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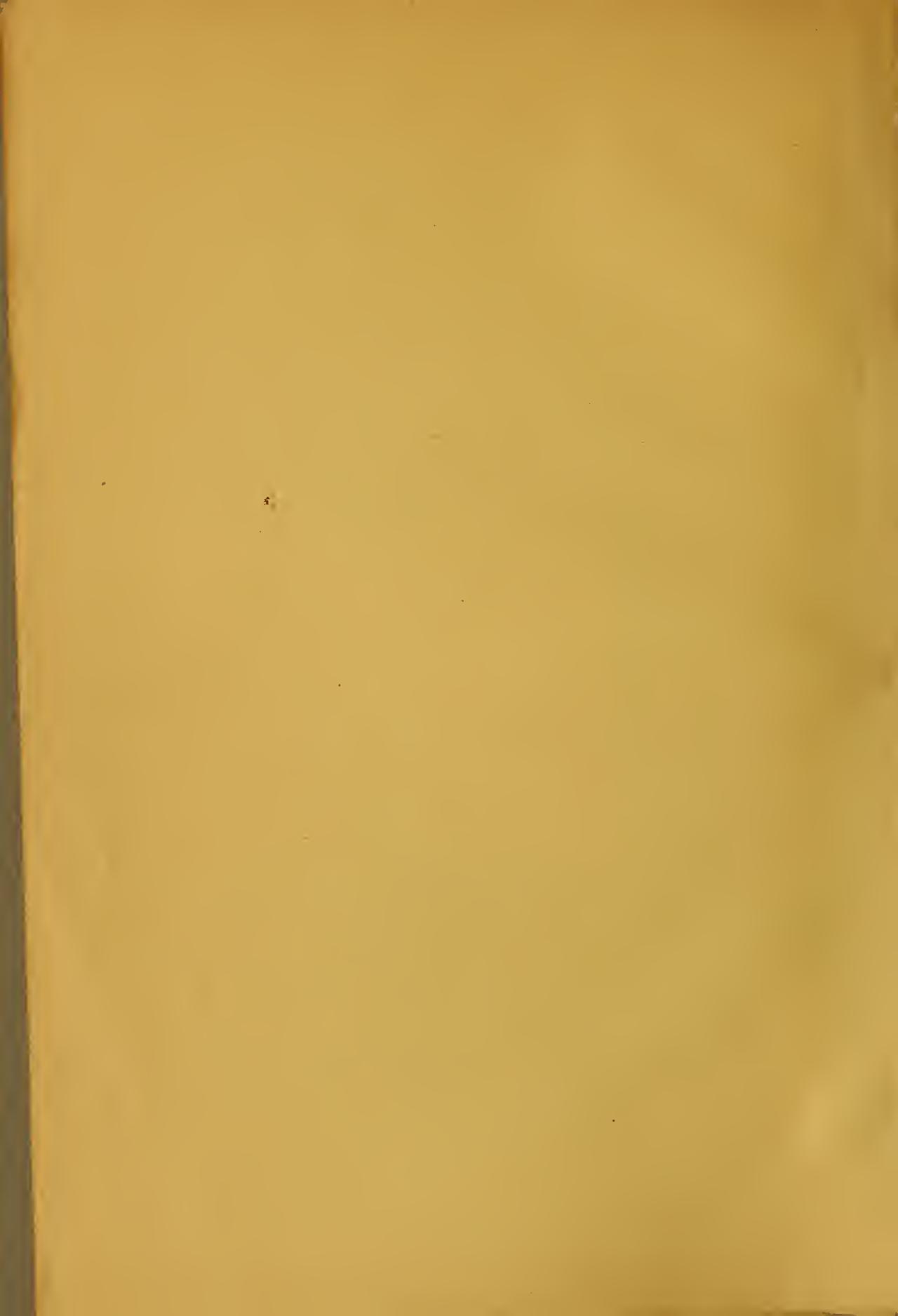
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Organs and Organ - Building
in
New England

By
Henry C. Lahee

From No
New England Magazine.



ORGANS AND ORGAN BUILDING IN NEW ENGLAND.

By Henry C. Lahee.

IT would be difficult to find a more concise or more useful introduction to the subject of the present article than the sketch by Professor Leo R. Lewis published in the programme of the twenty-second of the series of public organ recitals given in Boston last season under the auspices of the Twentieth Century Club. The sketch covers the history of the organ from its earliest days, and makes clear to the reader the simple technicalities with which it is necessary to deal.

"The parent instrument from which the organ was developed was the syrinx. This consisted of a set of pipes fastened in a row and made to sound by the direct force of the breath, after the fashion of the harmonica of our own day. The earliest organ was merely a set of such pipes, with a key device for admitting currents of air to the pipes from an air reservoir or wind-chest filled directly from the player's lungs. This instrument was mechanically similar to the bagpipe as we know it, but the tone was, of course, similar to that of the organ, *i. e.*, flute-like. Even after bellows came into use there was difficulty in getting the steady supply of wind necessary for smoothness and continuity of tone. Hence the invention, by Ctesibius of Alexandria, of the 'water organ,' about 200 B. C. By

his device the pressure of wind in the wind-chest was regulated by connection with a tub-like chamber inverted in water, after the fashion, but on a diminutive scale, of the modern gasometer. Moisture was, of course, a bane, and the water organ disappeared as soon as bellows with the simpler forms of air reservoirs, like modern blacksmiths' bellows, were successfully applied to the organ. Such an organ is mentioned as early as 430 A. D. It was about this time that the organ began to be used in church. Its introduction was slow, for unaccompanied singing was loved and already well developed. But Charlemagne (about 800), who enthusiastically fostered music, approved of the organ and made its use general. Some of the products of the time must have resembled a steam calliope in tone; for we read that an organ in Win-

chester cathedral had not only ten keys and four hundred pipes, but twenty-six bellows, which were blown by seventy men, 'in the sweat of their brow.' As every key was apparently connected with forty pipes, we do not wonder at the recorder's statement that 'everyone stops with his hand his gaping ear, being in no wise able to draw near.'

"During the next two or three centuries many improvements were made. The keyboard, formerly an aggregation of gigantic keys, each of which could be played only by pressure of the whole hand, gradually approached its present form. Whether this development took place first in connection with the



THE OLD BRATTLE ORGAN.

In St. John's Chapel, Portsmouth, N. H.



