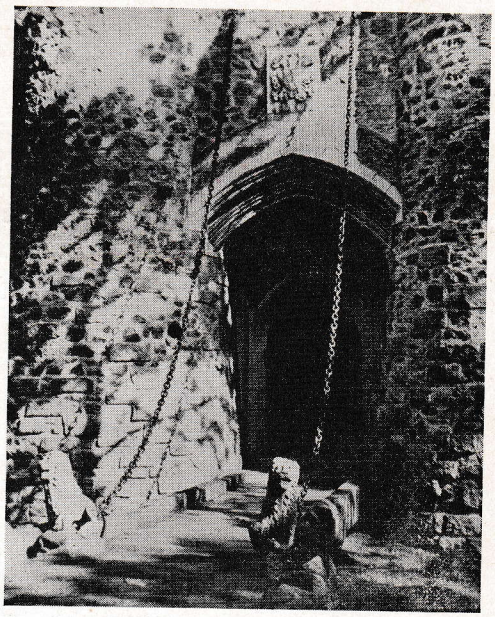
15¢

THE HAMMOND MUSEUM

Hesperus Avenue

GLOUCESTER

Massachusetts



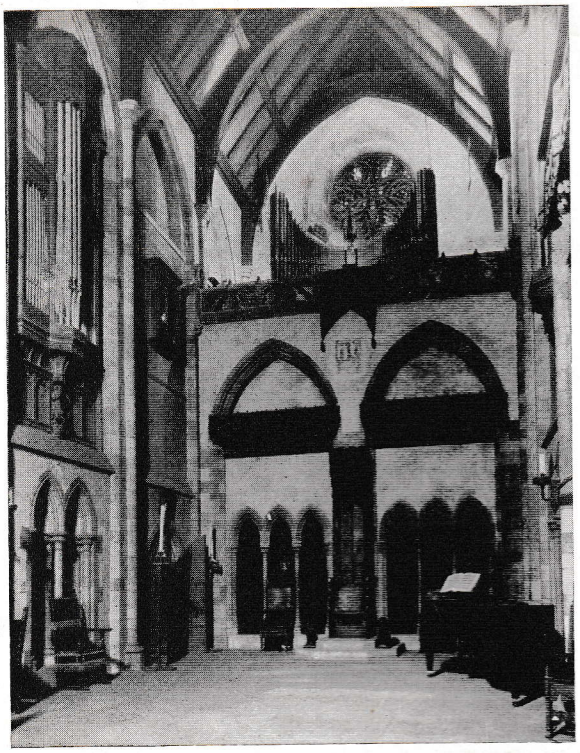
Open

Closed Sundays and Holidays

Hours 9 to 12

Tours at 9, 10 and 11 o'clock

ADMISSION,



THE ORGAN, HAMMOND MUSEUM

THE ORGAN OF THE HAMMOND MUSEUM

The organ is one of the oldest of instruments. Ctesibus of Alexandria is credited with its invention about 200 B.C. His creation comprised a machine of 8 ranks of pipes and was controlled by keys, a remarkable achievement for its times. The House organs were popular in the early Roman times, and the Emperor Nero was a patron of the art of organ playing. It was not until some time in the fifth or sixth century that the organ entered the Church. In the ninth century, organ building was an established industry in France and Germany. From then on the instrument and its importance grew with the centuries. Its influence upon the history of music is of course well known.

Most of the technical advance in the evolution of the organ has had to do with making it playable. That is to control the maximum number of pipes with the greatest ease to the performer. Infinite ingenuity and invention has changed the instrument from one whose notes had to be beaten with fists, to the modern instrument where the lightest touch of a finger simultaneously releases the voices of thousands of pipes.

