Know all Men by these Presents, *That we,*

Skinner Organ Company (Incorporated) of Boston, Massachuetts, and United States Casualty Company,

bodies corporate in the law are held and firmly bound unto The City of Philadelphia, Trustee under the Will of Stephen Girard, deceased in the sum of Sixty-five Thousand ($65,000.00) Dollars, lawful money of the United States of America, to be paid to the said The City of Philadelphia, Trustee, as aforesaid, its Successors and Assigns, to which payment well and truly to be made we do bind ourselves and each of us our and each of our successors and assigns jointly and severally firmly by these presents.

Sealed with our Seals, the 4th day of August A. D. one thousand nine hundred and Thirty-one (19 31.)

Now the condition of this obligation is such that if the above bounden

— Skinner Organ Company (Incorporated) —

shall well and faithfully perform all and singular the stipulations of a certain Agreement made by it with the said The City of Philadelphia, Trustee, as aforesaid, August 4th, 1931 and shall and will in all respects well and properly comply with and fulfill all the obligations and conditions in said Agreement mentioned, and shall build and install an organ in the manner provided for in said Agreement

then this obligation to be void, otherwise to be and remain in full force and virtue.

SIGNED, SEALED, AND DELIVERED IN THE PRESENCE OF

Skinner Organ Company (Incorporated)
by George L. Carlin
Treasurer

UNITED STATES CASUALTY COMPANY
By J. Gilmore
Attorney in fact

SEAL

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This Agreement, Made and concluded the fourth

day of August Anno Domini one thousand nine hundred and **thirty-one (1931)**

Between The City of Philadelphia, Trustee **under the Will of Stephen Girard, deceased** acting herein by the Board of Directors of City Trusts, hereinafter called the ~~party of the first part and~~ **Purchaser and the Skinner Organ Company (Incorporated) of Boston, Massachusetts,**

hereinafter called the ~~part~~ ~~of the second part~~ **Builder**

— **Witnesseth:** —

That said ~~part~~ **Builder** ~~of the second part,~~ for and in consideration of the payment~~s~~ hereinafter stipulated and agreed to be made by the ~~said party of the first part,~~ **Purchaser** ha~~s~~ covenanted and agreed, and by these presents do~~es~~ for **itself, its successors and assigns**

covenant and agree to and with ~~said party of the first part, to~~ **the Purchaser, to build an organ**

in the manner, upon the terms and conditions as stipulated and provided in the Specifications hereto attached and which it is agreed shall be at all times regarded as a part of this Contract with the same effect as if here at length inserted, **in a thorough and artistic manner, and install it, according to said Specifications, in the Chapel building at Girard College, Philadelphia, Pennsylvania, complete in every detail and fully warranted, on or about August 1, 1932, unless thirty days before said date, Purchaser shall have given written notice to the Builder fixing another date for such installation, subject, however, to delays from fires, strikes or causes beyond the control of the Builder, and especially subject to delays from freight embargoes or other interferences.**

The Purchaser agrees that when the Builder is ready to proceed with the installation of the organ, the Purchaser will keep the building at a suitable temperature as required by the Builder and provide and allow the use of suitable electric current for tone regulation, tuning, testing and lighting; that he shall provide a condition of quiet within the building for the proper tone regulation of the organ, and that he shall hold the Builder harmless from interference with its workmen during the installation

The Purchaser further agrees to assume all risk of damage to the organ by fire, lightning, water, tornado or otherwise while contained in the said building and to insure the same in good reliable companies for the benefit of the parties hereto as their interests may appear.

The Builder agrees to assume all risk of damage to the organ by fire, lightning, water, tornado or otherwise up until the time of its installation in said Chapel building and to insure the same at its own expense in good reliable companies for the benefit of the parties hereto as their interests may appear. Provided however if it becomes necessary to store the organ as set forth in the next succeeding paragraph then the cost of said insurance during the period of said storage shall be paid by the Purchaser.

If the building is not in proper condition for the organ to be erected when the organ is ready for shipment, and it becomes necessary to place the organ in storage, to be held until the building is ready for installation, the Purchaser agrees to arrange for such storage in a proper place, provided of course that the organ builder does not complete said organ at the factory before the proper time for shipment, in accordance with contract date of completion.

