HOW TO PLAY THE CINEMA ORGAN

A PRACTICAL BOOK BY A PRACTICAL PLAYER.

BY GEORGE TOOTELL MUS. DOC

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CONTENTS:

The Orchestral Organist: The Harmonium, Mustel Organ, Orchestral Organ and Pipe Organ; Playing with Orchestra; Playing from Odd Parts; Solo Playing in the Cinema; How to Compile a Film Accompaniment; The Extemporised Accompaniment; Typical Examples of Music for Film Scenes.

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:: HOW TO PLAY :: THE CINEMA ORGAN

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A PRACTICAL BOOK BY
A PRACTICAL PLAYER

BY

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THE MODERN ORCHESTRAL ORGAN.

Console of the latest type of orchestral organ specially designed for cinema use.

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FOREWORD.

THERE comes a time, owing to intuition plus lack of facilities, when art is in danger of becoming debased; a statement very true and applicable to music, in fact, quite as much as any other branch in art.

The advent of the Cinema Organ, with its peculiarities, called for a totally new and altogether different style of organ-playing to that to which British organists have been accustomed. Further, quite apart from the question of performing abilities, these organs are creations which cannot be successfully mastered in five minutes. Most of us, no doubt, have visited a cinema and listened to the organ, as played by a musician, certainly—but not an organist—merely a converted pianist, who, as far as organ-playing goes, is utterly off the mark. Such musicians are to be pitied, not derided, for the simple reason that down to the present little or no effort has been expended with the sole purpose in view of coaching these would-be cinema organists.

On the other hand, we have the church organist, and as such, although he may perhaps make a far better show than his converted brother, the ecclesiastical style simply diverted into the darkened picture theatre does not constitute the right type of photo-playing. Possibly the nearest approach to the cinema artist that can be cited is the concert organist, and even this classical style of player, although accomplished in the art of performing transcriptions, may discover many pitfalls, particularly if called upon to officiate at the console at short notice.

One point, therefore, is tremendously evident, *the Cinema organist must be carefully trained.* We must not overlook the fact that there are aspirants whose careers are in the moulding stage, and can be fashioned for good or ill. That a tutor or treatise dealing with the subject is overdue, I believe is incontestable.

Just as that great virtuoso, W. T. Best, the king of concert organists, "girt up his loins" and put the aspiring concert organist on the right pathway, Dr. Tootell, the pioneer of cinema organ-playing in

England, has compiled this treatise which deals with the fundamentals essential to those who at present possess precious little knowledge of what is to them apparently a new branch of the "noble art," and are desirous of becoming "real" cinema organists in every sense of the title.

In this profession the performer must necessarily be a specialist, well versed in drama and comedy, featuring both grave and gay. Orchestration, and the art of improvising play an important part in his "daily (and evening) round."

One essential should never be forgotten; the cinema player can enhance or spoil the moral underlying what is being screened; he can create or destroy an atmosphere, and it is within his precinct to ennoble. I have many times, like others, patronised the cinema and thoroughly enjoyed the "show," save for the ill-chosen music played, not only by the organist, but orchestra too; music that was irrelevant to the film, and in some instances the pictures were sacred narratives. This book should materially assist in counteracting a style which I might correctly term "entertainer" organ-playing, absolutely void of art, comprising in the main "stunt" antics at the console, and calculated to reduce the prestige of British organists (should they indulge in such gallery-play), whose fame is established in both hemispheres.

The author is not a mere theorist, but a practical solo organist, and in the following pages he has lucidly expounded sound principles, supported by practical illustrations, prepared solely to assist recruits anxious for active service in this field of industry. He has made an honest attempt to break new ground, and in so doing endeavoured to cover in this treatise all the potent factors connected with the work and preparation of a cinema organist.

A careful study of the succeeding pages, both from a theoretical and practical standpoint, should provide a sure foundation upon which the aspiring cinema organist can build up a worthy reputation, and on account of its high educational value, it is a pleasure to commend this book to all interested in the cinema organ, and especially those desiring information and seeking instruction as to "How to play the cinema organ."

WOLVERHAMPTON. HERBERT SNOW.

INTRODUCTION.

EARLY RECOLLECTIONS.

It seems but yesterday that, as a small boy, I stood gazing with awe-struck eyes upon a gorgeous individual, arrayed in a frock-coat suit and top hat, and armed with a large cigar and walking stick, who stood at the top of a flight of steps leading to the entrance of a travelling show, shouting "walk up, and see the moving pictures." In between his spasms, a wheezy mechanical organ laboriously croaked "God save the King," this procedure being carried out until the tent was full of people. Having paid my modest penny for admission, I viewed, with wonder, films of about four hundred feet in length, chiefly of "interest" subjects, which were shown in silence, the only accompaniment being the remarks and applause of the audience. After about half an hour of this, everybody was turned out, the imposing individual re-appeared on the front, and you were invited to pay another penny and see it all again. It seems but yesterday, and yet this happened twenty-three years ago!