Electrification has undoubtedly created the most sensational advance in the instrument. However, like all processes connected with the arts, dogma has had its peculiar influence on organ design. Today, many instruments are tonally planned as if electricity had not appeared. The different divisions of the organ are medleys of different

stops whose effectiveness is small. The effect in the symphony orchestra would be simulated if all its choirs were broken up and scattered with a trombone next to an oboe and a violin next to that. The tonal designers of the great orchestras knew better than that and massed their tones in the groups of strings, basses, wood winds, and tympani. George Ashdown Audsley was a strong advocate against the weak and diffuse use of organ color, and in designing my instrument in the Museum, I have been greatly influenced by his outlook. A survey of the specification of the organ on pages 9 thru 17 will show the massing of tonal colors, and the hearing of it is a proof of its effectiveness.

The organ in the 18th century reached one of its highest points of tonal sophistication. At this time, the instrument took on the speculative brilliancy which characterized the attitude of its contemporaries. Science was being applied to acoustic problems and the understanding of tones and their harmonics. In this manner, the so-called Baroque Organ evolved, one in which a brilliant sparkle was achieved thru the emphasis on upper partials or higher frequencies. The designs of these instruments was a tour de force of tonal engineering. However, many organ designers were carried away by their own achievement in this epoch and the result produced a contrary reaction in the next century. The nineteenth century fell from the speculative to the practical. The organ, like furniture, assumed fuller and rounder characteristics degenerating into specimens of the early twentieth century which are characterized as tubby, and which found their fulfillment in the romanticism of the movie theatre.

It is only recently that we have begun to dig ourselves out of this musical quagmire.

Immeasurable effort and money has been expended especially in the United States on the construction of mammoth organs. From an artistic standpoint these instruments are negligible. They also miss their tonal overwhelmingness by being scattered senselessly around badly designed auditoriums.

Three main elements would seem to enter into the effectiveness of organ tone.

1. The design of the instrument.

2. The design and location of the chambers containing the instrument.

3. The characteristics of the room into which the organ speaks.

A failure in any one of the three elements will minimize the effects of the other two. The architect and the organ builder should be one team, but most architects emulate Sir Christopher Wren and his belief that after all an organ was a "box of whistles." In this Museum, the house was built for the organ and not the organ for the house. An 85 foot high stone tower contains the instrument, in high shallow chambers of smooth concrete. These organ chambers open with minimum obstruction into a room about 100 feet long by 60 ft. high. The shape of this room is Gothic, the architecture that makes church organs sound better than concert hall organs.

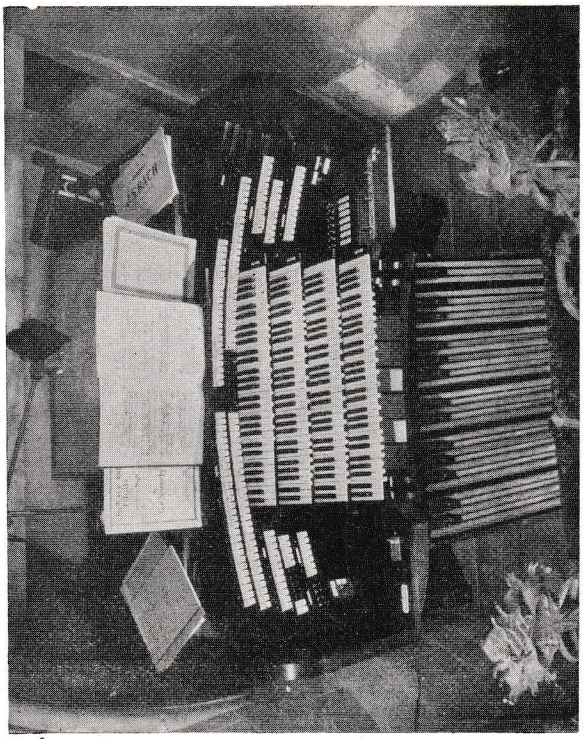
Some years ago, I observed old vases of earthenware standing in the Greek theatre built some 200–300 years B. C. in Syracuse, Sicily. They were to absorb sound waves and kill reverberations. We built our own giant vases inside the walls of the Museum and the quality of broadcasting and recording has proven the effectiveness of this ancient invention. The walls were kept very hard to maintain the life of the upper tones, the vases or absorbtion chambers tend to control the immense power of the lower organ tones.

