Chestnut St.

Pittsburgh:
MELZER & HORN,
77 Fifth Ave.

Cincinnati:
ALBERT NELSON,
44 W. 4th St.

Montreal, Canada:
L. E. N. TAYLOR,
1614 Notre Dame St.
THE AEOLIAN COMPANY,

Dear Sirs:

I have pleasure in informing you that I have sold one of your AEOLIANS to Her Majesty the Queen of Great Britain. I took one to Aberdeen a fortnight ago and gave a programme to all the press representatives in the North of Scotland; one of these notices was brought to the attention of the Queen, so we had an order to take one to Balmoral Castle for a hearing. The Queen was so pleased that she purchased it.

Yours truly,

J. MUIR WOOD & CO.

Figure A-4 (Aeolian Sold to Queen of Great Britain) – 1894
Moderate Wealth

with a refined and cultivated musical taste enables you to enjoy the finest orchestral and organ music, by means of the greatest triumph in musical invention known as the

ÆOLIAN

Pipe Organ, $1500.00

One of our Organs in a Cincinnati Residence.

Manufactured and attached only by the famous

PIPE ORGAN BUILDERS, FARRAND & VOTNEY

These Pipe Organs are artistically planned and delicately voiced, so that (with the ÆOLIAN) for the first time a Pipe Organ, the king of musical instruments, becomes as suitable for the home as for the church, as with it any one, without organ practice or technical knowledge, can render organ music themselves by simply giving some study to the drawing of stops to give proper expression to the music, a feat heretofore impossible except to organists. Built to order to fit any desired space. Correspondence solicited for full information and estimate. Booklet free.

FARRAND & VOTNEY

Organ Builders, Detroit, Mich.

Figure A-5 (Aeolian Pipe Organ by Garrand & Votey) – 1895
NOTABLE PATRONS
OF THE AEOLIAN

Our illustration this month leaves us only a small space; we want to use it to suggest the Aeolian as a Christmas gift. Do you know the instrument? Have you seen and heard it? It is the greatest musical invention of the present century. You can play it; any member of your family can play it. No technical knowledge of music is necessary. Ten thousand different pieces of music can be obtained for it. These embrace the best works of all the prominent composers.

Because we say the Aeolian is easy to play do not mistake us and suppose it is mechanical. The player on the Aeolian has complete control over the tempo, tone, color, and expression; he varies these as his taste dictates.

The people whose portraits are printed herewith are owners of Aeolians. We do not claim that the instrument is any better because of their patronage, but we do claim that the fact that people of culture and critical musical taste are purchasing Aeolians is a strong endorsement of the instrument's artistic merit. These people find the Aeolian a source of entertainment. Don't you think it is worthy of your investigation? Prices from $210 to $750.

The Aeolian is on daily exhibition at the following addresses.

Catalogue on application.

THE AEOLIAN CO., 18 WEST TWENTY-THIRD ST., NEW YORK

CHICAGO
Lyceum & Hayly, Wabash Ave. and Adams Street

CINCINNATI
D. H. Baldwin & Co., 158 West Fourth St

SAN FRANCISCO
Kohler & Chase, 26 O'Farrell St.

Figure A-6 (Notable Patrons of the Aeolian) – 1895
The great French organist and composer endorses the Aeolian. A splendid tribute from one of the leading musicians of Europe.

About two years ago some one sent me from New York a program of a concert given in the large hall of the Mendelssohn Club—a program on which appeared the names of Bach, Saint-Saëns, Verdi, Brahms, Max Bruch, Svenel, etc., and of which the second part commenced with the “first hearing in America” of my Symphonie Gothique.

I mistook at first the performer for a man, and supposed Monsieur Aeolian was some great virtuoso! As the Symphony had only been published two months, I admired the power for work, the intelligence of an artist capable of assimilating so rapidly, and for a public production, a work exceedingly complex and technically so difficult.

Who was this Monsieur Aeolian, of whom, till now, nobody had ever heard? Where did he come from? Some clippings from newspapers which came with the program, and giving an account of the evening, explained the mystery.

The Aeolian is an instrument which affords a mechanical substitute for the fingers of the human performer. It differs essentially from the known systems from the fact that the names, the tone-colors, the varieties of rhythm and execution, orchestration—even the character of the piece—are not imposed upon us, but remain subordinate to our fantasy. You can play the Passacaglia or the Toccata in D minor of the great Sebastian Bach without touching your hands to the keyboard. All you have to do is to register the piece—that is to say, to draw or push in the stops of the instrument according to the necessities of the orchestration.

Thus, through an execution mechanically faultless, you express your musical sentiment and intelligence. Thus, without any power of virtuosity, if you are incapable of playing a sonatina of Clementi, you can accompany with all the time variations and shading any performer in any piece. Thus, hereafter, the composer can register and define his thought, inscribing it with the utmost exactness on a roll of paper, which can be shipped by parcel post to the Antipodes, or it can be reserved on the shelves of a library, with a guarantee against error or misunderstanding of interpretation either now or hereafter.

The inventors of the Aeolian have already transcribed an entire repertory of the master works for orchestra, organ, and piano. They keep in step with the musical movements of the entire world—“up to date,” as the Americans say.

Lastly they gave us some idea of their repertory by playing successfully the Rhapsodies of Liszt, the Sonata Appassionata, Les Rêves d’Omphale, the Durne Macabre; then they accompanied Delbart in whole series of pieces for the ‘cello. They are engaged in transcribing the entire works of Bach, which will soon be finished.

The music for the Aeolian is in the form of paper rolls. You have only to insert them in the sockets and conform to the indications inscribed measure by measure on the paper which unrolls before your eyes; crescendos, diminuendos, ritards, repeats of a movement—all are scrupulously noted.

Is it not truly delightful to be able to register the interpretation of a musical work with absolute exactitude, and to be able to know that these instructions will remain as an unalterable document, as a certain witness, true to-day, which shall not change to-morrow—the typical interpretation which shall not vary in all eternity?

The Aeolian has rendered signal service in America. It has carried the good message into regions previously ignorant of artistic matters, and enabled far-off communities to glimpse the horizons of high art.

CH. M. WIDOR.
362 FIFTH AVENUE 1902 - 1912

Figure A- 8 (Aeolian Hall Advertisement) – 1902
This Is the First Public Library To Install a Pianola Piano and a Free Library of Pianola Rolls

Dr. Melvil Dewey, at the time he was New York State Librarian, made a startling prophecy in one of his public addresses.