ELIAS HOOK.

organ or with the parent of the pianoforte, the clavichord, has never been satisfactorily settled. In 1350 we find record of a remarkable organ with three keyboards in the Halberstadt cathedral. Before another century had passed the pedals had been invented (probably about 1430), and the history of the modern organ had begun. The different keyboards (manuals) made it possible to get variety of tone, but it was not until about 1500 that devices were invented for using separately the various sets of pipes played by the same keyboard. A development of this made possible what we know as organ 'stops,' which we see at the right and left of the organist, and which he draws out or pushes in when he wishes to vary the tone-color. As soon as the principle of stops was understood, attention could be given to the development of the many varieties of tone-color. This, as we may suppose, was carried on with great rapidity. We read of an organ built in 1585 for the Danzig cathedral with three manuals, having in the aggregate thirty-nine stops and a complete outfit of pedals of corresponding variety. The famous Lübeck organ, which Bach walked fifty miles to hear in 1705, was only a little larger than this. Great improvements have been made in the construction and 'voicing' of organ pipes since 1600; especially during the last half-century, when the perfected science of acoustics has had great influence. But the organ of today differs from that of 1600 even more in mechanical construction than in tone.

Couplers, by which the various manuals could be connected with one another and with the pedals, were used before 1650. The bellows was greatly improved in 1667. Fifty years later the 'swell' was introduced. By this device a portion of the organ was inclosed in a box which might be opened or closed at will by the performer, thus producing effects of *crescendo* and *diminuendo* without manipulating the stops."

Music was considered by the Puritans to be a frivolous trap of the Evil One, prepared to ensnare the souls of men. Even such sacred music as was authorized for the purpose of worship was only accepted after labored argument by the ministers that the singing

of psalms was a divine institution, and secular music was sternly interdicted as a menace to the salvation of souls. These conditions prevailed in New England up to the year 1640; and for many years music of the crudest kind only was to be heard. It has been stated that the work accomplished in America from the settlement of the country to the year 1750 was similar to that which had occupied centuries of development in Eu-



THOMAS APPLETON.



WILLIAM B. GOODRICH.

rope. This, however, is not an entirely fair statement, for while music developed in Europe by the natural process of evolution, the early settlers of America, who had all the advantages which existed in Europe and deliberately cut themselves away from them, had but to put themselves once more into communication with the Old World to receive its advantages. The great hindrance to the early progress of music in America was first the opposition of the Puritans, and next the poverty and crudeness of an undeveloped country. The struggle for existence during the first century of the settlement of New England should be sufficient excuse for the backward condition of music generally at the middle of the last century.

The history of the church organ in America and more particularly in New England begins about the year 1713; for in that year died Thomas Brattle, a Boston merchant and lover of music, who had imported from England the first organ that was ever seen in this country. Thomas Brattle graduated from Harvard College in 1676, and was also treasurer of the college from 1693 to the time of his death. According to his will his organ was "given and devoted to the praise and glory of God in said church" (the Brattle Square Church) "if they shall accept thereof and within a year after my decease procure a sober person that can play skilfully thereon with a loud noise; otherwise to the Church of England (King's Chapel) in this town on the same terms and conditions; and on their non-acceptance or discontinuance to use it as before, I give the same to my nephew, William Brattle." The good people of the Brattle Square Church, which was called the Manifesto Church, voted on July 24 of the same year, "that they did not think it



THE ORGAN IN KING'S CHAPEL, BOSTON.

proper to use said organ in the public worship of God"; consequently the instrument was offered to the congregation of King's Chapel. It was formally accepted by them on the third day of August, 1713. "At a meeting of the Gentlem of the Church, this 3rd day of August, 1713, Referring to the Orgains Giveing them by Thomas Brattle, Esq., Decsd—Voted that the Orgins be accepted by the Church." Soon after this, in February, 1714, until which time the organ had been waiting unpacked in the tower of King's Chapel, a Mr. Edward Enstone of Tower Hill, London, was invited to become organist, at a salary of thirty pounds per annum. The organ, set up after so much delay, remained in use till 1756, a period of forty-three years, when it was sold to St. Paul's Church, Newburyport. Here it was in constant use until 1836, when it was again sold for \$450 to St. John's Church, Portsmouth, N. H. The records of St. John's Church are silent upon the subject of the disposition of the organ, but for many years it has occupied a position near the chancel of the chapel on State Street. It is interesting on account of its history

alone; as a musical instrument it is insignificant, in fact quite heart-rending, even suggesting a justification of the Puritans in their objections to the church organ.

The history of the Brattle organ has been comparatively uneventful, and the instrument is enjoying a peaceful old age. Such has not been the case with most of our historical organs, some of which have been gradually dismembered and some have disappeared altogether. The common fate of old organs is to be used as make-shifts in new churches until a permanent instrument can be secured. Finally the old metal pipes are melted down and made over and the wooden portions are used for kindling wood.

After the Brattle organ was removed from King's Chapel in 1756, a new instrument was imported from London, where it had been built by Adrian Smith. It is said that it was sent as a gift from the king to the Church of England in Boston and that it was selected or approved and played upon by no less a musician than George Frederic Händel. This instrument was in use unchanged 104 years, and was then (in 1860) enlarged by Simmons and Wilcox. It has been repaired and enlarged twice since that year by Hook and Hastings, the old case and a few of the original pipes being retained on account of their historical associations. In the days of the Revolution the crown with which the



THE OLD ORGAN IN ST. PAUL'S CHURCH, BOSTON



THE FOURTH TREMONT TEMPLE ORGAN, BOSTON.

organ was surmounted was torn down; but lately, the bitter emotions caused by that strife having passed away, the old crown has been replaced. The old pipes and the action are no longer in existence, having gone the way of old organ material.

In 1790 the congregation of the Brattle Square Church experienced a change of heart and bought an organ containing two manuals and sixteen stops at a cost of £400. This instrument was made abroad, and even after it had been ordered the opposition to it was still so great that an effort was made to prevent its being landed. One wealthy member of the parish is said to have offered to pay the whole cost of the instrument into the treasury for the benefit of the poor if it should be thrown overboard in the harbor. This offer was not accepted and the

organ was duly set up; and it remained in use until 1872.

Between 1713, when the Brattle organ came into notice, and 1756, when the new organ was imported for King's Chapel, several other organs were brought over. The second organ imported was called the Berkeley organ and it is said to have been offered by Bishop Berkeley to a church in the town of Berkeley which had been named after him. The offer was refused and the organ was then presented to Trinity Church, Newport, R. I. This was a much more elaborate instrument than the Brattle organ; it had thirteen stops and 498 pipes, while the Brattle organ had only six stops and comparatively few pipes. After being in use for 111 years the Berkeley organ was reconstructed (in 1848) by Henry Erben of New York, the case



THE GREAT ORGAN, MUSIC HALL, BOSTON.

and two stops of the original instrument being retained. The other stops, with the action and key-board, were put into a pine case and placed in Grace Church, Brooklyn, and the organ thus constructed was presented by Miss Grace Gibbs in 1850 to St. Mary's Church, Portsmouth, R. I. In 1880 the interior of the organ in Trinity Church, Newport, was removed and taken to the Kay Chapel,

in the same city, this time the two old stops, which had formerly been retained, going with it. In the old case a new organ was built, and the Berkeley organ is now doing duty in three different places.