The instrument itself has been building over a period of twenty years in the hands of skilled experts working in the Hammond Laboratory. There has also been embodied in it some of the outstanding creative work of contemporary builders. Mr. E. M. Skinner, to whose genius so much of the modern organ is due, is the designer and builder of the beautiful reeds in the Solo Division. W. S. Dennison of Reading has created a remarkable ensemble of trumpets speaking with 20 in. wind pressure. This division has given the whole tonal ensemble of the instruments the brilliant characteristics of the French cathedral organ. Edwin Welte, the celebrated German organ builder, designed and built much of the Great Division. Donald Harrison designed a large part of the mixture work and the baroque stops which give an 18th century piquancy and flavor to 18th century music. Frederic Austin, whose organ consoles are famous, built the one for the Hammond Museum. This console is one of the largest constructed by the Austin Company.

Outside of these outstanding contributions, we have searched old churches for fine stops many of which have been acquired for the instrument.

The Museum organ has other characteristics which differentiates it from most American organs, notably its large proportion of pedal stops and its wealth of mixtures. These stops with the massed choirs make it an instrument of definite individuality which has appealed to many of the great artists of today.

—J.H.H.



CONSOLE OF ORGAN, HAMMOND MUSEUM

Specification of the

ORGAN OF THE HAMMOND MUSEUM

GLOUCESTER, MASSACHUSETTS

Built by the

Hammond Organ Laboratories

SOLO

Flauto Mirabilis	Wood	8′	6″	Wind	Pressure	73	
Gamba	Metal	8′	6″	″	″	73	
Gamba Celeste	″	8′	6″	″	″	~~73~~	61
Erzahler	″	8′	6″	″	″	~~73~~	61
Kleiner Erzahler	″	8′	6″	″	″	73	
Kleiner Erzahler Celeste	″	8′	6″	″	″	73	
Orchestral Flute	″	4′	6″	″	″	73	
Cornet - 4 ranks	″		3″	″	″	244	
Bassoon	″	16″	6″	″	″	73	
Tuba	″	8′	10″	″	″	73	
French Horn	″	8′	10″	″	″	73	
Corno-di Bassetto	″	8′	6″	″	″	73	
Orchestral Oboe	″	8′	6″	″	″	73	
Cor D'Amour	″	8′	6″	″	″	73	
Heckelsphone	″	8′	6″	″	″	73	
Cor Anglais	″	8′	6″	″	″	73	
Clarinet	″	8′	6″	″	″	73	
Tremolo							
Solo to Solo		16′					
Solo to Solo		4′					
~~Solo to Great~~		~~8′~~					Unison tablet
		9					

18

SWELL

						Pipes
* Gamba	Metal	16′	6″	Wind	Pressure	73
Viola	″	8′	6″	″	″	73
Stopped Diapason	Wood	8′	6″	″	″	73
Melodia	″	8′	6″	″	″	73
Gamba		8′	6″	″	″	73
Gamba Celeste	Metal	8′	6″	″	″	~~73~~ 61
Salicional	″	8′	6″	″	″	73
Vox Celeste	″	8′	6″	″	″	73
Viole d'Orchestre	″	8′	6″	″	″	73
Viole Celeste	″	8′	6″	″	″	73
Dulciana	″	8′	6″	″	″	73
Unda Maris	″	8′	6″	″	″	~~73~~ 61
Flauto Dolce	″	8′	6″	″	″	73
Flauto Celeste	″	8′	6″	″	″	73
Dulcet - 2 ranks	″	8′	6″	″	″	~~73~~ 122
Harmonic Flute	″	4′	6″	″	″	73
Violina	″	4′	6″	″	″	73
Nazard	″	2 2/3′	6″	″	″	61
Fifteenth	″	2′	6″	″	″	61
Tierce	″	1 3/5′	6″	″	″	61
Septime	″	1 1/7′	6″	″	″	61
Plein Jeu - 6 ranks	″		3″	″	″	366
Oboe	″	8′	6″	″	″	73
Tremolo						
Swell to Solo		8′				
Swell to Swell		16′				
Swell to Swell		4′				

