

THE  
ORGANIST'S  
JOURNAL & REVIEW  
COMPLETE.

## THE BOSTON MUSIC HALL ORGAN.

We commence with our opening number a series of descriptions of the large and noted Organs of the world. We hope that they may prove interesting, and be found worthy of preservation for future use and reference.

The Boston Music Hall, in which stands the great work we here describe, was dedicated on Saturday evening, Nov. 20, 1852. As many of our readers know, it is a large and beautiful hall, with sittings for about three thousand people. It has two entrances: one on Tremont, and the other (where the ticket-office is stationed) on Winter Street. Its length is 130 feet, width 78 feet, and height 65 feet; and its acoustic properties are of the best.

The Organ was built by WALKER, of Ludwigsburg, Germany, and was nearly seven years in construction. The whole expense of the instrument was between fifty and seventy-five thousand dollars. It was inaugurated on the evening of Nov. 2, 1863, by the performance of a programme representing the various schools of Organ Music. The Organists (according to the order of the programme) were JOHN K. PAINE, EUGENE THAYER, G. W. MORGAN, B. J. LANG, S. P. TUCKERMAN and J. H. WILCOX; and the occasion was one long to be remembered, attracting as it did Organists and Musicians from all parts of the country.

Our description will be found complete and reliable in all respects, although, did space permit, we could descend more to detail, and amplify it greatly. We believe, however, that it contains everything which is of practical value to students, or to any one interested in Organs and Organ music.

The capital letters enclosed in parenthesis, denote the quality of tone of each register. These we divide into four groups, or families of tone, viz: (O.) Organ tone, (F.) Flute tone, (S.) String tone, (R.) Reed tone. For the benefit of students we shall adopt this method of denoting the quality of tone in all our descriptions.

## SPECIFICATION.

## FIRST MANUAL. (GREAT ORGAN.)

23 Complete Registers: 25 Draw-stops.

1. Principal (or Double Diapason), 16 ft. (O.) 53 pipes.

Of pure tin; the 24 largest of these pipes are seen in the front; very full, round tone.

2. Tibia Major, 16 ft. (F.) 46 pipes.

Of pine wood; full, yet softer tone than No. 1.

3. Viola Major, 16 ft. (S.) 53 pipes.

Very large, rich quantity of tone.

4. Basson (Bassoon), 16 ft. (R.) 53 pipes.  
5. Ophycleide, 8 ft.

The upper and lower parts of one register, divided so that either may be used at pleasure. Free reeds, with pipes of wood. All the free reeds in the organ are provided with an apparatus for tuning by screws. A deep tone of singular beauty. Really a 16 ft. register throughout.

6. Principal (Open Diapason), 8 ft. (O.) 53 pipes.

Of pure tin; twelve of the pipes are seen in the left side front; full tone.

7. Flöte (Flute), 8 ft. (F.) 53 pipes.

Wood pipes, of double width and double mouths; full, clear tone.

8. Gemshorn, 8 ft. (S.) 53 pipes.

Conical or pointed pipes of proof tin; clear tone, somewhat like No. 3.

9. Viola di Gamba, 8 ft. (S.) 53 pipes.

Pure tin; a most beautiful string tone.

10. Gedekt (Stopped Diapason), 8 ft. (F.) 53 pipes.

Pipes of fir-wood, wide scale; full, soft tone.

11. Trombone, 8 ft. }  
12. Trompette, 4 ft. } (R.) 53 pipes.

Another divided register. Reeds with pipes of proof tin; very powerful tone. Really an 8 ft. register throughout.

13. Octav (English Principal), 4 ft. (O.) 53 pipes.  
Pure tin; the whole organ is tuned from this register.

14. Fugara, 4 ft. (S.) 53 pipes

Pure tin; very pungent string tone.

15. Hohlflöte (hollow-toned Flute), 4 ft. (F.) 53 pipes.

Metal pipes (that is, one-third pure tin, two-thirds lead); full yet subdued flute tone.