It is mutually agreed that, in view of the fact that the presence of rubbish and dust, especially from plaster, and of noise or disturbance caused by workmen, when an organ is being erected causes not only immediate but future troubles in the functioning of any organ, the building in which the organ herein referred to is to be erected shall not be considered ready for the erection of said organ until the organ chambers and the adjacent parts of the building are entirely free from rubbish and dust. In other words, it is understood that the organ erection shall not be started until any other workmen liable to create rubbish, dust or disturbance shall be out of the way entirely, and furthermore, if after the organ erection men once start their work, they are interrupted by other workmen creating rubbish and dust, or making any disturbance, the losses in time and expense caused by the lack of proper conditions for organ erection and tuning, shall be paid by the Purchaser in addition to the contract price herein mentioned.

The Purchaser agrees to inform the Builder as to where the organ and console are to be located, and the dimensions of the spaces to be occupied before the plans or construction of the organ are begun. After these dimensions have been so determined the Purchaser shall not permit any changes to be made in the dimensions of the organ spaces, nor the installation of any obstructions such as pipes, beams, posts, etc., and shall reimburse the Builder for additional cost due to such changes or obstructions.

Upon the full and faithful performance of all of the terms and conditions of this contract and the building and installation of said organ to the entire satisfaction and approval of the Purchaser the said Purchaser agrees to pay to the Builder the sum of Sixty-five thousand Dollars ($65,000.00) as follows:

When the Manual Chests are built at the factory, the sum of Eleven thousand Dollars ($11,000.00).

When the principal portions of said organ are manufactured, ready to assemble in the factory of the Builder, Eighteen thousand Dollars ($18,000.00).

Upon the delivery at the said Chapel building at Girard College of the principal portions of said organ, Eighteen thousand Dollars ($18,000.00).

Upon the erection of said organ complete, in accordance with this Contract, the Purchaser agreeing to examine said organ in the presence of a representative of the Builder, the balance of said contract price, to wit, the sum of Eighteen thousand Dollars ($18,000.00), provided, however, that when said organ is ready for erection, and completion is held up by the inability for any reason of the Purchaser to have the installation proceed, all payments are due up to ninety (90%) per cent. of the contract price.

Builder agrees to return and pay back to the Purchaser all sums paid by Purchaser upon failure of Builder to fully comply with all of the terms and conditions of this contract.

Final payment shall not be withheld on account of minor adjustments for which the Builder is liable under its warranty, and shall be paid within thirty (30) days of the date that it is due.

Builder will not assign, transfer, or sublet this contract without written consent of the Purchaser first had and obtained.

Builder shall at the time of the execution and delivery of this contract, furnish and deliver to the Purchaser the bond of indemnity of a surety company satisfactory to the Purchaser, conditioned for the satisfactory building and installation by the Builder of said organ and the full and faithful performance by the Builder of all and singular the terms, conditions and provisions of this Contract.

In case any question or dispute between the parties hereto shall arise under this Contract, or touching the ~~quantity, quality, or value of any~~ building & installation of organ furnished thereunder, the same shall be referred to Chairman of Committee on Enlargement of Girard College whose decision shall be final and conclusive. And the said ~~party of the second part~~ Builder hereby waives and releases all right of action and suit at law or in equity under or by virtue of this Contract.

In Witness Whereof, The said ~~party of the first part~~ Purchaser hath caused these presents to be executed by the VICE President of the Board of Directors of City Trusts, and the said ~~party of the second part~~ Builder has caused its common or corporate seal to be hereto affixed attested by its proper officers

the day and year first above written.

SIGNED, SEALED, AND DELIVERED IN THE PRESENCE OF:

(signature) (as to F.S.B.)

(signature)

(signature)

(signature) SEAL

VICE *President of the Board of Directors of City Trusts.*

Skinner Organ Co. (Inc.) SEAL

by Ernest M. Skinner

Vice Pres. SEAL

attest: Geo. O. Kingsbury

Secretary SEAL

SEAL

APPROVED AS TO FORM

Joseph O'Gaffney

Solicitor.