Incidentally, but a few short months have elapsed since I saw a cinema manager arrayed in top hat, frock coat, knitted pull-over, navy serge trousers, tan boots, and a large buttonhole, standing at the entrance to his theatre (presumably a high-class cinema), shouting the old formula; which shows that in one feature, at least, some cinemas have not advanced much in twenty-three years.

My next impression is of a travelling cinema show visiting the local

town hall, with a film called "Our Navy," which comprised pictures of our warships and naval men doing wonderful things. This film was accompanied by a pianist who played "A Life On The Ocean Wave," "Rule Britannia," "Jack's the Boy," etc., and also by "effects" such as the splash of water, and the bang of the guns. After twenty years, "effects" are now re-introduced into the cinema, so once again we are apparently back at the starting-post.

I pass on a year or two, and now find a cinema established as a permanent local entertainment. Feature films have grown to greater length, and Mary Pickford has appeared in barnstorming dramas. A pianist is installed to provide a musical accompaniment, and this pianist impresses me. He is not only a good player, but is very clever in the way in which he follows the action of the picture with suitable music. I am in my "'teens," and though I have gained my F.R.C.O. Diploma, am still busy with the study of harmony, counterpoint, and all the rest which is included in an academic training. This pianist gives me ideas as to the possibilities of music in conjunction with the photo-play, and I realise the enormous possibilities of an organ *of the right type* in the cinema.

Strange are the workings of Fate! In November, 1925, I gave demonstrations on a large Jardine cinema organ in Glasgow, and this very pianist, who inspired me with my first cinema aspirations, called upon me at the theatre where I was appearing to apply to me for an appointment!

I pass on a few more years, and am now comfortably installed in a good appointment as a Church organist (my third of such appointments) and enjoying a lucrative private practice. My eye had been constantly on the cinema; I saw, from the first, the artistic possibilities to the musician, especially to the organist, and had quietly studied the whole question from every conceivable point of view and formulated my methods. I intended to be a cinema solo-organist, and when my opportunity should come, I intended to be ready for it. But I intended, also, to have a genuine cinema organ, and up to this time no cinema organs had appeared in Great Britain.

In 1912 a very remarkable film appeared; this was "*Quo Vadis?*" produced by the Cines company, the first of the great super-films, and one which appeared before its time. It fell to my lot to arrange a musical setting for this film, for a tour round a circuit of fourteen theatres, with a week's run at each. Working entirely upon ideas and methods which I had formulated for myself, I arranged a musical setting for full orchestra and a double quartet of vocalists, which proved a striking

success, and led to further "commissions" of a similar nature. Previous to this, I had never heard an orchestral accompaniment to a film.

THE FIRST GENUINE CINEMA ORGAN.

A year later I received my first offer, as a solo organist, of a cinema appointment (through the late Mr. Easthope Martin, the well-known song-writer), and declined it because I did not consider the organ to be either suitable or adequate for solo work. I realised, from the first, that the cinema required a special type of instrument, and that the ordinary type of church or concert organ could never succeed in the cinema. But it was not long before the opportunity for which I had waited and hoped came to me, when I was offered the position of solo organist at The Palace, Accrington. Here the organ, constructed by Jardine & Co., was built under my supervision, and embodied most of my own ideas as to what a cinema organ should be. This organ was the first genuine cinema organ built in Great Britain, and is still one of the finest examples of a cinema organ in this country. The remarkable success of this organ, not only from the artistic but also the box-office point of view, gave impetus to cinema organ-building in England, but, unfortunately, other builders did not profit by the example, with the result that a number of organs were built for cinema purposes which were quite unsuited to their purpose, being purely church organs. Nevertheless, we are now seeing organs erected which are more genuinely *cinema* organs; if the introduction of the Wurlitzer organ into this country (from America) has only illustrated to British builders the necessary design for cinema purposes, it has served a valuable purpose.

In 1921, I accepted the position of solo organist at the Stoll Picture Theatre, Kingsway, London, when the large three-manual Jardine organ was erected there. This instrument, again built under my supervision, was the largest and most perfect cinema organ which had appeared up to that time; it is still one of the largest organs to be found in a British cinema. The record of my work at the Stoll Picture Theatre, and, more recently, in other parts of the country, is open for all to read elsewhere than in these pages.

WHAT CINEMA AUDIENCES WANT.

Though the cinema is essentially a business proposition—being purely entertainment—it affords very great artistic possibilities to the

musician, and especially to the organist. It was those artistic possibilities which appealed to me from the first, and eventually induced me to give myself up wholly to a cinema career. In the course of that career I have enjoyed many and varied experiences, having played to all types of audiences, from one consisting entirely of iron-workers to a private demonstration before Royalty; and in cinemas in industrial districts, seaside and holiday resorts, and the West-end of London. My experiences, in provincial centres especially, have brought me closely in touch with various sections of the public and with many varied types of audience, and from these experiences I can very definitely answer the perennial question, "What does the public want?" Cinema audiences want the best they can get; whether they always get it, or not, is another question, but they expect it, *and they appreciate it when they do get it.* The public taste for music is surprisingly high in many provincial centres, and cinema audiences have become keenly discriminating. I have not, in any provincial centre which I have visited, heard worse organ playing than I have heard in London cinemas, where, incidentally I have heard performances which were indescribably bad. The worst performance I have ever heard on a cinema organ was in a London West-end cinema; and the best performance (on an inadequate organ) was at Newcastle-on-Tyne.