The next organ imported was that for Christ Church, Boston (the Old North Church), in 1736; but this organ did not remain very long in that church, for in 1752 (some accounts say

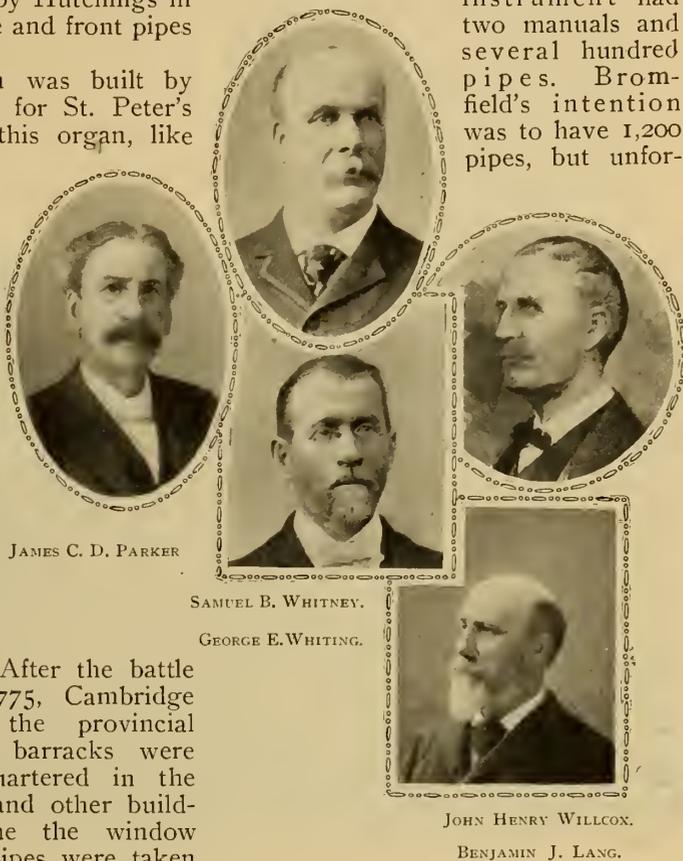
1759), Thomas Johnston, one of the earliest New England organ builders, replaced it with an instrument of his own building, which was in use until 1886. It was enlarged by Goodrich in 1834, but was rebuilt by Hutchings in 1886, the original case and front pipes being retained.

In 1743 an organ was built by J. Clarke of London for St. Peter's Church, Salem, but this organ, like that of Christ Church, was replaced by one built by Thomas Johnston in 1754.

Another organ of which the early history was exceedingly romantic was built in London by Snetzler and placed in Christ Church, Cambridge. It had been procured by the liberality and exertions of Barlow Trecothick, a relative of Mr. East Apthorp and afterwards Lord Mayor of London. After the battle of Lexington, in 1775, Cambridge was occupied by the provincial troops, and before barracks were built these were quartered in the church, the college and other buildings. At this time the window weights and organ pipes were taken by the soldiers and moulded into bullets, which, on June 17, were part of the ammunition used in the battle of Bunker Hill. On the last Sunday of that year services held in the church were attended by George Washington and his wife and others; and though no mention is made of the organ on that occasion, it is to be hoped that enough pipes remained to allow of its use. The instrument was repaired in 1790, and was used until 1844, when a new organ was put in its place.

The first pipe organ built in America is said to have been built by John Clemm for Trinity Church,

New York, in 1737. It contained three manuals and twenty-six stops, and cost £520. The first organ built in Boston, or in New England, was by Edward Bromfield, in 1745. This instrument had two manuals and several hundred pipes. Bromfield's intention was to have 1,200 pipes, but unfor-



JAMES C. D. PARKER

SAMUEL B. WHITNEY.

GEORGE E. WHITING.

JOHN HENRY WILLCOX.

BENJAMIN J. LANG.

FAMOUS BOSTON ORGANISTS.

tunately he died before the instrument was complete. "The workmanship of the pipes and keys," it is recorded, "exceeded anything of the kind that ever came out here from England. . . . And what is surprising was that he had but a few times looked into the inside work of two or three organs that came from England." This organ was placed in the Old South Church, Boston. During the siege of Boston the organ was removed for safety to a store belonging to William Phillips, where unfortunately it was burned.

Thomas Johnston, who has already been mentioned as the builder of the organs for Christ Church, Boston, and St. Peter's Church, Salem, and who was one of the earliest organ builders in New England, died in 1768, and was succeeded in organ building by Josiah Leavitt. The next organ builder was Thomas Pratt of Winchester, N. H., who died in 1849, and who is said to have built upwards of fifty instruments.

The first organ builder of importance in New England was William M. Goodrich of Templeton, Mass., who

Thomas Appleton in 1810 went into partnership with Lewis and Alpheus Babcock and Hayts, dealers in musical instruments and music, the name of the firm being Hayts, Babcock & Appleton; but the partnership was of short duration, the depression consequent upon the war of 1812 causing the failure of the enterprise. After this Mr. Appleton took up the manufacture of organs by himself and for many years stood at the head of his art. He built thirty-five organs for Boston, many of them having three manuals, and the

first being the Church Green organ, in the church at the corner of Summer and Bedford Streets. This instrument was afterwards taken to Providence, where it was used in a Baptist church until about 1872, when it was brought back to Boston and placed in the New South Church, situated at the corner of Tremont and Camden Streets. About



SETTING UP THE CINCINNATI ORGAN.
In Hook & Hastings's Factory.

has been called the father of organ building in New England. He was in business from 1805 to 1833; and such was his reputation and success that during the time he was in business only three foreign instruments were imported into Boston.

With Goodrich for a time was associated Thomas Appleton, who became one of the most noted organ builders of his day. Mr. Appleton married the sister of Mr. Goodrich. Ebenezer Goodrich, a younger brother of William, was also an organ builder and had a fair amount of business. He died in 1841.

1886 it was partially rebuilt by George H. Ryder. Mr. Appleton also built a three-manual organ for the Händel and Haydn Society, which was used by them in Music Hall until the German organ was imported, when it was sent to San Francisco. Thomas Appleton died in 1872, at the age of eighty-six. Besides the organs built by him for Boston, there were more than a hundred built by him for other cities.

Other early organ builders were John Rowe, 1795 to 1812, and Adam and John Geib, 1808 to 1847. The Geibs are supposed to have built the

organ used in the North Church, Salem.

