

CONTRACT  
SPECIFICATIONS  
AND STRUCTURAL DETAILS  
of a  
**KIMBALL ORGAN**  
for

MUNICIPAL MEMORIAL

AUDITORIUM

WORCESTER

MASSACHUSETTS

Manuals, Four, compass CC to C4 . . . 61 notes  
Pedals, compass CCC to G . . . . . 32 notes  
Console type, English, with roll top  
Stop control, Ivory draw knobs and tilting tablets  
Combinations, adjustable at the console, remote control system

**W. W. KIMBALL COMPANY**

Established 1857

Kimball Hall · Chicago

665 Fifth Avenue  
New York

# W. W. KIMBALL COMPANY

Number 32416.

Page 2.

Name of stop. Pitch. Pipes. Materials and remarks.

<u>Manual II</u>		<u>G R E A T</u>	<u>Open section</u>
Contra Gemshorn	32'		from Gemshorn 16', to tenor C
Double Diapason	16'	61	37 diapason metal, 24 zinc
Gemshorn	16	12	zinc, extending Gemshorn 8', tapered to $\frac{1}{8}$ (guide
Diapason I	8	61	49 heavy diapason metal, 12 heavy zinc, double lan-/
Diapason II	8	61	51 heavy diapason metal, 10 heavy zinc
Diapason III	8	61	49 diapason metal 35% tin, 12 zinc
Harmonic Flute	8	61	49 spotted metal, 12 zinc
Gemshorn	8	61	49 spotted metal, 12 zinc, tapered to $\frac{1}{8}$
Quint	5 $\frac{1}{2}$	61	56 diapason metal 35% tin, 5 zinc
Octave I	4	61	diapason metal 35% tin
Harmonic Flute	4	12	spotted metal, extension 8'
Tenth	3 $\frac{1}{5}$	61	diapason metal 35% tin
Twelfth	2 $\frac{2}{3}$	61	spotted metal
Fifteenth	2	61	spotted metal
Mixture (Plain Jeu)	7	305	spotted metal (15-19-22-26-29 - in five breaks)*
Harmonic Trumpet	8	61	56 reeds, spotted metal and zinc bells
Chimes	8	25	Deagan class "A" tubular bells, Kimball double-strength piano type action with loud and soft and individual and collective damper controls

<u>Manual II</u>		<u>G R E A T</u>	<u>Enclosed section</u>
Contre Basse	16'	61	wood, slender scale, bearded, open throughout
Diapason IV	8	61	49 spotted metal, 12 zinc
Viola	8	61	49 spotted metal, 12 zinc
Doppelflöte	8	61	wood, stopped, double mouths (or Stopped Flute)
Melodia	8	12	open wood, exten. Contre Basse, inverted mouths
Octave II	4	61	spotted metal
Flute Couverte	4	61	open wood and spotted metal
Super Octave	2	61	spotted metal
Harmonics	7	305	spotted metal (12-17-19- <sup>b</sup> 21-22 - in five breaks)*
Contra Tromba	16	61	61 reeds, diapason metal and zinc bells
Tromba	8	61	61 reeds, diapason metal and zinc bells
Tromba Clarion	4	61	49 reeds, diapason metal and zinc bells
Harp	8		from Choir
Celesta	4		from Choir
Tremolo			

NOTES: The Double Languid Diapason has a pronounced and balanced harmonic development, a diapason chorus in itself. The Great Diapason build-up is based on the scale of Diapason II.

\* The Great Mixtures do not break on the same notes, nor have they the same breaks as other Mixtures in the organ.

# W. W. KIMBALL COMPANY

Number 32416.

Page 3.

Manual IIIS W E L LEnclosed.

