Seven Generations in the building of Pipe Organs

The Kilgen Organ Company

Builders

Kilgen Organs

ST. LOUIS, U. S. A.

present this treatise on the construction and proper selection of Pipe Organs

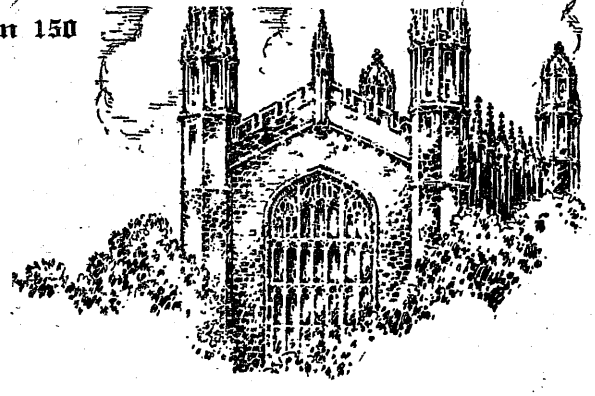
To

They respectfully request that its receipt be acknowledged

Blessing Prescribed for an Organ

Praise ye the Lord in His sanctuary,
Praise Him in His august firmament.
Praise ye Him for His mighty acts,
Praise ye Him for His supreme majesty.
Praise Him with sound of trumpet,
Praise Him with psaltery and harp.
Praise Him with timbrel and choir.
Praise Him with stringed-instruments and organ.
Praise Him with resounding cymbals,
Praise Him with crashing cymbals: let everything
that breathes praise the Lord! Alleluia.

Psalm 150



Foreword

IT IS the usual thing to say in the preface of such a book as this that words and pictures cannot adequately express the truth of a pipe organ. Such an observation might well be made concerning any one of the fine instruments that are made by a number of organ builders, because the inspiring tones of the king of instruments cannot be described nor translated by the imagination alone.

The main purpose of these pages is to convey facts about the pipe organ and what should be expected of it, in order that you may be guided in the selection of an instrument that will meet your requirements both functionally and artistically. In this, we have endeavored to eschew the technical discussion that usually attends a formal presentation.

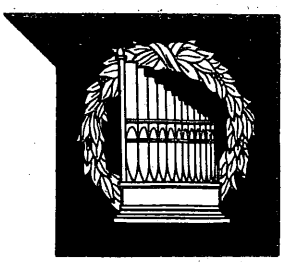
Also, we have tried to make this a human story of the single purpose that has dominated the efforts of one family through *Seven Generations* . . . . a story of men and ideals, a story of love for music and pride of craftsmanship.

We unfold for you the Kilgen story in the hope that you will then want to hear a Kilgen; because only in hearing its inspiring tones can pipe organ music be completely appreciated and understood.

**Chant to St. Caecilia, Proper of Saints, November 22; First Antiphon of Lauds.*

"Cantantibus organis Caecilia Domino decantabat dicens:"

Three Centuries of Learning How



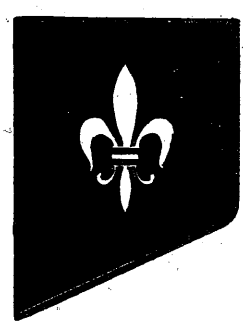
An understanding of the Kilgen Coat of Arms, so familiar to organists and lovers of pipe organs, will perhaps give some insight into this story and the wealth of tradition which lies behind modern pipe organ development.

The escutcheon is a shield which was popularly effected in Middle Europe during the late sixteenth and early seventeenth centuries. It is quartered with tinctures of Or (gold), Gules (red) and Azure (blue).

The Dexter Chief quarter, as illustrated on the left, represents the symbols of St. Caecilia the patroness of organ music. These symbols are an organ and a wreath, the latter representative of the crown of martyrdom, since St. Caecilia died for her faith. In 1584 the Academy of Music at Rome selected her as patroness of that institute; and since that time her veneration in the light of church music has become more universally recognized.

The Sinister Base position of the Coat of Arms is taken from the banner of the early French Kings. The charge, a Fleur de Lis, is in white on a field of Azure (blue). Initially, it is symbolic of the French origin of the Kilgen Family, but is significant also today as it represents the Coat of Arms of Louis IX, great Saint and King of France, after whom the City of St. Louis was named—in which city the Kilgen Factory is located.

Knighthood was still flourishing at the time that, according to tradition, Sebastian Kilgen built the first pipe organ that bore his name. With its relative crudeness, as compared to the instruments of today, it served its inspiring purpose in some abbey now in ruins. Less than a century earlier the use of organ stops was first devised, enabling the organist to secure various effects by the combinations of pipes. Only a few score years had elapsed since the first introduction of additional manuals.



It was early in the life of Kilgen Organs that Johann Sebastian Bach realized the pipe organ's limitless possibilities and sponsored them that

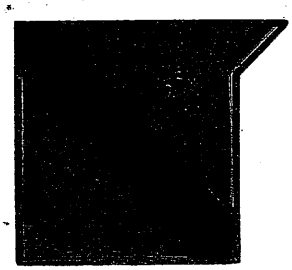
the world might enjoy the organ tonal grandeur of the masters' compositions. Just as The Kilgen was born of the crucible of those early developments, it has kept pace with the pipe organ more than three hundred years.

The charge on the Dexter Base quarter is a hand bearing a torch, emblematic of the Torch of Science or Learning. It is carried in white on Or (gold).

Only when one compares a pipe organ of earlier times to one of today, with its amazing intricacies of construction, can the part played by scientists in tonal and operating development be appreciated. Electricity, metallurgy, pneumatics, mechanics, acoustics and countless other physical laws have all contributed to modern organ craftsmanship.

That Science and its emblem should be cognate to The Kilgen is attested by the fact that Kilgen workshops have time and again given rise to new scientific developments and have sponsored every advance that has been made during the many generations of their usefulness. Kilgen was one of the first, for example, to adjust wind pressure to the instantaneous passage of energy which was introduced by the application of electricity to the organ. The magnet, which leading physicists now herald as the finest one, was conceived by Kilgen artisans. The silver spring contacts were a result of the Research Department's study for a simplified action which even a casual observer will recognize as the logical assurance of dependability.

In this quarter we find a Bend, Gules (red) on Or (gold). This symbol is taken from the Coat of Arms of the original home of The Kilgen. It was near Durlach, Germany, as tradition has it, that Sebastian Kilgen, a French Huguenot, who, wounded, fled into Germany during the strife in France and who learned organ building from the monks, while recovering from his injuries, built his first instrument in 1640. The little city was then the capital of the duchy of Baden and the home of its margraves; but its early civic importance has long been lost and its castles are now in ruins.



It was mainly through the tireless efforts of Sebastian Kilgen and succeeding Kilgen generations that Durlach became famous as a pipe organ guild.

Such adversity as the burning of the town by the French in 1688 failed to enervate the hopes of the first Kilgen organ builders.

In 1851 George Kilgen, now deceased, carried the ideals and experience of Kilgen craftsmanship to this country. The first American Kilgen Organs were built in New York, and these instruments, made in unimposing shops there, laid the foundation for the pre-eminence of the modern instrument which bears that name.

The late Charles Kilgen, son of George Kilgen, was soon made a partner and with the passing of his father, became the head of the company and after more than fifty years in this capacity, died in 1932, having attained an international reputation for his many contributions to the art of organ building.

Today the organization is directed by his son, Eugene, and a group of distinguished organ builders, whose lives are dedicated to Kilgen standards.

St. Louis has been the home of Kilgen organs since 1873. The present Company became a Corporation in 1939 when it received its charter from the State of Missouri. All patents, trade-marks, copyrights, special precision dies and machinery used in the building of Kilgen organs for over a generation were taken over by the Corporation.

1951 saw the one hundredth year of Kilgen Organ building in the United States. In all these years Kilgen has never failed to meet their contractual or financial obligations.

All that has been said of the tradition, the longevity and the far-flung beginnings of The Kilgen can only lend color to the modern instrument which bears that name. The pride of craftsmanship and the devotion to scientific development in its building are certain to engender confidence in its builders; but these are not the only determining factors in the selection of a pipe organ. The first and principal judgment is *tone.*

Such is the story that is epitomized in the scroll which adorns the Kilgen Coat of Arms. *Mirabile auditu,* "wonderful to hear."

It is the attainment of beauty and sincere artistry in tone that has given The Kilgen its well-earned legend—

The Kilgen Ideal

IN EVERY work or undertaking there is usually a predominating thought. This has been true in the writing of some of the world's best literature. It has been true in the painting of the greatest masterpieces on canvas. It is also true in the building of a Kilgen Organ.

The predominating thought behind the building of every Kilgen Organ, whether it be large or small, is—*to build the finest organ possible.*

It is easily understandable that the present Kilgen Organization is motivated by such an ideal, because throughout a history of more than a century their predecessors held this thought ever before them until it was ingrained in generation after generation and became a very part of the daily life of the organization.

Over a half century ago, Kilgen Organs at Cathedral of San Fernando, San Antonio, Texas, Our Lady of Sorrows Church, Las Vegas, New Mexico, were considered outstanding examples of fine organ building of that period. More than 25 years ago, such Kilgen Organs as those in St. Francis Xavier Church, St. Louis, Missouri, Cathedral of the Immaculate Conception, Wichita, Kansas, SS. Peter and Paul Church, Detroit, Michigan, were most noteworthy organs built at that time. Some 15 years ago, those organs in St. Patrick's Cathedral, New York, St. Ignatius Church, Chicago, St. Justin's Church, Hartford Connecticut, and many others made history in the organ building world.

