THE ENGLISH MEDIEVAL CHURCH ORGAN.[1]

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A few years ago—in 1880—I wrote a short History of the organ for Sir George Grove's "Dictionary of Musicians," in which an endeavour was made for the first time to produce a connected and coherent narrative of the growth and general development of the "King of Instruments." At a large meeting of Professors of Music, held sometime afterwards—in 1884—the late Sir George Macfarren was good enough to say that in that article "not only was unfolded the story of the organ during a period of over 2,000 years, but there was made known what might be called the physiology of the instrument."

While preparing that account the fact was brought frequently under my attention by incidental allusions met with, that the History of the English Medieval Church Organ had not received by any means the attention that the interesting nature of the subject deserved; and further, that many of the occasional notices that did occur were too frequently unreliable, and even misleading. Time and space failed, however, to allow of my then devoting adequate attention to the subject; but I made notes of all matters that came under my observation for subsequent use.

In the summer of 1886 there appeared in a provincial newspaper a notice of the proceedings which had then recently taken place at the annual meeting of one of the Diocesan Archæological and Scientific Associations. Among the papers read on that occasion was one describing some ancient parish registers, in which fre-

[1] Read at the Monthly Meeting of the Institute, March 1st, 1888.

quent reference was made to "the Organs." At the conclusion of the reading of that paper the observation was made, that "Except in one instance 'organs' always appeared; and that the use of the plural form had never been explained." This observation, referring as it did to one of the many subjects to which I had devoted much consideration, and had arrived at a judgment, suggested that it would not perhaps be without use if I were to arrange some of my notes in a connected and continuous form, and read them before one of our learned societies. This I did, the result being the production of the following paper:—

One preliminary explanation will not, perhaps, appear superfluous. It has been said that the current occasional notices of the early organs are sometimes unreliable and even misleading; and it will be only right therefore to point out how some of the mistakes have arisen to which this observation applies. Of the many causes of such confusion two may specially be mentioned; mistranslations; and the unwillingness, apparently, of even some of our most learned musical historians to admit the primitive nature of the early organs, even when the evidence was before them.

A few illustrations of these facts will present themselves as we proceed.

One other observation. Although the title of this paper is "The English Medieval Church Organ," yet the fact has to be borne in mind, that the organ was not admitted into the Christian Church simply for its own sake—so to speak—but for the assistance which it was rightly considered to be capable of rendering, in the way of guidance and support, in the performance of the simple and primitive melodies which formed exclusively the ecclesiastical music of the early centuries. It will be necessary, therefore, to take notice from time to time of the condition of the contemporary church music, and refer occasionally to the very slow advancement made in it in the course of many centuries, in order to account for the equally gradual development, which as a consequence, was made in the instrument used for its accompaniment; for the modifications in the moderate capabilities of the organ, really kept pace

with the tardy progress made in church music far more evenly than it has hitherto been the custom to suppose.

A few quotations will be given also to indicate what were some of the recorded consequences that resulted from the cultivation of the art of singing in churches; but these several digressions will be as few in number as conveniently may be, and likewise as brief in their nature as possible.

An organ of even the smallest and most primitive kind, required three component parts; (1) pipes to emit sounds; (2) an apparatus for supplying wind for the pipes; and (3) means for letting wind pass from the apparatus to the pipes, or of excluding it from them. Little organs comprising such parts certainly existed in the early centuries of the Christian era. The first illustration, given on page 129, represents one of the kind, but of later date by about four hundred years than the time to which we are now referring, and doubtless, therefore of improved make, including properly constructed bellows in lieu of the leathern wind-bags that were the earlier wind-providers. This representation is more particularly referred to farther on. It may be noticed now, that the organ has neither keys nor stops. Keys, even of the most primitive and unwieldy kind, are not certainly known to have existed until the end of the eleventh century; while stops are of as late invention as the fifteenth. The introduction of the terms "keys" and "stops" into translations of notices dating from the fourth century onwards for some hundreds of years, has led to anachronisms of the most confusing kind. Take for instance the following examples: Dr. Burney in his "History of Music, vol. ii, p. 65, 1782, says, "The most ancient proof of an instrument," consisting of the three members just named, "is a Greek epigram, attributed to the Emperor Julian the Apostate, who flourished about 364. I shall here give *a literal translation* of this epigram"; and he then proceeds thus:—

"I see reeds of a new species, the growth of another and a brazen soil; such as are not agitated by our winds, but by a blast that rushes from a leathern cavern beneath their roots; while a robust mortal, running with swift fingers over the concordant *keys*, makes them, as they smoothly dance, emit melodious sounds."

Dr. Burney used the word *keys*; and in a note gave this explanation:—"The *rulers* of the pipes; literally, *keys*." Now, had he been content to allow the word "rulers" to *mean* rulers, he would have been correct.

Dr. Rimbault in his History of the Organ, published in 1858, gave a second "literal translation" of the foregoing epigram, in which he says

"a highly-gifted man with nimble fingers handles the yielding *rods* of the pipes,"

and he adds, that "by no forced application can the word *keys* be found in the original!

A third writer, within the last ten years, who professed to give yet a third "literal translation," appears to have thought that if the word did not mean *keys*, it ought to signify *stops*, and rendered it so accordingly. So the three words, bearing totally different meanings—rods, keys, and stops—have severally been advanced as the "literal" rendering of the word which referred to certain flat rules of wood. Those rules were soon afterwards, and continued for upwards of five hundred years to be called "tongues," doubtless from the protruding ends which stood out in front.

To proceed: St. Jerome, who flourished at the beginning of the fifth century (died A.D., 420), described the organ of his time as being composed of fifteen pipes; of two bellows; and of two elephant skins united to serve as a wind-bag. Although St. Jerome gives the number of the pipes, he said nothing as to how the organ was played.

Cassiodorus, Consul of Rome, in the early part of the sixth century (514), was somewhat more explicit, and his use of the word *tongue* is the earliest instance of the employment of that term that has come under my notice.

"The organ," he says, "is like a tower, made of different pipes, which, by the blowing of bellows, a most copious sound is secured; and in order that a suitable modulation may regulate the sounds, it is constructed with certain *tongues* of wood from the interior, which the fingers of the master, duly pressing, elicit a full-sounding and most sweet song."

This account mentions the different pipes, the bellows,

and the wooden tongues to regulate the sounds, but is silent as to the number of the pipes.

Some notice may here be taken of the music of the early Christian Church. History does not explain in what manner the Church in the East may have arranged its music during the first centuries of the Christian era; nor is there any record as to the character of the music that was sung in the public services of the early British Church, previous to the arrival of St. Augustine, and which the Britons seem to have been so unwilling to relinquish when driven up to the mountains of Wales by the Saxons. But it informs us that in the latter part of the fourth century, St. Ambrose, Bishop of Milan (A.D. 374 to 397), had introduced a model of Church melody, in which he chose four series or successions of (eight) notes, and called them the first, second, third, and fourth tones (or octochords); laying completely aside as inapplicable the ancient heathen names of Doric, Phrygian, Lydian, Aeolic, Torcic, and the like. His four modes were as follows:—

The four Authentic Modes of St. Ambrose (Distinguished by Successive Odd Numbers.)

VIIth Mode			*g*	*a*	*b⌒c*	*D*	*e⌒f* *g.*
Vth Mode		*f*	*g*	*a*	*b⌒C*	*d*	*e⌒f.*
IIIrd Mode		*e⌒f*	*g*	*a*	*b⌒C*	*d*	*e.*
Ist Mode	*d*	*e⌒f*	*g*	*A*	*b⌒c*	*d.*	

By degrees the good work of Ambrose fell into great confusion, so much so that at the end of two centuries Pope Gregory the Great (A.D. 591 to 604) found it necessary to entirely reform and improve the existing condition of Church music. This he began doing by gathering together what remained of the results of the labours of Ambrose; by establishing four more "tones" or "modes;" and by originating fresh ecclesiastical melodies in accord with those scales.

The Eight Modes (the Four added by Gregory are placed below those of Ambrose) were these:—

VIIth Mode							*g*	*a*	*b⌒c*	*D*	*e⌒f*	*g.*		
Vth Mode						*f*	*g*	*a*	*b⌒C*	*d*	*e⌒f.*			
IIIrd Mode					*e⌒f*	*g*	*a*	*b⌒C*	*d*	*e.*				
Ist Mode				*d*	*e⌒f*	*g*	*A*	*b⌒c*	*d.*					
VIIIth Mode				*d*	*e⌒f*	*G*	*a*	*b⌒c*	*d.*					
VIth Mode			*c*	*d*	*e⌒F*	*g*	*a*	*b⌒c.*						
IVth Mode		*b⌒c*	*d*	*E⌒f*	*g*	*a*	*b.*							
IInd Mode	*a*	*b⌒c*	*D*	*e⌒f*	*g*	*a.*								
	A	*B*	*C*	*D*	*E*	*F*	*G*	*a*	*b*	*c*	*d*	*e*	*f*	*g.*

St. Gregory also introduced a greatly simplified nomenclature to represent each seven sounds of the two-octave scale. The Greeks had made use of the letters of their alphabet to represent musical sounds. The Romans did the same, employing the first fifteen of their capital letters, from A to P, for the purpose, as shown in the following diagram immediately below the music type. But Gregory, reflecting that the sounds, after the first seven, were but a repetition of those before it, except at a higher pitch, reduced the number of letters to seven, as used in the present day; retaining the capital letters for the lowest seven; distinguishing the second septenary, or series of seven sounds, by small letters; and the third, when it became necessary to extend the scale further, by double small letters. When the scale was carried a tone lower, the added sound was at first marked by the Greek gamma, and called "gamma ut," whence, subsequently, the well-known term "gamut." (See the third line of letters under the notation in the diagram.) Afterwards a capital G was attached to this lower note, and the lettering of the septenaries consequently underwent a slight necessary alteration, as shown in the lowermost line of lettering. Subsequently the compass was further extended downwards, the additions being distinguished by two capital letters, and hence called "double." In quite

early times the seven sounds represented by capital letters were called "the graves;" the second, denoted by small letters, acutes; and those marked by two small letters, "super-acutes," as indicated above the lower line in the diagram.

In the diagram on the opposite page, an elucidation of the lettering is given in modern musical notation. Above that, again, occur two short scales in letters, extracted from the longer scale at bottom, the purport of which will be explained further on.

So much as to the scales in which the early church music was written. With regard to the music written in those scales, the evidence is considered by many learned musicians to be by no means so conclusive. The music stave was not invented until four hundred years after the death of Gregory, nor were the so-termed Gregorian notes thought of till nearly six hundred years after that Prelate's death, and even than were not used for plain-song for another two hundred years.

The custom with church musicians was to put marks or signs (*neumata*), over the words, to remind the singer that the voice had to rise or fall. According to the late Dr. Hullah, some such marks were placed above the text by Gregory himself, as shown by the facsimile of his Antiphonary, printed in France some years ago:[1] and the custom continued in very extensive use throughout Western Christendom from the sixth to the twelfth century. The "neumata" consisted of points, little hooks, strokes, and flourishes made of various shapes and in different directions. Their relative positions would indicate the rising or falling of the voice; but inasmuch as it was scarcely possible for a copyist to write down a mark so correctly that the singer might not take the sound one or more notes higher or lower than the one intended, uncertainty was unavoidable; and the late Sir George Macfarren[2] therefore prefaced a quotation thus:—

"The following sentence of St. Isidore, the friend and survivor of Gregory, (died A.D. 636,) distinctly proves that no music of the time of the Roman Pontiff was or could be preserved:—*Unless* sounds are retained in the memory, they perish, *because they cannot be written.*"

[1] The History of Modern Music, J. Hullah, 2nd Edition, 1875, p. 17.

[2] Musical History briefly narrated and technically discussed, 1885, p. 19.

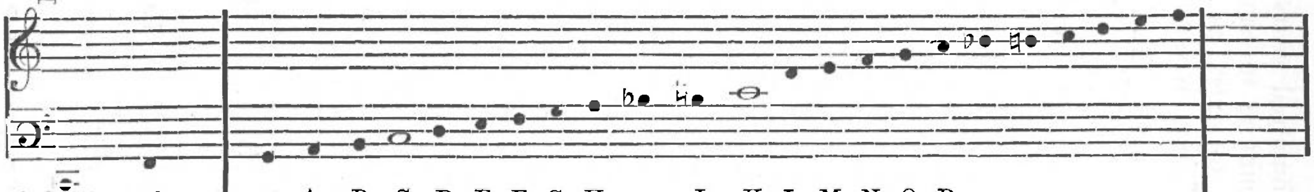
DIAGRAM OF ANCIENT SCALES, &c.

LITTLE.—c, d, e, f, gg, aa, ♭♭, ♮♮, cc, dd, ee, ff.
(2 feet.)