Contra Geigen	16'	73	49 spotted metal, 24 zinc (Viola Diapason tonality)
Rohrbordun	16	12	wood, extension Rohrflöte
Diapason	8	73	61 diapason metal, 12 zinc
Geigen Diapason	8	73	61 spotted metal, 12 zinc
Clarabella	8	73	wood, all open, regular mouths
Rohrflöte	8	73	12 wood, 61 spotted metal, with chimneys
Spitzflöte	8	73	61 spotted metal, 12 zinc, tapered to $\frac{3}{8}$
Flute Celeste	8	61	spotted metal, tapered to $\frac{3}{8}$
Viola da Gamba	8	73	61 spotted metal, 12 zinc
Viole d'Orchestre	8	73	64 pure tin, 9 zinc
Salicional	8	73	62 spotted metal, 11 zinc
Voix Celeste	8	73	62 spotted metal, 11 zinc
Octave (Geigen)	4	73	spotted metal
Harmonic Flute	4	73	spotted metal
Chimney Flute	4	12	spotted metal, extension Rohrflöte
Violina	4	12	spotted metal, extension Salicional
Nasard	2 $\frac{3}{8}$	61	spotted metal
Fifteenth	2	61	spotted metal
Flautina	2		spotted metal, extension Rohrflöte
Tierce	1 $\frac{3}{8}$	61	spotted metal
Mixture (Fourniture)	V	305	spotted metal (15-19-22-26-29 - in four breaks)*
Double Trumpet	16	73	68 reeds, diapason metal and zinc bells
Contra Fagotto	16	12	reeds, diapason metal and zinc bells, exten. Oboe
Cornopean	8	73	56 reeds, diapason metal and zinc bells
French Trumpet	8	73	56 reeds, spotted metal and zinc bells
Oboe	8	73	53 reeds, spotted metal and zinc bells
Vox Humana	8	73	53 reeds, spotted metal bells.
Clarion	4	73	44 reeds, spotted metal and zinc bells
Harp	8		from Choir
Celesta	4		from Choir
Tremolo			
Vox Humana Vlnratp			

NOTE: \* See note on page 2.

Scales and wind pressures for this organ have been worked out tentatively after discussion and study of the plans, definite decisions to depend upon physical and acoustical conditions and the effects desired. All details are to be submitted to and approved by the consulting organist in advance of execution, as well as passed upon by him and the Committee for acceptance. Wind pressures will range from 5", through 6", 10", 12", 15" to 20" and 25" or 30" and are not set arbitrarily at this time.

# W. W. KIMBALL COMPANY

Number 32416.

Page 4.

Manual ICHOIREnclosed.

Double Dulciana	16'	73	49 spotted metal, 24 zinc	(scales		
Horn Diapason	8	73	61 diapason metal 53% tin, 12 zinc, tapered 5 /			
Concert Flute	8	73	wood, 12 stopped, 61 open, harmonic, inverted mouths			
Cor de Nuit	8	73	61 spotted metal, 12 zinc, stopped			
Dulciana	8	12	spotted metal, extension Double Dulciana			
Unda Maris	8	73	61 spotted metal, 12 zinc			
Viola	8	73	61 spotted metal, 12 zinc			
Violes d'Amour II	8	146	128 pure tin, 18 zinc			
Traverse Flute	4	73	wood and spotted metal, harmonic			
Dulcet	4	12	spotted metal, extension Dulciana			
Octave Violes II	4	24	pure tin, extension Violes d'Amour II			
Nasard	2 $\frac{3}{8}$	61	spotted metal			
Piccolo	2	61	spotted metal			
Dolcetin	2		spotted metal, extension Dulciana			
Tierce	1 $\frac{3}{8}$	61	spotted metal			
Larigot	1 $\frac{3}{8}$	61	spotted metal			
Septieme	1 $\frac{1}{7}$	61	spotted metal			
Twenty Second	1	61	spotted metal			
Mixture	III	183	spotted metal (15-19-22 - in three breaks)*			
Bassoon	16	12	reeds, spotted metal and zinc bells, exten. Eng. Horn			
Trompette	8	73	56 reeds, spotted metal and zinc bells			
Clarinet	8	73	53 reeds, spotted metal bells			
English Horn	8	73	53 reeds, spotted metal and zinc bells			
Harp	8	61	{ Deagan de luxe metal bars with resonators, Kimball	{ action with individual and collective damper con-		
Celesta	4				61	{ trols and pressure regulator
Tremolo						

NOTE: \*See note on page 2.

# W. W. KIMBALL COMPANY

Number 32416.

Page 5.

Manual IVSOLOOpen section

Tuba Magna	8'	75	61 reeds, heavy diapason metal and zinc bells
------------	----	----	---

Manual IVSOLOEnclosed section

Contra Gamba	16'	75	49 spotted metal, 24 zinc
Orchestral Flute	8	75	open wood
Violoncello	8	75	61 spotted metal, 12 zinc
Gamba	8	12	spotted metal, extension Contra Gamba
Gamba Celesta	8	75	61 spotted metal, 12 zinc
Orchestral Flute	4	12	spotted metal, extension 8'
Gambette	4	12	spotted metal, extension Gamba
Ophicleide	16	75	75 reeds, diapason metal and zinc bells
Tuba Mirabilis	8	75	61 reeds, heavy diapason metal and zinc bells
Military Trumpet	8	75	61 reeds, spotted metal and zinc bells
French Horn	8	75	49 reeds, diapason metal bells
Orchestral Oboe	8	75	55 reeds, pure tin bells
Tuba Clarion	4	24	spotted metal, extension Ophicleide
Chimes	8		from Great
Harp	8		from Choir
Celesta	4		from Choir
Tremolo			

# W. W. KIMBALL COMPANY

Number 32416.