And today, those Kilgen Liturgical Organs delivered since the ending of World War II, such as St. Louis Cathedral, St. Louis, Missouri, Sacred Heart Cathedral, Davenport, Iowa, St. Rita's Church, Chicago, Illinois, St. Pius Church, Lynn, Massachusetts, St. Nicholas of Tolentine Church, Bronx, New York, Holy Ghost Church, Denver, Colorado, St. Hedwig's Church, Chicago, Illinois, St. Lawrence's Church, Cincinnati, Ohio, and many others, have been sincerely praised by musical authorities as truly outstanding examples of church organ building.

The remarkable combination action, the amazing relay with solid silver contacts—both Kilgen's patents—the chest magnet, with its armature chamber enclosed in a brass shell, the improved system of control in the console, the advanced type of reservoir and chest

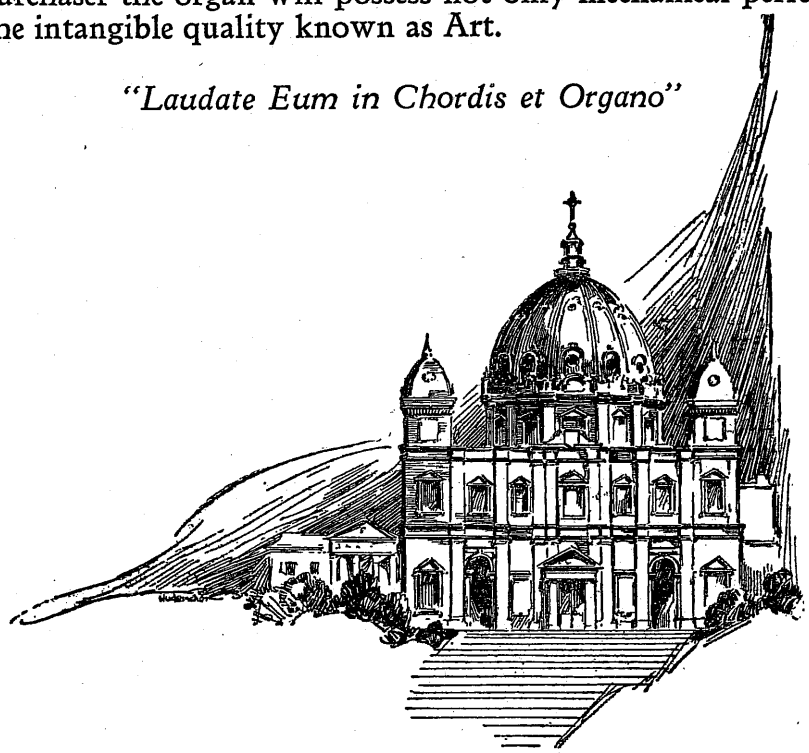
which insures steadiness of wind under all conditions and which allows different wind pressures so that each stop may have the pressure most favorable to its tone—the very factory itself, one of the largest, most completely equipped organ plants in the world—are simply tangible expressions of their efforts to maintain this ideal.

Kilgen Organs are noted for their sense of tonal balance and artistic restraint in the avoidance of the bizarre and faddishness. They embody tonal contrasts that make them ideal for the accompaniment of Catholic Liturgy throughout the year—and diapasons, upper work and mixtures are well developed to give required brilliance. Proper scaling and voicing results in a truly classic and churchly ensemble capable of a progressive and dynamic harmonic build-up that has led musical authorities to call them tonal masterpieces. Such a result is more than merely voicing—it is the accomplishment of master organ builders who are dominated by this thought.

It is undoubtedly this motive in the background that has resulted in the building of organs that have that indefinable something which has led authorities and critics to say of a Kilgen Organ: "It is different—It is superior,—for the instrument possesses that artistic tonal quality sought for often but only rarely attained."

When a Kilgen Organ is purchased, this is the background. It assures the purchaser the organ will possess not only mechanical perfection but the intangible quality known as Art.

"Laudate Eum in Chordis et Organo"



Suggestions for those Planning Selection of an Organ

THE purchase of an organ is an important event, not a frequent occurrence, and it is quite likely that those charged with the selection of the instrument are somewhat unfamiliar with the subject. With this thought in mind, it might be helpful to mention a few fundamental facts in connection with the planning and purchase of an organ.

First, every consideration should be given to the proper placing of the instrument, for even the best of organs and the best of organists are at a disadvantage if it is wrongly placed. This does not refer to any particular part of the building, as it may be placed anywhere within the auditorium, but its position should allow for the tone opening to be in the direction, as nearly as possible, toward the congregation. This is true whether it be a gallery installation or a sanctuary installation.

The choir and the console of the organ should so be placed that the tone from the organ flows first to them and then to the body of the church. Placing the choir or organist to the side of an organ, or around a corner from the tone opening, is never satisfactory, for coordination of organ with organist and choir, is then most difficult.

Next, a proper space should be provided, and while the size of organs vary and dimensions will be different under different circumstances, nevertheless as an average a space of at least 10 ft. wide for the smaller organ and 20 ft. wide for the larger instrument, and two spaces each 20 ft. wide for the still larger instrument, should be allowed. The depth of such space should never be less than 5 ft., and should average about 10 ft., with a height of from 12 to 20 ft.

All or any part of the instrument may be made expressive by building a box around it, or by placing it in a room or chamber. In most churches, chambers are either already built or certain spaces are adaptable to conversion into chambers. Every organ builder can build expression boxes, if no chambers are available, but chambers are recommended where possible because of the added effectiveness of expression. Of course, in the planning of a new building, the architect should consult an organ builder, so that proper space will be provided at the time the church is built.

An important point in planning organs is the size of the tone opening. If possible, for each room or chamber, an opening should be allowed at least 9 ft. wide by 7 ft. high, or even larger if possible, to allow the proper egress of tone from that section of the organ.

An organ can be screened, either by the conventional case of panel work and display pipes or by a grille covering the tone opening of a chamber. The church may have a local contractor furnish this screen or the organ builder may build it, but since it is not actually a part of the organ, simply exterior ornamentation, it is unnecessary to have the organ builder do this part of the work if the local contractor consults the organ builder so that the amount of opening in it is sufficient to allow the tone of the organ to come out properly.

The more information and sketches given the organ builder when the instrument is planned, the more helpful he can be in advising the church regarding the proper placement and space necessary; and thus, correspondence with the organ builder is recommended as early as possible.

Next is the tonal plan or specification. It is most necessary that those charged with the design of an organ for a Catholic church should have some knowledge of the requirements of the accompaniment of Catholic Liturgy, of sacred music in general and a basic concept of the *Motu proprio,* as well as a lengthy and practical experience in building organs for Catholic cathedrals and churches. Those on the Kilgen designing board have had such experience and will provide specifications of an organ that will meet these basic principles and one that will also be well proportioned to the size of the church and its acoustic environment.

The selection of the builder of the organ is a most important thing. The reputation of the company, the type of personnel and craftsmen, the plant and facilities for building organs, and the length of time that they have been in business and the quality of work which they have been doing, are all matters that should be taken into consideration.

Price should definitely not be the prime consideration, since so frequently the cheapest organ has proved to be the most expensive over a period of years, to say nothing of the vast difference in tonal quality.

When an organ building firm has been selected, place your confidence in their experience, judgment and integrity, and you will find that the resulting instrument will be a success from every standpoint.

Information You Should Furnish the Organ Builder from which to Prepare Specifications

KILGEN Organs are specially designed and specially built to meet the particular requirements of the auditoriums into which they are to be placed. It is the opinion of the Kilgen staff that unless organs are specially designed and built to meet the individual requirements, the really high standard of artistic excellence for which their organs have become known cannot be maintained.

When a request is received to design and submit organ specifications, before complying with this request, a most thorough study is made of the actual auditorium or blue prints and information accumulated regarding both the acoustical and physical properties of the auditorium, as well as the purposes and requirements for which the organ is to be used.

This data is then submitted to the Designing Department, which is composed of authorities on design. After a thorough study of the information which has been gathered, a specification is designed which will meet the conditions that have been found to exist and which will result in an organ perfectly adapted to the particular building in mind, and its tonal demands.

When the contract has been signed and the order to proceed given to the factory, the Engineering Department makes a complete layout showing in detail how the various parts of the instrument will be installed, and the Designing Department arranges the scales of all pipes and the type of voicing desired, so that the complete instrument will meet in every way all the requirements, acoustical and otherwise.

In order to facilitate the preliminary work of the Designing and Engineering Departments, it is necessary to have certain information from which to work, and listed below are the principal facts that the purchaser should give the organ builder or his representative.

[1] The name and address of the church, organization or individual purchasing the organ. If a committee has been appointed, the name, official title and address should be given of the person with whom negotiations are to be conducted.

[2] The size of the auditorium, the style of architecture and the seating capacity. State whether the organ is to be used purely for church services or is to be used also for recitals and concert work.

[3] The location and dimensions of space available for the organ. Either a sketch should be made and sent in to the organ builder showing the organ space and its dimensions or else a set of architect's blue prints should be obtained and sent with marks on these blue prints showing the organ location.