APPROVED BY THE ~~BOARD~~ Committee FOR EXECUTION

(signature)

for the *Secretary.*

SKINNER ORGAN COMPANY, INC.

ORGAN ARCHITECTS AND BUILDERS FOR CHURCHES, AUDITORIUMS, THEATRES AND RESIDENCES

New York City July 20, 1931 7/20/31 NY

SPECIFICATION OF AN ORGAN PREPARED FOR

CHAPEL ORGAN GIRARD COLLEGE PHILADELPHIA, PENN.

****

GREAT ORGAN

32' Violone	5 Pipes
16' Diapason	61 "
8' Diapason #1	61 "
8' Diapason #2	61 "
8' Diapason #3 (In Choir Box)	61 "
8' Principal Flute	61 "
8' Stopped Diapason (In Choir Box)	61 "
8' Erzahler (" " ")	61 "
8' Erzahler Celeste (" " ")	61 "
8' Cello (" " ")	61 "
5-1/3 Quinte	61 "
4' Octave	61 "
4' Principal	61 "
2-2/3 Twelfth	61 "
2' Fifteenth	61 "
Chorus Mixture (4 Rks) 15, 19, 22, 26	244 "
Harmonics (4 Rks) 17, 19, 21b, 22	244 "
16' Trumpet	61 "
8' Tromba	61 "
4' Clarion	61 "
8' Trumpet (In Choir Box)	61 "

Solo High Pressure Reeds to Great

8' Harp }
4' Celesta } From Choir)

Chimes (From Solo)

SWELL ORGAN

16'	Bourdon	73 Pipes
8'	Diapason	73 "
8'	Geigen	73 "
8'	Kenzaulophone	73 "
8'	Salicional	73 "
8'	Voix Celeste	73 "
8'	Viol d'Orchestre	73 "
8'	Viol Celeste	73 "
8'	Flauto Dolce	73 "
8'	Flute Celeste	61 "
4'	Octave	73 "
4'	Flute Triangulaire	73 "
2-2/3	Nazard	61 "
2'	Flautino	61 "
	Mixture (5 Rks) 15, 19, 22, 26, 29	305 "
	Cornet (4 Rks) 8, 12, 15, 17	244 "
16'	Posaune	73 "
8'	Cornopean	73 "
8'	French Trumpet	73 "
8'	Oboe d'Amore	73 "
8'	Vox Humana	73 "
4'	Clarion	73 "
8'	Harp (From Choir)	
4'	Celesta (From Choir)	
	Chimes (Solo)	
	Tremolo	

CHOIR ORGAN

16'	Dulciana	73 Pipes
8'	Geigen	73 "
8'	Spitz Flute	73 "
8'	Concert Flute	73 "
8'	Viol d'Orchestre	73 "
8'	Viol Celeste	73 "
8'	Dulciana	12 "

CHOIR ORGAN (Continued)

8'	Unda Maris // Ch.	61 Pipes
4'	Octave Dulciana	12 "
4'	Flute d'Amore	73 "
2-2/3	Twelfth Dulciana	7 "
2'	Fifteenth Dulciana	6 "
2'	Piccolo	61 "
	Carillon Mixture (3 Rks) 12, 17, 22	183 "
16'	Bassoon	73 "
8'	Clarinet	61 "
8'	Orchestral Oboe	61 "
8'	Harp	61 Bars
4'	Celesta	
	Chimes (Solo)	
	Tremolo	

SOLO ORGAN

8'	Flauto Mirabilis	73 Pipes
8'	Gamba	73 "
8'	Gamba Celeste	73 "
4'	Flute	73 "
	Grand Fourniture (7 Rks)	427 "
16'	Contra Tuba	73 "
8'	Harmonic Tuba	73 "
8'	Tuba Mirabilis	73 "
4'	Clarion	73 "
8'	French Horn	73 "
8'	English Horn	73 "
16'	Corno di Bassetto	12 "
8'	Corno di Bassetto	73 "
	Chimes	25 Tubes
	Tremolo	

Skinner Organ Co.
by E.M.S.

