# The Story of Robert Hope-Jones

THE CONCLUSION

The combination pedals and pistons are all provided with double touch. Upon using them in the ordinary way, the manual stops alone are affected. If, however, considerable extra pressure be brought to bear upon them. the appropriate Suitable Bass tablet is thereby momentarily depressed and liberated--by this means providing a suitable bass. In large organs, two or three adjustable toe pistons are also provided to give independent control of the Pedal organ. On touching any of these toe pistons, all Suitable Bass tablets are released, and any selection of Pedal stops and couplers that the organist may have arranged, are brought into use. The Hope-Jones plan seems to leave little room for improvement. It has been spoken of as "The greatest assistance to the organist since the invention of combination pedals" by none other than Mark Andrews, Associate of the Royal College of Organists in England.

### *SFORZANDO PEDAL--Double Touch*

Under the name of Sforzando Coupler, a device was formerly found in some organs by which the keys of the Swell were caused to act upon the keys of the Great. The coupler being brought on and off by a pedal, sforzando effects could be produced, or the first beat in each measure strongly accented in the style of the orchestration of the great masters. Hope-Jones in his pioneer organ at St. John's Church, Birkenhead, provided a pedal which brought on the Tuba on the Great organ. The pedal was thrown back by a spring on being released from the pressure of the foot. Some fine effects could be produced by this, but of course, the whole keyboard was effected, and only chords could be played.

### *BALANCED SWELL PEDAL*

The introduction of the balanced Swell pedal in 1863 has greatly increased the tonal resources of the organ. A further and great step in advance appears in recent organs built by the Hope-Jones Organ Company.

The position of the swell shutters is brought under the control of the organist's fingers as well as his feet. Each balanced swell pedal is provided with an indicator key fixed on the under side of the ledge of the music desk, where it is most conspicuous to the eye of the performer. As the swell pedal is opened by the organist's foot, the indicator key travels in a downward direction to the extent of perhaps one and a quarter inch. As the organist closes his pedal, the indicator key again moves upward into its normal position. By means of this visible indicator key, the organist is always aware of the position of the swell shutters. Through patent electric mechanism, the indicator key is so connected with the swell pedal that the slightest urging of the key either upward or downward by the finger will shift the swell pedal and cause it to close or open as may be desired and to the desired extent. When an organ possesses 4 or 5 swell boxes (as in the case of Hope-Jones' organs) modify the tone by many thousands per cent, it becomes highly important that the organist shall at all times have complete and instant control of the swell shutters and shall be conscious of their position without having to look below the keyboards. Hope-Jones also provides what he calls a general swell pedal (and its corresponding indicator key), any or all of the other swell pedals may be coupled at will.

*EDITOR'S NOTE: Following is the conclusion of the text relative to Robert Hope-Jones, "The Father of the Theatre Organ" as it appears in a book, "The Recent Revolution in Organ Building," written by George L. Miller in 1909 for the annual convention of the National Association of Organists. Mrs. David Marr loaned the book to ATOE Member Lloyd E. Klos while he was doing research on the history of the Marr & Colton Company.*

### *SWELL BOXES*

The invention of the Swell is generally attributed to Abraham Jordon, who first exhibited the Nag's Head Swell in 1731.

By the adoption of scientific principles, Hope-Jones has multiplied the efficiency of Swell Boxes tenfold. He points out that wood, hitherto used in their construction, is one of the best known conductors of sound, and should, therefore, not be employed. The effects produced by his brick, stone and cement boxes (Worcester Cathedral, McEwan Hall in Edinburgh, and Ocean Grove in New Jersey) mark, in ascending degrees, the dawn of a new era in Swell Box construction and effect. It is now possible to produce by means of scientific Swell Boxes, an increase or diminution of tone amounting to many thousands per cent.

We have heard the great Tuba at Ocean Grove, on 50-inch wind pressure, so reduced in strength that it formed an effective accompaniment to the tones of a single voice.