In 1820 the brothers Elias and George Hook, who had been connected with Goodrich, established themselves as organ builders in Salem, but moved to Boston in 1832. The firm became later known as Hook & Hastings, and has been very prosperous, having built up to the present day more than 1,700 organs, among which are several of the finest instruments in this country. The first Tremont Temple organ, which was built by them in 1853, was the first instrument on this continent which could by any stretch of imagination be called a concert organ. It contained 4 manuals, 70 stops, and 3,096 pipes. This organ was destroyed by fire, and a second organ was built in 1880 by the same firm, containing 4 manuals, 65 stops, and 3,445 pipes. This also was burnt in 1893.

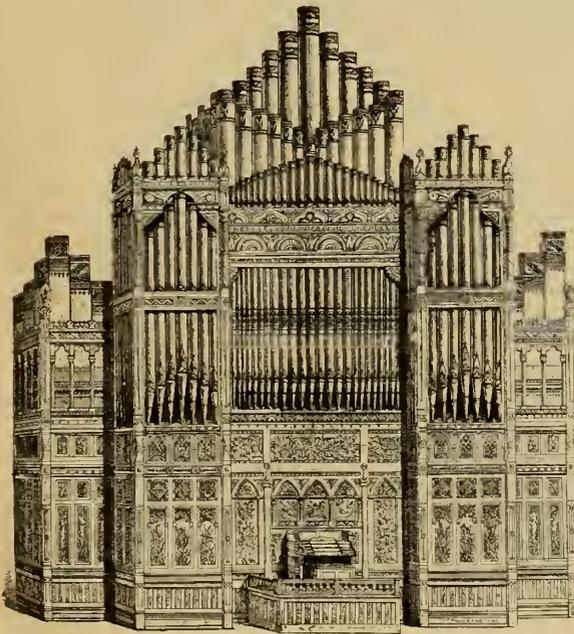
The industry of organ building was well established in this country by the middle of the present century, although it had by no means attained to European perfection. There are now a



ORGAN IN THE HARVARD CHURCH, BROOKLINE.

score or more of organ builders who are turning out hundreds of instruments annually. The prejudice against organs which during the last century was gradually dying out has now entirely disappeared, and for years past churches have strained their exchequers in order to provide the best organs possible.

There is little doubt that the importation of the Music Hall organ in 1863 gave a great stimulus to the industry, not alone by setting a standard for American builders, but by stirring up among the people an amount of enthusiasm for the "king of instruments" never before known on this continent. Many of the most prominent organists of to-day were led to choose their profession through admiration for the Music Hall organ. The



THE CINCINNATI MUSIC HALL ORGAN.



THE SETTING-UP ROOM IN GEORGE S. HUTCHINGS'S FACTORY, BOSTON.

early organs built in this country were crude affairs when compared with the organs in use in Europe or those of recent days built in America. Most of them were ordered by churches lacking sufficient means to pay for as good an organ as they desired, — a condition even now quite prevalent. The difficulty was glossed over by "half stops" and general insufficiency of appointment. In fact with the organs in vogue in American churches fifty years ago it would have been impossible to do much of what would to-day be considered legitimate organ playing. The swell organ was generally what is called "short," most of the stops ending at the tenor C; the pedal keyboard was only an octave and a half in compass, and the stops belonging to it

were only one or two in number. Indeed, it is said that Mr. George J. Webb, who was president of the Händel and Haydn Society from 1838 to 1841, made the declaration that not a single organist in Boston was capable of playing a first class fugue by Bach. Nevertheless, when the Great Organ was here, a small army of organists sprang up like the warriors of Roderick Dhu, fully competent to give a long series of most excellent recitals on that instrument. Men whose names have long since become familiar to the music-loving public of Boston and of whose ability there has never been any doubt, — Morgan, called the first con-

cert organist in America; Willcox, Eugene Thayer, J. C. D. Parker, J. K. Paine, Dr. Tuckerman, B. J. Lang, S. B. Whitney, George E. Whiting, — were all among the early organists of the Music Hall organ period; and now, while we still have some of them, their pupils and pupils' pupils are holding the important positions in most cities of this country.

The idea of placing in Boston an organ of the highest type was first put forward shortly after the completion of Music Hall in 1852, by Dr. J. Baxter Upham, who was president of the Music Hall Association; and the profits of a fair which was held to celebrate the opening of the hall were set apart as a nucleus of a fund for that purpose. Only the small sum of \$920 was real-

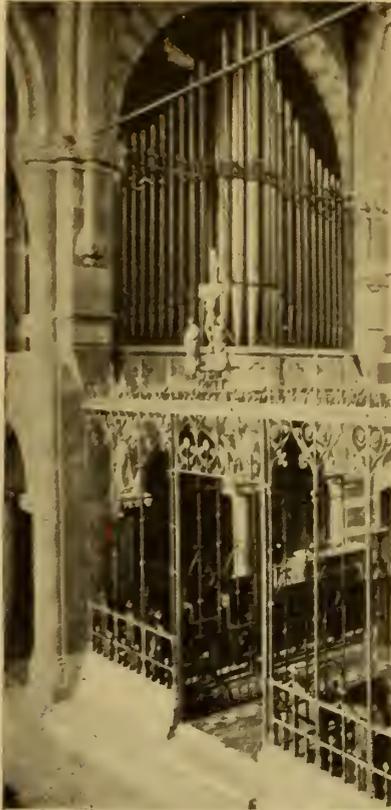
ized, but this was constantly added to by private gifts and occasional appropriations made by the Music Hall corporation. In 1853 a committee, of which Dr. Upham was chairman, went to Europe and made a thorough study of the most noted organs and visited many of the leading organ builders. Although the subject was kept constantly before the public, it was not until 1856 that any further definite action was taken. Then the Music Hall corporation agreed to appropriate \$10,000, if the balance of the sum of \$25,000, which was considered to be the necessary amount, could be raised by public subscription. The desire of the corporation was stated to be "to provide for a work that shall stand, it it to be hoped, not for decades only, but for centuries of years." So strongly was this view held, that it was

stipulated that, in case Music Hall should ever be sold or converted to purposes foreign to the designs of its founders, the organ was to be removed to some place of security till such time as another Music Hall should be constructed to receive it. Thus it should stand "the hope of art in future years."

The contract for the building of the organ was awarded to the firm of E. F. Walcker & Son of Ludwigsburg, Wurttemberg, Germany; but the case of the instrument was not included in this contract and was made by Messrs. Gustave and Christian Herter of New York, from designs originally drawn by Mr. Hammatt Billings, but subsequently modified by the Herters. An excellent description of the case was given in *Dwight's Journal of Music* and may be quoted here:—



THE ORGAN IN THE SOUTH CONGREGATIONAL CHURCH,
NEW BRITAIN, CONN.



ORGAN IN THE CHURCH OF
THE ADVENT, BOSTON.