GREAT.—C, D, E, F, g, a, ♭, ♮, c, d, e, f,
(4 feet.)

Double C fa ut.
(8 feet.)

1 + c in alt.



Roman capital letter scale. A, B, C, D, E, F, G, H, I, K, L, M, N, O, P.

Gregorian scale. A, B, C, D, E, F, G, a, ♭, ♮, c, d, e, f, g, aa.

Guidonian scale. Γ, A, B, C, D, E, F, G, a, ♭, ♮, c, d, e, f, g, aa, ♭♭, ♮♮, cc, dd, ee.

GRAVES. ACUTES. SUPER-ACUTES.

Subsequent scale, CC &c., FF. G, A, B, C, D, E, F. | g, a, ♭, ♮, c, d, e, f, | gg, aa, ♭♭, ♮♮, cc, dd, ee, ff. &c. c.

Upwards of four hundred years after the time of St. Isidore, the same doubt as to the interpretation of the neumata was shown to exist, as in A.D, 1047, John Cotton, a monk of Triers, wrote as follows :—

"The same marks which Master Trudo sung as *thirds*, were sung as *fourths* by Master Albinus ; and Master Salomo, (in another place,) even asserts *fifths* to be the notes meant ; so that at last there were as many methods of singing as teachers of the art."

So much as to the history of the matter, after making all allowance for which, it must be admitted that the Gregorian Chants are "Ancient Chants" even in the form in which they have descended to us; and a careful examination of them, and a comparison of them one with another, shows, that the extreme musical compass over which they range, from first to last, is an extent of eleven diatonic notes,—an octave and a half,—reaching from C in the "graves" to f in the "acutes," with the one chromatic note, *bb*," making twelve sounds in all.

C, *D*, *E*, *F*, *g*, *a*, ♭, ♮, *c*, *d*, *e*, *f*.

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12.

This compass it will be well to take note of, as it frequently presents itself in the course of our investigations.

To return to the organ.

The accounts hitherto considered have been those of organs of distant countries; and they have afforded a certain amount of information as to the general details of the small and early instruments made by foreign hands, which is most valuable.

We have now arrived at a period when organs were certainly made in England; and we, therefore, start on entirely fresh ground.

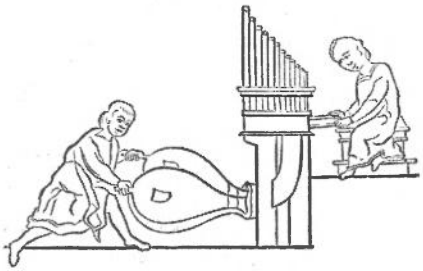
St. Aldhelm, abbot of Malmesbury, and afterwards bishop of Shirburn (died A.D. 709), thus speaks of the organ of his time; and, therefore, probably describes the English instrument of the commencement of the eight century. He says :—

"As he listens to mighty organs, each with its thousand blasts, the ear is soothed by the sound heard from the wind-giving bellows, while the rest shines in the gilt chests."

The "thousand blasts" were probably the multifarious and successive sounds heard in the course of the accompaniment to some chant. Dr. Rimbault considered the gilding to refer to the decoration of "the external pipes."

The Venerable Bede, who was a contemporary of Aldhelm, and survived him 26 years (died A.D. 735), describes the appearance, method of playing, and the musical effect of the organ of his day with much more minuteness. He says :—

"An organum is a kind of tower made with various pipes, from which by the blowing of bellows, a most copious sound is issued; and that a becoming modulation may accompany this, it is furnished with certain wooden tongues from the interior part, which the master's fingers skilfully repressing, produce a grand and most sweet melody."



The above illustration is taken from a most interesting engraving given in Gori's *Thesaurus Diptychorum*, which was copied from an ancient MS., said to be as old as the time of Charlemagne, who was born in 742, and died in 814. It is, therefore, nearly as old as Bede's description, and, aptly enough, illustrates it so exactly that it might even have been made to accompany it. The pipes are twelve in number, the largest of which would be from three to four feet in length, if the figure of the player may be taken to indicate a scale.

The drawing is well worthy of analytical examination. The pipes are of the exact number required for the accompaniment of the old ecclesiastical melodies—twelve—the largest, however, being to the right, not the left, and, therefore, contrary to the subsequent and modern arrangement. The pipes, bellows—completely formed—

and the playing tongues are all there; the great tube or "trunk" conveying the wind from the bellows to the region of the pipes, made apparently of metal, being much curved in form.

In the reign of King Edgar (958-975), St. Dunstan (924-988), gave an organ to the Abbey of Malmesbury; which organ continued to be in good playing condition after a lapse of one hundred and thirty years. The abbot, William of Malmesbury, writing about the year 1120, thus expressed himself respecting the generosity of the long past donor, and the continued excellence of his gift:—

"In many places, I believe, that a generous man offers things which would be reckoned a great miracle in England at that time, and would indicate dignity and genius on the part of him who bestowed them."

"And so the notes were excellent in tone and volume; and on the organ, where, through pipes of bronze, carefully constructed in musical measures, and the bellows eagerly give forth their long conceived blasts, there be engraved this couplet on brass plates:—

Dunstan, the Patron, to the Organ of Saint Aldhelm;
May he lose eternity who wishes to take away the supremacy from hence."

St. Dunstan, likewise, gave an organ to Abingdon Abbey, and another to the Abbey Church at Glastonbury; and he is said also to have furnished many other great churches with similar instruments.

In the same (tenth) century, Count Elwin presented an organ to the convent of Ramsey, for which, it is said—

"He paid thirty pounds for making copper pipes of organs, which were fixed in their proper case with holes in a close line, on the spiral winding in the inside: and on festal days being struck by a strong blast of wind from the bellows, gave forth a very sweet melody and a far resounding peal."

The "spiral winding in the inside" on which the case supporting the pipes rested, was doubtless the wind-trunk through which the pipes received their supply of wind from the bellows. Its curved form is shown in the drawing already given. The meaning of the term "spiral winding" has hitherto been left unexplained.

On turning from the organ to the music of the church at the point at which we left it; we meet, says Dr. Hullah,

"In a treatise entitled *Sententiæ de Musica*, by Isidore, Archbishop of Seville, with the earliest mention yet discovered of harmony in the

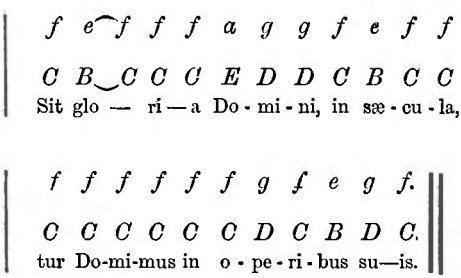
modern acceptation of the term,—the simultaneous utterance of different sounds. Isidore speaks of two kinds of harmony, "symphony" and "diaphony," by the former of which he would seem to have meant a combination of consonant, and by the latter of dissonant sounds."

Towards the end of the ninth century or the beginning of the tenth, Hucbald, a monk of St. Armand in the diocese of Tournay, in Belgic Gaul, who died at an advanced age in the year 932, wrote two treatises which have descended to us, and which give a fairly clear idea of what the two part music was really like at the period at which he lived.

The specimens are mostly very primitive in their construction, and, in sound, ugly in the extreme, In some instances they consist of a long series of fourths, or fifths, or even both in combination, producing results which must have been repugnant even to the most uncultivated musical ear.

One example is given below.

The melody or plain-song, Hucbald called *vox principalis*, or *principalis;* and the part added, *vox organalis*, or *organalis*. In the following illustration the "principalis" is given in capital letters, and the "organum" in small letters.

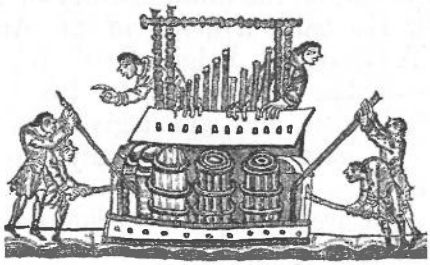


For an organum in four parts, the first two parts were doubled in the octave above, which simply increased the din.[1]

To about the same period as that in which Hucbald flourished (10th Century), is dated a representation of an organ, contained in a MS. Psalter of Eadwine, and preserved in the library of Trinity College, Cambridge. That

[1] The earliest known forms of organum were of five kinds—viz. (1) in the 8th above or below; (2) in the 5th above; (3) in the 4th above; (4) in the 4th above and the 5th below; and (5) in the 5th above and the 4th below.

drawing is of extreme historical interest in more ways than one. It is here reproduced:—



No attempt has hitherto been made to unravel its meaning, which in truth appears at first sight to be presented somewhat enigmatically, including as it does, ten pipes only, yet with two organists and four bellows-blowers. But if it be closely examined, and considered in conjunction with the advance in Church music reached at the time, and of the necessity for the instrument being rendered equal to the new requirements, a very possible solution may be arrived at.

It will be remembered that with the slides, only one note could be sounded at a time on the organ; yet two-part vocal music had now been composed. The drawing seems to represent nothing less than two little organs conjoined. Viewed in this way, of the two sets of pipes, the six larger of one series, and the four larger of the other, are in position, but the eleven remaining ones are omitted that the other parts of the drawing may be shown the more clearly; their situation on the surface of the wind-case, however, being indicated by the perforations over which they would stand.

The twenty-one pipes might have consisted of two sets of twelve and nine respectively in number. The two sets of playing slides near to the organists are necessarily out of sight. The requisite number of two bellows to each little organ is indicated by the four blowers, two at each end; and of the two organists one would play the "organum" while the other executed the "plain-song." On such a *duplicate* instrument the "Principalis" and the

"Organum," of the Hucbald example just given, could quite well have been played.

The organists appear to be each giving separate and distinct instructions to his own special assistants.

In the Utrecht Psalter, which dates back to the eighth century, there is an illustration of a still earlier and smaller organ than the one depicted above. Besides the two organists and two blowers it represents two series of four pipes each, and nine openings in front, which however seem to be slits rather than holes.

In the early part of the eleventh century a treatise—included in a larger work on *Divers Arts*—was written by a monk and priest of the name of Theophilus, which is of considerable value, as showing the state of organ-making at the period just named. The credit of the discovery of the work of which this treatise forms a part, is due to Mr. Hendrie, who published a translation of it in 1847.[1] The treatise is too long to quote *in extenso*, besides which it is vague in parts; but the following is the substance of it:—

The main portion, or slide-box, was made two feet and a half in length, and about one foot in breadth. The surface of this was pierced with one, two, or more rows of wind-holes, over which stood the pipes. The pipes were made of pure, thin, and very sound copper; and the comparative size of the grave, acute, and super-acute pipes was meted out carefully. The number of notes was seven or eight, and they had one, two, or more pipes each. The length of the slide-box was measured out equally for the slides of the different notes, and not on a gradually decreasing scale, as the pipes became smaller, as the slides in that case would neither have been of one width nor at the same distance apart. The handles of the slides were still called "tongues," and each was marked with a letter, according to the rise and fall of the sound, so that it could be known to which tone it belonged. The lettering was an interesting feature as showing the means taken to secure an agreement between the organ sounds and the music of the plain chant that was indicated in the same manner.

The smaller number of notes—seven or eight instead of

[1] *Theophili, qui et Rugerus, Presbyteri et Monachi Libri III, de Diversis Artibus.* Opera et Studio Roberti Hendrie. Londini, Johannes Murray. MDCCCXLII. 8vo.

a dozen—was evidently due to the transposition of some of the chants, so as to bring the whole within a shorter compass, which could be done without difficulty; but it would take us beyond our limits to follow this subject further.

It will be noticed that no mention whatever is made of keys or stops.

This outline of the contents of the treatise of Theophilus is introduced somewhat earlier than, chronologically, it should appear; as by its aid the ancient description of the remarkable tenth century organ, erected in Winchester Cathedral by Bishop Elphege (died 951), can be rendered intelligible. The account was written by a monk of the name of Wulstan, who died in 963; and it remained an enigma until I unravelled its meaning and published the result a few years ago. The translation from the Latin was made by Mr. Wackerbath, and is to be found in his "Music and the Anglo-Saxons," pp. 12-15.

It runs thus:—

"Such organs as you have built are seen nowhere, fabricated on a double ground. Twice six bellows above are ranged in a row, and fourteen lie below. These, by alternate blasts, supply an immense quantity of wind, and are worked by seventy strong men, labouring with their arms, covered with perspiration, each inciting his companions to drive the wind up with all his strength, that the full-bosomed box may speak with its four hundred pipes which the hand of the organist governs. Some when closed he opens, others when open he closes, as the individual nature of the varied sound requires. Two brethren (religious) of concordant spirit sit at the instrument, and each manages his own alphabet. There are, moreover, hidden holes in the forty tongues, and each has ten (pipes) in their due order. Some are conducted hither, others thither, each preserving the proper point (or situation) for its own note. They strike the seven differences of joyous sounds, adding the music of the lyric semitone. Like thunder the iron tones batter the ear, so that it may receive no sound but that alone. To such an amount does it reverberate, echoing in every direction, that everyone stops with his hand his gaping ears, being in nowise able to draw near and hear the sound, which so many combinations produce. The music is heard throughout the town, and the flying fame thereof is gone out over the whole country."