ECHO ORGAN
Playable on Solo and Choir Manuals

8'	Diapason	73 Pipes
8'	Waldflote	73 "
8'	Echo Gamba	73 "
8'	Dulcet	73 "
4'	Flute Triangulaire	73 "
8'	Vox Humana	73 "
	Tremolo	

PEDAL ORGAN - Augmented

32'	Resultant	32 Notes
32'	Open Diapason	12 Pipes
32'	Violone	12 "
16'	Diapason	32 "
16'	Contra Bass (Violone)	32 "
16'	Metal Diapason (Great)	32 Notes
16'	Dulciana (Choir)	32 "
16'	Bourdon	32 Pipes
16'	Echo Lieblich (Swell)	32 Notes
8'	Octave	12 Pipes
8'	Gedeckt	12 "
8'	Principal	12 "
8'	Still Gedeckt (Swell)	32 Notes
4'	Flute	12 Pipes
	Mixture (5 Rks) 15, 17, 19, 21, 22	160 "
32'	Bombarde	12 "
32'	Fagotto	12 "
16'	Bassoon (Choir)	32 Notes
16'	Trombone	32 Pipes
16'	Fagotto	32 "
8'	Tromba	12 "
	Chimes (Solo)	

Skinner Organ Co.
by EMS.

C O U P L E R S

Swell to Great)
Choir to Great)
Swell to Choir)
Swell to Solo) Unison
Solo to Great)
Solo to Choir)
Solo to Swell)
Great to Solo)

Swell to Swell 4')
Swell to Swell 16')
Swell to Great 4')
Swell to Great 16')
Swell to Choir 4')
Swell to Choir 16')
Choir to Choir 4')
Choir to Choir 16')
Choir to Great 4') Octave
Choir to Great 16')
Choir to Great 5-1/3)
Solo to Solo 4')
Solo to Solo 16')
Solo to Great 4')
Solo to Great 16')
Great to Great 4')

* Swell to Pedal)
* Great to Pedal)
* Choir to Pedal)
* Solo to Pedal) Pedal
Swell to Pedal 4')
Solo to Pedal 4')
Choir to Pedal 4')
Pedal to Pedal 4')

* Also by reversible Pistons

COMBINATIONS

Adjustable at the console and visibly operating the draw stop knobs

SWELL - 1, 2, 3, 4, 5, 6, 7, 8, 0 Pedal to Manual On and Off
GREAT - 1, 2, 3, 4, 5, 6, 7, 8, 0 " " " " " "
CHOIR - 1, 2, 3, 4, 5, 6, 7, 8, 0 " " " " " "
SOLO - 1, 2, 3, 4, 5, 6, 7, 8, 0 " " " " " "
PEDAL - 1, 2, 3, 4, 5, 6, 7, 8, 0
GENERAL 1, 2, 3, 4, 5, 6, 7, 8, include couplers
COUPLERS 1, 2, 3, 4
Master Swell Coupler Reversible

All Diapasons
All Flutes
All Strings
All Reeds

Octave Coupler Cancel
General Cancel to include Crescendo and Tutti
All Couplers Off
Manual 16' stops off
Tremolo Cancel on Crescendo and Tutti
Pedal 32' stops off
Divided Pedal (Solo, Swell)

Skinner Organ Co. (Inc.)
by E.M.S.

PEDAL MOVEMENTS

Swell Expression
Choir Expression
Solo and Echo Expression
Crescendo Pedal
Sforzando, Pedal and Piston

SKINNER ORGAN COMPANY, INC.

DETAILS OF CONSTRUCTION

The builder warrants the action and construction in every particular, and agrees to make good any defects in materials and workmanship which may appear within five years.

Action to be electro pneumatic.

Casing of console to be of ~~native~~ American Black Walnut oak, or of any other native wood of equal value; of simple design to harmonize with the period of the architecture of the building.

An organist's bench of same material as console casing.

All basses of the larger winded stops on separate chests.