Page 6.

		<u>P E D A L</u>	<u>Open section</u>
Major Bass	32'	12	large wood, extension Bourdon
Contra Violone	32'	12	open wood, bearded, extension Violone
Diapason I	16	32	open wood, large scale
Diapason III	16	32	12 heavy diapason metal, 20 heavy zinc
Violone	16	32	17 open wood, bearded, 15 spotted metal
Bourdon	16	32	stopped wood, large scale
Gemshorn	16		metal, from Great
Quint	10 $\frac{2}{5}$		wood, from Bourdon
Octave I	8	12	wood, extension Diapason I
Principal	8	12	heavy diapason metal, extension Diapason III
Violoncello	8	12	spotted metal, extension Violone
Stopped Flute	8	12	wood, extension Bourdon
Gemshorn	8		spotted metal, from Great
Octave Quint	5 $\frac{1}{2}$	32	diapason metal
Super Octave	4	12	diapason metal, extension Diapason III
Stopped Flute	4	12	wood, extension Bourdon
Mixture	IV	128	diapason metal 33 $\frac{1}{2}$ % tin (15-17-19-22)
Trombone	16	32	reeds, heavy diapason metal and zinc bells
Tromba	8	12	reeds, extension Trombone
Tromba Clarion	4	12	reeds, extension Tromba
Chimes	8		from Great

		<u>P E D A L</u>	<u>Enclosed section</u>
Diapason II	16'	32	wood, medium scale, bearded
Viola Diapason	16		metal, from Swell
Contre Basse	16		wood, from Great
Contra Gamba	16		metal, from Solo
Double Dulciana	16		metal, from Choir
Lieblich Gedeckt	16		wood, from Swell
Octave II	8	12	wood, extension Diapason II
Open Flute	8		wood, from Contre Basse, Great
Gamba	8		metal, from Solo
Gamba Celeste	8		metal, from Solo
Dulciana	8		metal, from Choir
Stillgedeckt	8		wood, from Swell
Open Flute	4		wood, from Contre Basse, Great
Gambette	4		metal, from Solo
Contra Bombarde	32	12	reeds, metal and zinc bells, extension Bombarde
Bombarde	16	32	reeds, metal and zinc bells
Ophicleide	16		reeds, from Solo
Contra Tromba	16		reeds, from Great
Double Trumpet	16		reeds, from Swell
Contra Fagotto	16		reeds, from Swell
Bassoon	16		reeds, from Choir
Tuba Quint	10 $\frac{2}{5}$		reeds, from Ophicleide
Bombarde Octave	8	12	reeds, extension Bombarde
Tuba	8		reeds, from Ophicleide
Bombarde Clarion	4	12	reeds, extension Bombarde.

NOTE: All manual stops playable on Pedal to be marked clearly with the chamber.  
All extended stops to be marked clearly as to derivation.

**W. W. KIMBALL COMPANY**

Number 32416.

Page 7.

COUPLERSInter-manual couplers by tablets over keyboards.  
(First two columns)Intra-manual couplers by draw knobs  
with their manual stop groups, subject  
to their manual combination actions.

Great to Pedal 8'	Great to Solo 8'	Swell to Swell 16'
Swell to Pedal 8'	Swell to Solo 8'	Swell to Swell 8' off
Choir to Pedal 8'	Swell to Solo 4'	Swell to Swell 4'
Solo to Pedal 8'	Open Great to Choir 8'	Choir to Choir 16'
Great to Pedal 4'	Enclosed Great to Choir 8'	Choir to Choir 8' off
Swell to Pedal 4'	Swell to Choir 16'	Choir to Choir 4'
Choir to Pedal 4'	Swell to Choir 8'	Solo to Solo 16'
Solo to Pedal 4'	Swell to Choir 4'	Solo to Solo 8' off
Swell to Great 16'	Solo to Choir 16'	Solo to Solo 4'
Swell to Great 8'	Solo to Choir 8'	
Swell to Great 4'	Solo to Choir 4'	
Choir to Great 16'	Solo to Great 16'	
Choir to Great 8'	Solo to Great 8'	
Choir to Great 4'	Solo to Great 4'	