The foregoing description is in many respects well worth analyzing. The organ was built in two stories—a plan that in later times became common, but of which, as we are told, no previous example had existed. The chief department, corresponding with the great organ of after time, occupied the lower stage, and was fed by fourteen bellows; the two smaller divisions, which possibly might

be compared to the choir and echo of subsequent times, were placed above, each being supplied with wind by six bellows. There were four hundred pipes, controlled by forty "tongues," to each of which was allotted ten pipes "in their due order," whatever that order may have been. Some of the larger pipes were "conducted hither, others thither," doubtless for the purpose of imparting to the front of the instrument a symmetrical appearance; the wind necessary to give them speech, being "conducted" to them, as in organs of later days. The twenty-six pairs of bellows were blown by seventy strong men—doubtless subordinates in the large and rich community—part of whose business probably it was to fulfil this duty in turn. As in performing this operation they are described as "labouring with their arms," there can be but little doubt that the bellows were of the ordinary household type.

We are told that "Two brethren (religious) of concordant spirit, sit at the instrument, and each manages his own alphabet." The forty tongues were, therefore, assorted into three sets, and, moreover, were *lettered*, showing with what part of the musical gamut their sounds accorded.

The musical scale simply consisted of the seven diatonic sounds, corresponding with the sounds of the white keys of a modern pianoforte, with "the music of the lyric semitone," or B flat added. No indication whatever can be traced as to the ranges of the three sets of playing-slides of this Winchester Organ; and, therefore, in my article on the organ in Grove's Dictionary, I ventured on the suggestion that the lower row of tongues which "the organist" governed, might have consisted of a set exactly corresponding with the two-octave range of Gregory's gamut of sixteen notes, as shown in the diagram already given; while the two remaining alphabets entrusted to the two religious brethern, possibly consisted each of a set of notes corresponding with those of the Gregorian Chants—twelve—making up the exact number of forty tongues in all.

C, D, E, F, G, a. ♭. ♮, *c, d, e, f.*

C, D, E, F, G, a, ♭, ♮, *c, d, e, f.*

A, B, C, D, E, F, G, a, ♭, ♮, *c, d, e, f, g, aa.*

Sir George Macfarren, in his "Musical History," p. 124, says, "The conjecture is most ingenious, and seems fully worthy of adoption."

The account of the manner in which the *hand* of the organist governed the slides or tongues, says, "some when closed he opens, others when open he closes, as the *individual* nature of the varied *sound* requires." Clearly, therefore he manipulated for *single* notes only; indeed he could do no more with slides than draw forward with one hand as he pushed home with the other.

However much one may feel interested with the constructive details of the ancient Winchester organ, it is more than doubtful whether one's admiration can be extended to its recorded musical effect. It is related that "like thunder the iron tones batter the ear, so that it may receive no sound but that alone. To such an amount does it reverberate, echoing in every direction, that every one stops with his hands his gaping ears, being in no wise able to draw near and bear the sound which so many combinations produce."

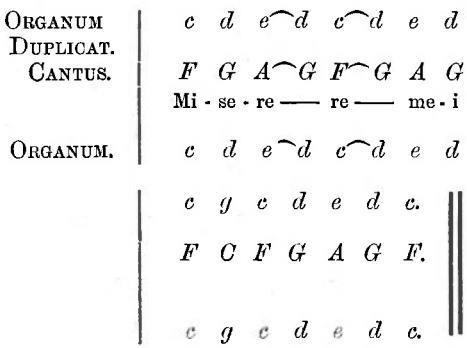
One would have been inclined to hope that the good monk Wulstan had been tempted for once to indulge in a little exaggeration, but from this comfortable shelter we are excluded by the historian Lingard, who remarks that Wulstan's fidelity cannot be questioned, since he dedicated his poem to Bishop Elphege. That being the case, we have but this reflection to fall back upon:—

It is related that the Winchester organ was the first of its kind ever constructed; and there is no record that a second one was ever made like it. It may, therefore, be looked upon as a subject for much congratulation that the method of fabricating such peace-destroying machines so speedily became "a lost art!"

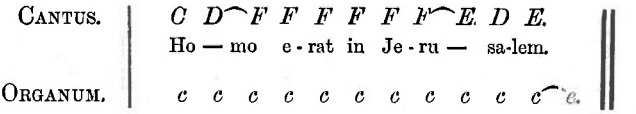
But, possibly, the Winchester organ possessed other and more welcome resources besides the one so hyperbolically described above. Each organ might have produced sounds of different strength, like the Great, Choir, and Echo of later times, which would have afforded contrast and relief—if the suggestion is not allowing one's knowledge of the effects of subsequent times to anticipate those effects by some centuries. One novel power it certainly possessed. As the two organists

represented in the Cambridge illustration could play sounds in two different pitches; so could the three players described by Wulstan produce sounds in three. An example of plain-song with two-fold accompaniment —above as well as below—will be given directly.

Guido Aretinus, a Benedictine Monk (*b.* 990, *d.* 1050), who flourished in the first half of the eleventh century, and to whose ingenuity and industry many ameliorations in the science of music are due, effected some improvements, upon the organum of Hucbald. The following, however, illustrates the increased (three-fold) capacity of the Winchester organ just spoken of, rather than any advancement in the organum.



The next example of organum, by forming combinations of a second, major third, or fourth to the cantus, made some approach towards the introduction of agreeable harmony.



Before quitting the subject, a few special comments may be made respecting the "organum" and the "organ."

In consequence of the similarity of the names, many musical historians have been led to suppose that the vocal "organum" was copied from the instrumental "organ;" but a little consideration, with some attention

bestowed on what could, and what could not have existed among the details of the ancient organ, would have led to the discovery that such a conclusion was not possible. There is not the slightest ground for supposing that the organ was, in the tenth century, so far developed as to contain a fifth-sounding rank of pipes; and had such been the case, the fifth sounds of the vocal organum were at variance in pitch by an octave with those of the organ; for in the organ they sounded at the interval, *not* of a *fifth*, but at an altitude of an *octave above* that fifth. Neither could pipes sounding a succession of fourths above the principal sounds, have formed a part of an organ at any period, and it is as little conceivable that ranks sounding in fourths or fifths below those sounds,—equally horrible in effect to those sounding in the opposite direction,—can ever have found admittance into the instrument. The organum, in the octave below, could have been available only to a very limited extent, as the lowest note in the "gamut," was the G bearing that name. The only likely and practicable *structural* "organum" was the octave, which would not only have been harmonious in effect, but in unison with the boys voices.

Of course *all* the sounds constituting the various species of organum could not have been heard together,—*that* would have been too unendurable;—yet if they were not so; if all were in the organ; and either one of them could be drawn on and so added to the Canto-fermo at will; that would imply the presence of numerous stops, elaborate machinery, and complicated sound-boards, such as is known to be utterly at variance with the contemporary history of the little instrument.

The solution of the whole difficulty, otherwise insuperable, becomes perfectly simple, if recognition be extended to the hitherto overlooked *second organist*. With perfect ease he could have played an "organum" to the "plain chant" of the first organist in any one of the intervals required, above or below, so far as the compass of his "alphabet" would allow. The combined sounds produced by the two organists would then have agreed with the two vocal parts, to which they would have formed a faithful accompaniment, and so the organ would

have been adapted to the requirements of the voices, rather than the voices to the organ;—not only a much more reasonable and probable course, but one in keeping with the subsequent history of the development of the two subjects.

We will now turn aside for a moment to take notice that in the distant days of the eleventh century, as since, ecclesiastical matters musical did not at all times progress very smoothly. Dissensions, not unfrequently, sprung up between composers, singers, and ecclesiastical dignitaries, in the course of which sometimes there was not lacking the use of expressions of a kind the plainest possible. Whether certain singers, disliking some of the harsh combinations still retained in use, ventured to make provoking alterations on their own account in a spirit of vanity, cannot now be discovered; but they appear to have indulged in such vocal flights as to excite the anger of Guido almost to an amusing extent; followed later on by some sharp criticism from Aeldred, Abbot of Rivaulx, in Yorkshire (who died in 1166), and culminating in some pointedly worded strictures from John of Salisbury (about the year 1170). Guido gave expression to his opinions in the following lines:—

Between a Singer and Musician
Wide is the distance and condition;
The one repeats, the other knows
The sounds which harmony compose.
And he who acts without a plan,
May be defin'd more beast than man.
At Shrillness, if he only aim,
The nightingale his strains can shame;
And still more loud and deep the lay
Which bulls can roar and asses bray.
A human form 'twas vain to give
To beings merely sensitive,
Who ne'er can quit the leading-string,
Or psalm, without a master, sing.

And in another place he said:—

"In these our times no set of men are so infatuated as singers; in every other art we improve, and in time attain to a greater degree of knowledge than we derived from our teachers; but, miserable disciples of singers, they though they should practise every day for an hundred years, would never be able to sing even one little antiphon themselves, nor without the help of a master, but lose as much time in attaining to

sing, as would have enabled them fully to understand the divine writ. And what is more to be lamented is, that many clerks of the religious orders, and monks too, neglect the psalms, the nocturnals, and vigils, while they with a most foolish and assiduous labour prosecute the art of singing, which they are never able to attain. This ignorance of their duty begets reproach, from whence proceeds contention; scarce the scholar with the master can agree, and much less one fellow scholar with another.

The Abbot of Rivaulx, expatiating on the same subject, exhibited a small liking only for the organs.

"Let me speake now of those who, under the shew of religion, doe obpalliate the businesse of pleasure: who usurpe those things for the service of their vanity, which the ancient fathers did profitably exercise in their types of future things. Whence then, I pray,—all types and figures now ceasing,—Whence hath the Church too many organs and musicall instruments? To what purpose, I demand, is that terrible blowing of belloes, expressing rather the cracks of thunder, than the sweetness of a voyce? To what purpose serves that contraction and inflection of the voice? This man sings a base, this a small meane, another a treble, a fourth divides and cuts asunder, as it were, certaine middle notes. One while the voice is strained, anon it is remitted, now againe it is dashed, and then again it is inlarged with a lowder sound. Sometimes, which is a shame to speake, it is enforced into an horse's neighings; sometimes, the masculine vigor being laid aside, it is sharpened into the shrilnesse of a woman's voyce: now and then it is writhed, and retorted with a certain artificiall circumvolution. Sometimes thou mayst see a man with an open mouth, not to sing, but, as it were, to breath out its last gaspe, by shutting in his breath, and by a certaine ridiculous interception of his voyce, as it were to threaten silence, and now againe to imitate the agonies of a dying man, or the extasies of such as suffer. In the meantime, the whole body is stirred up and downe with certaine historical gestures: the lips are wreathed, the eyes turne round, the shoulders play, and the bending of the fingers doth answer every note. And this ridiculous dissolution is called religion, and where these things are most frequently done, it is proclaimed abroad that God is there more honourably served. In the meane time, the common people standing by, troubling and astonished, admire the sound of the organs, the noyse of the cymbols and musicall instruments, the harmony of the pipes and cornets; but yet looke upon the luxurious gesticulations of the singers, the meretricious alternations, interchanges, and infractions of the voyces, not without derison and laughter; so that a man may thinke that they came, not to an oratory, or house of prayer, but to a theatre; not to pray, but to gaze about them: neither is that dreadfull majesty feared before whom they stand."

John of Salisbury seems to have viewed the use of figured music in the Church as a "profanation" of the latter, and twitted the clergy for indulging in "frittered notes" in the "Penetralia" itself. It will be observed that

the habit with singers having high voices to ascend still higher, and those with deep voices to descend still lower, is by no means one of modern date.

"The rites of religion are now profaned by music; and it seems as if no other use were made of it than to corrupt the mind by wanton modulations, effeminate inflexions, and frittered notes and periods, even in the Penetralia, or sanctuary, itself. The senseless crowd, delighted with all these vagaries, imagine they hear a concert of Sirens, in which the performers strive to imitate the notes of nightingales and parrots, not those of men, sometimes descending to the bottom of the scale, sometimes mounting to the summit: now softening, and now enforcing the tones, repeating passages, mixing in such a manner the grave sounds with the more grave, and the acute with the most acute, that the astonished and bewildered ear is unable to distinguish one voice from another."