He predicted that the day was not far distant when all libraries which aim to be completely equipped, would have large collections of Pianola rolls to be loaned as freely and unhesitatingly as books.

"Why should not the public borrow songs of Schubert as well as songs of Tennyson?" asked Dr. Dewey.

The Evanston, Ill., Public Library has put Dr. Dewey's idea into practical operation. A Weber Pianola Piano and a collection of 500 carefully selected music-rolls are now at the service of Evanston residents. Those who own Pianolas can take the rolls home, while others can play them in the library's music-room.

It is an impressive thought that lies back of this innovation, and this is the thought:

The Pianola has taken Music out of the class of the so-called ACCOMPLISHMENTS—has made it the universal possession of the MANY, rather than an exclusive art to be enjoyed by the privileged few.

It is a noteworthy fact that it is always the Pianola that is selected by those who buy with a full knowledge of the comparative merits of the different Piano-players. The Pianola is the first instrument of the kind to be purchased for a public library, just as it was the first instrument to be installed in a college. To-day there are over 100 leading educational institutions that are using the Aeolian Company's instruments in their musical courses.

Musically and mechanically, the Pianola is universally recognized as standing at the head of its class, a fact amply proven by its great sale, exceeding that of all other Piano-players combined.

Pianola Piano Catalog Q. Free Upon Request

THE AEOLIAN COMPANY

Aeolian Hall 362 Fifth Avenue, near 34th Street NEW YORK

Figure A-9 (Pianola Library Advertisement) – 1908
The Aeolian Pipe Organ

The above illustration is a fac-simile of an Aeolian Pipe Organ at present erected in our premises. This Organ can be played with music-rolls or by hand from the keyboards.

It may never have occurred to you that you can have a fine Pipe Organ in your home to play whenever you choose. Symphonies, overtures and operatic music can be played by anyone on the Aeolian Pipe Organ. The most majestic of all music is yours to render at will; all that you need is musical taste alone. This instrument has been installed in many town and country residences in this country and abroad.

You are invited to call at Aeolian Hall and see this Pipe Organ, which contains a set of Chimes and Harp. Only by a visit will you be able to fully understand how music, which you have previously associated solely with Church Organs and the Orchestra, has been made possible for even a novice to play.

The Aeolian Pipe Organ brochure V gives full particulars and will be forwarded on request.

THE AEOLIAN COMPANY

Aeolian Hall 362 5th Ave., N. Y.

Figure A-10 (Aeolian Pipe Organ Advertisement) – 1909
STEINWAY PIANOLA

THE INSTRUMENT DE LUXE OF THE MUSICAL WORLD

THE DISTINGUISHED, ARTISTIC PRODUCT OF THE TWO LEADING HOUSES OF THE MUSICAL INDUSTRY. A BEAUTIFUL STEINWAY PIANO WHICH MAY BE PLAYED EITHER BY HAND OR BY THE PIANOLA METHOD.

SOLD ONLY BY THE AEOLIAN COMPANY, AND ITS AGENTS AND REPRESENTATIVES

THE AEOLIAN COMPANY
AEOLIAN HALL NEW YORK

Figure A- 12 (Steinway Pianola Advertisement) – 1914
Ready for Immediate Occupancy

New Aeolian Hall

Floors and Offices

To Those Who Have a Particular Clientele

Figure A-13 (New Aeolian Hall Advertisement) – 1924
Figure A-14 ("Aeolian City" - Buildings Owned by Aeolian) – 1924
AEOLIAN

This excellent series of photographs taken in the Aeolian factory came from the collection of Jim Crank.

(above) Engineering and drafting department. (upper right) Metal pipe shop. (right) Racking pipes.

Figure A-15 (Crank, Aeolian Organ Department Employees) – 1928

Figure A-16 (Crank, Aeolian Organ Department and Employees) – 1925
1942 for the axial Candies residence in Athens, Georgia.

Figure A-17 (Crank, Aeolian Organ Console Department) – 1925.
Figure A- 18 (Crank, Aeolian Organ Erecting Room) – 1925
Duke University Chapel,

Durham, North Carolina, is to be provided with a large Four-Manual Aeolian Organ... This Chapel is destined to become one of the most magnificent edifices in America... It will have all the features of an architectural masterpiece, signifying in a definite way the spiritual ideals of the University... Its 210-foot tower will contain a Carillon of forty-eight bells... The Organ which becomes an integral part of this beautiful edifice will by reason of its tonal qualities and mechanical structure, be representative of the highest type of Organ construction.

Aeolian Company, 68, Fifth Avenue, New York

Figure A-19 (Duke University Chapel Drawing and Article) – 1931
Figure A- 20 (Abele) – 1930
Appendix B: Duke University Aeolian Organ Contract and Blueprints
Figure B-1 (Duke Chapel Aeolian Organ Contract 1) – 1930
Duke University Chapel,
Durham, North Carolina.

Four Manuals and Pedals. Compass of Manuals CC to C4, 61 Keys.
Compass of Pedals CDE to G, 32 Keys.