Studying the psychology of audiences, and the prevailing musical taste in various districts, is an interesting and amusing experience, and is also highly instructive. To the solo player in the cinema it is a necessary procedure, and one which I have invariably followed with some surprising and amusing results. Among "requests" for the performance of certain compositions, I have received :—

From an engineer-mechanic,	Bach's "Toccata in F major."
From a police constable,	Selection from Verdi's "Aida."
From a coal-heaver,	Beethoven's 5th Symphony.
From a bus conductor,	The Andante from Tschaikowsky's 5th Symphony.
From an elderly lady,	The Hallelujah Chorus.
From a doctor,	"The Sheik" Fox-trot.

Requests for various light and "popular" pieces come from all quarters, but the following note, actually received by me, is intriguing :—

Dear Sir,

Will you kindly oblige with A little love a little kiss on Sunday night?

And oblige,

Amy .....

Doris.....

I hasten to add that neither of the "requesters" was, or is, known

to me.

I have enjoyed the unusual experience of accompanying the whole of a long feature film with the organ console in absolute darkness, having to feel for my stops, which I was unable to see.

In a Welsh town I have witnessed the presentation of a five-part film, in which the whole of the second part was run backwards, and the first half of the third part upside down.

I have accompanied a film when the third part was shown before the second part, and no one appeared to be any the wiser! And I have accompanied a seven-part feature film for six consecutive performances, during the second of which Part 2 was omitted; in the third performance Part 4, and in the fifth performance Part 3 was omitted; in each case quite unexpectedly. These few cases will illustrate how variety may be unexpectedly introduced into the cinema organist's work. Happily they are the rare exception rather than the rule.

ORGAN POPULAR WITH CINEMA AUDIENCES.

Is the organ popular with cinema audiences? Undoubtedly, when properly treated. My own experience has shown me very conclusively that the *right type of organ*, in the hands of an expert player, is a most popular attraction in any cinema which possesses such an instrument.

It is all-important that British organ builders should realise the fact that the organ required for the cinema is a distinct type of instrument, specially designed for a special purpose. So long as builders erect the "legitimate" type of organ in the cinemas, so long will they produce failures. This special type of instrument—illustrated in the Jardine, Compton, and the Wurlitzer organ—demands a specialised player. At the present time, our principal teaching institutions make no provision in their curricula for the special training which is absolutely necessary for the cinema organist; and the student who has finished his usual course, and who desires to secure a cinema appointment, is left to his own devices—with disastrous results. There is a demand for first-rate cinema organists which cannot be supplied, simply because organists who are otherwise excellent players are unprepared for the specialised work required, and are utterly lost when they attempt cinema work. At the present time there are not half-a-dozen cinema organists of outstanding ability in all Great Britain, while there is a large number of those who are either mediocre or frankly incompetent.

SPECIALISED TYPE OF PLAYER REQUIRED.

The cinema requires a specialised type of player, who must not

only be a first-rate performer, but a very able musician. His work possesses unique features which are not encountered in any other branch of the profession; it is in those unique features that he must specialise, and through them that he can legitimately claim consideration as an unique and independent artist. This fact has not received due attention on account of the scarcity of first-rate performers, and the short-sightedness of our teaching institutions in not providing for the need.

I have frequently been described as "the pioneer, in this country, of this new branch of musical art"; I was certainly the first British organist to play a genuine cinema organ, and have undertaken the responsible task of writing this book with one single purpose before me —that of providing material assistance both to those who intend to follow the career of a cinema organist, and to those who already hold positions as cinema organists, especially in a solo capacity.

This book is a practical treatise by a practical player who has for many years devoted his whole attention to cinema music and the cinema organ. I have no doubt that some of the advice given in this book will cause discussion; be that as it may, nothing is recommended or advised which has not successfully stood *practical* test, and which is not based upon my own methods successfully carried out through many years of practical experience as a solo player in the cinema. The cinema has no use for theories which cannot be turned to practical use.

I earnestly hope that the following pages will provide a useful and practical guide to all who are interested in the cinema organ and organist.

GEORGE TOOTELL.

PART I.

THE ORCHESTRAL ORGANIST.

CHAPTER I.

The Harmonium, Mustel Organ, and Organ.

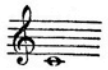
IN all cinema orchestral combinations the Harmonium or Mustel Organ is an important unit; and in the majority of first-class and large cinemas, the Organ [pipe-organ] will be found installed as an important feature of the musical arrangements. As, not infrequently, occasion arises when the pianist, or "relief" pianist, is called upon to play the harmonium (or organ), or a harmonium player is transferred to the organ, a brief description of the instruments will, no doubt, be found helpful to such players who are likely to be called upon in emergency.

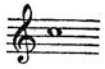
THE HARMONIUM AND AMERICAN ORGAN.