The organ builder is to furnish and install an electric blowing plant, consisting of a motor, blower, remote control self-starter where necessary, and generator for action current, all of ample size to meet any legitimate demand which may be made thereon by the instrument, according to the specifications.

The purchaser shall furnish a suitable foundation for the motor and blower, connect the motor and starting switch with the power current, install wiring from the console to the self-starter and connect same; do all cutting of floors, partitions, etc., and the running of conduits where required and wind conductors from the blower to the console and all organ chambers which may be necessary; and shall prepare the organ chamber in accordance with plans which shall be furnished by the organ builder.

The organ is to be erected in the building, tone regulated, tuned and left ready for use.

No organ case or front display pipe work is included.

Skinner Organ Co.
by E.M.S.

DETAILS OF CONSTRUCTION

KEYS The keys to be made of the best ebony and No.1 ivory. They shall be level and not inclined. The distance between the keyboards shall be 2 1/2" and each keyboard shall project 4 1/2" beyond the one above it.

The key springs shall be located under the forward end of the key. The upward movement of the key shall be limited by an adjustable stop, consisting of a brass wire, set in the under side of the front end of the key, and passing through the pin-block: a nut to be threaded to the lower end of the wire, and arranged to rest against the lower side of the pin-block when the key is up, so that any variation of the alignment of the pin-block, due to climatic changes, will be followed by the key. The keys shall be bushed wherever they come in contact with center or guide pins.

The contact shall be suspended between the pin-blocks and the forward end of the key and the fulcrum block at the rear end of the key in such a manner that any change in the alignment of the keys will be reflected in the contact supports, so that the contacts shall remain in permanent alignment relative to the keys.

The key-frames shall be hinged at the rear end in such a way that the keyboards may be raised conveniently to provide access for all mechanism associated with the keys.

STOPS The stops shall be operated by registers having solid ivory ends and ebony shanks. Registers to be set in register rods terminating at their ends at the rear in horizontal pivoted triangular links to prevent the binding of the registers. The purpose of the triangular link is to change the direction of the action from that of the register rods to that of the tie-rods between the triangular link and the lever, which is the direction parallel to the keys.

Means shall be provided in the register-rods for preventing the register from turning, and for limiting its movement both ways. The stop-jambs shall be perpendicular, and set at an angle of 45 degrees to the key-frames. They shall be arranged in distinctly separate groups, the registers for each group to be equally distant from each other, or in what might be called a "honey-comb" formation in order that the greatest possible number of registers may be brought within convenient reach of the hand without crowding. The groups shall be so arranged that they will be distinct from each other, and no group shall run below the key-frames sufficiently to be in any degree inaccessible.

COMBINATION MOVEMENTS - The combination movements shall operate the stops visibly, and they shall be adjustable at the console through a master piston, located beneath and at the left of the Choir keys. The manner of setting a combination shall be as follows:- Draw the combination of stops desired on a given manual, and, while holding the master piston, touch the combination piston upon which the desired combination is to be set; then release both.

All combinations are to be operated by electro-pneumatic agencies. Each manual to have its own separate and distinct power-pneumatic, so that, in going from one combination to another, there shall be no delay in response.

All connecting mechanism between the register and the adjustable combination mechanism to be made with good mechanical principles. No link in the chain of mechanism should perform the double function of carrying a movement in two directions at the same time. Tie-rods to engage from and with the triangular links at the rear end of the stop-rods extending backwards, level, and parallel to the key-frames and engaging at their rear ends with levers.

The adjustable combination device must consist of oscillating jacks, supported in jack-rods, arranged in groups, parallel to the key-frames. The jack-rods are to be connected to the stop movements by levers proceeding directly from said jack-rods to the corresponding tie and link. The combination-jacks to be arranged to be held in their extreme positions by a double-action spring, which will prevent their lodging on centers. The jacks, (which may be similar in principle to the original Duval device, but refined according to the best modern practice), to be moved from one position to another by means of pneumatic levers, placed above them, and affecting them one way or the other as the stop may be drawn in or out.