**Great Organ (Unenclosed)**

<table>
<thead>
<tr>
<th>Pipe</th>
<th>Size</th>
<th>Stops</th>
<th>Pipes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quintaton</td>
<td>8'</td>
<td></td>
<td>61</td>
</tr>
<tr>
<td>Diapason</td>
<td>8'</td>
<td></td>
<td>73</td>
</tr>
<tr>
<td>Bourdon</td>
<td>8'</td>
<td></td>
<td>99</td>
</tr>
<tr>
<td>First</td>
<td>8'</td>
<td></td>
<td>73</td>
</tr>
<tr>
<td>Second</td>
<td>8'</td>
<td></td>
<td>73</td>
</tr>
<tr>
<td>Third</td>
<td>8'</td>
<td></td>
<td>73</td>
</tr>
<tr>
<td>Great</td>
<td>8'</td>
<td></td>
<td>73</td>
</tr>
<tr>
<td>Principal Flute</td>
<td></td>
<td></td>
<td>73</td>
</tr>
<tr>
<td>Doppel Flute</td>
<td>8'</td>
<td></td>
<td>73</td>
</tr>
<tr>
<td>Quint</td>
<td>8'</td>
<td></td>
<td>73</td>
</tr>
<tr>
<td>Octave</td>
<td>8'</td>
<td></td>
<td>73</td>
</tr>
<tr>
<td>Principal</td>
<td>8'</td>
<td></td>
<td>73</td>
</tr>
<tr>
<td>Flute</td>
<td>8'</td>
<td></td>
<td>73</td>
</tr>
<tr>
<td>5'</td>
<td>8'</td>
<td></td>
<td>73</td>
</tr>
<tr>
<td>6'</td>
<td>8'</td>
<td></td>
<td>73</td>
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<tr>
<td>7'</td>
<td>8'</td>
<td></td>
<td>73</td>
</tr>
<tr>
<td>8'</td>
<td>8'</td>
<td></td>
<td>73</td>
</tr>
<tr>
<td>Harmonics (5 Kvs.)</td>
<td></td>
<td></td>
<td>305</td>
</tr>
<tr>
<td>Plain Jeu (3 to 6 Kvs.)</td>
<td></td>
<td></td>
<td>268</td>
</tr>
<tr>
<td>Contrabass</td>
<td>16'</td>
<td></td>
<td>73</td>
</tr>
<tr>
<td>Contrabass</td>
<td>16'</td>
<td></td>
<td>73</td>
</tr>
<tr>
<td>Bassoon 3rd Octave</td>
<td>16'</td>
<td></td>
<td>73</td>
</tr>
<tr>
<td>Bassoon 4th Octave</td>
<td>16'</td>
<td></td>
<td>73</td>
</tr>
<tr>
<td>Trumpet 4'</td>
<td></td>
<td></td>
<td>73</td>
</tr>
<tr>
<td>Trumpet 8'</td>
<td></td>
<td></td>
<td>73</td>
</tr>
<tr>
<td>Trumpet 16'</td>
<td></td>
<td></td>
<td>73</td>
</tr>
<tr>
<td>Trumpet 32'</td>
<td></td>
<td></td>
<td>73</td>
</tr>
</tbody>
</table>

Additional Flutes on 3½ Octave/10 Pipes

Precedent 6" Flute on 3½ Octave/10 Pipes

100 Pipes on 4' Flute

60 Pipes on 8' Flute

64 Pipes on 16' Flute

61 Pipes on 32' Flute

58 Pipes on 4' Trumpet

54 Pipes on 8' Trumpet

52 Pipes on 16' Trumpet

50 Pipes on 32' Trumpet

25 Pipes on 4' Trumpet

23 Pipes on 8' Trumpet

22 Pipes on 16' Trumpet

20 Pipes on 32' Trumpet

18 Pipes on 4' Trumpet

16 Pipes on 8' Trumpet

14 Pipes on 16' Trumpet

12 Pipes on 32' Trumpet

10 Pipes on 4' Trumpet

8 Pipes on 8' Trumpet

6 Pipes on 16' Trumpet

4 Pipes on 32' Trumpet

October 21st, 1930.
<table>
<thead>
<tr>
<th>22</th>
<th>8' Harp</th>
<th>(From Choir)</th>
</tr>
</thead>
<tbody>
<tr>
<td>23</td>
<td>4' Celesta</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td></td>
<td>Chimes (From Solo)</td>
</tr>
</tbody>
</table>

**GREAT ORGAN** – continued

<table>
<thead>
<tr>
<th>25</th>
<th>16' Bourdon</th>
<th>2 - 73 Pipes</th>
<th>12 2/4 (Wood)</th>
</tr>
</thead>
<tbody>
<tr>
<td>26</td>
<td>8' Diapason</td>
<td>73 Pipes</td>
<td>4 2/3 SP. 7.</td>
</tr>
<tr>
<td>27</td>
<td>8' Geigen Diapason</td>
<td>73 Pipes</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>8' Rohrflute</td>
<td>73 Pipes</td>
<td>REG (Voice Full)</td>
</tr>
<tr>
<td>29</td>
<td>8' Flute Celesta</td>
<td>61 Pipes</td>
<td>SPIEL</td>
</tr>
<tr>
<td>30</td>
<td>8' Flauto Dolce</td>
<td>73 Pipes</td>
<td>SPIEL FOX</td>
</tr>
<tr>
<td>31</td>
<td>8' Gamba</td>
<td>73 Pipes</td>
<td>57 VIOLE</td>
</tr>
<tr>
<td>32</td>
<td>8' Gamba Celesta</td>
<td>73 Pipes</td>
<td>58</td>
</tr>
<tr>
<td>33</td>
<td>8' Salicional</td>
<td>73 Pipes</td>
<td>58 VIOLE FOX</td>
</tr>
<tr>
<td>34</td>
<td>8' Vox Celesta</td>
<td>73 Pipes</td>
<td>54</td>
</tr>
<tr>
<td>35</td>
<td>4' Octave</td>
<td>73 Pipes</td>
<td>REG</td>
</tr>
<tr>
<td>36</td>
<td>4' FlautoMangulaires</td>
<td>73 Pipes</td>
<td></td>
</tr>
</tbody>
</table>

**SWELL ORGAN**

<table>
<thead>
<tr>
<th>37</th>
<th>2' Piccolo</th>
<th>61 Pipes</th>
<th>REG HARP</th>
</tr>
</thead>
<tbody>
<tr>
<td>38</td>
<td>Chorus Mixture (5 Oct.)</td>
<td>305 Pipes</td>
<td>WISE</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>39</th>
<th>8' Cor de Mari</th>
<th>260 4 2/3</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>4' Fugara</td>
<td>VIOLINA 7/8</td>
</tr>
<tr>
<td>41</td>
<td>2 1/2' Bassoon</td>
<td>CHIMNEY FL.</td>
</tr>
<tr>
<td>42</td>
<td>2' Flauto</td>
<td>305 PIPES</td>
</tr>
<tr>
<td>43</td>
<td>16 1/2' Tierce</td>
<td>8 DUO. @ 9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>44</th>
<th>16 1/2' Posse</th>
<th>8' 2 2/4</th>
<th>8' TRUMPET</th>
</tr>
</thead>
<tbody>
<tr>
<td>45</td>
<td>8' Cornopeen</td>
<td>10' PREO</td>
<td>8' TRUMPET</td>
</tr>
<tr>
<td>46</td>
<td>8' French Trumpet</td>
<td>10' PREO</td>
<td>8' TRUMPET</td>
</tr>
<tr>
<td>47</td>
<td>8' Oboe</td>
<td>8 2/4</td>
<td>8' TRUMPET</td>
</tr>
<tr>
<td>48</td>
<td>8' Vox Humana</td>
<td>8 2/4</td>
<td>8' TRUMPET</td>
</tr>
<tr>
<td>49</td>
<td>4' Clarion</td>
<td>16' PREO</td>
<td>8' TRUMPET</td>
</tr>
<tr>
<td>50</td>
<td>8' Harp</td>
<td>(From Choir)</td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>4' Celesta</td>
<td>(From Solo)</td>
<td></td>
</tr>
<tr>
<td>52</td>
<td>Chimes (From Solo)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>53</td>
<td>Tremolo</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Figure B- 4 (Duke Chapel Aeolian Organ Contract 4) – 1930
<table>
<thead>
<tr>
<th>Rank</th>
<th>Stop</th>
<th>Description</th>
<th>King</th>
<th>Number</th>
<th>Pipes</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Vox Humana</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Diapason</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>First Bourdon</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Second Bourdon</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Flute</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Tremolo</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Tromba</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Harmonic Flute</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Salicional</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Geleeck</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>First Diapason</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Second Diapason</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Bourdon</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>91</td>
<td>Tremolo</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>92</td>
<td>Harmonic Flute</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>93</td>
<td>Salicional</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>94</td>
<td>Geleeck</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95</td>
<td>First Diapason</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>96</td>
<td>Second Diapason</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>97</td>
<td>Bourdon</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>98</td>
<td>Tromba</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>99</td>
<td>Harmonic Flute</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>Salicional</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>101</td>
<td>Geleeck</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>102</td>
<td>First Diapason</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>103</td>
<td>Second Diapason</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>104</td>
<td>Bourdon</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>105</td>
<td>Tromba</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Echo Division**
- Playable from Solo Manual