Although the Abbot of Rievaulx awarded the organ but scant praise; Baldric, who was living at the same period, defended it after a fashion. "We permit," said he, "the use of the organ; but we do not count it as a crime if certain churches are without one;" so he extended to the instrument moderate recognition, which perhaps was better than nothing.

Invention of the Key-board.

Towards the end of the eleventh century, an important improvement was effected in the mechanism, by which the organ was played. It will be remembered that when the Winchester organ was constructed, in the tenth century, and the treatise by Theophilus was written, about the middle of the eleventh, the mode of sounding a note was by drawing forward a slide, which exposed the underside of the holes leading from the wind-box up to the pipes belonging to it; and it was silenced by the slide being pushed back, when the holes were again covered and the wind excluded. The frictional resistance of the slides, increased by their swelling and "binding" in damp weather, considered in conjunction with the circumstance that a given resistance could be overcome more easily by a blow than a pull, must have led the makers of the little instrument to turn their attention to the practicability of substituting pressure for traction in the process of producing its sounds; and the result was the substitution of levers for slides. The structural features then introduced, were very much as follows.

Under each pipe-hole of a note, a hinge-valve or "pallet" was placed, and held in position by a spring. A rope or cord passed down through the bottom of the wind-box —now the spring box,—outside and below which it was attached to its lever or key, hung at the inner end, and falling in front. The levers measured an uniform number of inches from centre to centre throughout the set, as the playing slides had done. The accumulated resistance of the several springs was overcome by blows dealt with the fists, the hands being protected by a covering to prevent their abrasion; and the great keys would rise of themselves on the withdrawal of the hands, under the operation of the springs. The important advance effected in the capability of the organ by this improvement was this. Instead of two organists being necessary to play a piece of music in two parts, as shown in the Cambridge drawing, and indicated in Wulston's description of the Winchester organ, one organ-beater could achieve that much by making a thrust with both hands at the same moment.

In this eleventh century, the completion of the four-line ecclesiastical stave was effected by Guido, and by the use not only of the lines, but of the spaces between them, each sound then had a place allotted to it which could not be mistaken; and all ambiguity as to interval or relative pitch, was at last brought to an end.

At the end of the eleventh or the beginning of the twelfth century, a part added to another received the name of *descant* (*dis-cantus*,) something apart from or extra to the song. It was preceded by the term *faburden*, which originally meant the singing of a single note or drone throughout a given melody. To "bear the burden" was to sing such a bass below either a single part or fuller harmony.[1] (See previous illustration.)

In the thirteenth century the same name was given to a greatly improved species of harmony consisting chiefly of thirds and sixths, of which the following specimen is given by Kiesewetter in his History of Music, p. 91.

The plain song, in the lower line, is almost identical with the "First Tone, first ending."

[1] See Macfarren, p. 25.

	c	d	c	b	c	b	c	b	a	g	a.	
	g	a	g	f	g	f	g	f	e	d	c.	
Plain Song.	E	F	E	D	E	D	E	D	C	B	A.	

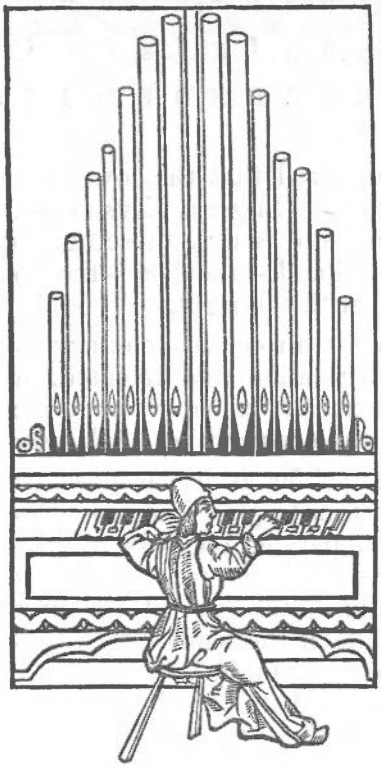
It will be observed that the lower two parts move in thirds throughout. On great Keys measuring nearly four inches from centre to centre, those notes could have been played with one hand,—the left,—the upper single notes being executed with the right.

In this same (thirteenth) century the square and lozenge shaped notation was invented, which afterwards cannot be inexactly called "Gregorian"; and which rotation led to the construction of *Mensural* music.

In the organ, so far as it has been traced, it was the unavoidable custom to place the pipes above and the Keys below in a line parallel one with the other. With the addition of every single note in the direction of its downward compass, the size of the unwieldy keys was aggravated, while at the same time the convenient reach of the player set rigid limits beyond which the organ itself could not be extended. In the fourteenth century the happy device was hit upon of introducing "rollers," by the aid of which the action of the keys could be transmitted right and left to any required distance, which immediately freed the instrument from the conditions that had previously held its dimensions within such narrow bounds. The necessity for the great Keys also was then at an end, and they therefore were gradually lessened in size.

In this same (fourteenth) century, the remaining four chromatic semitones were gradually introduced. It will be remembered that the first flat, B, had previously existed in the Winchester and other old organs. The first sharp, F ♯. was added in the early part of the century; then followed the second sharp and second flat, C ♯ and E ♭, and lastly the third sharp, G ♯.

The following engraving represents a fifteenth century organ with broad keys, &c. :—



Of the facilities for developing the growth and capabilities of the organ, the makers abroad,—ecclesiastics and others,—availed themselves quickly; but in this country very little interest seems to have been excited in the matter of large organs. There were a few exceptions. About the year 1450, Whethamstead, Abbot of St. Albans, gave to his church a "pair of organs;" for which, and their erection, he expended what must in those days have been the enormous sum of *fifty pounds*. No organ, —the account goes on to say,—in any monastery in England was comparable to this instrument, either for size, tone, or workmanship. John Litlyngton, Abbot of Croyland, also erected a large instrument which was described as a "grand organ," and was placed in a stone organ-gallery built over the west entrance to his church.

This organ was made in the monastery. No particulars of either of these instruments are known to exist.

It will doubtless have been observed that the notices of organs which have so far passed under review, have been of those situated in monastic and other large churches, to which their use, indeed, seems to have been chiefly confined.

Organs in Village and Parish Churches.

We have now to trace the use of the instrument in the village and parish churches of the country, and to take notice of the various interesting and historical particulars which surround it in those localities.

Two preliminary questions, however, require to be considered; to what extent was the organ used in the sixteenth century; and, to what influence was its partial employment only to be mainly attributed. The first query can be the most readily answered by the production of certain data obtained from contemporary documents, which will therefore be produced.

In the sixth year of Edward the Sixth's reign (1552), inventories were made by royal command, "of all manner of goodes, plate, juells, vestryments, bells, and other ornaments belonging or apperteyning to any Churche or Chapell within this our Realme of England." The correctness and completeness of the reports then prepared were certified to by the Parson and Churchwardens of each separate parish, so that their authenticity might be placed beyond doubt; and many of the reports so drawn up have in recent years been printed, and form valuable sources from which reliable statistics can be prepared. Many of these published transcripts I have consulted, and from them I have drawn up the following particulars:—

Of the inventories returned from the Parish Churches in the County of Surrey,[1] about 120 have been preserved. Fourteen only of these contained an organ, or scarcely one Church in eight. From the Churches in the County of Kent,[2] 136 inventories exist, from which we learn that

[1] "Inventories of the goods and ornaments in the Churches of Surrey," by Mr. J. R. Daniel-Tyssen, 1869.

[2] "Inventories of Parish Goods in Kent," by the Revd. Mackenzie, E. C. Walcott, in Archaeologia Cantiana, vols. viii.—xiv.

18 contained each an organ, or a fraction over one in eight. The inventories of the seven Churches in Shrewsbury[1] show that two contained an organ each, or nearly one Church in three, which is the highest proportion I have met with. On the other hand, the inventories from nine Churches in and around Lynn Regis[2] do not contain a single example. And of about 140 Churches in Worcestershire, 13 only contained an organ, that is, not one in ten. These facts will, to many, perhaps be surprising, but they are to some extent a consequence and not a cause; and it will be well to point out that cause.

The Archbishops and Bishops were wont, in the middle ages, to issue from time to time orders or "Constitutions" to the clergy, directing that they should see that each parish had in its Church, and kept in proper repair, certain specified goods, articles of furniture, and ornaments. In 1293 Robert de Wynchelsea, Archbishop of Canterbury, and in 1216 Walter Gray, Archbishop of York, issued such constitutions, the contents of which were almost exactly as follows:

Legend.
Antiphouer.
Graduale.
Two Psalters.
Troper.
Ordinal.
Missal.
Manual.
Chalice.
Principal vestment, with chusable, dalmatic, tunic, cope for the choir, with their appendages.
Frontal to the great altar, with three towels.
Three surplices.
One rochet.
Processional Cross.
Cross for funerals.
Thurible.
Lantern.
Bell to carry before the Eucharist at the visitation of the sick.
Pix for the Eucharist.
Chrismatory.
Veil for Lent.
Banner for Rogation Days.
Handbell, and bells in the belfry, with cords to the same.
Bier for the dead.
Holy-water stoup.
Osculatory.
Candlestick for the paschal light.
Font with lock.
Images in Church.
Principal image in Chancel.

No mention is made of an organ. We learn, therefore,

[1] Communicated by Joseph Hunter, Esq., to the Archaeological Journal, xii., 269.

[2] By Mr. Dawson Turner in Norfolk Archaeology, i. 73.

that in the thirteenth century an organ was *not* looked upon as a necessary piece of Church furniture; though a lantern *was!*

Two hundred and sixty-six years after the date of the Constitutions just given the lantern still retained its pre-eminence; for under the date 1559 the following entry occurs in the account book of the churchwardens of Stanford-in-the-Vale, Berkshire:—

1559. Inprimis for a lanterne for the Churche,.....xij*d.*

Fifteen years later again—in 1574—an incident occurred which showed that the organ, so far as Parish Churches were concerned, still remained legally unrecognised; and the evidence cropped up in the course of a dispute that had arisen in this way:—

In 1574 a contention arose between the parishioners of Easingwold, a town in Yorkshire, and the inhabitants of Raskelf, a chapelry in the same place. The residents in the latter place, perhaps, having their own chapel to keep up, apparently did not care to do that, and to pay towards the luxurious improvement of the mother church at Easingwold as well; and on an occasion when the Easingwold folk proposed certain additions to the furniture of their church the dwellers in Raskelf determined to raise the question as to whether those things were or were not essentials, and they appealed to "John Gibson, Viccar General of the Archbishop of York;" who made the following award:—

"That Bells and a Clocke be and are Decente and necessarye Ornaments for the said Church of Easingwold. But Organs are *not* necessarye for the same. xiij Maye, 1574."

Such was the law in the sixteenth century, and so it remains at the present time, at least, so far as it relates to Parish Churches.

But the subject in relation to the great ecclesiastical edifices differed widely from the foregoing; for in Cathedral Churches an organ was considered a "necessary ornament;" and the Ordinary had the power to compel the Dean and Chapter to erect one if necessary.

Although the organ was not formally recognised as a necessary piece of church furniture, a liking for it, and a desire to secure its guidance and assistance, not only in the church but out of it, are facts to which frequent testimony is borne by old records. Nobles and Squires, Clergymen and Ecclesiastical Dignitaries are mentioned among those whose taste led them to secure its guidance and assistance in their mansions or private chapels, and who, impressed with its acceptableness, in some cases subsequently devoted their instruments by Will to sacred purposes.

A few instances of the "good deeds" of such worthies may here be quoted.

In the Churchwardens' account of St. Mary's, Sandwich we read--

1444. Ress^{d} (Rec^{d}) the bequeth (bequest) of Thomas Boryner unto a payre of orgonys,—iiij*li.*

In 1455 Sir Maurice Hardwick, vicar of All Saints, Bristol, gave to the church—

"To the buying of a pair of organs, vis. viij*d.*

With regard to the prefix *Sir* in the extract just given, and in others that will present themselves as we proceed, it may be mentioned that it was frequently used to designate a clergyman. On this subject Bishop Percy says :—

"Within the limits of my own memory all *Readers* in Chapels were called *Sirs*, and of old have been writ so; whence I suppose, such of the laity as received the noble order of Knighthood, being called *Sirs* too, for distinction sake, had *Knight* writ after them; which had been superfluous if the title "*Sir*" had been peculiar to them."

In the following extract the title "Priest" and not "Sir" occurs :—

1526. Paid for lether to amend the organs, iij*s.* iv*d.*
„ Paid to the Pryst for mendyng of them, iv*s.*
(Wimborne Minister, p. 95.)

In 1475 Lord John Beauchamp in his Will said—

"I bequeath to the Church of the Dominican Friars of Worcester, xx marks to be bestowed in vestments and stuff, besides an organ of my own."