16. Flöte d'Amour, 4 ft. (F.) 53 pipes.

Pipes of pine and pear wood; a most beautiful, clear, soft tone.

17. Clairon (Clarion), 4 ft. (R.) 70 pipes.

Reeds with proof tin pipes; very brilliant tone.

18. Waldflöte (Forest Flute), 2 ft. (F.) 53 pipes.)

Conical pipes of proof tin; bright, liquid tone.

19. Quint (Fifth), 5 1-3 ft. (O.) 53 pipes.

Same kind of pipes as No. 18.

20. Tertz (Tenth), 3 1-5 ft. (O.) 53 pipes.

Same kind of pipes as No. 18.

21. Quint (Twelfth), 2 2-3 ft. (O.) 53 pipes.

Pipes of proof tin.

22. Octave, 2 ft. (O.) 53 pipes.

Same kind of pipes as No. 20; very brilliant tone.

23. Cornett, 5 1-3 ft. (5 ranks) (O.) 190 pipes.

Harmonies of a 16 foot tone; each group has a compass of over three octaves; pipes of proof tin; five pipes to every key, except the lower ones.

24. Mixtur, 2 2-3 foot (6 ranks) (O.) 348 pipes.

Harmonies of 8 foot tone; pipes of proof tin; six pipes to every key.

25. Scharff, 1 1-3 ft. (4 ranks) (O.) 232 pipes.

Harmonies of 4 foot tone; pipes of proof tin; very piercing tone; used only in the full organ; four pipes to every key.

Total number of pipes in the Great Manual, 1,930.

## SECOND MANUAL. (SWELL ORGAN.)

16 Complete Registers: 19 Draw-stops.

1. Bourdon (Double St. Diapason), 16 ft. (F.) 53 pipes.

Pipes of wood; full, soft tone.

2. Principal, 8 ft. (O.) 53 pipes.

Pipes of proof tin; very fine tone.

3. Salicional, 8 ft. (S.) 53 pipes.

Pipes of proof tin, quite slender; one of the most beautiful registers in the organ.

4. Dolce (Dulciana), 8 ft. (S.) 53 pipes.

Metal pipes, very slender; the softest pipe-register in the organ.

5. Quintatön, 8 ft. (F.) 53 pipes.

Pipes of tin, stopped at the top; sounds the twelfth above as a harmonic; singular quality of tone.

6. Gedekt (Stop Diapason), 8 ft. (F.) 53 pipes.

Pipes of wood, double width, and double mouths in the higher part. Full, yet soft tone.

7. Trombone Bass (Trombone), 8 ft. }  
8. Trombone Discant (Trumpet) 4 ft. } (R.) 53 pipes.

Another divided register; pipes of brass, shaped like orchestral trumpets, and every pipe finished with great care and nicety; the tone being an excellent imitation of a real trumpet. Really 8 ft. throughout.

9. Basson Bass (Bassoon), 8 ft. }  
10. Hautbois Discant (Oboe), 4 ft. } (R.) 53 pipes.

Pipes of pure tin, same shape and finish as Nos. 7 and 8; free reeds, and beautiful quality of tone. Really 8 ft. throughout.

11. Principal Octav, 4 ft. (O.) 53 pipes.  
Pipes of proof tin.

12. Rohrflöte (Reedy Flute), 4 ft. (F.) 53 pipes.

Metal pipes, stopped at the top with a little pipe or chimney inserted; peculiar tone.

13. Traversflöte (Traverse Flute), 4 ft. (F.) 53 pipes.

Pipes of maple wood, of the same shape and finished after the manner of orchestral flutes; another very costly register; very liquid, soft tone.

14. Cornettino, 4 ft. (O.) 70 pipes.

Pipes of pure tin; small, yet very penetrating tone.

15. Quintflöte, 5 1-3 ft. (F.) 53 pipes.

Conical wood pipes.

16. Nasard (Twelfth), 2 2-3 ft. (O.) 53 pipes.

Pure tin pipes.