- 105 pipes
- 73 notes
- Full length, no stops

**Pedal Organ**
- 6 pipes
- 15 pipes
- From Antiphonal Division

**Antiphonal Division**
- Playable from Great Manual

- 5 pipes
- 37 pipes
- 12 pipes
- 10 pipes
- 6 pipes
- 5 pipes
- 4 pipes
- 3 pipes
- 2 pipes
- 1 pipe

**Duke University Chapel**

10/21/30

**Figure B-5 (Duke Chapel Aeolian Organ Contract 5) – 1930**
<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
<th>Registers</th>
<th>Pipes</th>
</tr>
</thead>
<tbody>
<tr>
<td>112</td>
<td>32' Open Diapason (Stopped Pipes)</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>113</td>
<td>16' Open Diapason</td>
<td></td>
<td>32</td>
</tr>
<tr>
<td>114</td>
<td>16' Contra Bass</td>
<td></td>
<td>32</td>
</tr>
<tr>
<td>115</td>
<td>16' Bass</td>
<td></td>
<td>32</td>
</tr>
<tr>
<td>116</td>
<td>16' Gamba (Choir)</td>
<td></td>
<td>32</td>
</tr>
<tr>
<td>117</td>
<td>16' Echo Liebling (Swell)</td>
<td></td>
<td>32</td>
</tr>
<tr>
<td>118</td>
<td>16' Bass</td>
<td></td>
<td>32</td>
</tr>
<tr>
<td>119</td>
<td>10' Piccolo (Bourdon)</td>
<td></td>
<td>32</td>
</tr>
<tr>
<td>120</td>
<td>6' Piccolo (Bourdon)</td>
<td></td>
<td>32</td>
</tr>
<tr>
<td>121</td>
<td>6' Octave</td>
<td></td>
<td>32</td>
</tr>
<tr>
<td>122</td>
<td>6' Still Gedeckt (Swell)</td>
<td></td>
<td>32</td>
</tr>
<tr>
<td>123</td>
<td>8' Principal (Contra Bass)</td>
<td></td>
<td>32</td>
</tr>
<tr>
<td>124</td>
<td>4' Quint (Bourdon)</td>
<td></td>
<td>32</td>
</tr>
<tr>
<td>125</td>
<td>8' Flute (Bourdon)</td>
<td></td>
<td>32</td>
</tr>
<tr>
<td>126</td>
<td>4' Flute (Bourdon)</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>127</td>
<td>Harmonics (5 Basses)</td>
<td></td>
<td>160</td>
</tr>
<tr>
<td>128</td>
<td>32' Bombarda</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>129</td>
<td>16' Trombone</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>130</td>
<td>16' Tuba (Solo)</td>
<td></td>
<td>32</td>
</tr>
<tr>
<td>131</td>
<td>16' Piccolo (Choir)</td>
<td></td>
<td>32</td>
</tr>
<tr>
<td>132</td>
<td>8' Quint Trombone (Great)</td>
<td></td>
<td>32</td>
</tr>
<tr>
<td>133</td>
<td>8' Trombone (Ped. Trombone)</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>134</td>
<td>4' Clarion (Ped. Trombone)</td>
<td></td>
<td>12</td>
</tr>
</tbody>
</table>

**Combinations**

Adjustable at the console and visibly operating the draw stop knobs:

- **Swell**: 0, 2, 6, 7
- **Great**: 0, 2, 5, 7
- **Choir**: 0, 4, 7
- **Solo**: 0, 4, 7
- **Exposed Manual**: 0, 2, 3, 6
- **Pedal**: 0, 2, 3, 6
- **General**: 0, 2, 3, 6
- **Couplers**: 0

---

Figure B-6 (Duke Chapel Aeolian Organ Contract 6) – 1930
COMBINATIONS
Adjustable at the console and visibly operating the draw stop knobs.

SWELL - 1, 2, 3, 4, 5, 6, 7, 8, 9

GREAT - 1, 2, 3, 4, 5, 6, 7, 8

CHOIR - 1, 2, 3, 4, 5, 6, 7

SOLO - 1, 2, 3, 4, 5, 6, 7

ANTIPHONAL - Antiphonal 1, 2, 3, 4, K, 5, 6, 7, 8

PEDAL - 2, 3, 4, 5, 6, 7, 8

GENERAL - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

COUPLES - 1, 2, 3, 4

Double touch on Manual Pistons to pick up Pedal Combinations.