REVERSIBLES

Pistons below respective manuals, duplicated by two pistons:	Great to Pedal 8'	Pistons:)	32' stops off pedals
	Swell to Pedal 8'	)	16' stops off manuals
	Choir to Pedal 8'		
	Solo to Pedal 8'		

Pistons, duplicated by toe pistons:)

- Master expression tablet
- Sforzando
- Mezzo

ADJUSTABLE COMBINATIONS

Ten pistons affecting Great and Pedal stops and couplers #  
 Ten pistons affecting Swell and Pedal stops and couplers #  
 Ten pistons affecting Choir and Pedal stops and couplers #  
 Ten pistons affecting Solo and Pedal stops and couplers #  
 Ten pistons or two pistons affecting Pedal stops and couplers #  
 Twelve general pistons affecting stops, couplers and tremolos of entire organ  
 General cancel piston  
 Tremolo cancel piston  
 Inter-manual coupler cancel piston  
 Combination setter piston, with lock and key

# On and off pistons or tablets connecting intra-manual couplers to manual pistons  
 # On and off pistons or tablets connecting all couplers to manual pistons

On and off pistons or tablets for each manual, connecting corresponding Pedal combinations to manual pistons, OR--  
 Manual pistons to be double touch, bringing corresponding Pedal combinations on second touch (optional systems)

**W. W. KIMBALL COMPANY**

Number 32416.

Page 8.

ACCESSORIES

Balanced expression pedal for enclosed Great and related Pedal organs  
 Balanced expression pedal for Swell and related Pedal organs  
 Balanced expression pedal for Choir and related Pedal organs  
 Balanced expression pedal for enclosed Solo and related Pedal organs  
 Four locking slides to connect any or all expression to any expression pedal  
 Master expression tablet connecting all expression to designated expression pedal with-  
 out moving slides (also controlled by reversible piston and toe piston - tablet  
 can be set on general combinations)  
 Balanced Crescendo pedal affecting entire organ, or as elected, with selected unison  
 couplers coming on as desired, cutting out tremolos at determined point, cutting  
 out percussion stops, provided to handle six set-ups  
 Sforzando or Full Organ pedal or toe piston, reversible, duplicated by piston, cutting  
 out tremolos and percussion stops  
 Mezzo pedal or toe piston, reversible, duplicated by piston, cutting out tremolos  
 and percussion stops  
 ALL OFF, piston operating general cancel, the "off" side of Sforzando and Mezzo, and  
 pushing off Crescendo, clearing the organ completely  
 Chimes dampers control, reversible or locking  
 Chimes soft control, reversible or locking  
 Harp sustaining pedal, free and locking inward  
 Indicators for position of balanced expression pedals  
 Graduated indicator for position of balanced Crescendo pedal  
 Action current indicating light or voltmeter  
 Indicators for all blind movements not otherwise specified  
 Signal button (for conductor)  
 Signal light (from conductor)  
 Organ bench, adjustable for height (with adjustable back if desired)  
 Music rack and pedal lights and switches  
 Motor starter buttons  
 Clock

DISPLAY PIPES, non-speaking, sufficient to cover an area of 6 ft. by 30 ft. on each  
 side of each grille (four groups in all) or a total of say 720 sq. ft., are included  
 in this contract. These pipes are to be of zinc, furnished with sills and racks,  
 and finished with "French gold bronze."

The console may be movable without extra charge.

The privilege of modification of these specifications exists by mutual consent, any  
 modification to be approved by both parties.

It is the intention of the organ builder to make this the nearest approach to perfec-  
 tion, the organ best suited to its surroundings and purposes in New England, to which  
 and the criticism and cooperation of the Committee and Consultant are earnestly desired.  
 The Printed Structural Details following are as much a part of this contract as are  
 the specifications covering pages 1 to 8. Whatever promises to facilitate the handling  
 of the organ will be considered. The modern trend toward sound, legitimate, resource-  
 ful organs, and away from merely clever stunts and attachments is recognized. This  
 company has invented, developed and introduced many, if not the majority of organ con-  
 trols that have found favor with experienced organists.



**W. W. KIMBALL COMPANY**

Number 32416

Page 9.