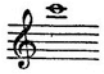
In this instrument, which originated about the commencement of the 19th century, the sounds comprising five octaves from  are produced by "free reeds,"—thin tongues of brass or steel set into vibration by pressure of air,—and the sounds are varied in tone and degree by "stops" and by wind pressure. The stops will be found numbered and arranged in a row in front of the player, and above the keys.

In the type of harmonium known as "The American Organ," these stops will bear names and also figures; the name denoting

the quality of tone, and the figure the *pitch* of the stop. Thus, we may find "Flute, 8 ft.," denoting flute tone of normal, or "8 ft." pitch. Similarly, as "8 ft." denotes normal pitch, so will "4 ft." sound *one octave higher* than the note depressed; "2 ft." will sound *two* octaves higher, and "16 ft." one octave *lower* than the touched note. Thus—

On an "8 ft." stop  will sound as written.

On a "4 ft." stop, the same note depressed will sound— 

On a "2 ft." stop, the same note depressed will sound— 

On a "16 ft." stop the same note depressed will sound— 

From this it is evident that by drawing all four stops and depressing *one* note, the sound is reproduced simultaneously through four octaves; and if a chord of three notes be sounded 

the actual sounds produced will be twelve sounds produced by three fingers. 

It is therefore obvious that with ten fingers, and a selection of stops, varied in tone, quality, and pitch, innumerable combinations and

effects are possible. A description of the tone-qualities of the different stops is unnecessary here; a harmonium tutor, or a few minutes' experimenting on the instrument will readily supply that information.

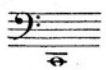
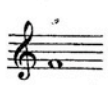
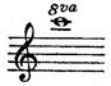
"TREMOLO" STOP.

Most instruments possess a "Tremolo" stop. When drawn, this stop starts into action a mechanism which interrupts the flow of wind, causing a tremulous or "wavy" effect, akin to the "vibrato" so beloved of vocalists. It should be used very sparingly indeed; in fact, as the harmonium is used practically always with the orchestra, the use of the tremolo stop at any time is to be deprecated; its effect, usually, is abominable.

THE STOPS.

In the harmonium proper (as distinguished from the American organ) the stops, with the exception of two, are not named but simply bear figures, and they will appear thus :—

④ ③ ② ① ○ ○ ① ② ③ ④

The keyboard is divided into Treble and Bass; the stops on the Bass side speak from  to  and on the Treble side from  to 

Thus, to ensure the same tone throughout Treble and Bass, it is necessary to draw stops with corresponding numbers, ② with ② and ④ with ④ for instance. The division of the keyboard enables the performer to produce all varieties and combinations of pitch and tone possible on the instrument.

"EXPRESSION" AND "GRAND JEU."

The two stops which bear no figure, and which are usually placed in the centre, are "Expression" and "Grand Jeu." In the ordinary

way, the wind created by the foot pedals enters a reservoir, where it is stored, and the player has no further control over it. All he has to do is to keep the reservoir supplied by means of the foot pedals. The "Expression" stop, when drawn, allows the wind to act directly upon the reeds, without being previously stored in the reservoir. Thus, the player by blowing more or less strongly, can completely control the volume of tone produced. The "Grand Jeu" brings into action all the stops of the instrument.

COUPLERS.

The remaining stops to be noticed are termed "Couplers," and may appear with that name, or the word "Octave" upon them. The Treble Coupler, or Octave, depresses the notes an octave *above* the notes touched, and similarly, the Bass Octave, or Coupler, depresses the notes an octave *below* those touched.

KNEE-SWELLS.

Crescendo, diminuendo, and sforzando, are obtained by means of a "Knee-swell." This is a flap of wood under the keyboard, by the player's right knee. When pressed outwards (by the knee) from the player, a *crescendo* is obtained, and correspondingly, *diminuendo* as it is gradually released. Similarly, a knee-swell will be found by the player's left knee; this, when pressed outwards to the left, will gradually bring on all stops in the instrument until all are speaking; thus enabling the player to add stops while his hands remain on the keys; the reverse effect, of course, being secured as the knee-swell is gradually released. By pressing outwards *both* knee-swells simultaneously, the loudest and fullest tone of which the instrument is capable is produced. Upon release, only the actual stops drawn will speak.

The stops, knee-swells, and foot pedals are the means whereby variety of tone is obtained. For the benefit of pianists, it may be as well to mention that varied degrees of *touch* do not affect the variety of tone in the slightest degree; the only effects which can be secured by the finger are those of *legato* and *staccato*. A clean *release* of the notes is essential in order to avoid "muddy" playing.

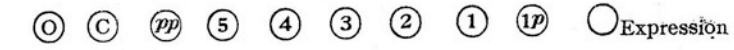
MUSTEL ORGAN.

The Mustel Organ is an improved type of harmonium, invented by Victor Mustel in 1855. The instrument comprises, in addition to the usual Harmonium stops, additional effects such as "Harpe

Eolienne," which comprises a set of two ranks of vibrators, of 2ft. pitch; these being tuned slightly sharp and flat, respectively, to the normal pitch, produce a gently vibrating effect, quite charming when used in the right place. The Mustel Organ, in the matter of novel effects, has been carried to a high state of perfection.