The jack-rods to be supported at each end by a hinged link, to insure freedom from friction and ease in operation. Contact wires to be arranged to engage with the link furthest from the draw-stop. Fans should be arranged to engage with the adjustable jacks, and to move them one way or the other in accord with the adjustment of the jack. Wood fans are to operate in pairs in opposite directions, and to be operated with the electro-pneumatics previously mentioned.

COUPLERS The couplers shall be operated by tilting tablets or draw-stops, in three groups: viz. - Pedal, Unison, and Octave. The Great to Pedal is to be operated by a reversible Pedal.

The coupler switches shall consist of electro-pneumatic rollers, containing the movable members of the contact switches. The movable contact members shall be located on the movable leaf of the pneumatic. The purpose of this design is to eliminate all tie-rods, links, or springs that may be liable to get out of adjustment.

CONTACTS All contacts throughout the entire mechanism to be so designed as to insure a slight, but not an excessive rubbing, thus insuring reliability. The circuits between key-contacts and coupler switches to be of #28 double cotton covered wire. #22 Annuciator wire may be used between the console and the junction-board, within the organ.

MAGNETS The key magnets are to be of the double-pole horse-shoe type. The winding on each pole to contain not less than one hundred ohms. ~~#35 silk or Beldenite insulated copper wire.~~ enameled

Action current 8 volts. Magnets 200 ohms resistance using 5/100 amperes on 7" pressure or under and 1/5 ampere on high duty pneumatics. This very small amperage insures no spark at contacts. Magnets tested in organ in actual use by ~~Mr. Hawley of~~ Hawley School of Engineering, Boston.

Armature valves shall be located above the magnets, in order that gravitation shall assist the magnet and not work against it. They shall consist of embossed discs, 3/4" in diameter, made of the best quality of Swedish iron. They shall be mounted in suitable receptacles, consisting of cell punched out of sheet brass, the thickness of which shall be equal to the thickness of the armature, plus its movement.

Above the armature, and resting on the brass cell, a wooden block is to form the closure of the armature cell, and block to be held in position by wood screws, surrounded by compression springs, to compensate for any variation in the thickness of the wood block, caused by atmospheric changes.

The armatures are to be cleanly surfaced and flat. They are not to be leathered, or covered with any substance to make them airtight. It is required that a perfect mechanical fit shall insure freedom from escape of air by the armature-valve, in order that irregularities, caused by particles of dust or dirt adherring to the leather, or variation in the thickness of the leather may not destroy the uniformity of movement of the armatures.

It is also required that the movement of the armatures shall not be over one-fiftieth (1/50) of an inch, in order that the lowest possible voltage may be used to operate the key-action, thus obviating sparking at the contact. The potential of the electric current operating the mechanism of the organ is not to exceed 8 volts at the magnet.

WIND CHESTS The wind chests shall be made on "a-valve-for-each-pipe" Principle, said valve to be operated, each by its own pneumatic. All of the valves of a given note in the scale of the wind chest to be controlled by a wind channel traversing the wind chest from front to back, and operated by said wind channel.

The wind chests to be double sized, and flooded through-out to prevent liability of checking or mal-operation. The groups of valves and associated pneumatics belonging to a given stop are to be mounted on a single removable block running lengthwise of the chest, and located directly beneath the pipes.

STOP ACTIONS The stop actions shall consist of means of severing the connection between a pipe pneumatic and its key channel and to be so designed that it will be equally as prompt as the key-action in its operation and fully as silent.

The passageway for the air from valve to pipes to be perpendicular in every case, passing directly through the top of the chest and not entering side-bars, (as is often done), thus causing friction and slow speech from the pipe.

The channels controlling the pipe-pneumatics are to be above the latter in the top of the chest. Each stop of pipes is to be racked on its individual "top-board", and the top-board is to be mounted on the table of the chest. The chests are to be stiffened-as to their length - by backbone members, not less than 8" in width, and 1/2" in thickness. The chambers formed by these members will be closed on their lower side by removable "bungs", through which an entire section (half-section) - of a complete group of pneumatics and valves may be removed for repair or renewal.