COUPLES
Great, Swell, Choir, Solo, to Pedal, Unison and Octave

Swell, Choir, Solo to Great, 16'-8'-4'

16' on Swell, Choir and Solo and Great

Solo to Swell 16' - 8' - 4'

Solo to Choir 16' - 8' - 4'

Swell to Choir 16' - 8' - 4'

Pedal to Pedal 8'

Unison Releasings on all Manuals

MECHANICALS

General Cancel, including Crescendo and Sforzando

Swell, Choir, Solo, Echo-Antiphonal Expression Pedals

Crescendo Expression Pedal

Adjustable connections for Swell Pedals

Reversibles by foot plungers and hand pistons

16' Manuals Stops Off

For Sforzando Tuttì by Pedal and Piston

Sforzando N F

Pedal division, lower-octaves

Reversibles for 32' Bombarde, 16' Dispason, 8' Fagotto

Pistons for Control of Echo-Antiphonal and Main Organs

Harp and Celesta Dampers

Adjustable Bench

Figure B-7 (Duke Chapel Aeolian Organ Contract 7) – 1930
MECHANICALS

Pedal Couplers, Unison and Octave
Swell, Choir, Solo to Great, 16', 8', 4'
16' and 4' on Swell, Choir and Solo
Solo to Swell 16', 8', 4'
Solo to Choir 16', 8', 4'
Swell to Choir 16', 8', 4'
Pedal to Pedal 8'

Unison Releases on all Manuals, except Great

Double touch on Manual Pistons to pick up Pedal Combinations

General Cancel, including Crescendo and Sforzando
Reversibles by foot and hand pistons
Choir to Pedal
Great to Pedal
Swell to Pedal
Solo to Pedal

32' Stops Off, 16' Manual Stops Off
Sforzando Tutti by Pedal and Piston
Sforzando HF
Swell, Choir, Solo, Echo-Antiphonal Expression Pedals
Crescendo Expression Pedal
Adjustable connections for Swell Pedals
Pedal division, lower octaves
Reversibles for 32' Bombard, 32' Diapason, 32' Poggio
Pistons for Control of Echo-Antiphonal and Main Organ
Harp and Celesta Dampers
Adjustable Bench

Figure B- 8 (Duke Chapel Aeolian Organ Contract 8) – 1930
Figure B-9 (Duke Chapel Aeolian Organ Contract 9) – 1930
The Aeolian Company, Garwood, N. J.

ORGAN #1765 — SCALES OF PIPES
BY DECEMBER 8TH, 1931

Great Flute Jue

<table>
<thead>
<tr>
<th>Rank</th>
<th>1st Break</th>
<th>2nd Break</th>
<th>3rd Break</th>
<th>4th Break</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>22</td>
<td>12</td>
<td>1</td>
<td>Sub 5</td>
</tr>
<tr>
<td>2nd</td>
<td>26</td>
<td>15</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>3rd</td>
<td>29</td>
<td>15</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>4th</td>
<td>22</td>
<td>12</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>5th</td>
<td>21</td>
<td>15</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>6th</td>
<td>20</td>
<td>15</td>
<td>15</td>
<td></td>
</tr>
</tbody>
</table>

1st Break 16 Notes x 3 Ranks = 54 Pipes
2nd " x 4 " = 76 "
3rd " x 5 " = 30 "
4th " x 6 " = 108 "
61 "

Scales 1 - 8 - 15 - 22 - 44 Scale at 8' CC
Sub 5 - 6 - 12 - 19 - 24 - 48 Scale at 8' CC

Swell Organ

Cornet
Cor d’Kuit
Salicional
Nazard
Pleutino
Tiorce

Reg. (48 Sc.)
56 Sc. at 8' CC
Chimney Flute
Piccolo
Dulciana (67 Sc. at 8' CC)

Chair Organ

Synthetic Quintadama is Dulciana 6 and Nazard 2-2/3 together.

Nazard 2-2/3 — Chimney Flute Scale Reg.
Tiorce 1-3/5 — "

Settima 1-1/7 — Combina B — Scale (Dela. at Princeton but not satisfactory)

Swell Mixtures

Same as WC4
Used on 1580 Swell
Spotted Metal throughout

Great Mixture to be same as 1766 Great Mix.
(French mixture)
Figure B-11 (Duke Chapel Aeolian Blower Room Layout) – 1931
Figure B-12 (Solo & Pedal Bombard Chamber) - 1931
Figure B-14 (Duke Chapel Repair Contract 1) – 1947
**CHURCH ORGAN (Cont'd.)**

<table>
<thead>
<tr>
<th>Description</th>
<th>#</th>
<th>1947</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Violin (complete)</td>
<td>1</td>
<td>175</td>
</tr>
<tr>
<td>2 2/3rd Nazard (complete)</td>
<td>1</td>
<td>186</td>
</tr>
<tr>
<td>2nd Piccolo (complete)</td>
<td>1</td>
<td>196</td>
</tr>
<tr>
<td>1 3/4th Tierce (complete)</td>
<td>1</td>
<td>198</td>
</tr>
<tr>
<td>3rd Oboe (to be repaired and renewed)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SWELL ORGAN**

<table>
<thead>
<tr>
<th>Description</th>
<th>#</th>
<th>1947</th>
</tr>
</thead>
<tbody>
<tr>
<td>5th Salicional (tenor C up)</td>
<td>1</td>
<td>61</td>
</tr>
<tr>
<td>6th Salicional Celeste (tenor C up)</td>
<td>1</td>
<td>61</td>
</tr>
<tr>
<td>4th Posa (complete)</td>
<td>1</td>
<td>73</td>
</tr>
</tbody>
</table>

The caps of the Nazard, Rohrflote and Cor-de-Nuit to be replaced.

**ECHO ORGAN**

<table>
<thead>
<tr>
<th>Description</th>
<th>#</th>
<th>1947</th>
</tr>
</thead>
<tbody>
<tr>
<td>8th Salicional (tenor C up)</td>
<td>1</td>
<td>61</td>
</tr>
<tr>
<td>9th Salicional Celeste (tenor C up)</td>
<td>1</td>
<td>61</td>
</tr>
<tr>
<td>8th Viole (tenor C up)</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>8th Viole Celeste (tenor C up)</td>
<td>1</td>
<td>101</td>
</tr>
</tbody>
</table>

5. Refinish and tune the entire organ.
FROM: MR. J. S. WHITFIELD
TO: DRAFTING ROOM AND SHOP

Re: 1189 C - Duke University
6" Wind, A = 440

1. Please order the following pipes:

   A. 6' Principal (T. C.) 49 pipes, based on 43 scale at 8' CC
      spotted, 1/4 M, 1/2 18th
      6" wind

   B. 4' Octave, 61 pipes, #55 scale at 4' C 1/4 M, 1/2 18th
      spotted
      6" wind

2. The following are being returned to be revoiced and / or replaced:

   A. 8' Tromba (antiphonal) 6" wind, new shallots and revoice.

   B. Cornet (IV Rks.), (antiphonal) To be replanned and revoiced
      as follows:

      12 - 15 - 19 - 22
      8 - 12 - 15 - 19
      12 notes
      12 notes
      6" wind

      Original plan of this was 8 - 12 - 15 - 19 - 22 throughout.

      Just omit undesired ranks and use scaling as is.