In a typical Mustel Organ of the most modern and improved type the stops will be found as follows:—

From extreme Left to centre:—

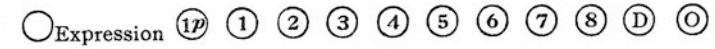


with the names:—

"Forte Expressif" (0); "Contre Basse" 16 (C); "Pianissimo Cor Anglais" (PP); "Harpe Eolienne" (5); "Bassoon" 8 (4); "Clairon" 4 (3); "Bourdon" 16 (2); "Cor Anglais" 8 (1); "Percussion et Cor Anglais" 8 (IP).

The "Contre Basse" (C) provides a heavy 16 ft. tone for the lowest octave; "Pianissimo Cor Anglais" (5) is the same tone as "Cor Anglais" (No. 1), but extremely soft in quality; "Harpe Eolienne" has already been explained. The "Bassoon" (No. 4) is of mellow, "reedy" tone, the "Clairon" (No. 3), being strident and of trumpet quality. "Percussion et Cor Anglais" (No. 1, P) is a novel effect, similar to that produced by a wind instrument player when "tongueing;" as the notes are touched upon the keyboard a distinct effect of percussion is obtained together with the sustained sound.

From centre to extreme Right the stops are:—



with the names:—

"Percussion et Flute" 8 (1 P); "Flute" 8 (1); "Clarinett" 16 (2); Fifre 4 (3); "Hautbois" (4); "Musette" 16 (5); "Voix Celeste" (6); "Baryton" 32 (7); "Harpe Eolienne" (8); "Dolce" (D); "Forte Expressif" (O).

The "Percussion et Flute" (1 P) is similar to the "Percussion" mentioned above, the tone being flute instead of cor anglais as in the former case. "Flute" (No. 1) is, as the name implies, a flute; "Clarinett' (No. 2) is a full-toned reed stop, the notes of which

will sound one octave lower than the note depressed. "Fifre" 4 ft. (No. 3) is a flute of "reedy" tone, sounding one octave higher than the notes depressed; "Hautbois" is an oboe of thin and reedy tone, the "Musette" (No. 5) being the same tone but sounding one octave lower. The "Voix Celeste" (No. 6) consists of two ranks of reeds, one of which is tuned slightly sharper than the other, the effect being "vibrato" of "string" tone. The "Baryton" (No. 7) is of thick reedy tone, and "Dolce" (D) is the normal "diapason" tone.

In addition to these stops, there will be found at the extreme Right of the row, a stop named "Metaphone," which is duplicated (like the "Forte Expressif") at the extreme Left of the row. When drawn, this stop alters the *tone* of any stops drawn, making the tone thinner and more "miniature" in effect, and in the case of some of the reeds the effect is not unlike the muted brass of the orchestra.

One remaining stop will be found, at the Left-hand side of the keyboard, named "Prolongement." When drawn, the effect of this stop is to *hold down* any note touched in the lowest octave of the keyboard, such note remaining down and speaking until another note is touched. By this means, a note may remain sustained after the finger has left it, thus leaving the left-hand free to play any chords or notes above the lowest octave.

The knee swells in the mustel organ act somewhat differently to those in the harmonium or American organ. In the latter instruments the *left* knee-swell brings on all the stops in the instrument; but in the mustel organ *both* knee swells produce the effect of *crescendo*, the right swell acting upon the right half of the keyboard, and the left swell similarly upon the left half. Neither of these knee-swells will add any stops to those already drawn; but *between the foot pedals* will be found a flap of wood which, when pressed by the right heel towards the left, will gradually add stops to those already drawn until the full power of the instrument is reached. When pressed sufficiently far, this flap will automatically lock in position, and is released by pressure of the left heel, thus allowing it to return to its normal position. Immediately in front of the player's knees, and above the foot pedals, are two buttons; when the two knee swells are *shut in*, they automatically press these two buttons, the resulting effect being the same as if both knee swells were remaining pressed

open to Left and Right—an effect of "forte." Further expression is then obtained by drawing the stop "Forte Expressif," when the expression is controlled (as in the case of the "Expression" stop) by the blowing. With the knee swells shut in, no "*piano*" effect is possible. These two buttons can, of course, be pressed by the knees, producing the same effect as the shutting in of the knee swells.

DOUBLE EXPRESSION AND DOUBLE BLOWING.

The chief feature of these organs is the "Double Expression," whereby the player is enabled to increase the volume of sound in either half of the keyboard without any effect on the other half. Thus, the bass may preponderate over the treble, or the treble over the bass at the will of the performer, and according to the way in which he works the foot pedals.

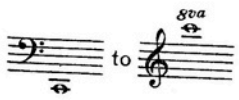
CORRECT BLOWING.

This brings us to the subject of *Blowing*, which is a very important one in the harmonium or American organ, and is *all-important in the mustel organ.* When working the foot-pedals, an even and continuous pressure must be secured; working the pedals from the ankles, and with only the slightest movement of the legs, one foot should always be descending; and, as no air pressure is created while a pedal is *rising*, the pedal should be allowed to rise quickly, ready for the next descent. Steady and even blowing is *essential;* on the harmonium, when the "Expression" stop is drawn, the control of the tone depends largely upon the player's ability to blow steadily. In the mustel organ, the quality of tone production, and its degree, depend *entirely* upon the manner in which the player controls the blowing by the foot pedals. No one can pretend to have mastered the instrument until he has complete control over the wind pressure.