[4] Information regarding organ chambers. The organ may be installed in specially built chambers or rooms which are built by the purchaser or it can be installed in an open space. In the event that chambers are built by the purchaser, expression boxes are not necessary and the price of the organ is somewhat reduced. If no chambers are built by the purchaser, then expression boxes are necessary. The organ builder should be told whether or not chambers are to be furnished or whether expression boxes are to be used. In the event that chambers are to be built, the Kilgen Engineering Department will furnish complete drawings and instructions for the building of the chambers.

[5] Exterior decoration or screen for organ. At the option of the purchaser, the grille or display pipes with case for covering the organ may be furnished and installed either by the organ builder or by a local contractor selected by the purchaser. If a local contractor is selected to do this work, drawings will be furnished by the organ builder for his guidance and a proportionate reduction in the price of the organ will be made. If the organ builder is to furnish the organ screen, preference for either case and display pipes or grille work should be indicated. The organ builder should be informed as to whether he is required to furnish the exterior screen for the organ and about grille or display pipes, and if he is to build this exterior work a proper design will be submitted for approval.

[6] If it is desired to keep the design and tonal structure within a limited budget, then give the approximate sum of money available for the purchase of the organ. When this figure is given, it is the practice of the Company to design an organ that will be as fine as it is possible to build for the sum named. Recommendations will be made, if desirable, for subtracting from or adding to the amount, depending upon the particular circumstances involved.

□ □ □

In some instances the purchaser may call upon a third person to design his specification. In such cases, the Kilgen organization will follow out with the greatest attention to detail the wishes of the designer and will build an organ that will faithfully embody the ideas of the designer.

The staff is ready at all times to give advice regarding organ specifications and regarding the placing of organs and will extend every cooperation to your architect.

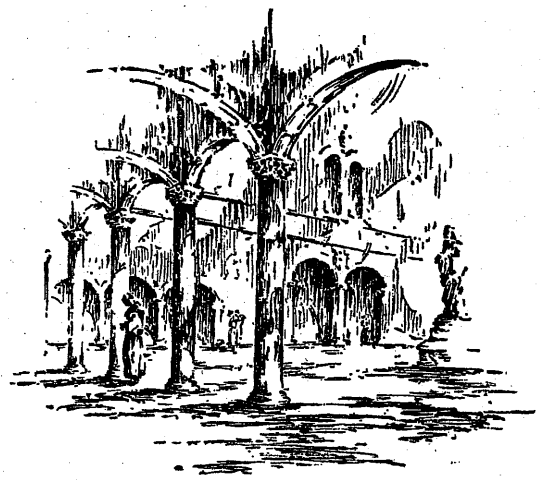
If a new building is in the process of construction, it is strongly recommended that the architect be advised to confer with the organ builder, so that proper space may be allowed for the organ before the building reaches too advanced a stage of construction so that any necessary changes or rearrangements may be made. The Engineering Department is at all times ready to extend full cooperation to architects without any obligation involved.

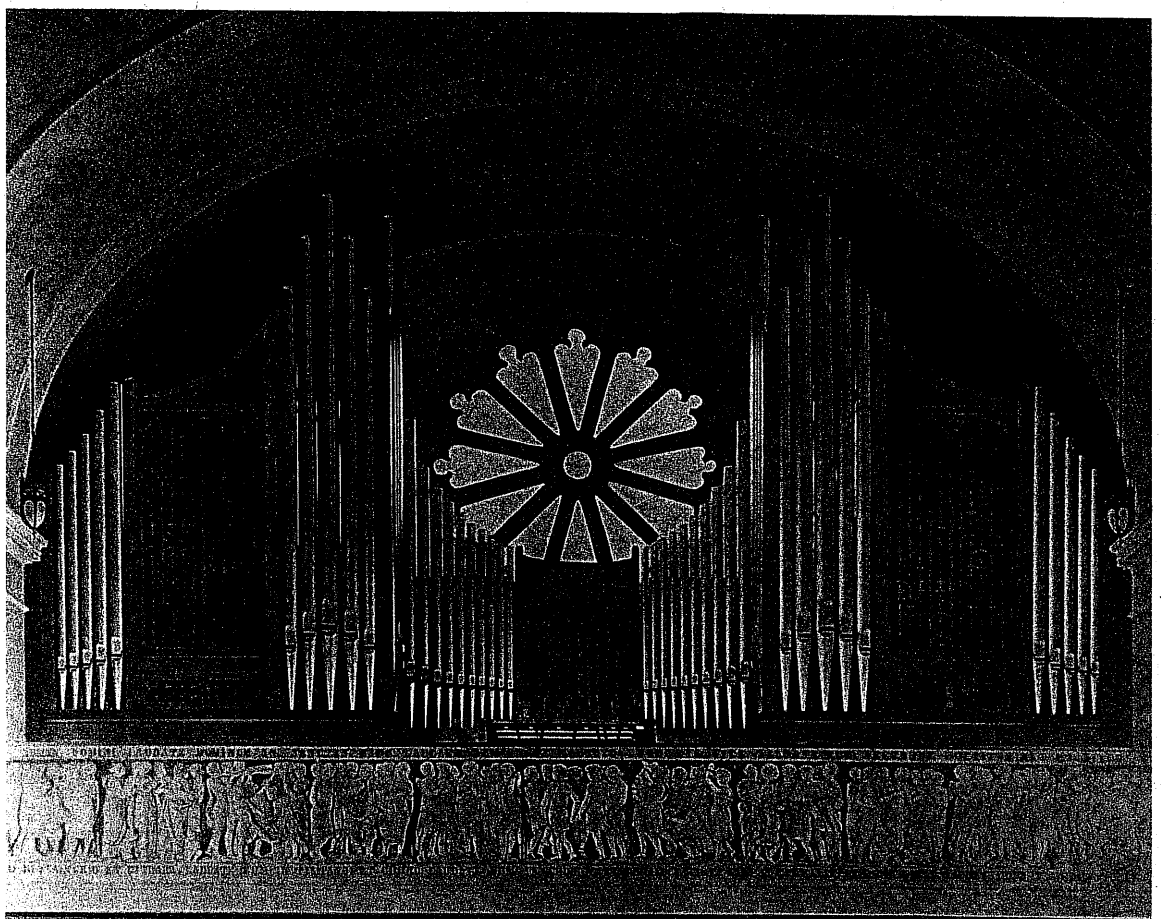
Kilgen engineers will study your building and organ chambers and give advice regarding these.

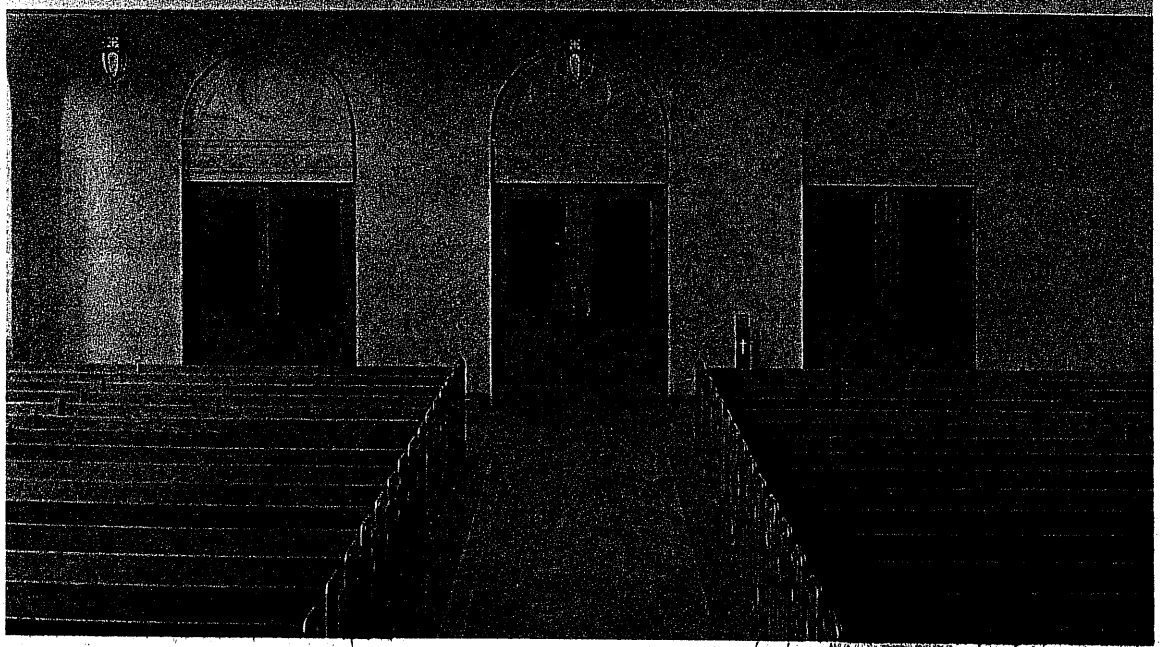
KILGEN Installations

To select a few installations from the imposing array which bespeaks Kilgen craftsmanship in this country is no easy task. The pipe organs pictorially displayed in this section can only hint at the extent and the diversity of Kilgen organ building.

Our purpose is to indicate how Kilgen tone may be adapted to any size edifice, from the small community church to the greatest cathedrals and auditoriums. Kilgen tone is fundamental to a Kilgen, and size of installation can never affect it. These few installations are intended to show how The Kilgen is always at home in its environment—because it is always built for its environment.