"The thing is an edifice in itself, of grand proportions, massive in its solidity, yet as graceful in its outlines and as rich in all its details as a poet's dream. Huge caryatides support the structure — figures full of strength, carved with wondrous skill; above rise the enormous pipes, marshalled in glittering rows, or grouped into monstrous columns; statues crown the pinnacles — singing or playing upon instruments, or listening; angels exquisitely carved in alto relievo surround the central towers, and below, over the arch above the key-boards, is the head of Sebastian Bach, the great master of the instrument. Sweet faces of angels and stony-eyed fates look down from arches and pilasters. Yet there is no confusion, nothing is overlaid. The whole vast front has such a symmetry and splen-

dor of design, that it would seem to have been created by magic, to have risen in its beauty at the sound of the wondrous harmonies within."

Before the organ was ready for shipment this country had entered upon the long struggle of the war of the rebellion, and for a time it seemed that the project would have to be abandoned. In fact negotiations were entered into with the Crystal Palace Association in England for the transfer of the instrument to them, when the Trent affair took place and the negotiations were at once broken off. Finally, after many dangers and difficulties, the organ arrived in Boston, early in the summer of 1863. The construction was completed in October, and the great instrument, which was 47 feet wide, 18 feet deep, and 70 feet high, weighed nearly seventy tons, and contained 4 manuals, 89 speaking stops, and 5,474 pipes, was ready for its inauguration.

On Saturday evening, October 31, in the presence of the subscribers and stockholders of the Music Hall Association, members of



THE ORGAN IN THE ROMAN CATHOLIC CATHEDRAL,
BOSTON.

the city government and other invited guests, the huge instrument was submitted to what was called "a private test." The organ was screened from view by a large green curtain, which, after the music had been in progress for some fifteen minutes, was slowly lowered. The following description of that moment is taken from a journal of the day:

ment was as unique as it was perfect; the like thereof can hardly have been known before."

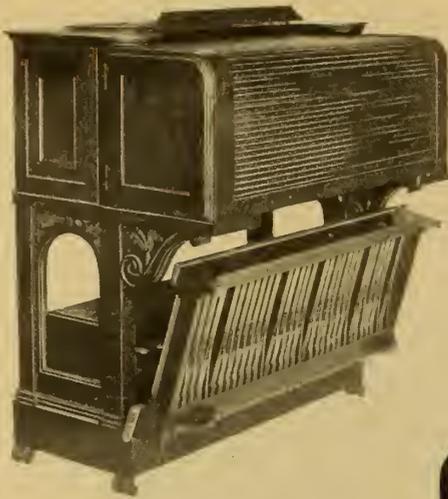
The organists who played on that occasion were Mr. B. J. Lang, Mr. Eugene Thayer of Worcester, and Mr. John H. Willcox. Following the private test came the inauguration, on Monday, November 2, and this was one of the most imposing musical cere-



THE ORGAN IN THE MISSION CHURCH, ROXBURY.

"As the rare symmetry and harmony developed into wonderful completeness, a perfect music to the sight, a symphony in wood and metal, the silence of the rapt audience gave way to a murmur of delight; then round on round of applause swelled in a long crescendo with each new phrase of the disclosure, all rising to their feet unconsciously. The enthusiasm of the mo-

monies ever held in Boston. The green curtain was again in place and concealed the instrument during the early portion of the ceremony, which was opened by the recitation, by Miss Charlotte Cushman, of an ode written for the occasion by Mrs. James T.



THE CONSOLE CLOSED.

Fields. The curtain was then lowered amidst much enthusiasm and Herr Friedrich Walcker played a few chords and was introduced to the audience by Dr. J. Baxter Upham, president of the Music Hall Association, thus formally handing over to the corporation the instrument which he had built. The programme on the occasion of this inauguration was as follows:

PART I.

1. Ode, recited by Miss Charlotte Cushman
2. Opening of the Organ by Herr Friedrich Walcker, son of the eminent organ builder, E. F. Walcker of Ludwigsburg.
3. *a.* Grand Toccata in F
b. Trio Sonata in E flat, for two manuals and pedal
John K. Paine, Organist of the West Church, Boston, and Professor of Music at Harvard University.
4. Grand Fugue in G minor
W. Eugene Thayer of Worcester.

PART II.

1. Grand Double Chorus, "He led them through the deep," and Chorus, "But the waters overwhelmed their enemies," from

- "Israel in Egypt" *Händel*
George W. Morgan, Organist of Christ Church, New York.
2. Grand Sonata in A, No. 3 . *Mendelssohn*
B. J. Lang, Organist of the Old South Church, and of the Händel and Haydn Society.
3. *a.* Lamentation in Parasceve . *Palestrina*
b. Kyrie and Sanctus, from a Mass *Palestrina*
c. Movement from the Anthem, "O give thanks" *Purcell*
Dr. S. P. Tuckerman, Or-



A MOVABLE CONSOLE.

- ganist at St. Paul's Church.
4. Offertoire in G *Lefebure Wely*
John H. Willcox, Organist at the Church of the Immaculate Conception.
5. Hallelujah Chorus *Händel*
G. W. Morgan.

Bach
Bach
Bach

During the succeeding fortnight no less than seven organ recitals were given by the same organists, Mr. J. C. D. Parker also playing in the sixth. On November 3, a complimentary dinner was given at the Revere House to Herr Walcker and the other artists who had in their several ways worked together in the structure of the great organ. Thus the instrument was duly installed and became the property of the Music Hall Association.

About 1880 the demand for a per-

manent orchestra was strong and resulted, through the munificence of Mr. Henry L. Higginson, in the establishment of the now renowned Boston Symphony Orchestra. It was found that the great organ occupied too much space and interfered seriously with the acoustic properties of the hall, and in order to obtain the highest possible results from the orchestra, it was decided, notwithstanding long and bitter opposition, to sell and remove the organ, which was purchased on May 15, 1884, by Hon. William O. Grover, in the interest of Dr. Eben Tourjée, the director of the New England Conservatory of Music. It was his desire to build a large concert hall on the premises of the Conservatory, and install therein the great organ. Various difficulties blocked this project temporarily, and shortly afterwards Dr. Tourjée fell into bad health which resulted in his death in 1891. Last year Mr. Grover also passed away, and as there was no probability of the fulfilment of his plans the trustees of the estate determined to sell the celebrated instrument. Thus in May of the present year the organ was brought out from the shed at the back of the



A MASON & HAMLIN CHURCH ORGAN.

New England Conservatory, in which it had rested for thirteen years, and sold at public auction, the price obtained being only \$1,500. The purchaser was an agent of Mr. Searles of Methuen, Mass., who immediately afterwards removed it to that place.