"Goods" were sometimes left to be sold and the proceeds devoted towards the purchase of an organ. Thus in 1493 Edward Dawes left "Eight measures of wooad, of Bristol warrantry and measure, towards buying a pair of new organs for the Church" of St. Werburgh in that city.

From the Churchwardens' accounts of Walberswick, in Suffolk, we learn that "John Almyngham, by Will, was a benefactor to a substantial amount; as he left to the Church twenty pounds; (with) ten pounds (of) which was to be boute (bought) a peyer of orgonys."

A fit close to this list will be the quotation of the codicil to the will of Richard Fitz-James, Bishop of London, proved May 22nd, 1522, which ran thus:—

Item, I Will that my payre of *portatives*, being in my chapels in the palace of London, mine *organs*, also being and standing in my chapels within my three manors of Fulham, Hadham, and Wykeham, shall there stand still and remain to my successor, next Bishop of London, that they may be used there to the honour and service of God.

Organ.

We have now to consider the use of the word "organ," in a much more limited sense than that in which it has thus far come under our notice.

The term *organum* had, in ancient times, no one specific signification; but was applied to any machine or instrument. The ancient Greeks had no particular musical instrument called an organ; nor did the Romans apply their word organum to an organ in our sense of the term, but to an instrument of any kind.

We find that the artificer who in the year 1344 agreed to make a clock for old St. Paul's Cathedral, was, as a maker of machines, described as "Walter the Orgoner"[1]; and the person who undertook to repair the organ which King John of France, while an English prisoner, took with him from Hertford to Somerton Castle in 1359, was similarly described as "Master John the Orgoner."[2] The derivative title is thus seen to have been given equally to the maker of a machine, or clock; and to the restorer of a musical instrument, or organ.

The term organum, laying aside its application to all

[1] Archaeological Journal, xii, 173.
[2] Lincoln Architectural Society's Papers, 1858, p. 58.

other subjects except that of our present consideration, meant an instrument. A single pipe producing a pleasant sound was a musical instrument; and as such, then, in the old and most restricted sense of the term, also an organ; and there can be no doubt that the term so applied was well known and recognised in the fourteenth and succeeding centuries, as will appear obvious as we proceed.

It has been shown that the great majority of English Parish Churches lacked organs possessing even the modest range of an octave, or an octave and a half of pipes; and the enquiry that this fact suggests is, how did the "clerk," or whomsoever had to lead the singing under such circumstances, obtain his starting note?

This is a question to which a very probable solution may soon be given. In the Gregorian chants the prevailing notes or *dominants* as they were termed, were one of either of the six notes ranging from F up to d; the entire reach of the remaining notes being, as already shown, from C up to f, an octave and a half. In the middle ages it was a well recognised custom to *transpose* some of the chants, on occasion, so as to bring the entire number within the compass of an ordinary voice. Thus, by taking either A, or B flat, the semitone above, as the dominant of the whole, which at the same time concentrated all other notes forming the "mediants" and "endings"—the entire number of chants could be brought into a compass of a seventh, consisting of the following notes:—

D.	E.	F.	g.	a.	b flat.	c.
1.	2.	3.	4.	5.	6.	7.

It will be remembered that the number of "tongues" in the Theophilus organ was "seven or eight;" it is very likely, therefore, that it was the custom even in the time of that writer—the eleventh century—sometimes to transpose some of the chants. It is most possible then that a competent clerk would avail himself of the help of one or two such pipes to give him the starting note, after which his own knowledge would enable him to continue the chant without further assistance.

A neighbouring church, more fortunately circumstanced, would, perhaps, possess a set of "seven or eight pipes,"

sufficient therefore to accompany the chants—some being transposed; or it might have a dozen pipes, in which latter case the chants could be accompanied *either* in their original position, *or* transposed; and such a set of pipes, with its playing mechanism and bellows, would be an example of what old documents so frequently refer to as "the organs." It would not be easy to conceive of the plural term "organs" being readily understood if the word in the singular number, organ, as applied to a single pipe, had been unknown.

An Organ.

At the same time the expression "an organ" was undoubtedly used sometimes to indicate a complete little instrument.

Thus among the accounts of the Precentor of the Abbey of Ely for the year 1396, particulars are given of the "Expenses of making *an organ*;" and as they are the earliest of the kind known to be in existence, and are most interesting in themselves, they are here quoted:—

20 stones of lead		16*s.*	9*d.*
1 lb. of tin			3
2 lbs. of quicksilver		2*s.*	
4 white horse hides, for 4 pair of bellows		7	8
16 pairs of Jemewes, (hinges,)		1	10
Ashen hoops for the bellows			4
1 lb. of glue			1
12 springs			3
6 calf skins		2	6
12 sheep skins		2	4
Wire, nails, cloth, hooks, and staples, &c.			12
The carpenter, 8 days, making the bellows		2	8
Fetching the organ builder, and his board		40	0
	Total,	4	8	5

Among the foregoing details a few are found that afford special information respecting the contemporary state of organ building, &c. The "ashen hoops for the bellows" indicate that the wind-providers were still of the primitive "forge" kind. The "12 springs" no doubt were the elastic appliances to hold the pallets close in the wind-box. Their number—"12"—agrees exactly with the number of notes required for the accompaniment of the Gregorian chants, as already pointed out more than once.

The item for "Fetching the organ-builder and his board," points to the simple unpretending kind of life that the useful class of artificers to which he belonged, led in the fourteenth century, as indeed they continued to do for 300 years afterwards, as will appear incidentally as we proceed.

There is nothing to indicate whether he was a clerical or lay member of the craft.

The Organs.

References to "the organs," [1] either in regard to their purchase, tuning, mending, &c., are constantly met with in ancient records, from which a few items will be quoted, with their dates, &c.

In the year 1433, we read in the Churchwarden's account of St. Peter Cheap, London, the simple statement.

1433. It'm, for ye Orgons mendying.—vis. viij*d.*

In the accounts of St. Michael's, Cornhill, under the date, 1459, we find a similar entry, with an addition:—

1459. It'm, to the Orgon maker for amendynge of the Orgons, w^h^ (with) j*d* spendid in ale.—v*d.*

Some years later, and in the same records, we meet with the following:—

1473. It'm, for mendyng of *the orgelles.*—j*d*; also,
1473. It'm, payde to the orgel player,—iiij*s.* vij*d.*

These notices are extremely interesting. The appearance of the German equivalent for the English word "organs" seems to point to the influence of some foreign maker, who, doubtless, trying his fortune in "Good London Town," was probably rendering reciprocal service in his calling to some good citizen who had "bid him a hearty welcome"!

1487. In 1487 we find "organs" mentioned as playing a part in the grand reception that was given by the Clergy and Citizens of Bristol to King Henry the Seventh on the

[1] It is somewhat amusing to observe the wealth of orthographical resource which the scribes of old exhibited in their numerous modes of spelling the word, "organs." In the course of my researches, I have met with it rendered in no less than the following *thirty-six* different ways:—

organs.	organes	organis.	orgaunys.	orgayns.	orgaynes.
orgainnes.	organys	organyse.	orgens.	orgenes.	orgenys.
			orgines.	orgons.	orgones.
			orguns.	orgunes.	orgyns.
			organnes.	orgains.	orgaines.
			organsse.	organynes.	orgaunes.
			orgaynys.	orrgans.	orgelles.
			orgeyns.	orgheyns.	orgins.
			orgouns.	orgounes.	orgonys.
			orgynys.	orkyns.	argons.

occasion of his entering their ancient City. The account is contained in a parchment roll still preserved in the Bristol Library; and runs thus:—

"1487. This yeare the King came to Bristoll one (on) Corpus Xti daye. The maior, with iii. c. (three hundred) burgesses, went and mette him in Reedfield, all in grene; and at the crosse in new markett the clergie mete him in their best copes; at newgate (he was) received with children singing, and *organs*; thirdly, (he was) received at St. Jones (John's) gate; and last, by the Abote of St. Augustine."[1]

As the "Organs" here mentioned were not only movable, but had simply to accompany children's voices, they doubtless were nothing more than a few treble pipes.

Portable organs are spoken of more specially further on.

The word "organs" was not unfrequently used as a contraction for some fuller title, such as "a pair of organs," to avoid tautology. Thus in the minutes of a meeting held at St. Michael's, Cornhill, we meet with this entry:—

1572. 30th November. It is agreed att this pressentt vestre, that the *towe pare of organes* shal be sold for the beste prysse they (that) may be had ffor them; and thatt there shal be towe pewes buylded in the plasse where the sayd *organes* do now stand.

A Pair of Organs.

We now come to the expression "A Pair of Organs." This term was for many years a great stumbling block to writers on the subject of the medieval organ, until my old friend, the late Dr. Rimbault elucidated the subject in his history of the organ, published in 1856. One writer, for instance, considered the term "pair" to refer to the "double bellows." losing sight of the fact that a single machine of the kind was generally called a "pair" of bellows. Another annotator thought that "a pair" signified "two organs conjoined, with two sets of keys, one above the other, one small and one called the choir organ, and the other the great organ, built, as its name imports, on a large scale and used in forte passages." But this view was disposed of by the price that the Churchwardens of St. Mary at Hill paid in "1521 to the organ-maker, for a payre of new organs, and for bringing them home, namely xs. viij*d.*" only. Again, many churches contained "*two* payre of orgayns," and if they were of the great bulk suggested, there would arise the question as to how much

[1] "Bristol, Past and Present," ii, 251.

room, if any, could have remained in a church so furnished for the accommodation of the congregation. Then some churches, as for instance, St. Dionis, Backchurch, had "j payer of *greate* organs,"—no choir—while others, as Ashford in Kent, had even "ij payer of *great* organes." At St. Stephen's, Westminster, there were, at the time of the Dissolution (1539) "iij payer of organs in the vpper chapell." The suggestion therefore that a pair meant two quite fell to the ground. A third commentator considered that "a pair of organs" meant an instrument with a double row of pipes; but the *single* regals, which had but *one*, was nevertheless always termed "a pair."

The term "pair" really signified a *set*, or a sufficient number to serve a specific purpose. It was in fact an idiomatic expression, and was used in ways much more numerous than seems to have been generally supposed and also much earlier. For instance, I have traced the use of the expression more than three hundred years farther back than the date of the earliest example quoted by the late Dr. Rimbault; and what is most interesting, many of the instances are to be found in connection with inventories of church goods; ancient buildings; offerings to the church; early wills and legacies, and such like interesting sources. The earliest example, dated 1307, which speaks of two pairs of organs, I reserve for the present.

In 1393 it is recorded that "Henry Wyvelescombe left, by will, for the use of Temple Church, Bristol, two pairs of vestments." The use of the term "pair," or "pairs," in connection with vestments appears to have been by no means uncommon in the fifteenth and sixteenth centuries; and the sense in which it was understood is indicated by another and more specific entry than the one just quoted. In the inventory of "goods" belonging to St. Ewen's church, Bristol (now pulled down) occur the following two entries:—

"1454, one pair of vestments, that is to say, one chusable with the alb and amice." Also, "a pair of white vestments for Lent, that is to say one white chusable, alb, amice, stole, &c." The first "pair" therefore consisted of *three* articles; the second of *four*, exclusive of the *et cetera*.

The term was also applied to sets of beads, thus:—

1416. Jan^{y} 11, John Beveley left "To Son Thomas, a pair of beads de lamber," &c.; and "To Daughter Isabel, a pair of beads de curell." (Bristol Will, p. 97.)

A pair, or set of beads, consisted, according to high authority,[1] of various numbers of pieces, from thirty to seventy, and perhaps more. The expression was also applied to stairs and steps. For example, in an old description of The Gate House of Burlington Priory, we read:—

"1536. On the est syde of the cloyster ys the Dortor (dormitory), goyng up a *payre* of stayres of stone xx steppes highe."[2]

Twenty, therefore, formed the number of the "pair" in that instance.

In the sense of "set," or "suit" the word "pair" is found used in such connection as the following:—

1471. May 11th, John Gaywode left "To son John, a pair of brigandines covered with red worsted;" and on Dec. 25th of the same year, another citizen of Bristol, John Seynte, left to his son John, "a pair of brigandines covered with blue velvet." In 1504 John Esterfeld left "To son Henry Esterfeld a pair of complete harness."

Glancing again at the Inventories of Church goods, we find in "An account of Utensils," at Walberswick in Suffolk:—

"1492. It', a pair of chalice of silver for the communion."

Evidently meaning a set consisting of chalice and paten. It is interesting thus to find the term "pair" used in connection with the vestments and the sacred utensils, as well as "the organs."