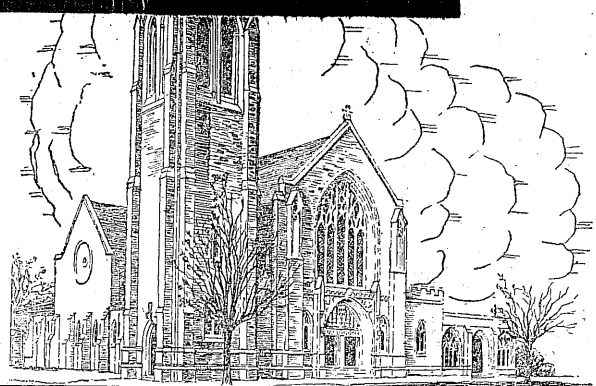


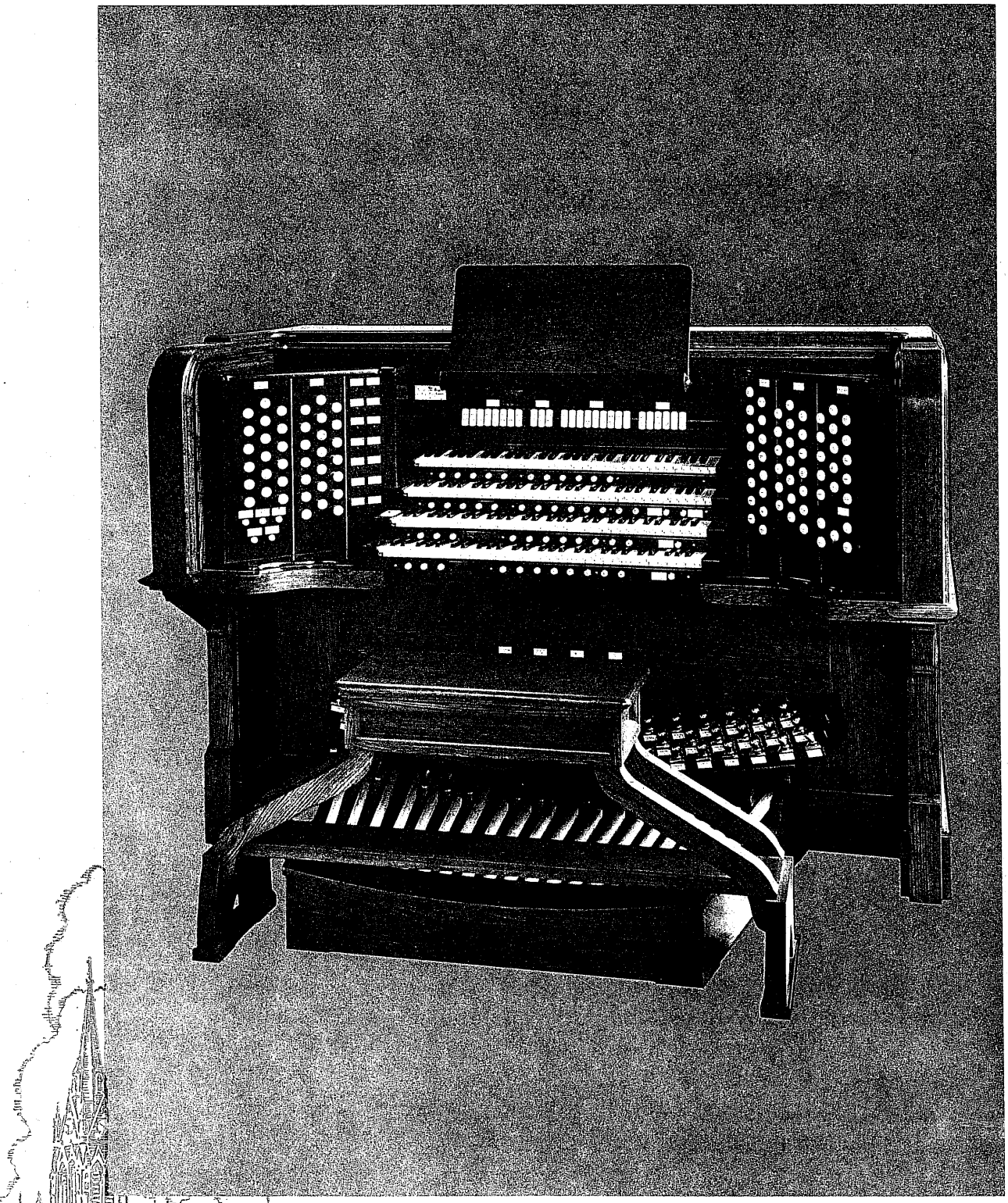




ST. AGNES CHURCH
LOUISVILLE, KENTUCKY
(PASSIONIST)

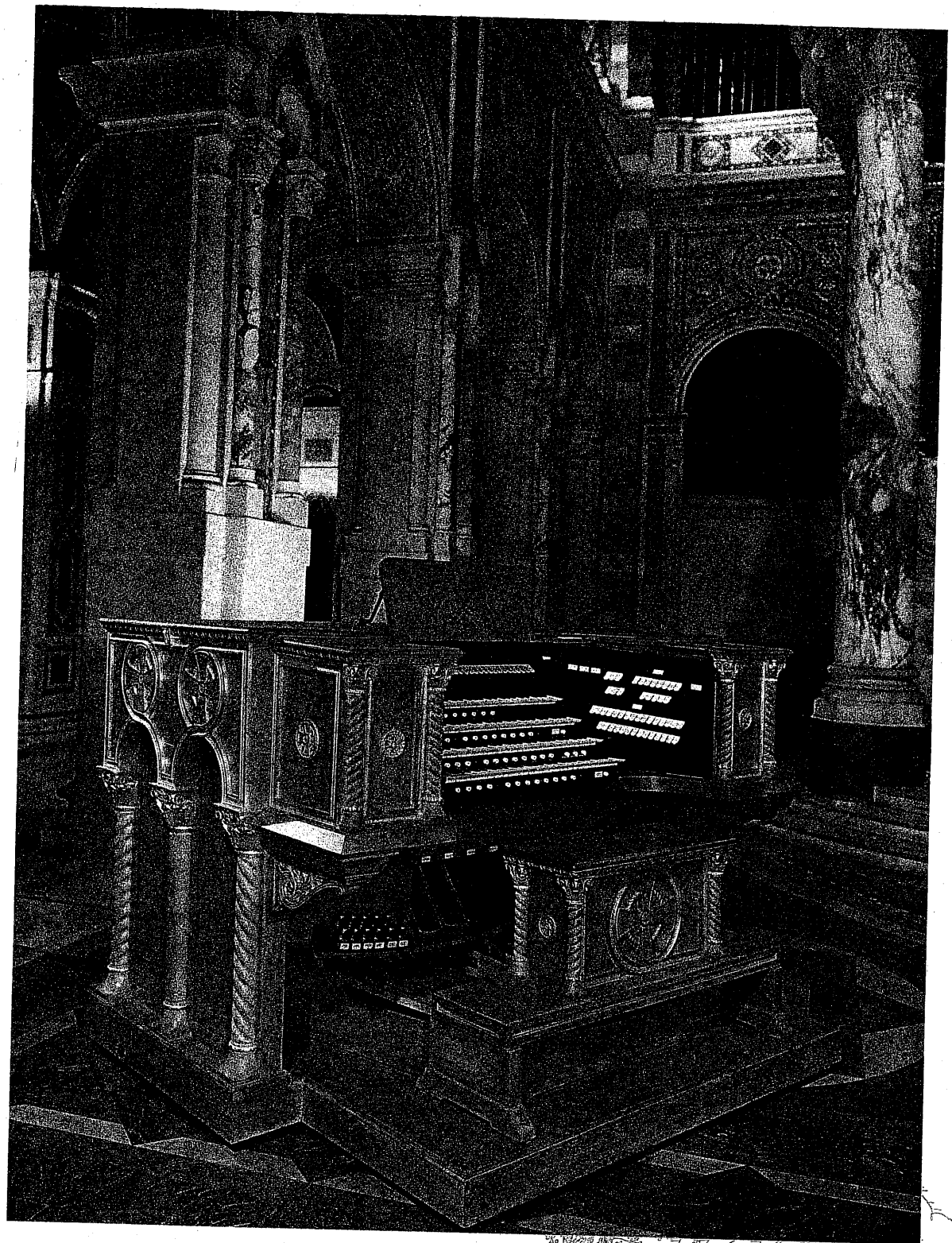
A Three-Manual Kilgen Gallery Organ and a separate division installed in the Sanctuary with duplicate Three-Manual consoles is installed in this beautiful church. Other Kilgen Organs have been built for this Order.