There are in Europe many organs in use today which are over two hundred years old; and we have seen that some of the organs in use in Boston are quite old. These instruments have, of course, been put in thorough repair from time to time, but they retain many of their original features. It seems, therefore, almost incredible that thirty-four years after its inauguration, our fine instrument, which was considered one of the great and notable organs of the world, should have been worth in the open market but two and a half per cent of its original cost. Many reasons



ONE OF MASON & HAMLIN'S WORK-ROOMS.



THE HOOK & HASTINGS WORKS, HASTINGS, MASS.

may be assigned for it. Perhaps the most powerful of all is the size of the instrument, which is too great for any ordinary auditorium. The march of improvement has brought into practical use many valuable inventions, but these would probably have been applied at fitting opportunity had the organ been allowed to remain in the Music Hall, and they will no doubt be applied when the instrument is set up again.

The stimulus given to the organ building industry by the Music Hall organ may be shown by a glance at the number and size of the instruments built since the day of its installment. To take account of every large instrument built in this country would involve an immense amount of labor and would not materially assist the object of this paper, which is chiefly confined to

that which has been done in New England; but inasmuch as New England organ builders have sent their instruments to all parts of this country, their progress fairly represents the progress of the whole nation.

In 1853, soon after the Music Hall organ was first suggested, the first Tremont Temple organ was built and was probably the largest and best organ in America at that time. The records of those days are very incomplete, but we find that the following important



"A VOICER."

organs were then built among others:

In 1856, Dr. Alexander's Church, New York City, 3 manuals, 35 stops; Citadel Square Church, Charleston, S. C. (specifications not given).

In 1859, St. Joseph's Church, Albany, N. Y., 3 manuals, 50 stops; Appleton Chapel, Cambridge, 3 manuals, 40 stops.

In 1860, King's Chapel, Boston (re-built), 3 manuals, 38 stops; St. Ignatius' Church, Baltimore, 3 manuals, 30 stops; St. Paul's Cathedral, Louisville, Ky., 3 manuals, 35 stops.

Organs were also completed for the Arlington Street Church, Boston; St. John's Church, Jamaica Plain; the West Church, Boston; the Tremont Street Methodist, and a few others. These records are to be found in the columns of Dwight's *Journal of Music*, which was the only important Boston musical journal of those times.

It will be noticed that several of the instruments referred to were in Boston churches which have long since been removed from their original locations. Bedford Street, Chauncy Street, and Summer Street, for instance, where several churches flourished, have long ceased to be residence streets and are devoted entirely to business. On the other hand, King's Chapel, Christ Church and a few of the older churches are still in their original locations and are likely to remain there. The tide of population flowed southward, and some of the finest organs of the sixties are in churches at the South End, as will be seen later, while the most modern organs will be found in the Back Bay, to which district the tide of population has turned during the last twenty years.

In 1863, the year in which the Music Hall organ was inaugurated, there was nothing in Boston approaching in size to that instrument, which contained 3 manuals and 89 speaking stops; but the organ which still stands in the Church of the Immaculate Conception was built in that year, and is to-day considered one of the most effective church organs in the city. It contains

3 manuals, 56 stops, and 3,381 pipes. In the following year an organ was built for Mechanics' Hall, Worcester, with 4 manuals, 73 stops, and 3,504 pipes. The organs of the Shawmut Congregational Church, Boston, and Plymouth Church, Brooklyn, which are to-day considered notable instruments, were both built in 1866. In 1880 the great organ in the Music Hall at Cincinnati was built, and this is still one of the largest and finest organs on this continent. It has 4 manuals, 96 stops, and 6,237 pipes, or about 1,000 more than the Boston Music Hall organ. The longest pipe is 32 feet and the shortest half an inch in length. This organ also contains "carillons," a feature not frequent, although contained in several European instruments.

It is evident, then, that larger organs were in demand during the years following the completion of the Music Hall organ; and in the subjoined list of the great organs of the world several instruments by American builders will be found. At the present day three builders alone show a list of more than twenty four-manual and over fifty large three-manual organs, a striking evidence of their activity during the past few years. It is impossible to judge of the size of an organ by the number of manuals or by the number of stops or pipes alone. The proportion of each varies in different instruments, as we can see by the following schedule. The merits of an organ depend not entirely upon its size, but upon its effectiveness.

First Tremont Temple, 1853, 4 manuals, 70 stops, 3,096 pipes.

Plymouth Church, Brooklyn, 4 manuals, 65 stops, 3,405 pipes.

Shawmut Congregational Church, 3 manuals, 63 stops, 3,485 pipes.

Immaculate Conception, 1863, 3 manuals, 56 stops, 3,381 pipes.

Cincinnati Music Hall, 1880, 4 manuals, 73 stops, 6,237 pipes.

There are in Europe no doubt many more large organs than in America, and the accompanying list will show

the particulars of many of them. The organ at Ulm should be specially noticed, as it was this instrument, under construction at the time of the visit of the Music Hall committee, and completed in 1856, which determined the committee to place the contract for the Music Hall organ with the firm of Walcker, who built the Ulm instrument. It cost \$11,000, and is a much larger organ than the Music Hall instrument, which eventually cost \$65,000, although it passed the custom house free of duty. The average size of organs in most of the large cathe-

number has since been increased, for in their list no mention is made of such instruments as the Albert Hall and Alexandria Palace organs in London, or that of the Town Hall in Sydney, Australia. Although there is an increasing number of great organs, it is doubtful whether the limit of size will be carried much farther. These immense instruments merely serve to show that the art of organ-building is advancing, for without mechanical inventions of recent years the manipulation of such instruments would be well nigh impossible.

TABLE OF THE LARGEST ORGANS IN THE WORLD.