But some of the entries which seem to be most worthy of special attention, are those in which vestments and organs are referred to in similar or even the same terms. Thus at St. Mary, Elmsley Castle, under date 1552, we find "a pere of vestement," and "a pere of organs." At St. John Baptist, Broomsgrove, "a payre of olde vestments," "j payre of orgaunes." At St. Bartholomew, Grimley, "ij peire of vestments," "a lytell peire of organes," &c.

It has been thought well to explain and illustrate the meaning of the expression "a pair of organs" thoroughly and exhaustively, as the misapprehensions respecting it have been so numerous and wide-spread; and also because most of the illustrations now brought together,

[1] Sir J. Cullum's Hawsted, quoted in Norf. Arch., i, 118.

[2] Remarks on "Conventual Arrangements." By M. H. Bloxam, Esq, Associated Architectural Societies' Reports, 1850, p. 182.

have never been cited in connection with the subject before;[1] otherwise, the whole question could have been disposed of in comparatively few words, thus:—The union of the two organs did not take place until after the Reformation, when the small organ from the Choir, being no longer required as a distant and separate little instrument, was taken up and put in place of the "pulpitum" in front of and a little below the Great organ in the Rood-loft. The Choir organ inside the Great organ case, which for some time was an exceptional feature, was not introduced until after the Restoration, at which period also the "Echo" made its appearance for the first time in English organs.

A Small Pair of Organs.

By "a small pair of organs" was doubtless meant a set of pipes in unison with treble voices, ranging from two feet c upwards. This scale is shown in the upper part of the diagram, on the *right* hand side, and will be seen to comprise some of the "acute" and "super-acute" notes of the complete scale appearing underneath.

A Great Pair of Organs.

The term "a great pair of organs" no doubt signified a series of pipes sounding in unison with the tenor and bass voices, that is, in the octave below the "small organs," to do which the open pipes would be required to be of twice the size, beginning with 4 feet C, and ranging thence upwards. This scale will be seen in the upper part of the diagram, on the *left* hand side, and comprises some of the "grave" and the "acute" notes. These ranges were doubtless extended from time to time; and it is more than probable that a complete compass of about three octaves, from FF or Gamut G upwards, was under favourable circumstances sometimes adopted.

In the accounts at Beatherisden, in Kent, the following very unusual entry appears:—

1552. Item, a *base* peare of organes.

The use of the word "base" is unique, and it is not

[1] The word "pair," like that of "organs" greatly exercised the orthographical ingenuity of the ancient scriveners, who succeeded in spelling it in the following *sixteen* different ways:—

Pair	paire	paier	pare
payer	payere	payre	peare
peer	peir	peire	per
pere	peyer	peyr	peyre.

clear to what peculiarity it might have referred, if indeed to any at all.

After a time the words "pair of" were frequently omitted for the sake of brevity; and we accordingly meet with such entries as the following, taken from the Wimborne accounts :—

1533. For making of a bar and a hanging lock and key to the lyttyll organs.—viij*d.*

For setting up of a bar to the greatorgans.—x*d.*

A bill upwards of 350 years old for the repair of an organ, is a great rarity; hence the following, also from the Wimborne accounts, has a special interest.

1535.	P[d] to John Vaucks for mendying of the gret organs.	xxv*s.* iv*d.*
	for hys bord - - - -	iv*s.* viij*d.*
	and to Thomas Wever to serve the said Vaucks.	iv*s.* ij*d.*
	for cools (coals.) - - - -	ij*d.*
	for mending of a stop, and a new lock - -	viij*d.*
	for allome. - - - -	iv*d.*
	for shep skynnys. - - -	xx*d.*
	for glu and small nayls. - - -	iv*d.*
	for nayls for the skaffold. - - -	iij*d.*
	and for tallow candells. - - -	ı*d.*
	Total	xlj*s.* v*d.*

The following extracts, taken from an old account of Burlington Priory, offer a good parallel to the chief subjects which have just been discussed.

1536.—"On the south syde ys *a stayre* of iiij foote brode, and of xx steppes highe; which *stayres* be on the south syde of the hall."

"On the north syde ys *a payre of stayres* ledyng up to one hye chamber."

Here we find the terms "stair," "stairs" and "a pair of stairs" used to express one and the same thing. In exactly the same manner the singular,—an organ,—the plural,—organs,—and the aggregate term,—a pair of organs,—were used almost as convertible terms when writing of the English medieval organ, for nearly four hundred years.

(To be continued.)

THE ENGLISH MEDIÆVAL CHURCH ORGAN.

By EDWARD J. HOPKINS, Mus. Doc.,
ORGANIST OF THE TEMPLE CHURCH, LONDON.

(Continued from page 157.)

TWO PAIR OF ORGANS.

The oldest Inventory of "Church Goods" known to be in existence, is that which was taken of the property in the Temple Church, London, at the time of the general suppression of the Order of Knights Templars, in 1307. Its title ran thus :—

"Goods and Ornaments in the Temple Church, London. Account of Nicholas Pygott, one of the Sheriffs of London, and Nigel Drury, the last Sheriff, taken the xth of January, 1st Edward IInd.

Among the "Items" scheduled in that document are found, "In the Great Church, Two pairs of Organs," with their value attached, which was estimated at "xl*s.*" Also "In the Choir, one book for the organs," which, together with "two cushions to the chanters' chairs," was appraised at "v*s.*" The above very early and hitherto generally overlooked reference to "pairs of organs" is not only extremely interesting from an historical point of view, but is especially so as being a record of the predilection entertained by the Knights Templars of old for the instrument; a taste which was shown to have been inherited to a large extent by their successors exactly two centuries ago this year (1688,)[1] when after, a protracted trial of two organs made and erected in their Church by the two most celebrated organ-builders of the time,—Bernhard Smith

[1] In 1682 the Treasurers of the two Honourable Societies of this Temple gave "Father Smith" a verbal order to make an organ for their church, but Renatus Harris, a rival organ builder, made interest and obtained permission to erect a competitive instrument, and the two organs were completed towards the middle of the year 1684. A protracted contest ensued, which was continued until about the end of 1687, by which time, to repeat the Hon. Roger North's quaint expression, the two rival artists "were but just not ruined."

Ultimately the decision was given in favour of Smith's handiwork; Harris's organ being removed without loss of reputation to its builder.

and Renatus Harris,—they finally selected that by the former maker, as "containing the greatest number of raritys and excellences;" and which taste was never in a more living or fostering condition in the two Honourable Societies than it is at the present time.[1]

The term "*two* pairs of organs" continued to be used for some centuries, and indicated simply that the instrument was furnished with two sets of pipes.

An entry of the fifteenth century, referring to an organ that was "old" even at that remote period, is still in existence in the ancient Parish Registers of the Church of St. Mary at Hill, London, and stands thus:—

1485-6. "The Inventorye of Church Godes.
Item, two peyre of *old* organs."

Later, on the expression occurred more frequently, and at times with some special details attached; as at St. Andrew's, Norwich, where the following notice is met with, with the value of the instrument subjoined:—

"1552. Item, ij. peir of orgunes" .. x*li.*

At Ashford, in Kent, there appears:—

"1552. Item, ij. payer of *great* organes,"

which would mean an organ comprising two sets of *large* pipes, probably of about the number and size of those indicated in the diagram marked "Great," on p. 127.

"Little organs" and "Great organs" were sometimes distinguished by the specific names Portative and Positive.

The Portative,

was a small organ which, as its name imports, could easily be carried about from place to place. Of the easy movability of the Portative, an illustration is afforded by the fact that "In 1429 frequent payments were made to men for carrying on foote the Kinges portable organs from Windsor to Eltham, and from Eltham to Hertford."[2]

[1] Geoffrey Chaucer, who died in 1400, and who, it may be noted, entered his name as a Law Student at the Temple, thus referred to the organ, (in the singular number,) in *The Cock and the Fox*:—

"His vois was merier than the mery *Orgon*
On mass daies, that in the churches gon."

And in speaking of St. Cecilia, he mentions the instrument in the plural number, thus:—

"And while that *organs* maden melodie,
To God alone thus in her heart sang she."

[2] The Choir, viii., p. 69, note.

Another record states that "a small organ, introduced into the choir of Croyland Abbey to assist in the services, was carried from London to Croyland on the shoulders of two porters."[1]

The identity between the "Little organ" and the "Portative" is shown by the following memorandum from Letters relating to the Suppression of Monasteries, published by the Camden Society, p. 269 :—

1538. Item, sold a old peyer of *portatyffes organs* to Mr. Besum. . ij*s*.

These names were sometimes even used as convertible terms, as in the Inventory of the goods in the Priory Church of Minster, in Sheppey, taken in 1536; where we find :—

"In the nether part of the quyer, a *pere of portatyves* :"

And again in the notice of a repair made to the organ in the Lady Chapel of the old Church of St. Peter, Cheap, London, which stands thus :—

1522. It'm, for mendyng of y^e^ *portatyvys* that serve for owre lady's masse.

The Portative was frequently used for secular purposes, and was sometimes carried in processions, though it was not always referred to by its specific name. Thus among the expenses incurred by the Company of Grocers of Norwich in 1534, when they gave a Pageant Play, were the following :—

It', for a psent govyn (present given) for y^e^ borowyng of y^e^ Organs .. .. iv*d*.
It', to Jno. Bakyn (for) playeng at y^e^ Organs .. .. vj*d*.[2]

A curious early fifteenth century entry exists which is of too interesting a nature to be omitted here. Among the goods given by Sir Thomas Cumberworth, Knt., to the Chapel of Holy Trinity in Somerby Church, A.D. 1440, was included

A portetife Missal.

This might have been a service book, sufficiently small to be carried about, or it could have been a small portable organ made to fold up, and present the appearance of a book when closed, as some draft-boards are made in the present day.

[1] Paper by the Rev. E. Moore; Arch : Soc : Lincoln iii., p. 129.

[2] Norfolk Archæology, v., p. 24.

The possibility of its having been a small instrument ingeniously devised after this fashion, is shown by the notice of some folding Regals which is given farther on.

The Positive.

This term was in old times understood to signify the larger and fixed organ, and afterwards was applied to the "Choir organ in front," or "Little organ." Although found in most English musical dictionaries, there is no evidence of the name having ever been used in this country, the word "Great" having generally met with the more ready acceptance.

The Regals.

Old Parish Registers not unfrequently contain some reference to the purchase or the repair of "the Regals;" and much diversity of opinion has existed among writers as to what was the exact nature of the instrument so named. Some have supposed it to have been identical with the Portative, which is quite incorrect. The Regals were certainly small in size, and therefore portable, hence their being confused with the Portative; but the Portative really was composed of "flue" pipes,—of which the toy penny whistle is a homely example,—while the Regal was made up of "reed" pipes, of which a type is presented in the "squeaker," which country lads still delight to construct of osiers plucked from the brook-side in spring-time. The distinction is made quite clear by old entries of the kind already referred to, and which, it may be mentioned, have never hitherto been taken advantage of in the elucidation of this subject; but a few of which will here be quoted.

It should be mentioned that there were two kinds of regals; the single regals, a "pair" of which consisted of *one* set of pipes; and the *double* regals, which had *two* rows of pipes.

In the Churchwardens' account of St. Peter Cheap, London, occur the particulars and cost of repairs to the double regals of that Church. They stand thus:—

1555. It'm, to Howe, organ maker, for makynge sprynges to the doble regalls, and the tonges (tongues) of the ij. regalls which is called the pryncypalls in the base regall . . iiijs.

The springs would fulfil the same office as those in the early Ely organ already explained. The tongues were the small pieces of brass, or "vibrators," the periodical motion and beating of which produced the tone. And it is a noteworthy fact that the word "tongue" still continues to be used as the technical name for the vibrators of their reed-stops by English organ builders after a lapse of over three centuries.

A year later than the date just given, other repairs—this time to the organs as well as the regals—are thus recorded :—

1556. It'm, payd to Howe for ij. new pypes for the organs, and brasse to the regalls .. .. ij*s.*

The regals in this case probably were a substitution for "the small organs in the choir."

The Regals, like the Portative, were sometimes used in Pageants. Thus in the accounts of the Weavers' Pageant, performed at Coventry in the sixteenth century, the following entries occur :—

1554. Payd to James Hewet for hys reyggals.. .. viij*d.*
1554. Payd to James Hewet for playing of his regols in the payggeant .. .. viiij*d.*

In the last century the regals were also frequently used in similar exhibitions abroad; and were thus described by Snetzler, a celebrated German organ-builder, at that time residing in London, whose account furnishes interesting details :—

In Germany, and other parts of Europe, on Corpus Christi and other festivals, processions were made, in which a regal was borne through the streets on the shoulders of a man. Whenever the procession stopped, the instrument was set down on a stool, and some one of the train stepped forward and played upon it; he that carried it blowing the bellows.