17. Octav, 2 ft. (tin) (O.) 53 pipes.

Same as No. 16.

18. Mixture, 2 ft. (5 ranks) (O.) 290 pipes.

Same kind of pipes as No. 16; five pipes to every key.

Total number of pipes in the Swell Manual, 1,172.

## THIRD MANUAL. (CHOIR ORGAN.)

14 Complete Registers: 16 Draw-stops.

1. Gedekt, 16 ft. (F.) 53 pipes.

Pipes of wood, full, soft tone.

2. Principal Flöte, 8 ft. (F.) 53 pipes.

Pure tin pipes, the largest ones being seen in the right front; firm, round tone.

3. Spitzflöte, 8 ft. (F.) 53 pipes.

Pure tin pipes, conical form; tone full, round, and clear.

4. Bifra (2 ranks), 8 ft. and 4 ft. (F.) 116 pipes.

Of pure tin, with two pipes to each key; the larger one stopped at the top, the other very slender, and giving an octave higher tone; a tremolo is adapted specially for this register, which is one of the most interesting in the organ.

5. Gedekt, 8 ft. (F.) 53 pipes.

Pipes of wood; full, soft tone.

6. Clarin Bass, 8 ft. }  
7. Clarin Discant, 4 ft. } (R.) 53 pipes.

One register divided. Reeds with proof tin pipes; very clear and quite powerful tone. Really 8 ft. throughout.

8. Viola, 8 ft. (S.) 53 pipes.

Proof tin pipes; a most charming string tone.

9. Physharmonica, 8 ft. (R.) 53 pipes.

In some respects one of the most remarkable registers in the organ. It has simply reeds, without pipes, the whole being contained in a box about two feet long and six inches square. It can be used so as to commence with the merest breath of tone, increasing to quite a volume, then diminishing until the tone literally dies away to perfect silence. The effect, when properly used, is singularly beautiful.

10. Hohlpeife, 4 ft. (F.) 53 pipes.

Upper part of tin, lower part of maple; very brilliant, liquid tone.

11. Principal Flute, 4 ft. (F.) 53 pipes.

Pipes of pure tin.

12. Dolce (Dulciana), 4 ft. (S.) 53 pipes.

Pipes of tin; tone very delicate, closely imitating the violin.

13. Flautino (Octave Flute), 2 ft. (F.) 53 pipes.

Pipes of tin; very brilliant tone.

14. Super-Octav, 1 ft. (F.) 53 pipes.

Pipes of tin; tone most delicate and brilliant. This register contains the smallest pipes in the organ. The shortest being about three-eighths of an inch in length.

15. Sesquialtera (2 ranks), 2 2-3 ft. and 1 3-5 ft. (O.) 116 pipes.

Pipes of tin; two pipes to each key.

Total number of pipes in the Choir Manual, 928.

## FOURTH MANUAL. (SOLO ORGAN.)

11 Complete Registers: 13 Draw-stops.

1. Bourdon, 16 ft. (F.) 53 pipes.

Pipes of wood; full, soft tone.

2. Geigen Principal, 8 ft. (S.) 53 pipes.

Pipes of pure tin, twelve of which are seen in front; tone very round and fine.

3. Aeoline, 8 ft. (S.) 53 pipes.

Pipes of tin and wood, very slender; tone exceedingly soft, and quite like a violin.

4. Concert Flöte, 8 ft. (F.) 53 pipes.

Square pipes of the finest pine wood; tone the most liquid and lovely imaginable.

5. Corno-Bassetto, 8 ft. (R.) 53 pipes.

Reeds with metal pipes; one of the finest solo registers in the organ.

6. Vox Humana, 8 ft. (R.) 116 pipes.

Lately removed, and a new Vox Humana placed in the Swell Organ; the Traversflöte from the Swell taking the place of this in the Solo organ.

7. Gemshorn, 4 ft. (S.) 53 pipes.

Pipes of proof tin, conical; bright, soft tone.