   C. Great Plein Jeu (III - VII Rks.) 22 - 26 - 29
      18 Notes
      6" wind, revoice
      1 - 5 - 8 - 12 - 15
      6 notes

   D. Swell Chorus Mixture (V Rks.) 5" wind, revoice
      1 - 3

   E. Solo Mixture (V Rks.) 10" wind, revoice


1159 C

Figure B-16 (Duke Chapel Pipe Repair) - 1949
Appendix C: Letters and other Documents
Minutes of a meeting of the Duke Endowment Building Committee held at the office of the Duke Endowment, 335 Fifth Avenue, New York City, N. Y., on Tuesday, September 30, 1930 at twelve o' clock noon.

There were present: George C. Allen, Chairman; Naneline H. Duke, Norman A. Cooke, William S. Lee, William R. Perkins, members of the Committee; Charles I. Burkholder, Edward G. Marshall, Walter C. Parker, Trustees of the Duke Endowment; Mr. Robert L. Flowers of Duke University, A. C. Lee, Chief Engineer and Alex. H. Sands, Jr., Secretary.

After discussion, the following decisions were arrived at:

1. Plain wooden seats with no cushions in the Chapel.

2. Pennsylvania rubbed finish blue stone for floors in Chapel and Arcades, instead of wood and limestone as heretofore specified, at additional cost not exceeding $5,000.00.

3. Recommend to the Building Committee of Duke University that the decisions of said Committee with reference to construction of Faculty Houses as shown by minutes of conference held June 4, 1930, be adhered to, the following being an extract from said minutes:

   "The Committee also approved the construction of House No. 1 at a total cost of $60,000.00 and House No. 2 at a total cost of $45,000.00, with a variation from this from not over $4,000.00 or $5,000.00, these prices to include house and garage but not the general grading of the grounds and building of walkways and driveways. 

   "In addition to the above prices, architect's fee of approximately $6 to be added to each of the houses."

4. Approve contract with G. Owen Bonavit, Inc. for stained glass windows, doors and screen, for all glass in Chapel, for a total of $200,000.00.

5. A report was made on the negotiations with the Skinner Organ Company for the organ for the Chapel, and the Committee authorized the following letter to be addressed to the Skinner Organ Company with reference thereto:

   "The contract and specifications tendered by you covering an organ for the new Chapel has been considered and found unacceptable. They do not conform to my letter of August 8th and the resolution which I showed you and which constituted my authority. They do not give what we consider a satisfactory installation of this kind for the new chapel. So please regard these negotiations at an end.

   "Yours very truly,

   "DUKE CONSTRUCTION COMPANY

   "A. C. Lee,

   "Vice President & Chief Engineer."

6. Payment of retainer of $500.00 to Blidworth, Inc., for survey and report on sound amplification, which was authorized if survey and report was satisfactory, at a cost not exceeding $12,000.00.

7. Olmsted Brothers File 7411, Plan SH52 dated September 25, 1930, considered and location of driveways as shown thereon for Faculty Houses Nos. 1 and 2 were approved, subject to approval of occupants of these houses.
Minutes of a meeting of The Duke Endowment Building Committee held at the office of The Duke Endowment, 535 Fifth Avenue, New York City, New York, on Tuesday, the 25th day of November, 1930, at eleven-thirty o'clock in the forenoon.


The screens between the tower and nave of Duke University Chapel to form an organ case for the echo-antiphonal organ, as illustrated by the submitted architect's drawing of same, was authorized at a price not to exceed $10,000.00.

After discussion of the report and proposed contract with Budworth, Inc., for voice amplifier system for the Chapel and adjoining buildings, the authorized amount for this purpose was increased to $18,355.00, exclusive of conduits, wiring, etc. which, according to submitted estimate of A. C. Lee, will cost $8,705.00, which was also approved.

Alex. H. Sands, Jr.,
Secretary.

Copy to:
Dr. R. L. Flowers
Mr. A. C. Lee.
February 27, 1974

Dear Fenner,

I am delighted to know of your interest in coming to Duke. I think there are great opportunities here, both for you and for the University, and I am so pleased that I had an opportunity to talk with you.

I am not going to involve myself in the direct negotiations, since that is not my function at this particular University. I do want to assure you that I personally will see that the contract for the organ is signed no later than six months after you come here. Under a long tradition at Duke, we simply do not commit ourselves to things if we do not have money in hand. What I am doing to you, is committing to you that I will get the money in hand and proceed. I am saying that I will give it my personal attention, and that I am extremely interested in it, and that I will do all that is necessary to be done.

I certainly hope that you will come to Duke. We need you, and I think there is a tremendous opportunity here for doing things that you have always had an interest in.

With best wishes always,

Sincerely,

Terry Sanford

Professor Fenner Douglass
Oberlin College
Oberlin, Ohio 44074

bcc: Mr. Jim Ferguson

Original given to JOB for discussion.
The decline and fall of the Aeolian Organ

No Good

Ill wind that blows

Figure C-4 Page 1/9 (Aeolian: Background & Recommendations)
THE DUKE CHAPEL AEOLIAN ORGAN:
BACKGROUND AND RECOMMENDATIONS
To understand the limited musical value of the Duke Chapel Aeolian organ it is important to take a retrospective glance at the early 1930's - the period in which this organ was designed and constructed.

European builders had for the most part continued to improve upon and refine the actions and tonal design of the past 500 years - the very qualities which have always set the European instruments apart as the world's finest. In the United States, however, there had arisen a new countetrend.

Enchanted by the apparently endless possibilities of the various devices invented by the British electronical genius Hope-Jones, most American builders followed the practice of attempting to install as many stop knobs on a console as possible. To be sure, each one of these stop knobs represented a sound of some sort, but it was a "borrowed" sound in the truest sense of the word. One rank of pipes was made to serve many stops. Thus, there were instances of organs with 200 "stops" having only 58 ranks of pipes - producing only 58 different sounds and not 200 as one might expect. It was precisely this principle which made Mr. Jones and Wurlitzer so famous in the theater organ field. It is precisely this same principle which makes an organ constructed in this fashion inappropriate for classical music in the church or concert hall.

Concurrent with the work of Hope-Jones was the rise in popularity of the house organ. This was the era of large country and city homes - American palaces such as Biltmore House in North Carolina, Whitehall in Palm Beach, and the Henry Clay Frick House (now the Frick Museum) in New York. Such magnificent houses created a demand for large home organs,
and this demand was eagerly served by the Aeolian company of New York. It should be mentioned that these instruments were always intended for the popular and semi-classical music which was the usual fare at family musicales. Consequently, the Aeolian company did not specialize in instruments designed for traditional and liturgical organ literature.