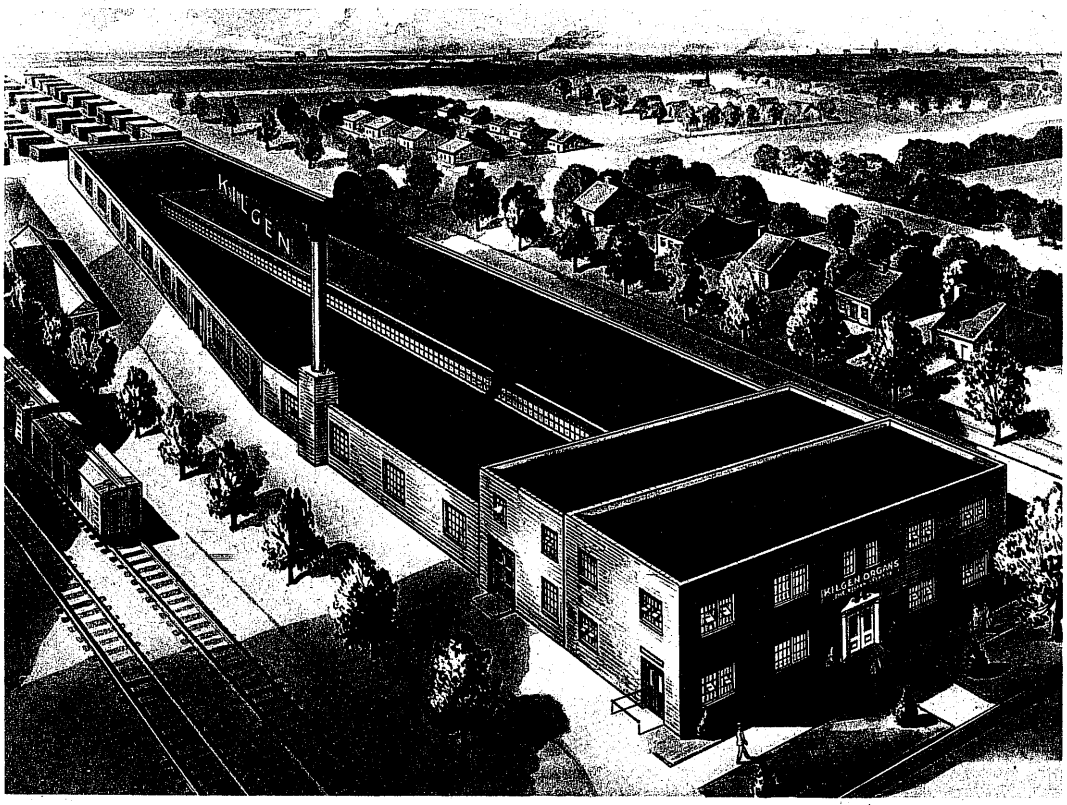
KILGEN DRAW KNOB CONSOLE

As all Kilgen consoles are specially designed and built for each church, the type of console desired is a matter of choice. Newly developed precision made combination action requires no wind in the console.



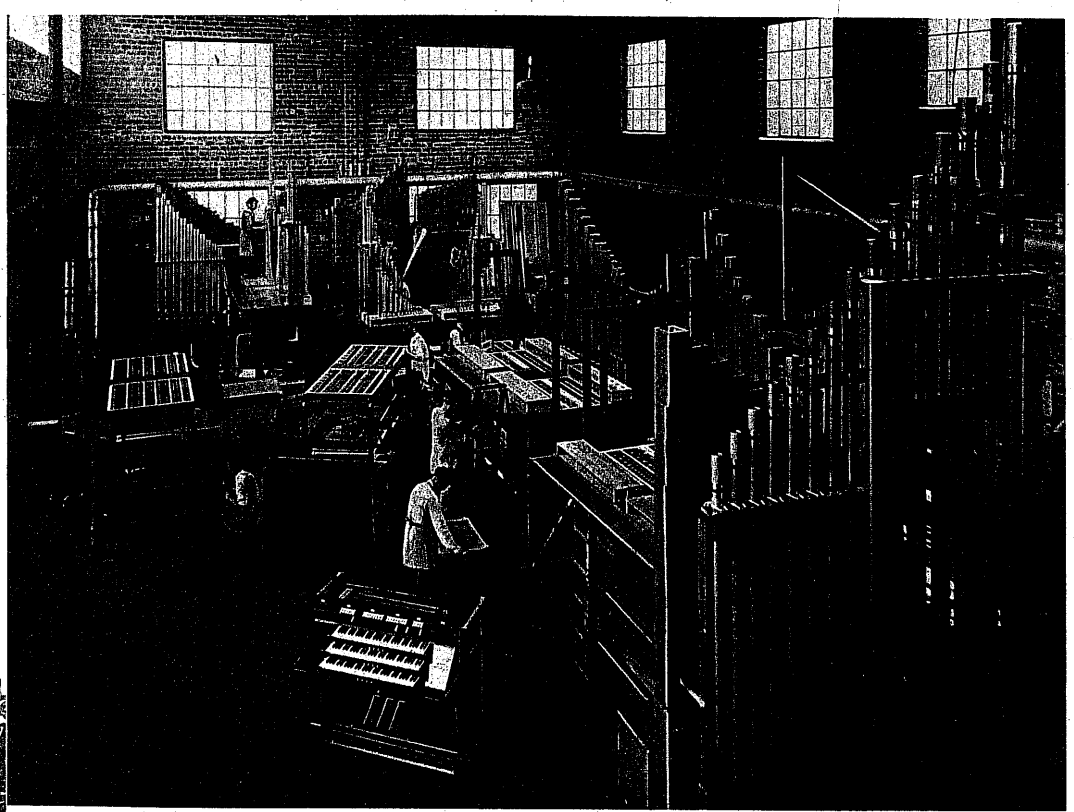
KILGEN STOP TABLET CONSOLE

Preferred by so many organists because of the ease of control, this wing console with its precision made combination action requiring no wind in the console, is installed in the St. Louis Cathedral, St. Louis, Missouri.



THE LARGE KILGEN PLANT AT ST. LOUIS

Devoted exclusively to organ building.



THE ERECTING AND ASSEMBLY ROOM

Organs are tested in this room at the factory before shipment.

A Trip Through the Kilgen Plant

The fact is, I was just a bit dubious of the whole project when they elected *me* to go to St. Louis and "go through the plant" of The Kilgen Organ Company. Machinery doesn't make much of a hit with me. The noise and clamor of a factory seemed not nearly so attractive a setting for a day of pleasure as some other places I might have chosen.

But from the moment I drove up to the Kilgen plant, surprise followed surprise. Interest piled upon interest momentarily until the day seemed to slip away in an incredibly short time.

The first thing that impressed me upon entering the plant was the absence of the clamor and din I feared. Here system, orderliness and art find a meeting ground, while music, craftsmanship and a love for their work are mingled together in the activities of those who labor.

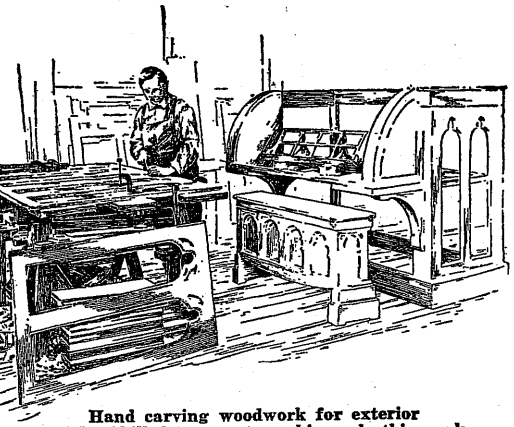
Beginning at the Designing and Engineering Department, I found artists and architects who literally live for the king of instruments—the pipe organ. They are men who might be erecting bridges, business buildings or public institutions. But they are designing organs, into every detail of which go rare attainments in the architectural craft, ripened by a breadth of experience in designing organs probably unrivaled anywhere in the world.

Passing from the drafting room, we came to a group which was building the interior framework for a large organ. It has to be substantially made and sufficiently strong to sustain the weight of the parts resting upon it.

Presently another interesting group was encountered working on case work, which has to be finished in harmony with the other furniture of the auditorium in which the organ is installed. Suitable designs, I learned, are originated and furnished by the Kilgen Company, then submitted for approval so that the wishes of the purchaser may be exactly followed.

Progressing farther, we came upon workmen finishing the interior woodwork of an organ. It seemed to me merely to stain the wood should be sufficient. Instead of that, it is covered with the best orange shellac or hard oil finish, as the different purposes specially demand. This provides against evil effects of atmospheric moisture. It is one of the internal reasons, not readily apparent to the eye, why a Kilgen Organ lasts such a long time.

We came next in our journey through the plant to the section devoted to building the vital mechanical, electrical and pneumatic parts of the action. It was explained to me that throughout the Kilgen improved electro-pneumatic action, experience of more than thirty years in building this type of action is embodied.



Hand carving woodwork for exterior finish. Skilled men, not machines, do this work to make it of highest artistic merit.

Electrical contacts are the rubbing type, made of solid silver, thus avoiding the danger of corrosion and eliminating all necessity for cleaning. The use of these silver contacts in conjunction with Kilgen high-resistance magnets is an assurance of reliability of performance for more than a generation.

These contacts are built into the coupler mechanism and relays, and there is an insulated separator-bar between each contact, which prevents any possibility of contacts touching each other. This has been hailed by scientists and physicists as the most perfect type of organ contact system. It is patented under the name of "The Kilgen Safe-Guarded Relay." The action is capable of prompt and rapid repetition and is simple in construction and free from complications.

The magnets which actuate the individual mechanism of each key next commanded our attention. A most remarkable feature of these magnets is the small amount of current they consume, so that even in the largest organs there is no danger of the amperage—which means the volume of current—exceeding that allowed by the fire underwriters. It is a point of importance to those responsible for the installation of an organ and for its safety.