8. Piffaro (2 ranks), 4 ft. and 2 ft. (F.) 116 pipes.

Two pipes to each key; very bright, yet delicate tone.

9. Vox Angelica, 4 ft. (R.) 53 pipes.

Free reed, with pipes of tin; fine and penetrating tone of the most singular quality of any register in the organ.

10. Quint, 2 2-3 ft. (O.) 53 pipes.

Covered metal pipes.

11. Piccolo (Octave Flute), 2 ft. (F.) 53 pipes.

Pipes of pure tin; very brilliant, sparkling tone.

Total number of pipes in Solo Manual, 754.

## PEDAL ORGAN.

## FORTE DIVISION.

14 Complete Registers: 17 Draw-stops.

This division of the Pedale is furnished with a double pneumatic action of great power.

1. Principal Bass, 32 ft. (O.) 30 pipes.

Lowest pipes of wood. This register contains the largest pipes in the organ; six of them, of pure tin, are seen in the great central towers. The largest metal pipe in the organ is in the left central tower; it is about thirty-five feet long, and weighs nearly a thousand pounds: a full-sized man could easily go through it.

2. Grand Bourdon, 32 ft. (5 ranks), (O.) 120 pipes.

Pipes of wood, five to every key; the five sounding together give a thirty-two foot tone (the lowest sound in the organ), of great power and grandeur. Such is the power required to open the valves of this register, that it is furnished specially with the pneumatic action.

3. Bombardon, 32 ft. (R.) 30 pipes.

Immense free reeds, with great pipes of wood; the single vibrations of this register are so slow, and of such power, as to be distinctly appreciable.

4. Octav Bass, 16 ft. (O.) 30 pipes.

Pure tin pipes, thirteen of which are seen in the front.

5. Sub Bass, 16 ft. (O.) 30 pipes.

Pipes of wood, of wide scale; soft, full tone.

6. Trombone, 16 ft. (R.) 30 pipes.

Reeds with pipes of zinc; a very powerful trumpet tone.

7. Contra-Violin, 16 ft. (S.) 30 pipes.

Pipes of wood; a remarkable imitation of the *cont a basso* in the orchestra.

8. Octave Bass, 8 ft. (O.) 30 pipes.

Pipes of pure tin.

9. Hohlflöte-bass, 8 ft. (Hollow Flute Bass.) (F.) 30 pipes.

Pipes of wood; very strong, flute tone.

10. Violoncello, 8 ft. (S.) 30 pipes.

Pipes of tin; a beautiful imitation of the orchestral instrument of the same name.

11. Trompette, 8 ft. (R.) 30 pipes.

Reeds with heavy pipes of zinc; very strong tone.

12. Corno-Basso, 4 ft. (R.) 30 pipes.

Reeds, with pipes of proof tin; octave higher in pitch.

13. Octave, 4 ft. (O.) 30 pipes.

Pipes of pure tin.

14. Cornettino, 2 ft. (R.) 30 pipes.

Pure tin, same as No. 11, two octaves higher; makes the pedal very distinct and brilliant. Scarcely desirable, as it is too penetrating and shrill.

#### PIANO DIVISION.

6 complete Registers: 6 Draw-stops.

These registers are all placed in the swell box.

5. Bourdon (Double St. Diapason), 16 ft. (F.) 30 pipes.

Pipes of wood; very low, soft, distant tone.

16. Viola, 8 ft. (S.) 30 pipes.

Pipes of pure tin; a charming tone.

17. Flöte, 8 ft. (F.) 30 pipes.

Pipes of wood; clear, soft, round tone.

18. Flöte, 4 ft. (F.) 30 pipes.

Same, octave higher; very soft tone.

19. Waldflöte (Forest Flute), 2 ft. (F.) 30 pipes.

Pipes of metal, two octaves higher than No. 17; a most beautiful and delicate tone.