The pipe-valves shall be mounted directly on their associated diaphragm-pneumatics in such a way that the lower surface of the valve is isolated from the bellows-pressure when its associated key-channel is exhausted, in order to reduce the labor of the pipe-pneumatics, by removing the necessity for their working against the bellows-pressure, as happens when the bellows-pressure, works permanently against the valves.

The lower notes of all the 16' and large 8' stops are not to stand on the principal chest of the manual to which they belong, but shall be placed on auxiliary chests with the valves beneath them, said valves to be operated by a usual form of primary, which in its turn is to be actuated from a valve in the main wind-chest in the division to which the stop belongs. ~~The communication between the chests is to be tubular. Valves in the principal chest of a manual similar in character to the pipe-valves are to supply the tubes actuating the auxiliary chests.~~

RESERVOIRS Each manual division is to be supplied from its own separate reservoir, the pressure on same to be established principally by springs, co-operating with sufficient weight to make effective tremolos. Where a wind-chest is in two divisions, separate wind-trunks must convey the wind from the reservoir to each division. All the auxiliary chests shall be supplied with wind directly from the reservoirs belonging to their respective manuals.

Regulators must be provided and located in the blower room, next to the blowing apparatus, and as many regulators shall be

installed as there are pressures to be conveyed therefrom to the organ chambers. A basement regulator shall intervene between the blower and the division it supplies.

These regulators shall be separately supplied from the fan-blower, and shall separately convey the air through their wind trunks to their associated divisions of the organ. The object of the basement regulators is, through the action of their gates, to prohibit the sound of the blower passing into the wind trunks and thence into the organ and elsewhere.

WIND TRUNKS All wind trunks shall be of galvanized iron of not less than 28 gauge. They shall be retained at their terminals by hard wood collars of not less than 1" [redacted] in thickness, glued up, seven ply, and cross-grained. The wind trunk shall be held rigidly in its collar by an upset ring embossed in the wind trunk on the side of the collar away from the end of the trunk, and by expanding the trunk on the other side of the collar, so that the latter is practically dovetailed into the galvanized iron. The collars shall be bushed with the best heavy ~~alum tanned sheepskin~~ leather.

BLOWING MECHANISM This will be of the type known as the "ORGOBLO" the same to be driven by a slow speed motor. The motor equipment shall include an automatic starting box. The installation of the latter, however, and all wires in connection with driving or controlling the motor will be provided and installed and connected up by the purchaser.

SWELL SHADES The Swell shades shall be horizontal and glued up in strips, and shall fit perfectly. They shall be moved collectively by a single electro-pneumatic swell engine and not individually. The tie, or toggle, operating them collectively, shall consist of two strips, separated by blocks placed opposite the toggle-pins at their point of engagement with the folds. The intent of the construction is to prevent warping or twisting of the rods.

The Swell engine shall consist of eight (8) or sixteen (16) power pneumatics, each of which shall have its primary, secondary, and magnet. These power pneumatics shall each be operated by a wire communicating with a foot contact in the console, having an equal number of circuit breakers. There shall be no circuit breakers on the Swell engine, but the circuit shall remain closed throughout the entire system when they are closed at the foot piece. The foot piece shall be arranged to energize the motors in succession cumulatively, and the energy of the motors shall be conveyed to the common swell tie by means of floating levers, whiffle-trees, or bars, arranged transversely to the direction of the motion caused by said motors.-----

The end of each bar of the first system shall connect with the motors; if the number of motors is sixteen (16) the number of the first group of levers will be eight (8) as each lever embraces two (2) motors. A secondary group of four (4) levers shall, at their outer extremity, engage with the centers of the primary group of levers; a third shall engage at its center with the swell-shades by means of the usual levers, rolls, and links. The swell shades shall be opened by springs. By the arrangement described, the movement of the swell is divided into sixteen (16) equal parts.

The toggles of the swell shades shall be so designed that any given division of the total movement of the swell engine will be equal to the movement of any other division. In other words, the movement of the swell shades shall be divided into sixteen (16) uniform divisions, in order that the musical effect of the Crescendo may be devoid of any explosive or jerky impression.

Skinner Organ Co. (Inc.)
E. Ems.