LOCATION.	Manuals.	Speaking Stops.	Mechanical Stops.	Pedal Movements.	Piston Combinations.	Total Stops.	Pipes.	Date.	BUILDER.
Town Hall, Sydney, N. S. W. . .	5	128	18	15	33	194	8,800	1889	Hill & Son.
Cathedral, Riga, Russia . . .	4	124	19	19	24	186	6,826	1883	Walcker & Son.
Cathedral, Garden City, N.Y. . .	4	115	18	21	....	154	7,252	1883	Roosevelt.
Albert Hall, London . . .	4	111	14	20	32	177	7,391	*1870	Willis.
Auditorium, Chicago . . .	4	109	18	20	25	172	7,124	1889	Roosevelt.
St. Sulpice, Paris . . .	5	100	18	20	....	138	6,706	1862	Cavaillé-Coll.
Cathedral, Ulm, Ger. . .	3	100	9	†	....	....	6,564	1856	Walcker & Son.
St. George's Hall, Liverpool . .	4	100	10	†	42	....	6,404	1867	Willis.
St. Bartholomew's, New York . .	4	98	26	19	36	179	6,042	1896	Hutchings.
Town Hall, Leeds . . .	4	93	17	17	....	127	6,500	1873	Gray & Davidson.
Music Hall, Boston . . .	4	89	4	13	....	106	5,353	1863	Walcker & Son.
Alexandra Palace, London . . .	4	88	15	11	32	146	5,888	‡1872	Willis.
Cathedral, Magdeburg . . .	5	86	†	†	....	....	5,784	?	Reubke & Son.
Notre Dame, Paris . . .	5	86	14	22	....	122	5,246	1868	Cavaillé Coll.
Parish Church, Doncaster, Eng. .	5	56	7	4	....	97	5,406	1862	Schulze (reconst'd).
Calvary Church, New York . . .	3	84	16	17	22	139	5,460	1888	Roosevelt.
Nicholai Kirche, Leipsic . . .	4	84	12	....	....	96	†	1862	Ladegast.
Music Hall, Cincinnati . . .	4	81	15	14	....	110	6,237	1878	Hook & Hastings.
Marien Kirche, Lubeck, Ger. . .	4	82	15	....	....	97	†	1853	Schulze (reconst'd).
Cathedral, Mørseburg, Saxony . .	4	81	19	....	....	100	5,686	1853	Ladegast (reconst'd).
Cathedral, Seville, Spain, 1st . .	3	110	....	....	....	....	5,300	....	....
Cathedral, Seville, Spain, 2d . .	3	71	....	....	....	....	....	....	....

* About 1870.

† Not stated.

‡ About 1872.

The organ at Amiens, France, dates from 1429; one in the Minorets Church, Cologne, from the same century; the organ at Lubeck, 1518; at Rouen, 1630; at Merseburg, 1629; and at Doncaster, 1740.

drals and churches of Europe seems to be about 3 manuals, 30 to 40 stops, and 2,000 to 3,000 pipes. According to Rimbault and Hopkins, about 1880 there were about 40 organs containing more than 60 speaking stops; and this

The organ from Amiens, France, dates from 1429; one in the Minorets Church, Cologne, from the same century; the organ at Inbeck, 1578, and at Rouen, 1630.

In old-fashioned organs the com-

munication between the keyboard and the pipes was effected by means of a series of wooden rods called "trackers." This system is still in use, and for small organs it is claimed by many people that it has not been excelled. But for large instruments where the trackers have to extend a great distance, and where many pipes are in use at the same time, a considerable amount of strength is required, and the response to the efforts of the organist is slow. This complaint was frequently made of the Music Hall organ; and the result was that if the organist waited to hear the sound he would not be able to play in proper time,—the music would get slower and slower. He was therefore obliged to play by rule and shut his ears to the result. An instance of the effort required under the old tracker system may be given. The old organ in Trinity Church, New York, one of the first large organs built in this country, required when the full organ was on a pressure of nine pounds on each key in order to open the valves of the pipes. When the organist was using full chords requiring every finger and both feet, the power exerted was sufficient to lift him bodily from his seat.

The first invention and perhaps the most important for the relief of this strain upon the organist was the "pneumatic action," by which each key when pressed down opens a valve leading into a small bellows which admits the wind to the pipe, each pipe having its own little bellows. The performer, therefore, does not produce the sound directly when he touches the keys, but only sets to work a small bellows, and the small bellows is responsible for the sound. This idea first occurred to Mr. J. Booth of Wakefield, England, who applied it to an organ built for a church near Sheffield in 1827. Since that time the invention has undergone many improvements and has been brought to a high degree of perfection, in connection with tubular-pneumatic and electro-pneumatic action. These two are notable systems of recent in-

tro-duction, although tubular action was first used to a limited extent in this country in the organ of the Shawmut Congregational Church, Boston, in 1866.

The second important invention was that which enabled electricity to be applied to the action of the organ. The electro-pneumatic action is a German device, as is shown beyond question by records now existing, but from its first very simple yet clumsy method there have been, first in England, later in France and in America, new and better systems. The first English electric organ was invented by Bryceson, an English builder, and applied by him to an organ used in Drury Lane Theatre in 1867. A similar instrument was used in the following year at the Gloucester festival; but the invention dates back to 1861. The Drury Lane organ was the first containing the electric drawstop action and cable of insulated wires through which it was played, and the keyboard was placed 55 feet from the organ. After all these years it is only now beginning to come into anything like general-use.

There have been many failures and many heart-rending experiences with electric organs, but several are now in existence which have satisfactorily stood the test of years. Of the most modern type of organs may be mentioned the instrument in the Harvard Church, Brookline, Mass., which is one of the finest modern organs in New England. Another remarkable instrument is that in the Church of St. Mary the Virgin, New York, of which the great, swell, and part of the pedals are in the gallery, while the choir and remainder of the pedals are in the chancel, 200 feet distant. A movable key-desk is placed in the chancel and another in the gallery, either desk controlling the whole organ. Mention should also be made of the notable electro-pneumatic organ recently placed in the beautiful memorial Church of the Advocate in Philadelphia. The organ is in three divisions, remote from each

other, electrically connected through a movable console in the chancel. There are electric action organs* on board the steamers *St. Paul* and *St. Louis*, which may be noted as a decided novelty in the equipment of ocean steamers, and which are subject to extremely trying conditions.

When one hears of an electric action organ, a picture of whizzing dynamos and live wires is conjured up; but in reality an extremely low current is used, about four volts, which is generated by a small cell or storage battery, and this current merely moves a little metal disc, which sets in motion the pneumatic action. The electric wires convey the impulse from the keyboard back into the organ, and cause the valves to open which supply the pipes with wind. It is also claimed that electric action will outlast all possible wear; at least the platinum which is used for the contact has been submitted to a test of two million contacts without giving any visible signs of deterioration.

As a result of this application of electricity the ingenuity of the organ builder has been conspicuously displayed in the numerous mechanical devices by which the performer can now regulate his instrument. Combinations of almost every kind may be obtained and released by merely touching one of the little buttons or tilting tablets which are placed in a row above the keyboard of the organ. These are supplemented by pedal combinations, and many organs are fitted with a pedal or switch by means of which the full force of the instrument can be thrown on gradually or in a moment at the will of the performer, and may be reduced in like manner.