* Diap. Open - 8' 73 pipes 6" (metal)

23

GREAT

						Pipes
Diapason	Metal	16′	6″	Wind	Pressure	~~73~~
First Diapason	″	8′	6″	″	″	73
Second Diapason	″	8′	6″	″	″	73
Third Diapason	″	8′	7″	″	″	73
Fourth Diapason	″	8′	7″	″	″	73
Bourdon	″	8′	7″	″	″	73
Principal Flute	″	8′	7″	″	″	73
Gamba	″	8′	7″	″	″	73
Gamba Celeste	″	8′	7″	″	″	~~73~~ 61
Gemshorn	″	8′	7″	″	″	73
Dulciana	″	8′	7″	″	″	73
Unda Maris	″	8′	7″	″	″	~~73~~ 61
Quinte	″	5 1/3′	6″	″	″	73
Principal	″	4′	6″	″	″	73
Octave	″	4′	6″	″	″	73
Flute Harmonic	″	4′	6″	″	″	61
Twelfth	″	2 2/3′	6″	″	″	61
Fifteenth	″	2′	6″	″	″	61
Cymbal	″		3″	″	″	~~61~~ 183
Fourniture - 3 rank	″		3″	″	″	~~183~~ 244
Full Mixture - 4 ranks	″		3″	″	″	244
Cornopean	″	8′	7″	″	″	73
Great to Great		16′				
Great to Great		4′				
Solo to Great		16′				
Solo to Great		8′				
Solo to Great		4′				
Swell to Great		16′				
Swell to Great		8′				
Swell to Great		4′				
Choir to Great		16′				
Choir to Great		8′				
Choir to Great		4′				

22

CHOIR

						Pipes
Diapason	Metal	8′	6″	Wind	Pressure	73
Tibia	Wood	8′	6″	”	”	73
Concert Flute	”	8′	6″	”	”	73
Melodia	”	8′	6″	”	”	73
Octave	Metal	4′	6″	”	”	73
Gemshorn	”	4′	6″	”	”	73
Piccolo	”	2′	6″	”	”	~~73~~ 61
Tuba	”	16′	6″	”	”	73
English Horn	”	8′	6″	”	”	73
Tremolo						
Choir to Choir		16′				
Choir to Choir		4′				
Swell to Choir		16′				
Swell to Choir		8′				
Swell to Choir		4′				
Harp Celeste						61
Chimes						25
Piano		16′				
Piano		8′				73
Piano		4′				

BAROQUE — FLOATING

BAROQUE (Mixture) Single Unit Stop - Exp.

Cor de Nuit	Metal	8′	61
Nachthorn	”	4′	61
Blockflute	”	2′	61
Nazard	”	2 2/3′	61
Tierce	”	1 3/5′	61
Larigot	”	1 1/3′	61

(Non-Expression) 73

Tremolo			
Vox Humana	Metal		
Oboe	Metal	8′	73
Trumpet	”	8′	73
Deep Flute	Wood	16′	73
Mixture String P 4 Ranks	Metal		~~73~~ 278
String P. P.	”	8′	73
Flautino	”	2′	73
High Flute	”	4′	73
Flute	Wood	8′	73
String M. F.	”	8′	73
Vib. String F.	Metal	8′	73
String F.	”	8′	73
Vib. String P. P.	”	8′	73
Diapason	”	8′	73