20. Basson (Bassoon), 16 ft. (R.) 30 pipes.

Free reeds, with pipes of wood; has a mysterious, startling, yet beautiful tone.

Total number of pipes in the two divisions of the Pedal organ, 690.

Whole number of pipes in the whole organ, 5,474.

Whole number of complete registers, 84.

Whole number of draw-stops, 96.

The manual couplers are only four in number, yet of such a peculiar and complicated construction, that any connection may be made with them without raising the hands from the keys, by means of the small ivory knobs seen between the first and third manuals.

The *collective* or combination pedals, thirteen in number, are placed just above the pedals (keys for the feet), and are acted upon by means of the little iron foot pieces seen ranged in a horizontal row.

The beautifully colored and lettered porcelain tablets, seen just above the manuals, correspond to these in number and name (except No. 13, which has no tablet). They are named as follows, commencing from the left side:—

#### No. 1. ZUNGENWERKE

Draws all the *reed* registers in the entire organ.

#### No. 2. FORTISSIMO I. M. (First Manual.)

Draws all the registers in the Great Manual except the reeds, and Nos. 23 and 25.

#### No. 3. FORTE I. M.

Draws all the 8 ft. and 4 ft. registers and one 16 ft. register in Great Manual, reeds excepted.

#### No. 4. PIANO I. M.

Draws the 8 ft. registers in the Great Manual, reeds excepted.

#### No. 5. SOLO IV. M. (Solo Organ.)

Draws the Corno-Bassetto register in the Solo Organ.

#### No. 6. VOLLESWERK.

Draws the *full* organ, except the Vox Humana and Plysharmonica, which are too delicate for common use.

#### No. 7. COPULA IV. M. to PEDAL.

Couples Solo Organ to Pedals.

#### No. 8. COPULA III. M. to PEDAL.

Couples Choir Organ to Pedals.

#### No. 9. COPULA II. M. to PEDAL.

Couples Swell Organ to Pedals.

#### No. 10. COPULA I. M. to PEDAL.

Couples Great Organ to Pedals.

#### No. 11. I. II. III. IV. M. to PEDAL.

Couples all the manuals to the pedals.

#### No. 12. COPULA ZUM FORTE PEDAL.

Couples the *loud* pedal organ to the pedals, without which none of these registers will sound, even if drawn.

#### No. 13. (No tablet.)

Added here by Herr WALKER, the son. Draws the full *swell organ*. All of these collective pedals produce their effects *instantaneously*.

## THE GRAND CRESCENDO PEDAL.

This commences with the softest register in the organ (Dolce in the Swell Organ), and brings on as rapidly or as slowly as the performer desires all the registers to the full organ, making a perfectly even crescendo of great power, afterwards diminishing as rapidly or as slowly as desired, until the sound dies away into silence. It can also be used to any desired extent, stopping the crescendo at any point, and again diminishing or remaining stationary. The dial seen over the manuals indicates at any time the exact number of registers drawn, so that the organist can get *precisely* and *instantly* the power desired; and if any combinations are drawn, they will not be in the least interfered with after this pedal is returned.

The *Great Manual* is furnished with a *pneumatic action*, by which the touch is made as easy as that of a grand piano-forte. In the pneumatic action the keys are only required to open a small bellows (one to each key), which, under heavy pressure, instantly expands, and opens all the valves belonging to the keys pressed down. Without this action it would be almost a physical impossibility to play an organ of this size.

The organ is furnished with wind by a steam engine of about ten-horse power, located in the cellar. There are six large feeder bellows, and one very large wind reservoir, and in all seventeen pairs of bellows.

The organ can also be blown by man power; it requiring four men to furnish wind for the full organ, and double that number if wind be required for any length of time.

## EXPLANATIONS AND DEFINITIONS.

For the better understanding on the part of the general reader of our descriptions, a brief explanation is here given of some portions of the mechanism of an organ, and of the technical terms in common use.