TREMOLOS, Tremolos must consist of the arrangement of motor and valve, similar in character to the old fashioned French tremolo or the English form, shown in "SKINNER MODERN ORGAN" page 7, plate 6.

They shall be connected to the reservoirs and not to the chests. The connection shall consist of a galvanized iron conductor 2" in diameter, and not less than 10' in length. Gates shall be provided within the conductor where it enters the reservoirs, in order to govern the amount of air entering the conductor. The tremolo should also be provided with a regulating slide on the top on its movable leaf to govern the amount of air escaping from the tremolo, and equipped with mufflers.

REEDS The reeds shall have heavy blocks throughout. All the larger weighted reeds are to have their weights attached to the tongues by a screw, of which the head is on one side of the tongue and the weight on the other. No leathering of the eschallots will be employed.

All reed tongues to be full spring brass. All reeds run to top G. of the keyboards. Tuba Mirabilis reeds to top C. of keyboard. All wood pipes larger than 2'C tongued and grooved. All wood pipes larger than 2'C have lips and ears tongued, grooved and spliced.

CONSOLES - PEDAL BOARD, ETC.

The toe board of the console shall be curved on a radius of which the center is common to the radius of the pedals. All curved basses caps, panels, etc., shall be glued upon curved forms, and not sawed out of the solid. Body of the pedal keys shall be of maple. They shall not be more than 1-1/8" in width on their upper surface. The naturals shall extend to the full length of the visible portion of the key, with sufficient allowance for clearance only.

The sharps to be 6" in length, 2" in height at the front and 2 1/2" at the back making a slope of 1/2". The body of the sharps shall be of black walnut and the tops capped with the best quality of ebony. Sufficient space shall be left between the back of the pedal sharps and the toe-board for the accommodation of the swell-shoes, toe pistons, etc., and none of the mechanical pedals shall overhang the pedal keys.

The Swell and crescendo shoes shall be rectangular in form, perfectly flat, and hinged on both sides to give stability and covered with rubber matting of a suitable character.

All brass work throughout shall be lacquered. All wood pipes shall be double-coated with shellac and rubbed down. All metal pipes shall be lacquered and the top and bottom surfaces of the keys shall be double-coated with shellac, and rubbed down.

Magnets set in boards of hard Maple.

All wind ways screws fitted with absorption springs.

Manual chests on rollers and fastened to frames at one side only to permit effects of atmospheric changes on wood. All pedal chests spliced at both ends. All soft wood used clear highest grade California Sugar Pine. Frames, sills and swell boxes of best obtainable Spruce.

All moving parts and friction points, etc., in console bushed with finest billiard cloth.

A most rigid adherance to first class workmanship, finish and reliability will be observed by the builder throughout the entire work.

The foregoing specifications consist of pages 1 to 12 inclusive.

Skinner Organ Co. Inc.

Board of Directors of City Trusts

(SEAL) (SEAL)

Contract Questionnaire

Date:

In reference to Contract No. with

Girard College Phila. Pa

to which this sheet must be attached, please answer the following questions so that our records may be clear.

1. Are we committed to any commission to anybody on this contract?
   If so, to whom, how much and when payable?
   H. L. Banks Jr. $ 3000 as payments rec'd by us.
2. Are we committed to any free organ recital? no
3. Is there any unsettled question regarding front pipes or grille work?
   Are we to submit designs or estimates for either?
   no
4. Is the organ to be installed in a new building, the completion of which is doubtful? yes
5. Are the organ chambers in condition to be measured by our Engineer? no
6. Are there any engineering matters which require immediate attention? "
   See a.P.M.
7. Is there an old organ to be disposed of? no Does it belong to us or is the church to remove it before we start installation?
8. Give approximate dimensions of auditorium including inside height of roof.
   See plans
9. Will organ be in chamber or chambers? yes If so, has latter good openings? yes
10. Is there any resonance or echo? ? If so, how many seconds?
11. Have walls or roof been treated with acoustical material?
    See Encs.

Please note any further information which we should have that is not embodied in the contract.

Signed by R. A. White