Kimball Organs are designed by us and built in our own factory in accordance with the following general

**STRUCTURAL DETAILS:****CONSOLE**

- CASE** Console case and bench to be native hard wood, finished as ordered. The visible interior of console to be mahogany or other hard wood, finished as ordered.
- All inside woodwork to be finished with three coats of lacquer.
- KEYS** Manual keys to be sugar pine, naturals surfaced with genuine ivory, sharps to be ebony. Pedal keys to be hard maple with removable faces, the sharps to be black (impregnated). Manual keyboards inclined, and hinged; pedal keyboard concave and radiating, hinged and removable.
- Manual and pedal key springs to be located at front of key. Key motion to be regulated from front of key.
- Manual and pedal keys to be bushed with first quality bushing cloth.
- MEASURE-  
MENTS** Manual key tips 4" apart horizontally and 2½" vertically. Face of center pedal natural 29½" below tip of lowest manual natural. Nose of center pedal sharp on four and five manual organs 11" forward of a plumb line dropped from tip of lowest manual natural key; three manual organs 9¾" forward; two manual organs 8" forward.
- CONTROLS** The stop controls to be draw knobs with solid ivory heads on ebony shanks, solid ivory tablets, or standard molded stop keys. Draw knobs to move in a straight line in velvet bushings. Stop keys with their regulating machine-screws and springs to be mounted in individual die-cast metal frames. Movement of all stop controls each way past center to be assisted by toggle springs, and motion cushioned by heavy felt.
- Each group of combination pistons, with contacts and springs, to be located in a removable frame screwed to the front of manual pin rail. Toe pistons, with springs and contacts, to be self-contained removable units with metal studs. Balanced pedal assembly to be a self-contained removable unit. Pedals to be mounted on hardened steel shaft in machined bronze bearings, lubricated from ball oil-cups sunk in pedal face. Pedals to have individually adjustable tension.
- Locking and reversible pedals, with springs and contacts, to be self-contained removable units of cast brass.
- All metal fittings in console to be heavily plated with non-corrosive metal.
- All lettering on stop controls to be engraved.
- Indicators to be provided for all blind movements.
- VERMIN  
PROOFING** Openings cut for balanced pedals and pedal keyboard to be solidly enclosed.

**W. W. KIMBALL COMPANY**

Number 32416

Page 10

**ORGAN**

<b>FRAME WORK</b>	Floor sills and building frame to be sound, clear Douglas fir, finished with three coats of lacquer.
<b>WIND CHESTS</b>	All wind chests to be made of No. 1 white pine, finished inside and out with three coats of lacquer. All channeling and boring to be sealed airtight inside by soaking in hot varnish. The windchests of manuals affected by octave couplers to be extended one octave above the compass of the keyboards, to 73 notes.
<b>REGULATORS</b>	All regulators to be made of No. 1 white pine, finished with three coats of lacquer, leath- ered inside and outside at hinges and gussets with alum-tanned sheepskin. Regulators to be equipped with three control valves of graduated sizes, operated in succession by the regulator top.  Wind pressures to be obtained by coiled springs and felted, screwed-on weights.  Silencing regulators to be installed in the blower room, wherever required, one for each blower outlet.
<b>WIND TRUNKING</b>	Small wind trunks to be made of metal with heavy metal collars, lacquered finish.  Large wind trunks to be made of No. 1 white pine with hard wood collars and reinforced flexible joints. Collars to be packed with felt and leather and screwed in place.
<b>EXPRESSION SHUTTERS</b>	Expression shutters to be laminated chestnut not less than 2" thick, with double felted edges. They are to be fitted with adjustable oiled bearings.
<b>TREMOLOS</b>	Tremolos to be of the pneumatic valve type, made of No. 1 white pine, finished with three coats of lacquer, fitted with mufflers and means of regulating speed and strength of beat independently.
<b>FINISH</b>	All other wood work, also metal wind trunking, to be finished with two coats of lacquer; except expression shutters, which are given a dark color finish that does not reflect light.
<b>LUMBER</b>	All lumber used to be seasoned in the open air two years or more, then slowly and evenly dried to a moisture content of 4½% to 6% (depending upon use) in modern humidifying kilns.