An instrument of the first class usually contains several separate and complete organs in itself, each having its own wind-chest, key-board, and complete sets of pipes. Each of these separate organs has also a distinctive character, the union of the whole making the *full organ*. They are as follows, viz:

1. The GREAT ORGAN;—commonly so called because its pipes are of a greater scale, and produce larger tones, and because it contains more registers than any of the others, and is the chief one of the five.

2. The SWELL ORGAN;—so called because all its pipes are enclosed in a room or box by themselves, the front of which opens or closes somewhat like window-shutters, at the pleasure of the organist, thus increasing or diminishing the tone. This is next in size and importance to the *Great Organ*.

3. The CHOIR ORGAN;—probably so called from its having been used formerly in accompanying the choir; its pipes are of a smaller scale than those of the *Great Organ*.

4. The SOLO ORGAN;—so denominated because most of its registers are in imitation of some solo instrument, as the flute, clarinet, trumpet, etc.: it is much used in playing melodies.

5. The PEDAL ORGAN, which derives its name from the fact of its being played wholly by the feet. This is the part from which come

those deep and ponderous tones which make the organ so truly majestic and sublime an instrument. These separate organs are individually larger or smaller in proportion to the size of the whole work.

A *register* is a complete set of pipes; that is, one pipe for every key, although certain registers have more, as will be seen further on. All the pipes of this set have each the same quality of tone, differing only in pitch. It may be said here that the terms *register* and *stop* have been used so indiscriminately as generally to mean the same thing. Properly however, the *register* is the *set of pipes*; and the *stop*, (more properly *draw-stop*), the *lever* by which (when the keys are pressed down), these can be made to sound or remain silent.

A *draw-stop* has a lettered knob on the end of the lever, giving the name of the particular set of pipes with which it is connected; these are the knobs seen ranged within reach on each side of the player. By reference to these names the organist is enabled to determine beforehand the quality and quantity of the tone that will be given: as many or as few being drawn at once as may be desired.

Registers are spoken of as 8 ft., 4 ft., or 16 ft., etc., which means that the largest and lowest of that set of pipes is in length eight feet, four feet, or sixteen feet, the pipes diminishing in size as the scale ascends.

A pipe thirty-two feet in length gives the pitch of low CCC, an octave lower than the lowest tone of a grand piano. A column of air in such a pipe makes thirty-two vibrations in a second. A pipe sixteen feet long will make sixty-four vibrations in a second. One eight feet long, one hundred and twenty-eight, and so on in the same ratio. The smallest pipe in this instrument makes over thirty-two thousand vibrations in a second.

A *reed register* is one that not only has pipes, but *reeds*, similar in some respects to those found in harmoniums and instruments of that class.

By this combination of pipes and reeds a much more powerful tone may be obtained than by either alone. There are soft reed registers, however; the reeds in these affecting the quality more than the quantity of tone. The trumpet, clarion, clarinet, etc., are among the most prominent of the reed registers.

A *Mixture* is a register having several ranks of pipes to each key, all of which sound when the key is pressed down. These pipes are tuned from one to three octaves above the foundation note of each key, to various intervals which harmonize with that foundation note, and are only used in the full organ to give brilliancy to the whole. When they predominate, the tone must be so shrill as to be painful, and lack in solidity and grandeur.

A *Copula*, or *coupler*, is a mechanical movement by which two of these key-boards may be so connected that in playing upon one the corresponding keys of the other are pressed down, thus producing the effect of two players. By means of several couplers the whole may be thus joined; and if all the registers be then drawn, the entire power of the organ is obtained.

A *Collective pedal* (or combination pedal), is a movement operated by the feet, by which certain effects or combinations are produced instantaneously, and without interruption of the playing. They ought to be made, as in this organ, so as to leave all previous combinations undisturbed after they are withdrawn.

This Music Hall Organ is now nearly twelve years old, and has withstood excellently the severe tests of our climate, and almost incessant use. Its noble presence is at once an honor to its builder, to our Commonwealth, and a grand monument to our divine Art of Music.