20

PEDAL

						Pipes
Tibia Profunda (B.) 32′	Wood	32′	5″	Wind	Pressure	32 Notes
First Diapason (G.)	″	16′	6″	″	″	32 Notes
Second Diapason (G.)	Metal	16′	6″	″	″	32 Notes
Third Diapason (C.)	Wood	16′	7″	″	″	32 Notes
Bourdon (G.)	″	16′	7″	″	″	32 Notes
Bourdon Baroque	″	16′	4″	″	″	
Tibia Profunda (B.)	″	16′	4″	″	″	32 Notes
Violone (B.)	″	16′	4″	″	″	32 Notes
Contra Viole (B.)	Metal	16′	4″	″	″	32 Notes
Gemshorn (Solo)	″	16′	6″	″	″	32 Notes
Quinte (Gt.)	″	10 2/3′	6″	″	″	32 Notes
Principal (Gt.)	″	8′	6″	″	″	32 Notes
Octave (C.)	″	8′	6″	″	″	32 Notes
Gemshorn (Solo)	″	8′	6″	″	″	32 Notes
Flute (B.)	Wood	8′	4″	″	″	32 Notes
First Flute (Solo)	″	8′	6″	″	″	32 Notes
Second Flute (Gt.)	″	8′	7″	″	″	32 Notes
Gemshorn (Solo)	Metal	5 1/3″	6″	″	″	32 Notes
Flute (Solo)	Wood	4′	6″	″	″	32 Notes

Mixture - 3 ranks (Solo)	Metal		6″	″	″	96 Notes
Mixture - 3 ranks (Solo)	″		6″	″	″	96 Notes
Contra Fagotto (Solo)	″	32′	12″	″	″	32 Notes
Contra Fagotto (Solo)	″	16′	12″	″	″	32 Notes
Trombone (Solo)	″	16′	20″	″	″	32 Notes
Trombone (Choir)	″	16′	6″	″	″	32 Notes
Tromba (Solo)	″	8′	20″	″	″	32 Notes
Contra Fagotto (Solo)	″	8′	12″	″	″	32 Notes
Tuba (Choir)	″	8′	6″	″	″	32 Notes
Contra Fagotto (Solo)	″	4′	12″	″	″	32 Notes
Great to Pedal		8′				
Great to Pedal		4′				
Solo to Pedal		8′				
Solo to Pedal		4′				
Swell to Pedal		8′				
Swell to Pedal		4′				
Choir to Pedal		8′				
Choir to Pedal		4′				
Baroque to Pedal		8′				
Baroque to Pedal		4′				
~~Baroque to Pedal~~		~~16′~~				

28

UNISON

Solo	8′
Swell	8′
Great	8′
Choir	8′

REED CHORUS

Stentorphone	Metal	8′	20″	Wind	Pressure	73
Stentorphone	″	4′	20″	″	″	73
Tuba Sonora	″	8′	20″	″	″	73
First Trumpet	″	8′	20″	″	″	73
Second Trumpet	″	8′	20″	″	″	73
French Trumpet	″	8′	20″	″	″	73
Clarion	″	4′	20″	″	″	73

Reed Chorus — Floating
To All Manuels
3 Combination each.

CONTROLS

	Exp. — Pedals
SFORZ — Rev — Pilot	Choir
Swell to Ped. — Rev.	Great
Gr. to Ped. — Rev.	Swell
Solo to Ped.	Solo
Ch to Ped.	Master — Exp.
Baroque to Ped.	Crescendo — Pilot

7

SET COMBINATIONS

Generals	15	Pistons	&	CAN
Solo	8	″		″
S. W.	8	″		″
G. R.	8	″		″
Choir	8	″		″
Ped.	5	″		″

Ped. Combinations — on and off
Each manual

BAROQUE — FLOATING

Bar. to Solo
Solo to BAR — on & off — 5 Comb
S. W. to BAR — on & off — 5 Comb
G. R. to BAR — on & off — 5 Comb
Choir to BAR — on & off — 5 Comb
Reed Chorus on & off — Crescendo — Ped.

BLOWER: Orgoblow made by Spencer Turbine Co. of Hartford.

MOTOR: 25 H.P. by General Electric.

GENERATOR 12 volts, 50 cycles by Electric Specialty Co.

Also a high pressure booster: Westinghouse — 5 H.P. 1740 RPM 35″ wind pressure.

28
20
11
22
23
18

122
7

129

+ New Synthetic stops