The Hope-Jones method seems to be to construct the box and its shutters (in laminated form) of brick, cement or other inert and non-porous material, and to substitute for the felt usually employed at the joints of his patented "sound trap." It is Hope-Jones' habit to place the shutters immediately above the pipes themselves, so that when they are opened, the Swell box is left practically without any top. It is in such cases not his custom to fit any shutters in the side or front of the swell box.

To relieve the compression of the air caused by playing for any length of time with the shutters closed, he provides escape valves, opening outside the auditorium. He also provides fans for driving all the cold air out of the box before using the organ, thus equalizing the temperature with the air outside. The use of Swell boxes of this vastly increased efficiency, permits the employment of larger scales and heavier pressures for the pipes than could otherwise be used, and enormously increases the tonal flexibility of the organ.

### *BELLOWS SPRINGS VERSUS WEIGHTS*

Prior to the construction of the organ at Birkenhead, it has been the custom to obtain or regulate the pressure of wind supplies to the pipes by means of loading the bellows with weights, Owing to its inertia, no heavy bellows weight can be set into motion rapidly. When, therefore, a staccato chord was struck on one of these earlier organs with all its stops drawn, little or no response was obtained from the pipes, because the wind chest was instantly exhausted and no time was allowed for the inert bellows weights to fall and so force a fresh supply of air into the wind chests.

In one of Hope-Jones' earliest patents, the weights indeed remain, but they merely serve to compress springs, which in turn act upon the top of the bellows. Before this patent was granted, he had, however, given up the use of weights altogether and relied entirely upon springs.m

This one detail--the substitution of springs for weights--has had a farreaching effect upon organ music. It rendered possible the entire removal of the old unsteadiness of wind from which all organs of the time suffered in greater or less degree. It quickened the attack of the action, and the speech of the pipes to an amazing extent, and opened a new and wider field to the King of Instruments.

### *INDIVIDUAL PALLETS*

Fifty years ago, the pallet and slider sound-board were well nigh universally used, but several of the builders strongly advocated and introduced chests having an independent valve, pallet or membrane to control the admission of wind to each pipe in the organ. The object of this was to prevent ""robbing"". While the pressure of the wind might be ample and steady enough with only a few stops drawn, it was found that when all the stops were drawn, the large pipes ""robbed"" their smaller neighbors of their due supply of wind, causing them to sound flat. By giving each pipe a pallet or valve to itself, the waste of wind in the large grooves was prevented.

A good pallet and slider chest is difficult to make, and those constructed by indifferent workmen out of indifferent lumber will cause trouble through "running""--that is, leakage of wind from pipe to another.

Individual pallet chests are cheaper to make, and they have none of the defects named above. Most of these chests, however, are subject to troubles of their own, and not one of those in which round valves are employed permits the pipes to speak to advantage.

Willis, Hope-Jones, Michell and other artists, after lengthy tests, independently arrived at the conclusion that the best tonal results cannot by any possibility be obtained from these cheap forms of chest. Long pallets and a large and steady body of air below each pipe are deemed essential.

### *HEAVY WIND PRESSURES*

The vast majority of organs built fifty years ago used no higher wind pressure than 3 inches. To Willis must be attributed greater advance in the utilization of heavy wind pressure for reed work.

Prior to the advent of Hope-Jones around 1887, no higher pressure than 25 inches had, we believe, been employed in any organ, and the vast majority of instruments were voiced on pressures not exceeding 3 inches. Hope-Jones showed that by increasing the weight of metal, bellying all flue pipes in the center, leathering their lips, clothing their flues, and reversing their languids, he could obtain from heavy pressures practically unlimited power, and at the same time actually add to the sweetness of tone produced by the old, lightly-blown pipes. He used narrow mouths, did away with regulation at the foot of the pipe, and utilized the "pneumatic blow" obtained from his electric action. He

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WurliTzer pipes, chests, percussions, etc. Robert Morton console and relay. Southern California area only – unable to crate or ship. Walter B. Trepte, 8046 Pasadena Avenue, La Mesa, California. 714-465-5906.