The same maker gave the following account of a folding regal which had passed through his hands. He said he once repaired a regal, so contrived as to shut up and form a cushion, which when open discovered the pipes and keys on one side, and the bellows and wind-chest on the other.

Just one more quotation before this subject is quitted, as it seems to indicate that the organs and the regals occasionally were united into one instrument :—

It', for makyng of the regalls of the Organs ꝑfite (perfect).. viij*d.*
(St. Peter, Norwich).

The Situation of the Organ.

It has already been shown that in the great majority of cases Churches had no organs, and that they therefore possessed possibly nothing more than one or two pipes wherewith to give the pitch and start the singing on ordinary occasions.

It is one of the many pleasant and kindly features of olden times, that the larger and richer communities would frequently *lend* an organ to their less wealthy brethren for use on special occasions. Thus among the fifteenth century records of York Minster, we find the following:—

> 1485. To John Hewe for repairing the organ at the altar of B.V.M. in the Cathedral Church, and for carrying the same to the House of the Minorite Brethren, and for bringing back the same to the Cathedral Church. . xiij*s.* ix*d.*

In small Parish Churches which possessed an organ of their own, the most usual position for it was in the Chancel, or as it was not unfrequently called, the Quire. There it would stand ready for daily use in the ordinary services of the Church, at the same time that it could, unless fixed, be readily removed to any other required situation for a special occasion or purpose, and with nearly as much ease as a harmonium could be transferred in the present day. In the Chancel it probably was most frequently placed on the north side, against the wall; as the south side was usually occupied chiefly by the sedilia, piscina, priests' door, and, perhaps, other structural features. The north side was moreover the most advantageous place for it so far as daylight was concerned, as the morning, midday, and evening rays would then fall continuously on the organist's book, &c. When not in use it was frequently enclosed by doors, or covered by a curtain.

In somewhat larger Churches, having aisles to the Chancel, the organ was sometimes placed under one of the north arches. This was the case with the instrument at Old Radnor, South Wales, the case of which still remains, and in its old position.

Churches of still greater dimensions frequently had *two* organs; one in the Chancel, or the Lady Chapel, and the other in the Rood-loft. This is shown to have been the case in some instances by ancient inventories, in others by notices of repairs effected on the instruments.

Thus in the Churchwardens' account of Wimborne Minster, we find :—

1495. Paid for glyw (glue) and lether (leather) for the organs in the Rode-loft .. .. xj*d.*
Paid for mending the organs in the chapel of St. Mary, and for naylys, (nails,) gymowys, (hinges,) and glyw, (glue) .. .. xiv*d.*

A year later, similar accounts at St. Mary's, Sandwich, contain the following entries :—

1496. Item, for shepeskyn to mend the *grete* organyse .. iij*d.*
Payd for mendyng of the *lytell* organys .. .. iij*s.* iv*d.*

And a few years afterwards this particular :—

1502. Item, for a shepis skyn for *both* organys .. .. ij*d.*

At St. Margaret's, Westminster, some years later still, we meet with notices of these disbursements :—

1514. Item, Paid to Thomas Smyth, organe-maker, for mendyng the *grete* orgones .. .. xi*s.*
And for the *small* orgones .. .. .. v*s.*

The most usual positions for the organs were the Choir or Chancel, and the Rood-loft. In Churches of average size that had any organs at all, there were frequently two —in larger Churches often more—and one occupied each of the positions just named. It is only rarely that the position of the "great organs" and "small organs" are actually named; but as more space would be available in the Rood-loft, whence, moreover, certain portions of the service were sung by the Monks, whose deep voices "the organs" would have to support, there can be no doubt that the larger organ was placed there and the smaller organ below. For the accommodation of the singing Monks there was a projecting gallery – or pulpit, as it was sometimes termed— standing out from the centre of the east front of the Rood-loft, near to the organ. This position, as already observed, was in subsequent times occupied by the Choir organ.

In the contract for the screen in the University Church, Cambridge (1521), it was specified that the "Roode-lofte" should be made

wyth a poulpete (pulpit) into the mydds of y^e^ quyer.

There are three short entries in the Churchwardens' account of St. Michael's, Cornhill, which, taken together, give a clear and interesting account of the source whence

the funds were derived; the ordering, and the erection of a fifteenth century organ. They are as follows:—

1475. Receyved owte of the Church Aley bagge ffor a peyer of new orgones as hyt aperyth in y^e^ paymetes (payments) by y^e^ wille of all y^e^ pyshons, (parishoners,) .. ix*li.*

,, Payd to Myghell Glancets organes maker ffor a pre (pair) of newe organes, and also bargayned w^h^ hym ffor our olde organes to have them (in part payment,) and besyde them, in money payd .. .. .. ix*li.*

,, Payd to Roberd Crossley, carpet, (carpenter,) ffor v. gystes, (joists,) and c. burde, (boards,) ij. fellettes, & iij. legges, & for rebatyng of y^e^ seid burdes & workmashyppe of y^e^ same in the Rodelofte to enhawse (enhavnse, raise), hyt, & to make stondyng ffor the seyd organes .. vs. vij*d.*

The following two entries, referring to the removal of an organ up into the Rood loft, and for bringing it down again in the year following, are from the old accounts of St. Peter, Cheap:—

1524. It'm, payd for iiij. porters for Removynge of the organs into the Roode lofte .. .. .. xij*d.*

1525. It'm, for the bryngyng downe of the organs oute of the Rode lofte .. .. viij*d.*

The instrument would appear to have been moved bodily, as a grand pianoforte is in the present day.

The greater Abbeys and Monastic Churches not unfrequently contained two, three, four, or even as many as five distinct organs, placed in as many different parts of the edifice. Westminster Abbey had, at the time of the Dissolution,

1539. ij. payre of organes in the quyre;

and in the "jhesus chapell,"

A payer of Organys with a corten of lynen to cover them.

The Cathedral of Worcester had three organs; one in the Chapel of St. Edmund; another in the Chapel of St. George; and a third in the Choir.

At Durham there were no less than *five* organs. Mr. Davies, of Kichvelly, in his "Ancient Rites of Durham" (1672), mentions *three*. Mr. Micklethwaite has called my attention to accounts of the remaining two. Mr. Davies says:—

"There were three pair of organs belonging to the said quire, for maintenance of God's service, and the celebrating thereof.

"One of the fairest pair of the three stood over the quire door, only opened and played upon on principal feasts, the pipes being all

of most fine wood, and workmanship very fair, partly gilt upon the inside, and the outside of the leaves and covers up to the top, with branches, and flowers finely gilt, with the name of Jesus gilt with gold. There were but two pair more of them in all England of the same making, one in York and another in Paul's.

"Also there was a lantern of wood like unto a pulpit, standing and adjoining to the wood-orgons over the quire door, where they had wont to sing the nine lessons, in the old time, on principal dayes, standing with their faces towards the high altar. The second pair stood on the north side of the quire, being never played upon but when the four docters of the Church were read—viz., Augustine, Ambrose, Gregory, and Jerome, being a pair of fair large Orgons called the *Cryers*. The third pair were daily used at ordinary service."

The situation and purpose of the fourth organ are thus referred to in "The Monastical Church of Durham:"—

"Within the Gallelei (or Lady Chapel) our Ladies masse was sung dailie, by the master of the Song Schole, cauled Mr. John Brimley, with certain decons, and quiristers, the master playing upon a paire of faire orgaines the tyme of our Laidies masse."

The use and site of the fifth are thus incidentally mentioned, and in the same work:—

"Thomas Castell, Prior of Durham, lyeth buryed under a faire marble stone in the body of the church, before Jesus Alter, wher ther was on the north syde, betwixt two pillars, a loft for the M^r^ and quiresters to sing Jesus messe every fridaie, conteyninge a paire of orgaines to play on, and a faire desk to lie there bookes on in tyme of dyvin-service."

The west end was not an unusual position for one of the organs to occupy in a large Church. Thus at Meaux Abbey, in Yorkshire, in 1396, there were "larger organs at the west end of the Church; smaller ones in the Choir."

At Fountains Abbey, Yorks, Mr. W. H. St. John Hope tells me he has found clear marks of a loft or gallery at the west end of the nave, which from the analogous case of Meaux Abbey, a daughter house of Fountains, he considers in all probability held the organs. He also states that a similar loft or gallery certainly existed at the west end of the Church of the Cistercian Abbey, of Buildwas. With regard to the position of the great organ at Fountains, Mr. Hope points out that the holes for a great beam between the piers and other indications on the wall above seem to prove that it stood on the north side in the great loft or *pulpitum* at the west end of the Monks' choir. The western organs may have been for the choir of the *conversi*, or lay-brethren, who occupied the nave.

The invention of the key-board or manual, and the gradual introduction of the chromatic semitones, are subjects that have already been touched upon. From being simply great levers, the keys were by degrees reduced in size and made in more comely shape, until, at length, by the end of the fifteenth century they were very little broader than those in use in the present day. All the internal mechanism also underwent a corresponding amount of improvement and amelioration. The organ-manual in the middle of the fifteenth century, however, still continued to be in compass only about two octaves, sometimes even less. If we glance at what was being done abroad, we find that the great organ in the Cathedral at Halberstadt, made in 1361 and repaired in 1495, had its manual extending simply from tenor "B♮," the second line in the bass, to "a," the second space in the treble, an octave and a seventh only, comprising fourteen diatonic and eight chromatic keys, twenty-two in all. The organ at St. Sebald, Nurnberg, commencing on the same note, ascended to "d," raising the number to twenty-seven notes; while that at Mildenberg went up to "f," making thirty notes. In the organ at Bamberg, important additions were introduced in the shape of notes in the downward direction, and that, moreover, to the extent of half an octave. These consisted of one chromatic and three diatonic notes, namely, B flat, A, G, and FF. The next additions were other and still deeper toned diatonic notes which were introduced in the following ingenious way:—A note was placed immediately to the left of the FF key, thus looking like EE, but which was made to sound "double C-fa-ut," and two short keys were inserted *apparently* FF sharp and G sharp, but *really* sounding DD and EE. The lower diatonic notes then stood in this order:—

			2		3		
			D		E		
C		F		G		A	
1		4		5		6	

Early in the sixteenth century (in 1516), a new organ was commenced for St. Mary's Church at Lübeck, the two manuals of which started from the unusual note DD, and ascended thence to A, three octaves and a

fifth. The pedals, however, began a note lower, on CC, and the organ had upwards of twenty-five stops, and a pipe of thirty-two feet of pure tin, standing in the front of the case. In 1560-1 a "positive" or "choir organ in front" was added, the manual of which commenced at CC. In process of time the lower diatonic notes had their proper positions assigned them; a greater or less number of the chromatic semitones were inserted in the great octave, as the lowest octave came to be called, and the "Tablature" of the four octaves of the key-board underwent complete revision, the note C being taken as the commencing note of each octave, or rather septave, and they were severally distinguished as the great octave, marked by capital letters; the small octave, written in small characters, the once-marked octave, and the twice-marked octave, thus:—

C D E F G A B c d e f g a b

c d e f g a b c d e f g a b c[1]

In the year 1576 an organ was erected at Bernaw-in-the-Mark, Brandenbourg; the two manuals of which were of four octaves in compass, from "C to c," forty-eight notes; while the pedals were of two octaves and a note in compass, "C to d," the low C♯ being omitted in both cases.

It should be remarked that nearly all the old organs just mentioned had pedals. These pedals, first used in the fifteenth century, were originally an octave only in compass, "B to b," which range was gradually increased, first upwards, then downwards, until in the course of a hundred years, they had attained the scale just given. From that time onwards "Pedal-boards" were always made with C as the lowest note, even when they were only an octave or a tenth in extent, of which several old examples still exist.

In England, as abroad, for some hundreds of years the monks were not only the chief musicians, but, to a great extent, also the organ makers and the organ players. At the same time the knowledge of the art was not by any

[1] The upper C, as being really the commencement of a fresh septave, was *thrice* marked.

means exclusively possessed by the inmates of the religious houses, for it is an interesting fact that in 1421 there existed in London a trade-guild of "Orgle-makers," some members at least of which would doubtless be laymen. The earlier records, nevertheless, somewhat frequently refer to ecclesiastics. Thus we read in the churchwardens' accounts of St. Mary's, Sandwich, Kent :—

1444. To Sir John for amendyng of the organs .. xij*d.*
1462. To a Preyst for the amending of the organys iiij*d.*

Payment to a lay organ builder for a new instrument is thus entered in the registers of St. Michael's, Cornhill, London :—

1475. Payd to Myghell Glancets, organes maker, ffor a pre (pair) of newe organes; and also bargayned w^h^ hymm ffor our olde organes to have them (in exchange) and besyde them in money payd.—ix*li.*

Concerning the players of organs—clerical, lay, and undescribed—notices of which the following are examples—are not unfrequently met with.