At the time, however, E. M. Skinner was rapidly gaining national prominence as one of America's best builders of electro-pneumatic organs. In fact, when G. Donald Harrison left the Willis Company in England to join Skinner, it was said by many that Skinner had become the best builder in the country. Because of the quality of Harrison's work, the Skinner firm was able to attract the best contracts then available, including such installations as the Cathedral of St. John the Divine in New York and Princeton Chapel at Princeton, New Jersey.

When the Duke Chapel was being constructed, it was no doubt the quality of Skinner's reputation combined with the amazing similarity between Princeton Chapel and Duke Chapel in terms of style and dimension which made the Duke planners cast their eyes in the direction of the Princeton organ. It was even decided at one point that the Duke organ should be the sister of the Princeton instrument - a duplicate stop for stop. Appropriately, the contract was to have been given to Skinner. However, after some extremely aggressive salemanship, the contract was actually awarded to the Aeolian Company. From this moment, the story of the Duke organ becomes one of an accelerating decline.

The Aeolian Company was never set up to build an organ of this scope. Furthermore, they were not capable of producing the quality of material and craftsmanship which should have gone into this organ.
Built with inferior metal and factory leftovers, installed with a faulty mechanical and electrical action in the wrong place in the Chapel, the Aeolian organ for Duke was destined to be the instrument which forced the company into a life-saving merger with Skinner.

Through the years, this instrument has required continuous and expensive attention. Shortly before his death in 1956, Harrison came down from Aeolian-Skinner to attempt some reworking of the organ, but the task was so monumental and expensive that he did not make any major modification. Feeling that the antiphonal organ was the only division of the instrument which could be heard clearly, he spent most of his time voicing that part of the organ. Since then, the organ has deteriorated to the point that major rebuilding now amounts to more than the cost of replacing the old instrument with a new one. Both Aeolian-Skinner and M. P. Möller of Hagerstown, Maryland have submitted estimates for total rebuilding of the old organ which range from $250,000 to $300,000. In addition, the necessary tonal modification would raise the amount far more. Fortunately, there is an alternative which is both superior and less expensive.

Since the summer of 1968, a group of people has been working quite diligently to shape a solution to the organ problem. Part of the solution was suggested when Dr. Rudolph Kremer, the Interim Organist at the Chapel, invited the distinguished Dutch organ builder, D. A. Flentrop, to make a proposal for a new organ at Duke. After a personal visit to the building, Mr. Flentrop spent considerable time at his workshop in Holland preparing a first specification and design for the new instrument. When his plans arrived, they were accompanied by the same two statements.

Figure C-8 Page 5/9 (Aeolian: Background & Recommendations)
made by every other organ builder - the acoustics in the Chapel must be modified, and the best location for the major chapel instrument is in the space presently occupied by the antiphonal division. With this placement, the great organ would be able to play the major portion of the Sunday chapel music as well as recitals. This solves half of the problem, but makes no direct contribution to the need for an instrument in the chancel.

The definition of this segment of the problem began to emerge during the visit to Duke in May of 1969 by E. Power Biggs. Here for the dedication of the Holtkamp organ given by the Mary Duke Biddle Foundation, Mr. Biggs graciously consented to spend an evening in consultation on the Duke organ situation. Emphasizing the correctness according to historical precedent of placing the major organ at the rear of the nave, he also pointed out that a choral program in the chancel cannot be served by the same rear organ. Walter Holtkamp, Jr., at the same meeting, made it quite clear that the present design which includes a division at the back of the nave playable from the front console is at best a very unmusical electronic gimmick. The correct solution involves two separate organs of different designs for different purposes. As Williams notes, this is the scheme which was employed by many of the major European cathedrals and churches.²

As soon as the two organ plan was established, it became immediately apparent that a unique situation was at hand - the possibility, indeed the desirability of having two diverse types of instrument in the building. In November of 1969 it was suggested by Mr. Flentrop that the chancel organ should be built in the great French manner. Such an instrument
should be capable of playing the classical French literature as well as the romantic and contemporary literature. This two organ plan achieves the long-sought, but as yet unrealized goal of every major American builder in that it provides the tonal capabilities of the two most important schools of tonal design without forcing a compromise by putting them both in the same case. Two cases - two sounds instead of one case and rageur au Hollandais et Français.

After the idea of the French sound in the chancel was discussed and accepted, the important issue of selecting the builder arose. Since it had been suggested that the second instrument for the Chapel should come from the shop of a North American builder, the selection process was made considerably easier. There are only two builders capable of producing the unadulterated French sound - Casavant of Canada and Fisk of Massachusetts. Due to the urgency of replacing the front instrument, it was decided that each of these firms should be contacted to give preliminary indications of how they would attack the chancel problem. Thus, each was provided with a set of blueprints prior to an actual site visit to inspect the present installation. In addition, each builder was given an indication of the approximate size of the new instrument as well as an idea of how much visual modification would be acceptable in the chancel. The point was made and stressed that even though the present cases were not designed as proper working cases, it would be necessary to work with them as much as possible in an effort to assure continuity with Trimbauer's ornamentation.

Both Lawrence I. Phelps of Casavant and Charles B. Fisk of Fisk have made their visits to the Chapel for the purpose of study and sub-
sequent recommendation. As of this writing, it is quite clear that Charles Fisk responded with enthusiasm to the challenge of the unique aspects of the situation, while at the same time addressing himself to the dimensional and visual constraints mentioned above. Mr. Phelps, on the other hand, proposed an instrument which was too large for the space. Moreover, the installation of the instrument he designed would require the replacement of the existing organ cases on both sides of the chancel with the stark box-like case favored by Casavant. Mr. Fisk has also offered a very imaginative answer to the need for choral accompaniment by designing an *Orgue de Chœur* division placed at the height necessary for the choir members to hear.

For those unfamiliar with the work of Fisk, a brief summary of the Harvard organ story may be illuminating—particularly in view of the parallel to the situation in Duke Chapel. In the late 1950's, Harvard was faced with the problem of what to do with its chapel organ. A large Aeolian-Skinner built in 1932, the instrument had a history of costly maintenance and expensive rebuilding with the general conclusion being that the organ was quite unsuccessful. In large part, this was due to the features discussed above in connection with the Aeolian organ at Duke—a badly constructed instrument tonally in a "broom closet" location. A distinguished committee composed of E. Power Biggs, Edward W. Flint, Daniel Finkham, Donald Willing, and Melville Smith was set up in 1959 to make recommendations to the president.