**ACTION DETAILS**

<b>ELECTRICAL SYSTEM</b>	The electrical system complies in every respect with the regulations of the National Board of Fire Underwriters.
<b>CONTACTS</b>	Key, relay and stop action contacts to be made of silver .925 fine. One element to be spring silver wire and the other a plate faced with a silver bar, both elements to have cylindrical surfaces meeting at right angles with a gentle rubbing motion.  Braided feed wires are to be soldered onto contact plates, which are to be mounted directly on the parts moving them.
<b>WIRING</b>	All wiring, except internal wiring in switchboard and relay, to be machine-spun moisture- and flame-proof cables, made (with color code) to the following specifications:  <i>Primary Cables</i> No. 24 B & S gauge tinned copper wire, double cotton covered, wax-impregnated, four opposed wrappings of waxed paper, tight machine-braided cotton cover, coated with flame-proof slate finish.  <i>Main Cables</i> No. 24 B & S gauge tinned, enameled copper wire, single cotton covered, wax-impregnated, six opposed wrappings of waxed paper, tight machine-braided cotton cover, coated with flame-proof slate finish.

# W. W. KIMBALL COMPANY

Number 52416

Page 11

- MAGNETS** Magnets to be of the hair-pin pole type, made to the following electrical and mechanical specifications:
- Cores* Norway iron, annealed after bending.
- Coils* Wound with No. 40 enameled copper wire, with soldered-on stranded terminal wires tied to core. Total resistance 400 ohms, current consumption 1/27 ampere at 15 volts. Coils to be slipped onto core after bending. Coils to have protective covering.
- Base* Base to be a seamless aluminum die-casting. Air ports to be screened. Core and coil assembly to be pressed into base.
- Valve Seat* Die-cast Bakelite.  
Valve seat to be raised to form a dirt trap.
- Armature* To be 7/16" in diameter, .020" thick, weighing 1/73 ounce.  
To be punched from Armco iron sheets, flattened, tumbled and copper plated.  
To be left bare of any packing material, and to seat against non-corrosive, non-metallic materials.  
To have a fixed motion of .020".
- SWITCHES** Switches to be made of hard maple, with switch combs mounted on moving leaf of operating pneumatic, which is to be attached directly to primary action box, and is easily removable. Switch plates heavily plated with silver, set in low cut grooves in switchboards.
- PRIMARIES** Manual primaries to be built into bottom boards of chests. Pedal primaries to be built onto face boards of chests. Magnets to be set vertically with armatures held normally in the off position by gravity. All primaries to be held in position with expansion springs and to be silenced with muffler boxes. Primary pneumatics to be covered with best selected English pneumatic leather.
- VALVES** Valves to be discs of felt and leather backed by discs of compressed fibre, all felt to be poisoned against insects.
- CHEST ACTION** Manual wind chests to be of the individual valve type with individual top boards for each set of pipes. Each group of valves, with their diaphragms, is to be mounted on a removable unit attached directly to the top board of the chest.  
Each pipe is to be set directly over its valve, with a straight, vertical wind channel.  
Pipe valves to be glued directly onto best selected English pneumatic leather diaphragms.  
Valve springs to be phosphor bronze, conical and self-centering.  
The large pipes of the 16' and 8' stops are to be set off on separate chests, each pipe having its individual magnet, primary and valve, no set-off pipe to be tubed to the main chest.  
Each pedal pipe to have its individual magnet, primary and valve.
- STOP ACTION** The stop action (except in the case of pipes with individual electric primaries controlled through switches) is to be operated by pitman valves, one for each pipe, placed in the action channels of each set of pipes. It is to be as positive, quick and quiet as the key action.  
Pitman valves to be suede leather. Pitman tails to be graphited and tumbled. Pitman seats and guides to be graphited and burnished. Pitman action boxes to be attached directly to the diaphragm valve boards, and the whole assembly to be attached to the top board of the chest by screws with expansion springs.
- SWELL ACTION** The swell action (expression) to be of the individual shutter type, with shutters opening in succession, each shutter equipped with an individual pneumatic motor and adjustable bumper. The motion of shutters to be adjustable. The shutter primaries and motors to be located inside the organ chambers and to be fitted with mufflers.
- COMBINA-** The combination action to move the stop controls and to be adjustable instantly at the con-

# W. W. KIMBALL COMPANY

Number 52416

Page 12

## PIPES

All pipes to be made and voiced in the Kimball Factory.

### METAL PIPES

The following metals to be used: (The tin content given is the minimum in each class; some diapason metals, for example, run to 33 $\frac{1}{3}$ % tin. No antimony to be used.)