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75 note Oboe Horn 4'' wind, would make excellent Serpent. Ron McDonald, 1720 South 11 East, Salt Lake City, Utah.

Gulbransen Rialto Theatre Organ, latest model just over one year old. Organ stored for last six months, equipped with two Leslie speakers – $3600. SP4 John Nelson, Hq Co USATCI, Fort Dis, New Jersey 08640.

## WANTED

Chests, pipes, regulators, blower, tremulants for theatre pipe organ. State condition and price. E.J. Borowiec, 224 S. 5th St., Delano, Minnesota 55328.

WurliTzer Theatre Organ stop keys, and engraving. Please indicate quantity available – number of each color, and price. Judd Walton, 227 Texas Street, Vallejo, California.

Back issues of THEATRE ORGAN. Willing to pay reasonable price. Need Volume I, No. 1, 3, 4; Volume II, No. 1, 2, 4; Volume III, No. 1, 2, 3, 4; Volume IV, No. 1, 2. Ellsworth S. Primeau, 3822 Vineland Avenue, North Hollywood, California 91604.

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## ROBERT HOPE-JONES
(Continued)

almost all parts of the world shows the Hope-Jones influence, though some builders still fight against the leathered lip. It was only at the cost of considerable thought and labor that Hope-Jones was able to develop his crude and embryonic scientific theory into a process which bids fair to transform modern organ building.

As knowledge of the Hope-Jones methods spreads, coarse and unmusical stops disappear. He is without question right in urging that the chief aim in using heavy pressure should be to increase refinement, not power of tone. Sweet foundation tone produced from heavy wind pressure always possesses satisfactory power. He is also unquestionably right in his contention that when great nobility of foundation tone is required, Diapasons should not be unduly multiplied, but Tibias or large Flutes should be used behind them.

Every epoch-making innovation raises adversaries. We learn from these that pure foundation tone does not blend. True, there are examples of organs where the true foundation tone exists, but does not blend with the rest of the instrument, but it is misleading to say that "pure foundation tone does not blend." Hope-Jones has proved conclusively that by exercise of the requisite skill, it does, and so have others who follow in his steps.

### *THE DECLINE OF MIXTURES*

The decline of mixture work has in itself entirely altered and very greatly improved the effect of organs when considered from a musical point of view. The tone is now bright and clear.

The announcement by Mr. Hope-Jones at the beginning of the last decade of the past century of his complete discardment of all mixture and mutation work, may fairly be stated to have marked a distinct epoch in the history of the controversy.

### *FLUTES*

The chief developments in Flutes that have taken place during the period under consideration are the introduction of large scale, leather-lipped "Tibias" by Hope-Jones.

These pipes have already effected a revolution in the tonal structure of large organs. They produce a much greater percentage of foundation tone than the best Diapasons, and are finding their way into the most modern organs of size. They appear under various names, such as Tibia Clausa, Tibia Plena, Gross Flute, Flute Fundamentale, and Philomela.

The word Tibia is now used in this country to denote a quality of tone of an intensely massive, full and clear character, first realized by Mr. Hope-Jones, though faintly foreshadowed by Bishop in his Clarabella.

The Tibia Plena was invented by Mr. Hope-Jones, and first introduced by him into the organ at St. John's, Birkenhead. It is a wood Flute of very large scale, with the mouth on the narrow side of the pipe. The also inaugurated an entirely new departure in the science of reed voicing.

He employs pressures as high as 50 inches, and never uses less than five. His work in this direction has exercised a profound influence on organ building throughout the world, and leading builders in all countries are adopting his pressures or are experimenting in that direction.

### *TRANSFERENCE OF STOPS*

At the commencement of the period of which we are treating, the stops belonging to the Swell organ could be drawn on that keyboard only; similarly, the stops on the Great, Choir and Pedal organs could be drawn only on their respective keyboards.