A comparison of a few instruments will show to what extent mechanical devices have increased in proportion to the size of the instrument. Such an organ as the Music Hall organ had but a few couplers, which would connect the different manuals and pedals. The Shawmut Church organ (1866)

had 63 stops, of which 51 were speaking and the remaining 12 mechanical; the Cincinnati Music Hall organ (1880) has 81 speaking stops, 15 mechanical registers, and 14 pedal movements; St. Xavier's Church, New York (1881), 66 speaking stops, 14 mechanical registers, and 13 pedal movements; St. Anne's, Philadelphia (1894), 42 speaking stops, 9 mechanical registers, and 12 pedal movements; the new organ at the Union Congregational Church, Worcester, 44 speaking stops, 10 mechanical accessories, 15 adjustable pistons, and 18 pedal movements; the Harvard Church, Brookline, has 46 speaking stops, 14 oscillating tablets, 16 combination pistons, and 7 pedal movements; and the new organ in the South Congregational Church, New Britain, Conn., has 63 speaking stops, 12 couplers, 21 adjustable combination pedals duplicated by pistons, 5 mechanical accessories, and 6 pedal movements.

Thus it will be seen that every facility is at the hand of the organist. The modern organ has a crisp, easy touch, requiring but the flip of a finger, and can be made easier than the finest pianoforte. In fact, resistance generally has to be regulated by means of springs in order to make the touch acceptable to the organist; and this ease of touch is never changed by any burden of couplers. Each manual or keyboard may be coupled with every other one and yet there is always the same ease and nicety of touch.

The principal manufacturers of church organs in New England to-day are George F. Hastings & Company, whose factories are in a railroad village named Hastings in the town of Weston, Mass., and George Hutchings & Company of Boston. A visit to the factories of these great organ builders, where one may often find the workmen engaged in setting up four or five magnificent instruments at once, is an interesting experience. An idea of the extent of modern organ manufacture may be gained from the fact that these

*Built by George Jardine & Sons of New York.

two great New England houses have together up to the present time built nearly 2,300 organs. Other organ builders in New England to-day are Johnson & Son of Westfield, Mass., Steere & Turner of Springfield, Mass., the Methuen Organ Company, George H. Ryder & Company, Cole & Woodberry, and Jesse Woodberry & Company, of Boston.

Reference should be made here to the reed organs, for the manufacture of which for the last forty years New England has been so conspicuous a centre. The Mason & Hamlin cabinet organs, many of which have been of large size for church use, are of world-wide reputation; and the Estey's of Brattleboro, Vermont, and other houses manufacture thousands of these reed organs each year.

The modern organ seems to be so perfect that it difficult to prophesy as to the direction of future improvements; but as in every other mechanical art there seems to be practically no

limit to invention, so we may expect to find in another thirty years instruments which will make the finest organs of to-day seem antiquated. There have been complaints from time to time of the lack of fine instruments in Boston, some people going so far as to say that there is no organ fit for the performance of a first class concert programme. Yet the excellent series of organ recitals given last winter under the auspices of the Twentieth Century Club seems to contradict that statement; for though some of the finest instruments were not accessible for concert purposes nearly a score of organs were found on which such programmes were played. Possibly some of these organs were not all that one might wish; and the opinion of more than one lover of organs, that the number of fine organs in Boston it not by any means commensurate with the size of the city or with its reputation as a musical centre, appears to be well founded.

ABBY AND JOHN.

By N. J. Welles.



IN memory I can see them yet, trailing up the front steps of the small country church, marching bravely on, hand in hand, until they reached the foremost pew and sat in the very shadow of the small square table that held the preacher's Bible. Here they winked and blinked at the sun, that shone with all the ardor of half-past ten straight into their upturned faces.

Abby was tall and angular, with sandy hair and pale, splattery freckles on her face. When they walked together she always kept a half-step in advance and had the appearance of leading an unwilling captive in the square form and swarthy features of

John. Perhaps it was this half-step that gave her the preference and placed her name first when they were linked together. However that may be, it is certain that no one ever spoke of them as John and Abby, but always as Abby and John.

There were no curtains to the windows of that old-time church, nor carpets on the floor, nor cushions on the seats. The curtains would have kept out the sunshine; the carpets would have hushed the tread of feet, so that early comers would not be quite certain whether Deacon Babcock and his wife were both present or if Mrs. Babcock had been obliged to remain at home with one of her customary headaches. With bare floors and a keen hearing how different!

And if there were cushions on the seats and unfriendly bones kept from digging their way through resisting flesh, there might have been more drowsy eyes and more going to sleep through that two-hour discourse. Neither was there a groaning organ or a screeching violin to keep heavy eyes from shutting out the view,—there was only a tuning fork that belonged to John. It may have been the tuning fork which brought them so regularly, for in all the long, slow years of childhood, I can never remember seeing their places vacant until—but that is my story.

When the minister announced the hymn he looked at John—poor man, he could not sing a crow to sleep himself—and John looked at Abby. If Abby had succeeded in finding the place, both in the book of words and in the book of tunes, and had determined whether the tune to fit the words was "Salem" or "Old Hundred," she looked at John. Then John pinched the tuning fork and stood up holding it close to Abby's ear. Abby listened, and when the fork squeaked out the proper key commenced to sing. They were generally well in the second line—Abby's shrill voice in the lead and John's deeper one plowing through a wonderful bass that was, for the most part, but the air sung an octave more or less lower—when the people rose and added their voices. The people began at the first of the hymn and Abby and John kept on where they were, and the harmony—but the harmony was in the happy faces and the clear sunshine and the blue clouds that sailed away over the tops of the dear old trees.

When the service was through they trailed out as they had come in, hand in hand, and back down the dusty road, with cockle-burrs and thistles making a garden of the highway, to their small wood-colored house with wild cucumber vines climbing over the windows.

No one remembered when they commenced going about in this un-

ceremonious manner. When they were small they had gone to Sunday-school, and, later, to day-school, contented with the companionship of each other. It did not matter that the boys teased John or that the girls were rudely cool to Abby,—it only made them the more anxious for home going when they could walk side by side and tell their troubles into listening ears.

They were not married young; instead, they had waited so long and gone about so regularly together that Mrs. Perkins, the dictator of respectability for the neighborhood, had considered it her duty to speak to Abby's mother. They were married the next Sunday. Abby was dressed in a pink lawn with green flowers in it and wore a green ribbon tied around her waist. Alas, that fatal green ribbon! It floats out to me now over all these years and draws my memory back until I can see it yet in all its flimsy, narrow brightness. There were yards upon yards of it, knotted and bowed and looped up until it looked like a veritable tuft of grass on Abby's back,—and all this when other girls were vying with each other for unusual widths and sombre colors.

When the ceremony was over they went back to the seat they had occupied together for so many years and started the hymn the minister selected to follow the service. The next week they commenced housekeeping by themselves in the little wood-colored house with the wild cucumber vines over the windows.

The first years that followed their marriage brought but a few changes. Abby grew a trifle thinner and John's face was more tanned and wrinkled. A larger acreage was cleared of stumps and changed to plow-land and their garden became richer and more productive. When they had been married three years Abbotsford was born. So determined had his father been to name him something that could be called Abby for short, that he read a history of England from beginning to end and at last found the name, Ab-