THE ORGAN.

There now remains for consideration the most important of keyed wind-instruments, the "Grand," "Concert," or "Pipe" Organ, universally known in Great Britain as the "*Organ*," and which has been appropriately termed "The King of Instruments." Upon taking his seat at the instrument the player will find himself facing two, three, or

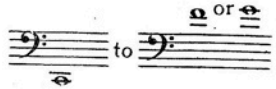
four keyboards—termed "manuals"—with a compass of five octaves:



MANUALS.

If the instrument comprises two manuals, the lower will be termed "Great Organ," "Solo Organ," or "Accompaniment," and the upper manual "Swell Organ," or "Solo Organ." In a three-manual instrument, the lowest manual will be "Orchestral," "Solo," or "Accompaniment;" the middle one "Great," and the top manual "Swell," or "Solo" organ; while in a four-manual instrument, taking the lowest manual first, we will find: I. "Orchestral" Organ, or "Accompaniment"; II. "Great"; III. "Swell," and IV. "Solo" organs. In church organs of more than two manuals, the lowest is invariably termed "Choir" organ, but this term is not found in cinema organs.

PEDALS.

In addition to the manuals, there is a "pedal-board" of 30 notes (or 32) played by the feet; it is a chromatic keyboard, corresponding exactly to a manual keyboard, and the notes upon it cover a range from 

Many modern instruments (notably the Wurlitzer organs) possess the 32-note pedal-board, which I consider a great advantage; the top F sharp and G are often extremely useful.

POSITION.

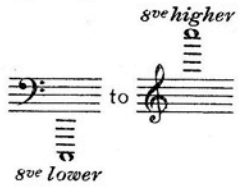
Instead of sitting "opposite middle C," as at the pianoforte, the player will sit practically "opposite middle D," when he will find that the D in the middle of the pedal-board is under middle D of the manuals, and his position can be easily tested by sliding the toe of the right foot between the E flat and F sharp, and the left foot between B flat and C sharp. He will then be in the centre of the pedal board, and will have no more difficulty in reaching the top F with his right foot than the bottom C with his left foot. It will be obvious that the player is not sitting opposite the centre of the *manuals*, but that point will be found immaterial.

ACTION.

The "action" employed in the cinema organ will be either "tubular pneumatic," or "electro-pneumatic." If the former, the stops will be ranged and grouped on each side of the player with, probably, a few also in front of him; if the action is "electro-pneumatic," he will find "stop-keys"—like dominoes—arranged either in a semi-circular form facing him, or in one or two straight rows immediately above the uppermost manual.

STOPS AND STOP-KEYS.

The stops, or stop-keys, are grouped according to each manual, *i.e.* all stops sounded from the "Great" will be found grouped together, and similarly for each manual; and above each group of stops will be a label stating the manual to which they belong. The stops are of four kinds; Flue stops, Reed stops, Couplers, and Effects. *Flue Stops* are those of "fluty," or "string" (more or less) tone; *Reed Stops* may be said to correspond to the wind instruments of the orchestra; *Couplers* join manuals and stops together; and *Effects* comprise any percussion or novel effects apart from the foregoing. Nomenclature of stops varies, hardly any two organs (even by the same builder) will be found to contain the same stops under the same names, which is one of the mysteries of organ-building. But invariably the *pitch* of the stops will be denoted by a figure upon it; thus (as in the American organ) "8ft." denotes normal pitch (the pipe sounding the lowest note C on the keyboard being approximately 8 feet long); "4ft." will sound one octave higher, and "2ft." two octaves higher. Similarly, "16ft." will sound one octave lower, and "32ft." two octaves lower than the note depressed. It will thus be seen that the organ comprises the most extensive range of any musical instrument or combination of instruments, the the notes available comprising a complete chromatic scale from



NAMES OF STOPS.

Though the nomenclature of stops varies considerably, the

following will be most generally found in cinema organs :—

FLUE STOPS.

32 ft. Pitch : Acoustic Bass, or Contra Bass, or Contra Bourdon ; Diaphone.

16 ft. Pitch : Sub Bass, or Contra Bass, or Bourdon, or Contra Flute ; Double Diapason ; Contra Gamba ; Violone ; Contra Viol ; Diaphone ; Tibia Clausa.

8 ft. Pitch : Open Diapason ; Viola Diapason, or Violin Diapason ; Gamba ; Viola ; Viol d'Amour ; Viol d'Orchestre ; Violin ; Viol Celeste, or Vox Celeste ; Dulciana ; Vox Angelica ; Claribel, or Harmonic Claribel, or Claribella ; Cor de Nuit ; Flute, or Orchestral Flute ; Hohl Flute ; Stopped Diapason ; Flauto Amabile ; Flute Major ; Tibia, or Tibia Clausa ; Violoncello ; Flute Bass, or Bass Flute ; Quintadena ; Unda Maris.