Cast special string metal (known as "pure tin") . . . . .90% tin, balance lead  
 Cast spotted metal . . . . .45% tin, balance lead  
 Cast diapason metal . . . . .25% tin, balance lead  
 Rolled, annealed heavy zinc.

The pipes of certain principal diapasons (scale 38 and larger) to be made of special heavy diapason metal down to FF#, the low six pipes of open wood or extra heavy zinc; others of heavy diapason metal down to AA#, the low ten of heavy zinc; normal scale diapasons of heavy diapason metal down to tenor C, the low twelve pipes of heavy zinc. Salicionals, their celestes and similar stops to be of spotted metal down to BB, the low eleven pipes of zinc.

Dulcianas, violas, gemshorns, spitzflötes, geigens, violin diapasons and similar stops to be of spotted metal down to tenor C, the low twelve pipes to be of zinc.

Slender scale orchestral strings and delicate violes to be made of pure tin down to AA, the low nine pipes to be made of zinc.

Zinc pipes to have cast metal mouths and toes, 33 $\frac{1}{3}$ % tin.

All metal flue pipes to be provided with sliding tuners.

### WOOD PIPES

All wood pipes to be made of No. 1 white pine, those from 2' speaking length upward to have hard maple fronts and backs. All to be glue sized inside, sanded smooth and finished with three coats of lacquer outside. Large wood pipes to be tongued and grooved, with reinforcing screws at top and bottom.

The feet of all wood pipes standing on the manual windchests to have metal toes containing 33 $\frac{1}{3}$ % tin. Gates to be provided in the feet of all larger wood pipes.

All wood pipes to be provided with tuners. All stoppers to be cork fitted.

### REED PIPES

All 8' chorus reed stops on pressures higher than 10" to have 61 reed pipes.

All 8' chorus reed stops on 10" pressure or lower to have 56 reed pipes.

All 8' orchestral reed stops to have 53 reed pipes, French Horn 49 reed pipes.

Reed blocks to be cast extra heavy, with shoulder extension to support eschalot against tuning spring.

Reed tongues to be spring brass. Reed wedges to be machined brass.

Reed eschalots to be bored from solid brass rod, except certain larger sizes to be formed from heavy brass sheets. No leathered eschalots to be used.

### VOICING

Pipe scales and treatment, wind pressures and tone character to be determined with full knowledge of conditions of installation and intended use of organ.

**The voicing shall be entirely satisfactory to the purchaser.**

## POWER PLANT

### BLOWER

To consist of a direct coupled electric motor and blower tested to furnish continuously an ample and steady supply of wind at the required pressures.

### GENERATOR

The generator for action current to be wound to our order to the speed of the blower motor and to be direct coupled thereto without belting, chains or gears.

## FINALLY

### WORKMAN SHIP

The workmanship and finish of the organ to be of the highest standard, in every way equal to, and consistent with, the materials used.

### ERECTION, TESTING

The entire instrument to be completely erected, tested and tuned, in our factory before shipment.

### INSTALLA- TION

The organ to be installed, regulated and tuned in the building by Kimball employees, and not to be offered for acceptance until it is finished to the complete satisfaction of the purchaser.

### FREE

The organ to be kept in tune and regulation for one year from its completion date. This

# W. W. KIMBALL CO.

## Contract

Number 32416

Page 13

Chicago, Illinois.....193...

W. W. KIMBALL COMPANY hereby agrees to build and deliver f. o. b. cars, Chicago, Illinois, and .....The Municipal Memorial Auditorium Commission..... of .....Worcester, Massachusetts..... agrees to purchase and pay for as hereinafter set forth, one Kimball pipe organ, in accordance with the specifications and structural details attached hereto, and which are hereby made a part of this contract. W. W. Kimball Company agrees to ship the said organ on or about.....193..., and to install the same in...The..... Municipal Memorial Auditorium.....at...Worcester, Massachusetts..... on or about.....193..., unless delayed by fire, strike, freight embargo, act of Providence or other cause beyond its control.

The shipping and completion dates are contingent upon the Purchaser furnishing to W. W. Kimball Company within ten days of its request therefor, essential plans and information for the construction of the organ; and further, upon the Purchaser duly providing, in accordance with directions and information supplied by W. W. Kimball Company: the chambers or other space for the organ, console and blowing plant, finished, clean and thoroughly dried out before the organ parts are delivered; the electrical connections to the blowing plant and conduits for same and for the organ cables and mains; the air tight galvanized iron wind pipes from blowing plant to all sections of the organ and the console; electric lights in the organ chambers and blower room and at console; and allowing the uninterrupted use of the premises, with necessary light, heat and power for the proper installation, tuning and finishing of the organ.