It is difficult to say who first conceived the idea of transference of stops, but authentic instances occurring in the 16th century can be pointed out. During the last 50 years, many builders have done work in this direction, but without question, the leadership in the movement must be attributed to Hope-Jones, While others may have suggested the same thing, he has worked the system out practically in a hundred instances, and has forced upon the attention of the organ world the artistic advantages of the plan.

His scheme of treating the organ as a single unit and rendering it possible to draw any of the stops on any of the keyboards at any reasonable pitch, was unfolded before the members of the Royal College of Organists in London at a lecture he delivered on May 5, 1891.

When adopting this system in part, he would speak of "unifying" this, that, or the other stop, and this somewhat inapt phrase has now been adopted by other builders, and threatens to become general.

## HOPE-JONES' CONTRIBUTIONS TO ORGAN TONE

### *DIAPASONS*

In the year 1887, Hope-Jones introduced his discovery that by leathering the lips of the Diapason pipes, narrowing their mouths, inverting their lanquids, and increasing the thickness of the metal, the pipes could be voiced on 10, 20, or even 30-inch wind without hardness of tone, forcing, or windiness being introduced. He ceased to restrict the tone of the pipe, and did all his regulation at the flue.

His invention has proved of profound significance to the organ world. The old musical quality, rich in foundation tone, is returning, but with added power. Its station, in place of the hard and empty-toned Diapasons to which we had perforce become accustomed is rapidly growing. The organ in

block is sunk, and the lip, which is of considerable thickness, is usually coated with a thin strip of leather to impart to the tone the requisite smoothness and finish. It is voiced on any wind pressure from 4 inches upwards. The Tibia Plena is the most powerful and weighty of all the Tibia tribe of stops. The Tibia Profunda and Tibia Profundissima are 16-ft. and 32-ft. Pedal extensions of the Tibia Plena.

The Tibia Clausa is a wood Gedeckt of very large scale, in other words, a stopped pipe, furnished with leather lips. It was invented by Mr. Hope-Jones. The tone is powerful and beautifully pure and liquid. The prevailing fault of the modern Swell organ is, perhaps, the inadequacy of the Flute work. It was the recognition of this shortcoming which led to the invention of the Tibia Clausa.

The Tibia Dura is another of Mr. Hope-Jones' inventions. It is an open wood pipe of peculiar shape, wider at the top than the bottom, and described as a bright, hard, and searching tone.

The Tibia Minor was invented by John Compton of England. It bears some resemblance to Hope-Jones' Tibia Clausa, but destined for use on an open wind chest. It is made of wood, though some have been made of metal. In all cases, the upper lip is leathered, following Hope-Jones' idea.

The Tibia Mollis, invented by Hope-Jones, is a Flute of soft tone, composed of rectangular wooden pipes.

### *STRINGS*

At the commencement of the period herein spoken, string-toned stops as we know them today scarcely existed. To William Thynne belongs the credit of a great step in advance. Hope-Jones founded his work on the Thynne model, and by introducing smaller scales, bellied pipes, and sundried improvements in detail, produced the keen and refined string stops now finding their way into all organ of importance. His delicate Viols are of exceedingly small scale, some examples measuring only 1-1/8 inches in diameter at the 8-foot note. They are met with under the names of Viol d' Orchestre, Viol Celeste and Dulcet. According to Wedgwood in his "Dictionary of Organ Stops", "The Hope-Jones pattern of Muted Viol is one of the most beautiful tones conceivable." These Stops have contributed more than anything else towards making the organ suitable for the performance of orchestral music.

### *REEDS*

In the last half-century, the art of reed voicing has been largely revolutionized. Willis created an entirely new school in this field. He was the first to show that reeds could be made really beautiful and fit for use without help from flue stops. When he wanted power, he obtained it by raising the pressure.

Hope-Jones took up the work where Willis left it, and has not only pushed the Willis work to its logical conclusion, but has introduced a new school of his own.