The committee invited bids from European and American builders alike, and in the spring of 1960 made the recommendation that C. B. Fisk be selected to build the organ. The report of the committee was accepted,
and the new Fisk organ at Harvard stands as testimony to the wisdom and 
good taste of these five men. It is of some interest that Fenner Douglass, 
the head of the organ department at Oberlin Conservatory, has recently 
described this instrument as "the most important organ built in America."

For the following reasons there can be no doubt that Charles Fisk 
should be selected as the builder for the new chancel organ in Duke 
Chapel:

1) The precedent of the Harvard organ.

2) The unqualified endorsement of Fenner Douglass and John Mueller 
   (Consultant to the Duke Chapel Organ Committee). These endorse-
   ments being a result of detailed and sustained experience with 
   Fisk organs.

3) The enthusiastic response to Fisk's tonal concepts on the part 
   of others concerned with this project.
Figure C- 13 Memories of the Duke Chapel (Moseley)
Frederick Swann at Duke University
A review

On the evening of April 16, an unusual program took place at Duke University Chapel. Frederick Swann played a recital featuring both the Aeolian organ in the chancel, an electro-pneumatic instrument of 4 manuals and 121 ranks, and the Flentrop organ in the gallery, a four-manual organ of 66 stops with mechanical key and stop action. The recital was unique in that it was only the second time in twelve years that the Aeolian had been heard in recital. The Antiphonal and Echo organs of the Aeolian had been removed in 1976 to make room for the Flentrop. (See the Diapason, February 1931, p. 1 for the stoplist of the Aeolian, and March 1977, pp. 1, 3, 4 for articles on the Flentrop.)

The program: Cortege et Litanie, Dupré; Sonata in F Minor, Mendelssohn; Choral in E Major, Franck (Aeolian); Fanfare, Lewis; Magnificat primi toni, Buxtehude, Ach Gott! erhör mein Sufsen, Krebs; Fugue in B, S. 552b, Bach (Flentrop); Sonata on the 94th Psalm, Reubke (Aeolian).

For this reviewer, the evening was filled with nostalgia. Upon hearing the Dupré Cortege on distant pianissimo strings, memories were stirred of the much-loved Mildred Hendrix, who was the Duke University Organist for over 30 years. It was through her efforts that this area of North Carolina had the leading organists in the world play on the Duke Organ Recital Series. Frederick Swann was the perfect choice for this "dual" recital since he approaches a romantic organ like the Aeolian from an orchestral stance, and the remarkably effective orchestral voices abounded—yet, there were handsome Principal choruses at several dynamic levels. The thrilling 32' Bourdon would slide under the softest strings or could be felt in full organ. The Aeolian abounds in reeds—Tromba choruses, Tubas, French Trumpets, imitative solo reeds. Sad to relate, the 32' Bombarde was out of commission as well as the high pressure Tuba Mirabilis 8'.

After a brief intermission, Mr. Swann played a group of pieces on the Flentrop. It was charming, as he followed the wise course of sparcity in registration. The Krebs was delightful, the

James Creech, Nelson Barden, Frederick Swann, Jonathan Ambrosino, William Brane

Buxtehude handsomely presented. I am not certain what I expected, but I was amazed to observe that the clarity of the Flentrop was about the same level as that of the Aeolian—the inner voices managed to become lost on occasion on both organs.

Mr. Swann ended this musical feast with the Reubke on the Aeolian, which along with the Franck exploited the instrument's unique qualities. The estimated 1,200 present burst into thunderous applause and gave Mr. Swann (and the organs) a standing ovation. As the applause continued it became clear that there is room in this magnificent building for both instruments. They don't compete—each makes a stirring statement. Like Stanford, Duke enjoys the golden opportunity of having two organs from totally different eras in the same room. The Aeolian represents the largest church organ built by the Aeolian Company. This remarkable recital kicked off an effort to restore this historically significant instrument. Hats off to Mr. Swann for a wonderful program, and to those who worked so hard to bring the condition of the Aeolian to the attention of the Duke administration. It is my fervent hope that all concerned can work together to keep both of these unique instruments in first class condition.

William F. Brane
Kinston, NC

Figure C-14 (Frederick Swann at Duke University - A Review) – June 1989
ORGAN RESTORATION, MAINTENANCE AND TUNING

A. THOMPSON-ALLEN COMPANY

NICHOLAS THOMPSON-ALLEN
JOSEPH F. DZEDA
CURATORS OF ORGANS YALE UNIVERSITY

11 COURT STREET
NEW HAVEN, CONN. 06511
(203) 776-1616

October 9, 1987

Dr. H. Keith H. Brodie, President
Duke University
207 Allen Building
Durham, North Carolina 27706

Dear Dr. Brodie:

It has come to my attention that my name is being used to support a project to remove the Aeolian organ from the Chapel at Duke University.

To say that I would advocate the removal of this instrument rather than its restoration would be incorrect. The Aeolian organ is one of but a handful of such large instruments by distinguished builders still remaining in our country, and represents an important and productive period in American organbuilding.

To remove this instrument in favor of a new one with built-in "historic" features seems somehow contradictory to me. The Chapel organ is a truly genuine symphonic-romantic instrument, and deserves careful restoration and preservation.

I urge that the instrument be allowed to remain in its original setting, beautifully rebuilt and ready for another half-century of regular use.

Very sincerely,

A. THOMPSON-ALLEN CO.

Joseph F. Dzeda

pc: Mr. Neil Williams
The Rev. Dr. William H. Willimon
Mr. Anthony Bosworth

Figure C-15 Thompson-Allen Letter to Duke (Dzeda)
Mr. Michael E. Foley, President
Foley-Baker Inc.
1212 Boston Turnpike
Bolton, Connecticut 06043

Dear Mr. Foley,

President H. Keith H. Brodie shared with me your letter of April 6th concerning the front organ in Duke Chapel.

I am responding on behalf of the Reverend William H. Willimon, Minister to Duke University, who is on a sabatical leave in Germany for two months.

I would like to thank you for your interest and concern regarding our Aeolian organ. Many others share your sentiments. Unfortunately, at the present time, no funds are available either for the restoration of the Aeolian or for the purchase of a new organ. Therefore, nothing can be done in the immediate future. However, we appreciate your letter, and please know that your ideas will be given every consideration as we plan for the future.

Sincerely,

Mary M. Parkerson
Director of Development

MMP/bm

cc: H. Keith H. Brodie