The bases of the magnets are made of cold-rolled brass—an advantage exclusive with the Kilgen magnet—the most expensive to build, but the strongest and most durable obtainable. There is no chance of these magnets being affected by atmospheric changes. They are machined down to the exactness of one-thousandth of an inch, so the workmen told me. Of course, with this standard of accuracy, they are interchangeable one with another, either whole or in part. The armature gap is set permanently and rigidly, so that no adjustment ever is necessary after leaving the factory.

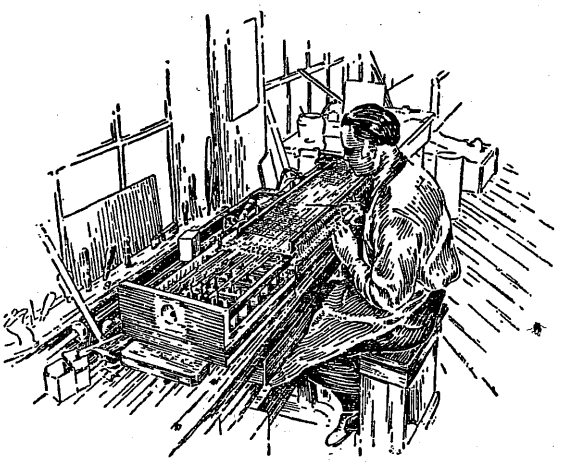
Next we came to the wind chests, upon which a great deal of the efficiency of an organ depends. Kilgen Wind Chests are of the most advanced design. They are made with special bellows chamber, providing a perfect supply of air in unvarying pressure to each organ pipe under any and all conditions of use. The wind is supplied from valve to pipe without grooving, as the pipe is placed directly over the valve vent. Each pipe has a separate valve and motor, unaffected by the use of any other valve or motor. This makes possible the playing of

Testing leathers used in Electric-Pneumatic Action. Electric light reveals the slightest flaw.

rapid staccato passages on one manual, with a slow melody movement on another manual, without any variation of wind pressure affecting the melody movement.

Kilgen chests are so designed that any desired wind pressure may be given to each section of the organ to accomplish the best tonal results.

A large individual bellows or reservoir for each wind chest is provided. The ribs and folds of these reservoirs are double-leathered, with three-ply corner leathers—genuine, specially treated bellows leather being used instead of a cheaper or less durable material. Kilgen organs, I understand, are known for their steadiness of wind.

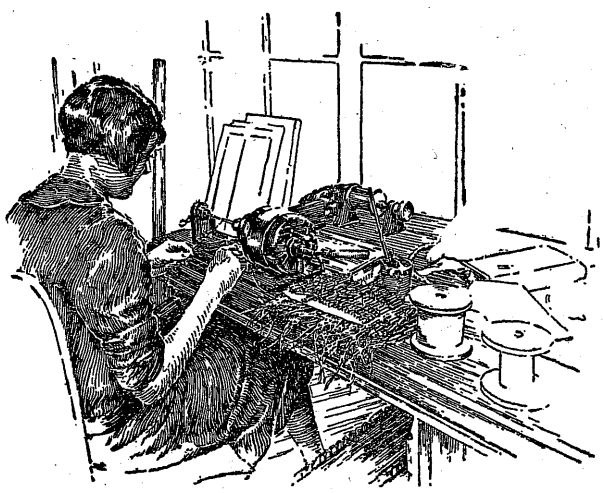


Building and adjusting the contacts of solid silver, which distinguish a Kilgen organ, insure its long life and perfect operation.

The wind trunks follow out the idea of ample capacity, so as to carry the greatest amount of wind that can be required. Flexible, telescopic joints are used wherever there is a possibility of the chests transferring their weight to the wind trunks in the event of shrinking or settling of the floors.

An interesting feature of the organ is the expression action and louvres. One would be likely to pass over them as detail, but the experts assured me they must be of sufficient thickness and in exact proportion to the size and power of the instrument. Moreover, their action must be instantaneous in response and noiseless. The louvres have rigid frames to prevent warping, are hollow and filled with fibre glass packing, sound-proofed to effect the utmost in tonal shading.

We then came to the section where consoles (or key-desks) are made. Organists from all over the world have been most enthusiastic about the Kilgen console design, both the draw-knob and the stop-tablet types. The stop controls of the draw-knob type are placed in panels at an angle of 45 degrees on each side of manuals. The inter-manual couplers are placed above the top manual.



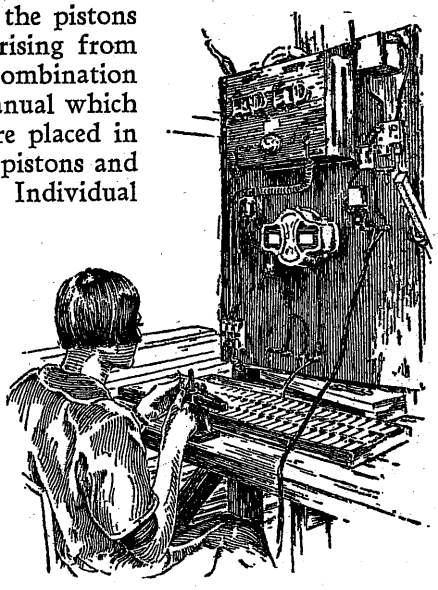
Making magnets. Each one wound by a skilled operator.

The stop controls of the stop-tablet type console are placed above the top manual in single or double rows. A wing type console is used on large three and four manual organs and stop tablets are placed in panels on an angle of 45 degrees on each side of the manuals.

The arrangement employed with both draw-knob and stop-tablet type of consoles assures the organist of the greatest ease of control.

The patented "Kilgen Electric Combination Action" allows the stop combinations to be set on the pistons by the organist, without necessitating his rising from the organ-bench. The individual manual combination pistons are placed under the center of the manual which they affect. General combination pistons are placed in groups to the left of the individual manual pistons and can be duplicated by toe studs when desired. Individual manual cancellors are placed above the stop controls for each section of the organ and a general cancellor is placed under the lowest manual. When desired, on-and-off switches are provided which make it possible to set pedal stops on manual combinations or to leave them off.

These Combination Actions are built of duralumin, and die-stamped and precision made, with all connections carefully bushed with felt, resulting in a surprisingly silent operation. No wind is required in the console, for the mechanism is entirely electro-magnetic, thus eliminating the noise usually found when the action is such that wind is required in the console.

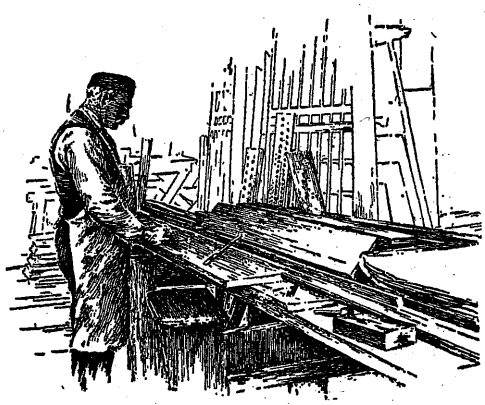


Setting magnet bases, and testing each one to make sure its amperage is correct.

I found that the action of these combinations is positive and instantaneous in response. It is constructed in such a manner that dirt, dust, dampness, or general climatic conditions will not affect it.

The general construction of these consoles is such that, for adjustments, the different manuals may be lifted up and folded back like the leaves of a big book, affording ready accessibility to any part without dismantling the mechanism.

The dimensions of manuals, pedal-board and other controls on consoles, as well as the measurements of their relative positions, are in accordance with the recommendations of the Committee on Console Standardization of the American Guild of Organists.



Constructing wind chests. Only specially selected lumber is good enough for this purpose.

When I came to the Wood-Pipe Building Department, I was most strongly impressed with the fine lumber used for these pipes. On examining finished pipes, pipes in process of construction, and material on hand, I did not find one single defect in any of the material. My attention was called to the way in which pieces of hardwood were inserted for the lips and in the other parts of the wood pipes, where the voicing is done. It was further pointed out to me how the stoppers of the stopped pipes were made with the grain in the wood of these stoppers running parallel with

A Kilgen console, with key action being tested. Note how different manuals fold back like leaves of a book.

the grain of the pipe, so that expansion and contraction, due to climatic changes, would affect both stopper and pipe alike. Stoppers were well fitted, well packed, and decidedly air-tight. I could readily see how pipes so carefully made would last for many, many years.

Entering the department for metal pipes, I was again surprised. It had never occurred to me that the correct way to make metal pipes for organs is to begin with the raw material. It was explained to me that different kinds of metals are melted, specific alloys made, then carefully tested, then cast into sheets, the different alloys being used for the different timbres of tones—special alloys of metal in exceptionally heavy sheets are cast for diapasons, other sheets of different alloys for string tones, and still more sheets made from other formulas to be used for chorus reeds, solo reeds and others.

The metal sheets thus cast are given to the pipe-makers, who cut and formed into their proper shape and finally assembled, all by hand, the pipes for that particular stop.

It was fascinating to see these organ pipes—the diapasons, strings, reeds. The mixtures were especially interesting—and, judging from the great attention to detail employed, I could readily understand why these stops are so universally acclaimed for their superiority.

In another part of this department were zinc pipes—these to be used as the basses for string pipes and for various pedal registers. A fine grade of annealed zinc of ample thickness was the material used, and soft metal mouths, with reinforced languids, were inserted in these pipes.

As I entered the Voicing Department, my surprise increased. When I was introduced to the voicers, I learned that they were men of national reputation. Their work is done in collaboration with the Kilgen staff, who design the organs, and is subject to their critical approval.