At St. Mary's, Sandwich :—

1462. To a Priest that playth at organys .. .. iiij*d.*
1463. To Sir John for hys playyng at organys vi*s.* viij*d.*

At Wimborne Minster :—

1495, Paid to the orgyn-player .. .. xx*d.*

At Wigtoft, Lincolnshire :—

1507. It', payd for expencys for y^e^ orgaunpllayar .. 2½*d.*

A very modest pittance, even for those days!

A quaint entry occurs in the accounts of St. Mary's, Cambridge, which records that in 1514, 16*d.* was paid,

1514. To a Blak Fryer in Estir Holidays for to play atts orgaynes.

But to return to a consideration of the organs.

It was no uncommon thing for organs to be imported from abroad, and there is much reason for believing that many good hints were obtained by our native makers by these means.

In the church records at Louth, the following entry appears :—

1515. Memorandum. That George Smythe, merchaunt, boughte one payre (of) orrgans beyonde the sea, and the said George sold 'em (to) the com'onty (commonalty) of this towne of Louthe fore 13*li.* 6*s.* 8*d.*

Also the following referring to its erection in the church :—

For setting up the Flemish organ in the roof-loft by "foure daies" .. .. 20*d.*

Shortly after it was put up, its assistance was called into requisition in the course of a very interesting ceremony connected with the completion of the spire of the church, which is thus quaintly recorded in the archives of the town :—

1515. Memorandum. The fifteenth Sunday after Holy Trinity of this year (1515) the weathercock was set upon the broach, of Holy Rood Eve after, there being William Ayleby, parish priest, with many of his brethren priests there present (who) hallow(ed) the said weathercock and the stone that it stands upon, and so (they were) conveyed upon the said broach; and then the said priests sung Te Deum Laudamus, with organs, and the Kirkwardens garred ring all the bells, and caused all the people there being (there present), to have bread and ale, and all the lowing of God, our Lady, and all Saints.

Sixteen years later a second organ was made for the Church, when a thorough organ enthusiast, Mr. Richard Taylor, Priest and Bachelor of Laws, rendered substantial help to the undertaking, in the way of personal trouble as well as of means. It is recorded :—

That the honest men of this Town of Louthe, deshirying to have a good payr of organs, to the laude, prayse, and honour of God, and the hole holy co'pany of heffen, made an assemble together for this purpose on a certayne daye; at whiche tyme Mr Richard Taylor, Priest & bachelor of laws, then abydyng w'tin the dyocess of Norwiche, being p'sent, heryng the good devoute mynds and vertuouse intent of the said townesmen, of his mere devocion and good, naturall zele to this towne, wherein he was borne and brought up, offred for to cause them (to) have a payre made of a c'unyng man in Lyn, that should be exampled by a payre of the same man makyng at Ely, who was called Mr Bylton, whiche then had a singular prayse, for the sum of xxij pounds, whereof he pr'mysed to gyff thereto xi pounds; upon which promesse they accorded, insomuch that the saide Mr Taylor covennantyed and bargaynyd (for) the organys to be made & brought to thys towne, and set up on the north syde in the hihhe quere, on St. Barnabe eve, in the yere of oure Lorde m,v,xxxj (1531); at which time the said xxij powndes was payd, xi poundes by the officer or alderman of o'r lady guilde, then beying upon the stock of our lady, and the other xi poundes by the aboue naymd Mr Taylor; whiche (who) also, co'sideryng the goodness of the instrument, and how well it satisfyed and co'tented the mynds of the pysshoners, dyd gyffe farther at that tyme, in rewarde to the maker of the said instrument, for a rewarde besyde his covvenant, xi shillings

for his good diligence and well acqwytyng hym to the said instrument; for whiche beneficiall acte I praye Jesu acqwyte and reward hym to his Kyngdom of heven. Amen for Charite!"

It will have been observed that up to this time the various old records have indeed mentioned the prices of the instruments to which they have referred, but have been silent as to any other particulars. That *keys* and *stops* must, however, have been in use for some years, there can be little doubt. In 1513 we find these features distinctly referred to in the Churchwardens' account of St. Lawrence, Reading, in the following terms:—

1513. It. payd for ij lokks to the same (new) organs; one for the stopps and the other for the keyes .. xj*d*.

In the accounts of St. Peter Cheap, London, we find:—

1526. It'm, p'd for one of the yrons of the stoppys of the organs .. .. xij*d*.

The "yron" was the lever about eighteen inches long, by which the stop-slide was moved to and fro, of which examples existed in the old organ at Radnor not many years ago.

The oldest known contract for an English organ is dated 1519, which mentions "keyes" and "stoppes" among other particulars, and likewise, for the first time, affords an indication of the manual-compass. The document is of so much historical interest that it is here quoted entire:—

This endenture made in the yere of oure lorde god m^{l} v^{o} xix. and in the moneth of July xxix day. Witnesseth that Antony Duddyngton, Citezen of London, Organ-Maker, hath made a full bargayn, condycionally, with Maister Will^{m}. Petenson, Doctour in Divinite, Vicar of Alhalowe Barkyng, Rob^{t} Whytehed and John Churche, Wardeyns of the same Churche, and Maisters of the P'isshe of Alhalowe Barkyng, next y^{e} Tower of London, to make an instrument, that y^{s} to say a payer of organs for the foresed churche, of dowble *Ce-fa-ut* that y^{s} to say, xxvij. playne keyes, and the pryncipale to conteyn the length of V foote, so folowing w^{t} Bassys called Diapasou to the same, conteyning length of x foot or more: And to be dowble pryncipalls thoroweout the seid instrument, so that the pyppes w^{t} inforth (inside) shall be as fyne metall and stuff as the utter (outer) parts, that is to say of pure Tyn, w^{t} as fewe stoppes as may be convenient. And the seid Antony to have ernest vi^{li} xiii^{s} iiij^{d}. Also the foresaid Antony askyth v quarters of respytt, that y^{s} to say, from the fest of Seynt Mighell the Archanngelle, next following to the fest of Seynt Mighell the day twelvemonth following. And also undernethe this condicion, that the aforesaid Antony shall convey the

belowes in the loft abowf in the seid Quere of Alhalowes, w^{t} a pype to the sond boarde. Also this p'rmysed by the said Antony, that yf the foresaid Maister, Docteur, Vicare, Churche Wardeyns, Maisters of the p'isshe, be not content nor lyke not the seid instrument that, then they shall allowe him for convaying of the belows xl^{s}. for his cost of them, and to restore the rest of the Truest agayn to the seid Maisters. And yf the seid Antony deceese and depart his naturall lyf w^{t} in the foreseid v quarters, that then hys wyff or hys executours or his assignes shall fully content the foresaid some of iiij^{li} xiij^{s} iiij^{d} to the seid Vicare, and Churche Wardeyns, and Maisiers of the P'isshe w^{t} out any delay. And yf they be content w^{t} the seid instrument, to pay to the seid Antony fyfty poundes sterlinge. In Wittnesse whereof the seid p'ties to these endentures chaungeably have set their sealls. Geven the day and yere abovesaid.

The expression "xxvij playne keyes," or keys on a level—diatonic keys—would doubtless indicate the four-octave short-octave German compass that has already been explained, and which was even then beyond the average key-range common in England at that time. This is shown to have been the case by the following entry from the Parish books referring to the *extension* of an organ-compass to that range :—

> 1542. Item, to Gyllains, the organ maker, ffor making of the Orgons in the Roid lofte Dabbyll se fautt (Double C-fa-ut), and the Regalls. .. .. .. xj*s*.

The clause that there should be "as fewe stoppes as may be," will always be looked upon as a remarkable one.

Between the date of Duddyngton's organ and 1605—less than ninety years—organ-building made greater strides in England than it had done during the period from the time of its first introduction into this country to the commencement of the sixteenth century. The "double organ," as the instrument with the "choir organ in front" was called, had become common in our large Churches, and the manuals in their downward range, had even outgrown the Continental range; but there were no pedals.

In 1605-6 Thomas Dallam made the organ in King's College Chapel, Cambridge, consisting of "litle and greate organs," the handsome cases of which still remain; and other important instruments were erected in York Cathedral (1632-4), Magdalen College, Oxford (1637), and in most of the Cathedrals. It would delay us too long if we were to enter into details respecting these;

but it will be worth while to quote an entry that shows how the earlier separate organs were brought together and utilised. It is extracted from the Fourth Report of the Historical MSS. Commission, p. 157:—

Coventry L Lichfield, anno Dni 1635.

I. Inprimis, that the twoe payre of organs in your church w^ch^ are much defective, bee speedily amended, and if itt will stand with the grace of your church & be more convenient & usefull for your quire (as wee conceive it will) that you put them both into one, and make a chayre organ of them.

The art of organ-building in this country was destined to be checked for several years.

On August 23, 1643, an ordinance was passed by the Lords and Commons assembled in Parliament for abolishing superstitious monuments. On May 9, 1644, a second ordinance was passed "for the further demolishing of monuments of Idolatry and Superstition," in which the destruction of organs was enjoined. Its wording ran thus:—

And that all organs and the frames and cases wherein they stand in all Churches and Chapells aforesaid shall be taken away and utterly defaced, and none other hereafter set up in their places.

Collegiate and Parish Churches were in consequence of this ordinance stripped of their organs; some being sold to private persons, while others were partly demolished; some were removed by the clergy, to save their being destroyed; while some few escaped altogether. Of those which found their way into private houses, efforts were made to discourage their use. Thus, at a Convocation held in Bridgwater, in 1655, the question was raised:—

Whether a believing man or woman, being head of a family, in this day of the gospell, may keepe in his or her house an instrument of musicke, playing on them or admitting others to play thereon?

And the answer was:—

It is the duty of the saintes to abstaine from all appearance of evil, and not to make provision for tbe flesh to fulfil y^e^ lusts thereof.

Oliver Cromwell himself had some taste for music, and had the "double organ," which Evelyn heard in the Chapel of Magdalen College, Oxford, in July, 1654, conveyed to Hampton Court, and erected in the great gallery and frequently played upon, to his great content.

Cromwell, therefore, suffered no compunction whatever in his own case in "making provision for the flesh."

A few words respecting the re-introduction of organs into Church, and their restoration to public approval will bring this paper to a close.

During the seventeen years that elapsed between the issue of the ordinance quoted just now and the Restoration in 1660, most of the English organ-builders had been dispersed, and compelled to work as ordinary joiners and carpenters; so that at the expiration of the period just named, there was "scarce an organ-maker that could be called a workman in the kingdom," except the Dallams (brothers); Thamar, of Peterborough; Preston, of York; and Loosemore, of Exeter. Continental artists were therefore encouraged to settle in this country, among whom Bernhardt Schmidt (Father Smith) with his two nephews, Christian and Gerard; and Thomas Harris, an Englishman who had taken refuge in France during the troublous times, together with his son Renatus, a young man of great ingenuity and spirit.

Smith was at once appointed "organ-maker in ordinary" to King Charles II, and put into possession of apartments at Whitehall, called in an old plan of the Palace "The Organ-builder's Workhouse." "The first organ he engaged to build for this country," says Dr. Burney, in his "History of Music," "was for the Chapel Royal at Whitehall, which being hastily put together, did not quite fulfil the expectations of those who were able to judge of its excellence; and it was probably from some such early failure, that this admirable workman determined never to engage to build an organ upon short notice." Burney says nothing as to the date of this premature trial of the organ; but Samuel Pepys gives it in his entertaining "Diary;" and as this interesting little historical fact has never been quoted, it is here given:—

1660. June 17th (Lord's day.) This day the organs did begin to play at White Hall before the King.

In the course of the following three weeks the instrument underwent the necessary revision; and Pepys again refers to it:—

July 8th (Lord's day.) To White Hall chapel, where I heard very good musique, the first time that ever I remember to have heard the organs and singing-men in surplices in my life.

Pepys' taste for the organ some years later was rather on the increase than otherwise :—

April 5, 1667. To Hackney, where I was told, that at their church they have a fair *pair of Organs*, which play while the people sing, which I am mighty glad of, wishing the like in London, and would give £50 towards *it*.

In the next entry Pepys' candour and impressibility exhibit themselves somewhat prominently :—

April 20, 1667. To Hackney Church, where very full, and found much difficulty to get pews. That which I went chiefly to see, was the young ladies of the schools, whereof there is great store, very pretty; and also *the organ*, which is handsome and tunes the psalms, and plays with the people; which is mighty pretty, and makes me mighty ernest to have *a pair* at our church; I having almost a mind to give them *a pair* at our church ; I having a mind to give them *a pair*, if they would settle a maintenance on them for it."

There is no record as to whether Pepys' intention was ever carried into effect.