He has taken the Willis chorus reeds and by doubling the wind pressure and increasing the loading and thickness of tongues, has produced results of surpassing magnificence. From the Willis' Cor Anglais, he has developed his Double English Horn; from the Willis' Oboe, his Oboe Horn; and from the Willis' Orchestral Oboe, the thin-toned stops of that class now being introduced by Austin, Skinner, and by his own firm. His chief claim to distinction in this field, however, lies in the production of the smooth reed tone now so rapidly coming into general use; in his 85-note Tuba; in the use of diminutive eschallots with mere saw-cut openings; and in the utilization of "vowel cavities" for giving character to orchestral-toned reeds.

The latter are of particular interest, as their possibilities are in process of development. The results already achieved have done much to make the most advanced organ in a sense rival the orchestra.

To exemplify the principle of the vowel cavities, Hope-Jones was in the habit, in his factory in Birkenhead, England in 1890, of placing the end of one of his slim Kinura reed pipes in his mouth, and by making the shape of the latter favor the oo, ah, eh, or ee, entirely modified the quality of tone emitted by the pipe.

In England, this vowel cavity principle has been applied to Orchestral Oboes, Kinuras and Vox Humanas, but in this country, it was introduced but six years ago, and has so far been adapted only to Orchestral Oboes, Examples are to be seen in the Wanamaker organ in New York, Park Church in Elmira, and Buffalo Cathedral. There undoubtedly lies a great future before this plan of increasing the variety of orchestral tone colors.

### *THE DIAPHONE*

The invention of the Diaphone by Hope-Jones in 1894, provided the organ-builder with an entirely new method of producing tone, and the organist with a new group of tone colors. Much was made of this invention in the English musical press, but it does not seem to have been practically applied in that country in more than perhaps a score of instances. So far as this country is concerned, we believe the only true Diaphones in use are those in the Auditorium at Ocean Grove, N. J., and in St. Paul's Cathedral in Buffalo, N. Y., though a few specimens, half reed and half diaphone have been fitted under the name of "Magnaton".

The Diaphone takes so many forms and covers to large a field that the cost of experimenting and working out its various forms and scales must necessarily be great. Possibly this is the reason why the invention has been so little developed. The tonal effects produced by the Diaphone which we have heard are magnificent, and it appears to us that the diaphonic principle will play an important part in furnishing the bass for organs in the future.

### *SUMMING UP HOPE-JONES' CONTRIBUTIONS TO ORGAN-BUILDING*

In 1903, Hope-Jones came to this country and joined the Austin Organ Co. as vice president, whereupon that company adopted his stop keys, wind pressures, scales, leathered lip, smooth reeds, orchestral stops, etc.

In 1907, the Hope-Jones Organ Co. in Elmira, N.Y. commenced the construction of organs containing all these and other English improvements.

Until recently, England unquestionably led in the development of the organ, and Hope-Jones led England. Now that his genius is at work in this country, who shall set limit to our progress? Even when expressing himself through other firms, his influence entirely altered the standard practice of the leading builders, and since direct expression has been obtained, improvements have appeared with even greater rapidity.

It is the author's opinion that in the course of the last half-dozen years, this country has made such great strides in the art that it may now claim ability to produce organs that are quite equal to the best of those built in England. And he ventures to prophesy that in less than another half dozen years, American-built organs will be accepted as the world's highest standard.

At a banquet given in the New York in 1906, Alexander Guilmant complained that no organ which he had played in this country possessed "majesty of effect." The advent of Hope-Jones has entirely changed the situation. When Guilmant next comes, he will be as quick to recognize the fact as was the celebrated English organist, Edwin Lemare, who pronounced the reeds at Ocean Grove, N. J. the finest he had ever heard.


**SUNDAY IN VICTORIA**—Reginald Stone at the console of his 2m/6r Kimball which is installed in the 400-seat Fox Theatre, Victoria, British Columbia, plays music for "In the Shade of the Old Apple Tree" as the audience sings under direction of blazer-clad baritone. Stone has presented silent movies at theatre on numerous occasions. A recent Sunday afternoon session featured organ selections by Stone, plus a soprano, two accordianists and a color travelogue on the screen. The organ is slated to be moved eventually to a larger location, Stone has advised THEATRE ORGAN.