4 ft. Pitch : Quintadena ; Gemshorn ; Principal ; Harmonic Flute ; Flute Douce ; Octave Flute.

2 ft. Pitch : Piccolo ; Ottavino ; Fifteenth.

REED STOPS.

16 ft. Pitch : Contra Tromba, or Trombone, or Contra Posaune, or Ophicleide ; Bass Clarinet ; Contra Fagotto.

8 ft. Pitch : Tuba, or Tromba, or Tuba Horn ; Horn, or Orchestral Horn ; Cornopean ; Trumpet ; Oboe ; Orchestral Oboe ; Oboe Horn ; Clarinet ; Corno di Bassetto ; Vox Humana ; Saxophone.

4 ft. Pitch : Clarion ; Octave Tromba.

"BORROWED" STOPS.

Each speaking stop should be of individual and distinct tone quality, and practically every manual speaking stop should be available for solo purposes. In other words, each manual speaking stop should have its own set of pipes, the only exception to this being 16 ft. reed stops, which, to economise space, are frequently "borrowed" : thus, "Trombone 16 ft." will, when drawn, utilise the same set of pipes as "Tromba" or "Trumpet 8 ft.", an extra octave of pipes added to the bass providing the necessary octave of lower sounds, for the note depressed will sound the octave below. In the same way, "Bourdon 16 ft."—a flue stop—may be borrowed from a "Claribella" or "Stopped Diapason," but this is not to be recommended. Each time

a stop is borrowed in this way (and any stop may be so utilised) merely the same *tone* is reproduced in different octaves, and the more this obnoxious practice is employed in an organ, the less variety of tone will be available. But I am entirely in favour of (and strongly advocate) the practice of borrowing manual stops to the pedal department, in addition to the distinctive pedal stops. Thus, a "Clarinet 8 ft." on the manuals, borrowed as a "16 ft. Bass Clarinet" to the pedals is of great utility, providing a soft "reedy" bass of striking effect. The difference in effect between this practice and that of borrowing from manual to manual will be easily understood.

TONE-QUALITIES OF STOPS.

A concise description of the tone-qualities of the various stops which have been enumerated will be helpful :—

FLUE STOPS.

32 ft. Pitch : These should be found only in the pedal department (they are useless elsewhere), providing that wonderful depth in the bass, with dignity and grandeur of effect, which is unobtainable by any other means in music.

16 ft. Pitch : These stops are a distinctive feature of the pedal department, and correspond to the double-basses of the orchestra. Usually a "Bourdon" of soft tone will be found in the Swell organ, and either a Sub-Bass or Double Diapason (possibly both) in the Great organ. On the manuals they are only useful as a "fill-up" in loud music, or to produce such effects as "storm" or "thunder." They add "body" to the harmony, but, when used, usually cause a muddy and indistinct effect.

8 ft. Pitch : The "Diapason" provides the normal "organ" tone—full and with "body" in it. In the cinema organ, this should be more "biting" or "stringy" than in the ordinary or "church" organ. "Gamba" and "Viola" are string-toned—thin and biting in quality—heavier or lighter according to the manual ; a Gamba on the Great organ will be heavier—larger scale—than a similar stop on the Swell. "Viol d'Orchestre," and "Viol d'Amore" are soft string-toned stops, and "Dulciana" and "Quintadena" a *very* soft species of Diapason. "Celestes" comprise a rank of pipes duplicated with the Viol d'Orchestre, but tuned very slightly sharp, thus producing when used with the Viol, a gently waving effect. The "Unda Maris" is a similar effect. "Claribel," "Claribella," "Stopped Diapason," "Hohl Flote," and

"Flute" can all be classed together as flutes of varying tone-quality and power, but distinctly *flute* tone; "Flute Bass" being found in the pedal department only. This stop, so beloved by organ builders, ought not to appear in a cinema organ unless the pedal department contains an 8 ft. string-toned stop such as "Violoncello." The only excuse for its inclusion, otherwise, is the fact that it may be borrowed from the "Bourdon" or some other flute-toned stop, thus effecting an economy in space and expense. "Viol" or "Violoncello" is a heavy-scale stop of strong and "stringy" tone, which is found both on manuals and pedals, the "Violoncello" more frequently on the latter.

4 ft. Pitch: The "Principal" is virtually an "Octave Diapason" of almost (sometimes actually) the same scale and power as the Diapason, "Gemshorn" being a miniature "Principal"—the same type of stop on a small scale. The remainder are all of flute tone.

2 ft. Pitch: "Piccolo or "Ottavino" is soft but piercing in tone, especially in the upper notes; the "Fifteenth" is virtually the same stop on a much louder scale.

REED STOPS.

16 ft. Pitch: These will be found (except in large organs) confined to the pedal department. They may be found on the manuals—where a *soft* 16 ft. reed is very effective—but, generally speaking, are only useful, in such cases, for adding "body" and power when playing loud music.