Soldering pipe foot to pipe body on metal pipe.

Metal pipes are cast from basic metal, expertly alloyed in the Kilgen Factory.

Many factors enter into the correct voicing of an organ. Special study must be made of the building wherein the organ is to dwell and function. Acoustic conditions, hard or soft plaster, cushioned seats, size, shape and construction of the auditorium must all be taken into consideration, in order to obtain artistic results, perfect balance and blend of tone when the instrument is finally installed.

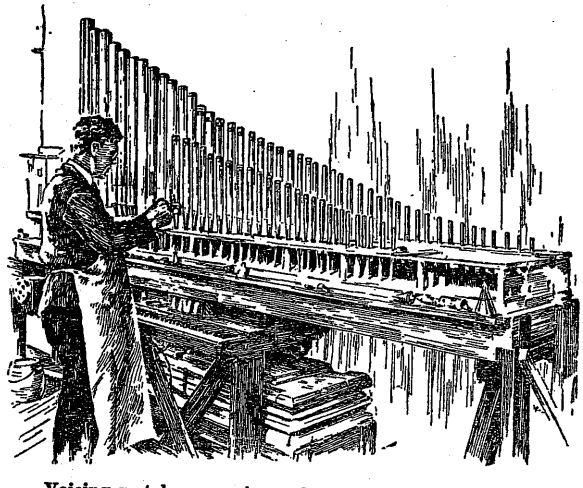
Each stop must be given its distinctive quality and quantity of tone. The exact strength of tone must be given the chorus stops and a proper balance and blend must be arranged between these and the intermediate and more delicate registers.

Exceptional care must be given to the proper harmonic development in the diapason and mutation stops. The importance of the individual scaling of each stop and the selection of the proper wind pressure was here brought to my attention.

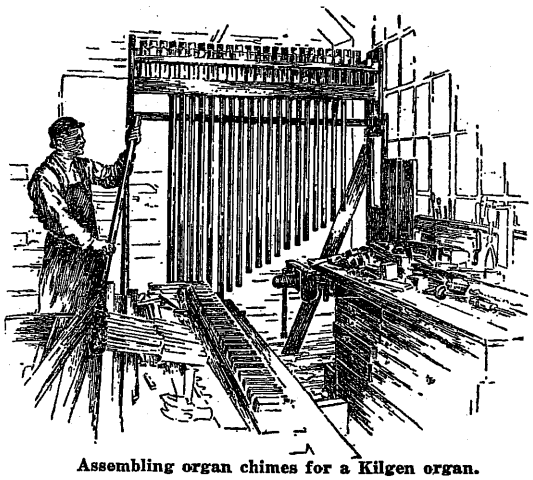
It is this great care and attention to the many details which enter into the work of voicing that results in the organ which is a distinct tonal success.

As we reached the great erecting room, where a number of large organs were set up and being tested, I came to a realization of the immense amount of experience, talent, and mechanical and musical skill that must be employed to build the modern pipe organ. Not content, however, with careful building of parts and minute care in each operation, every organ is set up and given an actual operative test before it gets the final approval. The value of expert engineering work in organ building was impressed upon me here, by noting the arrangement of passageways provided inside the organ for tuning and regulating purposes. This point assures a certain convenience of inestimable value in keeping the organ always at its maximum efficiency.

Here in the erecting and assembling room, an organ was played for me. It is difficult to describe tone. I am not a finished musician, but one would not be human if the inspiring tone quality of the Kilgen Organ did not make an appeal to the feelings. Here, it seems, tone quality is best expressed and proved. In tone is found the consummation of the care, honesty of purpose,



Voicing metal organ pipes. One tap of a tiny hammer suffices to alter the pitch and regulate the tone quality or voice of a pipe. Each voicer must be an expert.



Assembling organ chimes for a Kilgen organ.

quality of material and workmanship built into the thing that produces it.

The many years of experience in building artistic pipe organs, which the Kilgen organization has had, is crystallized in their product. With ideals to maintain which have been adhered to for over a century, it is no wonder great care is exercised.

Leaving the erecting room, I came to the office of the Manager of Installation and Service Department, where, to my surprise, I found he keeps a card-index record of the condition of every Kilgen Organ, whether old or new, near or far. He has charge of a large corps of men whose function is to travel, install and finish the new organs in the auditoriums for which they were built, and also to service and adjust organs already installed.

It was very evident to me that the company does not lose interest in their organs after they are delivered to the purchaser, for these service experts are available all over the country, at all times. It is an established fact that Kilgen Organs cost less to maintain.

I found that the organ finishers are unusual men with this company. Before they are allowed to have charge of installing or finishing of organs, they must have had years of experience. The result is that the organs are installed in the finest manner possible, and it is an established policy that only men regularly in the employ of the Kilgen Company are allowed to install their organs.

Before my visit was concluded I came to realize that no cheap assembly of doubtful pieces, garnered here and there, will suffice to maintain the reputation of the name of Kilgen. No risk of forfeiting that reputation is incurred through use of a cheaper substitute at some point. It was more apparent when I departed than when I entered, that the pride of the present organization in their product is justified.

In my report to the committee which sent me to St. Louis, I could not possibly incorporate any other recommendation, but that a Kilgen Organ represents the *soundest investment*. This is true, because it is certain to return dividends of *long* service, *superior* service, *satisfactory* service—with the highest measure of artistic excellence.

Organ Tonality

A GREAT variety of pipe organ voices are at the disposal of the pipe organ designer. These voices have great variety in tonal characteristics, some are components of a tonal chorus, others produce a traditional organ tone and still others are imitative of orchestral tonalities.

The Organ Designer should select these voices first with a view to their meeting the requirements of Catholic Liturgy throughout the year and next for their value in playing sacred music and the classics, and should take into consideration the size and acoustic environment of the church in which the organ is to be placed.

A brief, non-technical description of some of the stops most frequently used is given below.

DIAPASON

The stop yielding the foundation tone of the organ. Used at different strength, quality and pitch, the Diapason chorus is the glory of the organ. In this family is the Octave or Principal 4, whose chief office is to establish the first and most important upper partial of the tone produced by the fundamental unison of the 8 ft. Diapason. The Twelfth and the Fifteenth, also belonging to the Diapason chorus, plus the presence of a Mixture of suitable pitch and appropriate composition and tonality, are essential in every important division of the organ. It is well known to all familiar with the phenomena of musical sounds, that in those produced by the trained human voice and the string instruments of the orchestra, the "prime" tones are accompanied by a great number of upper partials, not prominent enough in the fundamental stops of the organ. The organ mixture adds these necessary partials. In the medium size organ, a 16 ft. Spitzflote, Quintaton or Gemshorn are recommended, and in larger instruments, the 16 ft. Violone or small scale Diapason is the logical stop for complete Diapason chorus ensemble.

MIXTURES

Mixture is the generic name for all compound harmonic-corroborating stops. The Mixture may be composed of two or more ranks of pipes, according to the tonal structure or appointment of the organ in which it is placed. The different pitches of the separate ranks and their breaks are dictated by that tonal structure. The presence of a Mixture of suitable size and appropriate composition and tonality is essential in every important division of an organ in which a proper scientific and artistic tonal structure is assayed, in order to impart a proper brilliance to the ensemble. There are many different types of Mixtures which should be selected in accordance with the tonal structure of the organ. Some of the most important Mixtures are the Full Mixture, Fourniture, Scharf, Plein Jeu, Cymbal and Sesquialtera.

GEMSHORN

The Gemshorn is clear, somewhat penetrating, between the quality of a Reed and a String. A most suitable stop as the softest voice in the Great Organ. As a Celeste combination of two ranks it is also very pleasing.

DULCIANA

Sweet singing, the soft silvery quality of the Dulciana is the reposeful voice. A second rank that may be drawn with the Dulciana and tuned slightly sharper in pitch to produce a wave effect is the Unda Maris.

FLUTE HARMONIQUE

Although the tones of the Flute Harmonique are not strictly imitative, they are clearer, more penetrating, and more valuable in combinations and registration of an assertive character. It is also most useful as a solo stop.

MILD OVERTONES

Flageolet 2′, Flautino 2′, Nasard $2^2/_3'$, Tierce $1^3/_5'$, Septieme $1^1/_7'$, Sifflote 1′, all add to the harmonic development in the upper registers to a softer degree than the Mixtures. Most useful in Choir and Positiv sections.

HOHLFLOTE

In a class by itself, imparting great firmness and tonal solidity to the unison foundation tone. The characteristics are a somewhat dull and hollow tone.

STRINGS

The Viola De Gamba and the Viole Celeste yielding a broad mild string tone are most useful in the Swell section. Other strings most effective when properly used are the Salicional, the Voix Celeste, the Viola, the Violina, the Cello.

KOPPELFLOTE

Excellent flute tonality for it is good mixing quality in combination with almost any other stop in the organ.

TROMPETTE

The tone of the Trompette to be true in character should have a certain amount of fire without resembling too much its orchestral counterpart.

TUBA MIRABILIS

The powerful tone of this stop makes it adequate only for large instruments. It is most impressive in grand climaxes.

FRENCH AND ENGLISH HORN

Marvelous imitative stops, but should not be included in any specification unless the organ were at least a large 3 manual with all necessary voices for proper tonal ensemble.

CLARINET

The counterpart of the orchestral instrument.