In consideration of the foregoing the Purchaser agrees to pay for the said organ the sum of  
 .. FORTY THOUSAND .....dollars (\$ .40,000.00)  
 payable in Chicago or New York exchange, with interest at six per cent (6%) per annum on any amount of the purchase price not paid when due, as follows:

.. TEN THOUSAND .....dollars (\$ .10,000.00)  
 Upon signing this contract;

.....dollars (\$.....)  
 On

.. TEN THOUSAND .....dollars (\$ .10,000.00)  
 When organ is ready for shipment from the factory; and

.. TWENTY THOUSAND .....dollars (\$ .20,000.00)  
 Upon completed installation;

it being understood that in the event of delay in shipment or installation caused by Purchaser for any reason, Purchaser agrees to pay all costs of storage; to make all stipulated payments up to and including that due when organ is ready for shipment from the factory; and within sixty days (60) after the stated approximate shipping date to pay the entire balance of purchase price less an amount of fifteen per cent (15%) of the total price, which amount shall be withheld until installation of the organ.

The Purchaser agrees to assume all risks of damage to the organ by fire, water, lightning, tornado or earthquake, or any other cause not due to negligence or fault of W. W. Kimball Company or its employees, after its arrival on the Purchaser's premises, and to insure the same in reliable companies for the benefit of the parties hereto as their respective interests may appear at the time of any loss; and further, that title to the organ shall remain in W. W. Kimball Company until it is fully paid for as hereinbefore provided.

The foregoing contract covers all agreements and conditions between the parties hereto and becomes valid and binding upon both when accepted by the Purchaser and approved by an executive officer of W. W. Kimball Company.

Accepted .....193...

W. W. KIMBALL COMPANY

By..... *W. Woodruff* Consulting Eng.....

Approved .....193...

W. W. KIMBALL COMPANY,

By.....

52416

# ANNUAL SERVICE CONTRACT

Chicago, Illinois, .....193...

TO ....The Municipal Memorial Auditorium Commission.

OF.....Worcester, Massachusetts.....

W. W. KIMBALL COMPANY, Kimball Hall, Chicago, Illinois, offers to assume the care of the  
.....Kimball.....organ in the....Municipal Memorial Auditorium.....  
.....of....Worcester, Massachusetts.....

by supplying competent technicians and helpers who will visit the same.....  
.....(in addition to necessary intermediate calls to  
adjust minor troubles that occasionally arise) on or about ....(dates to be arranged).....

In the meaning of this contract, the care of the organ shall include tuning, regulation of the action and correction of such minor defects as may be due to legitimate wear, but shall not include, except upon your specific order, replacement of worn-out parts, repair of damage resulting from carelessness, malice, excessive heat or dampness, ravages of mice or vermin, or from other special causes, nor cleaning or general repairs made necessary by age. It shall include inspection and simple adjustment of the organ blowing plant, but not repairs or replacements in connection with same, except upon your specific order.

As consideration for these services you agree to pay us at our current rates for labor and materials and to reimburse our expenses, and when such payments are made by you within ten days of date of our invoices we will allow you, as holder of our annual service contract, a discount of ten per cent (10%) on labor and on materials supplied from our factory. Expenses and materials purchased locally will be invoiced at net cost and not subject to discount, nor will discount be allowed on overdue invoices. Expenses and time enroute on out-of-town contracts will be pro-rated with any other jobs which may be included in the same trip.

THIS AGREEMENT begins on the date of its acceptance appearing below, and continues for one year and thereafter until the giving of written notice by either party to the other of a desire to terminate it, which notice, together with liquidation of all outstanding accounts, shall serve to cancel the agreement thirty days after date of service of same.

W. W. KIMBALL COMPANY,

Accepted ..... 193..

By.....*C. H. Woodruff*.....

By .....

When issued in connection with a contract a new KIMBALL organ, this Annual Service Contract acts as a guarantee and covers the replacement of any defective parts as well as general service for one year from the first of the month next following completion of the organ; provided that only employees of W. W. Kimball Company are permitted access to the interior of the organ unless with consent of the Company; and when so issued it is hereby acknowledged to be prepaid in full for this term.

W. W. KIMBALL COMPANY,

By.....*C. H. Woodruff*.....