VOX HUMANA

Considering its value in refined registration, the Vox Humana (human voice) should find a place in organs of any pretension, but it should not be included in the scheme of an organ unless the essentials in the tonal structure are present.

CHORALBASS

A full and distinct tone used at 8′ and 4′ pitch to give definition to the Pedal section. The Pedal Octave and Super Octave accomplishes this same purpose.

16 Ft. PEDAL STOPS

The Bourdon, of the flute quality, is an essential stop. 16 ft. Reed stops, such as the Trombone and Double Trumpet, are much recommended even in 2 manual organs for coordinated bass ensemble. Next in line is the Contrabass, the Double Diapason and Violone.

32 FT. PEDAL STOPS

The 32 ft. Contra Fagotto is strongly recommended for the large organ, varying in size up to the climax of the 32 ft. Bombarde in the 4 manual organ. Next in importance is the 32 ft. Violone and the Contra Bourdon.

Appreciation from World Authorities

MARIO SALVADOR

Doctor of Music, Organist and Choir Director

St. Louis Cathedral

I am pleased to the utmost with the newly installed Kilgen Organ in the St. Louis Cathedral.

This organ was not designed to possess the characteristics of any particular school of thought. The tonal balance of the instrument is so remarkable because the foundation stops, upper work and mixtures—reeds, strings and solo work, all blend into a massive structure of organ tone. The tonal coloring of the instrument, as effected in both the individual pipes and the whole ensemble, has been carried out to the highest possible artistic standard.

Only those who will hear this organ can ever hope to appreciate its truly magnificent beauty.

I feel that this instrument is one of the greatest masterpieces of organ building.

ARCHDIOCESE OF DENVER

Denver, Colo.

MONSIGNOR JOSEPH BOSSETTI, V. G.

Director of Music

I express my complete satisfaction in the masterpiece you have created in the construction of the pipe organ at the Holy Ghost Church, Denver. The beauty of tone, the skillful imitation of the many instruments, the sonority of Diapasons, the brilliancy of the strings, the balance of the mixtures, the fullness of the ensemble make this organ a real work of art. The Kilgen firm is one of the very few who can still build a real church organ.

ROLAND BOISVERT

Musical Director

St. Benedict's, Louisiana

It is always a pleasure to perform on a Kilgen Pipe Organ. To all sincere music lovers the tone is the thing, and one of the outstanding qualities of the many Kilgens the world over is the beauty of its individual voices. Then, too, their blending is akin to a musical miracle. Little wonder that the organ industry has benefited by the many years of constant research that the generations of Kilgens have given to the musical world.

ST. GILES CHURCH

Oak Park (Chicago), Ill.

REV. L. W. FRAWLEY, *Pastor*

Our new organ completed last year has given perfect satisfaction since the installation.

Ever since the parish was organized in 1927, we have had a Kilgen organ. Over the years our pleasure has grown with its performance. Your Service Department has been most cooperative when called.

I can honestly recommend your instrument without reserve.

ST. PATRICK'S CATHEDRAL

New York City

As a member of the organ committee, I beg to state that the Kilgen Organ was selected after exhaustive examination of the instruments built by the best organ makers in the United States. We are entirely satisfied with our choice. These statements are made by the authority and with the full knowledge of Rt. Rev. Msgr. M. J. Lavelle, Rector of the Cathedral.

OUR LADY OF THE SACRED HEART CHURCH

San Diego, California

REV. MSGR. OWEN HANNON, V. F.

I feel that I speak not only for myself but for every member of the Parish when I say that we are most pleased with the organ installed by your company. I am sure that for generations to come it will be a continued source of high inspiration.

CHOATE SCHOOL

Wallingford, Conn.

DUNCAN PHYFE, *Director of Music*

I think that of all the organs the Kilgen Organ in St. Anthony's Church, Hawthorne, N. J., and St. Justin's, Hartford Conn., are the loveliest and best designed of the two and three manual organs I have heard.

CORPUS CHRISTI CHURCH

Newport, Ky.

REV. JOHN KROGER, *Pastor*

Some time ago you delivered to us a new Kilgen Organ. We are highly pleased with it. We realize fully that into this fine instrument went the highly skilled labor of many workmen and the experiences of generations of organ builders.

You may well be proud of your achievements.

MARCEL DUPRE

Paris, France

It is a pleasure to tell you how I enjoyed playing your splendid organ at St. Francis Xavier's Church in St. Louis. I congratulate you on its excellent accent and its fine voicing.

VILLA MARIA

Westchester, Pa.

SISTER M. MICHAEL JOSEPH

The organ is lovely and everybody is very much satisfied and happy over it.

PIETRO YON

Carnegie Hall, New York

I feel I am doing a service to churches by recommending Kilgen Organs. No other pipe organ builders have the great artists to produce tone-quality and to engineer perfection as your organization.

Your organ is far superior to anything on which I have ever played, having demonstrated this over and over again on my recital tours throughout the world. What more can I say about an organ than that it is a *Kilgen?*

ST. LOUIS CATHEDRAL

St. Louis, Mo.

RT. REV. MSGR. NICHOLAS BRINKMAN, *Rector*

It is now some two years since the grand Kilgen Liturgical Organ was completed in our Cathedral, and I want to express my appreciation to your organization for building one of the truly great organ masterpieces of modern times.

Not only our own internationally famous organist, Dr. Mario Salvador, but many visiting organists and musical authorities have enthusiastically praised this outstanding instrument.

It has adequately taken care of not only our Liturgical services but has also been the source of much religious inspiration at our Sacred Concerts.

I have heard many organs throughout the world, but I can truthfully say I consider the St. Louis Cathedral organ the finest I have ever heard.

THE VATICAN

Rome

REMIGO RENZI

First Organist of the Basilica of St. Peter in the Vatican

In Chicago I had the pleasure of playing your splendid organs. I found them of perfect construction and exceptionally suited for the requirements of Catholic Churches, demonstrating the superiority in tone and action of your organs.

I believe that you will be able to construct for the Basilica of St. Peter in the Vatican the *Greatest Organ* for the *Greatest Church* in the world.

ST. MARY OF THE HILLS CHURCH

Milton, Mass.

PATRICK J. FLAHERTY, *Pastor*

The organ is a beautiful instrument and I am delighted with it beyond expression. Your men were excellent to work with. It was a pleasure to deal with you and I appreciate your kindness.

REV. A. C. KEMPER, S. J.

St. Louis University

Let me express to you my personal satisfaction over your finished product in the church connected with our university. This organ has surpassed my expectations. The voicing and blending of the various elements are equal to any I have ever heard, and I have tried many organs.

LOUIS VIERNE

Paris

Organist of Notre Dame Cathedral

I was very glad to play your beautiful organ at Saint Francis Xavier's in Saint Louis and appreciate its tonal qualities.

ST. JOHN'S ANTIQUA, B. W.I.

REV. FATHER VANACKERE

Approximately 20 years ago your firm put an organ in the Roman Catholic Church of St. Kitts, Bassettorre, B. W. I., where the Belgian Redemptorists are parish priests. Up to now it is in perfect condition.

ST. FRANCIS DE SALES CATHOLIC CHURCH

Indianapolis, Ind.

REV. JOSEPH CLANCY, *Pastor*

Accomplished musicians at our organ dedication were enthusiastic in their praise of this fine instrument.

ST. JAMES CATHOLIC CHURCH

Philadelphia, Pa.

MRS. ANNA K. STUHLTRAGER, *Organist*

The enclosed clipping is from the "Evening Bulletin," the only evening paper in Philadelphia. After reading the favorable comments of this very conservative paper, I thought you would appreciate the fact that Father Joseph Muset was delighted with the tones of the Kilgen Organ at St. James Church. He especially mentioned the third cornet, twelfth, 2-2/3.

IMMACULATE CONCEPTION CHURCH

Butte, Montana

REV. NORBERT HOFF, *Pastor*

This letter is written after the dedication of our Kilgen Organ installed during the month of September. The new Immaculate Conception Church edifice was opened just before Pearl Harbor. Only with the installation of the organ could the church be completed. Through the trying years of the war and after the happy occasion of the organ dedication, rounding out the appointments and furnishings of the church was most eagerly awaited. The Kilgen Company's fulfillment of a firm contract made in full view of the inflationary possibilities in the midst of the war, is a fine tribute to the integrity of Kilgen transactions.

But what I wish more particularly to say concerns our satisfaction and delight in the possession of this instrument.

May I assure you that in the people and clergy of this parish you have proud and enthusiastic owners.

IF THAT which has been presented between these covers has interested you, we are recompensed for our effort. It is our story to the millions who listen with pleasure to the inspiring tones of The Kilgen.

However, if you are not among these millions, it is our hope that this brief treatise has created a desire for you to be. Then all that has been said will take on a new and more significant meaning.

We have included only a few of the thousands of testimonial letters that we have received from the leading organists of the world, from clergymen and from laymen.

We assure those who are interested in the selection of a pipe organ that this constitutes but a brief part of what might be learned about The Kilgen. A far greater understanding will be gained by discussing your needs with one of the well-informed, helpful organ architects representing us.

You will find these architects' advice both sound and dependable. A letter, saying that you are interested in selecting a pipe organ, will place the services of one of our representatives at your disposal.

The Kilgen Organ Company

Builders

Kilgen Organs

EXECUTIVE OFFICES AND PLANT
4632 W. FLORISSANT AVE. ST. LOUIS 15, MO.

PHONE, COLFAX 2000

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