8 ft. Pitch: The "Tuba" or "Tromba" is usually the noisiest stop in the organ; a trumpet-toned stop of great power on a special wind-pressure. The "Trumpet" is, as its name implies, a loud-toned trumpet, "Cornopean" being a trumpet on a smaller scale. "Horn," and "Orchestral Horn," are also trumpet-toned stops, and bear no resemblance to the orchestral instrument of that name. The ordinary "Oboe" is of soft and mellow tone, totally unlike the orchestral instrument of that name; but the "Orchestral Oboe" bears a strong resemblance to the orchestral instrument, and is thin and "biting" in tone, the "Oboe Horn" being practically a "Cor Anglais." The "Clarinet" and "Corno di Bassetto" are to all intents and purposes identical, and usually bear a strong resemblance to their orchestral prototypes. The "Vox Humana," as the name implies, is intended to imitate the human voice; actually it frequently resembles the bleat of a goat suffering from chronic catarrh, but specimens of this

stop are to be found which are voiced to a very successful imitation of the human voice.

4 ft. Pitch: The "Clarion" or "Octave Tromba" are only useful for adding brilliance when the full power of the organ is used.

The names of many of these stops will be found duplicated upon different manuals, especially in large organs; thus "Diapason," or "Flute" (of various denominations) may be found upon all manuals, but their power ("scale") will vary, and also their tone qualities.

COUPLERS.

Couplers are clearly denoted; thus "Swell to Great," when drawn, will couple the Swell manual to the Great, and all stops drawn on the Swell organ will speak from the Great organ keys in addition to the stops drawn on the Great organ. Similarly "Great to Pedal," for instance, will couple the Great organ to the pedal key-board. "Swell Octave," when drawn, will reproduce any note depressed one octave higher (together with the note depressed); "Sub-Octave" will similarly reproduce any note one octave lower, while "Octaves Alone," or "Unison Off" with an octave coupler drawn, will cause *only* the octave above the depressed note to sound.

EFFECTS, "TREMULANT," ETC.

Effects and Accessories. The first of these to be noticed is the "Tremulant," a much-abused and overworked stop. When drawn, this sets into action a mechanism which, by interrupting the flow of wind, creates a vibrato, or tremulous effect. Its effect is in inverse ratio to the frequency of its use, and, like any special effect, loses all its charm when overdone. Unfortunately, this stop has a fatal fascination for many players, who draw it before they begin to play, and forget to put it in until after they have finished. The effect of an overdose of tremulant is nauseating and intolerable. Judiciously used, it can be of great effect; injudiciously used, it is an abomination. Some organs possess a "Tremulant" to each manual, and also (in the Wurlitzer organs) a "Tremulant" to each of certain stops. Needless to say, the use of this stop with a loudly-voiced reed such as the Tromba will create an appalling effect, though the writer has heard such an enormity committed. It should be used in conjuction with the lighter reed or flue stops.

Other effects found in cinema organs will be "Pizzicato Strings"; "Chimes," "Carillon," or "Cathedral Chimes," 8 ft. pitch, usually

2 octaves of a chromatic scale from "fiddle G"; "Glockenspiel," "Fairy Bells," or "Fairy Chimes," 4 ft. pitch, 2½ octaves from "fiddle G"; "Celesta," or "Chrysoglott," the same pitch and range as Glockenspiel, but much softer; "Harp"; "Gongs," also of the same range; "Sleigh Bells," which will be either 2½ octaves of notes, or merely a jingle of little bells set into motion by pressing a piston or drawing a stop; "Zylophone," 2½ octaves of wooden notes struck by hammers; and "Piano," which is virtually a pianoforte action. All of these are played by the fingers from one or other of the manuals.

The following effects will usually be played either from the keys, or by touching a thumb-piston, or pedal-piston: "Tympani-Roll"; "Bass Drum"; "Cymbal"; "Crash Cymbal"; "Side Drum"; "Snare Drum"; "Triangle"; "Tom-Tom"; "Castanets"; "Tambourine"; "Chinese Block."

The following "stage effects" are also included in cinema organs of American manufacture: "Auto Horn"; "Fire Gong"; "Steamboat Whistle"; "Wind" and "Sea" effects; "Horse Hoofs," and "Bird Effects."

COMBINATION PISTONS.

Immediately below each manual will be seen a row of "buttons" or "pistons," termed "Combination pistons." By touching these with the thumb while playing, various stops are added to (or taken from) those already in use. These are usually arranged "Crescendo to the Right," *i.e.*, each piston, proceeding from Left to Right, will add to the combination of stops being used, until the full complement of stops is drawn on that manual. Similarly, above the pedals will be found a set of "Pedal Pistons" (large buttons) each of which, when pressed by the foot, will produce one of the effects enumerated, or, in some cases, draw certain stops.

SWELL AND SFORZANDO PEDALS.

One other feature remains to be noticed, the "Swell Pedal," or more correctly termed "Crescendo Pedal." Usually placed in the centre of the face-board above the pedals, will be found one or more balanced pedals, similar to those used to blow a harmonium; these (apart from the addition of stops) are the only means of obtaining *crescendo* or *diminuendo* in the organ. The whole of the foot should rest on the pedal when using it, and by pressing the pedal down with the toe a *crescendo* is obtained; by pressing with the heel (thus bringing the pedal back) *diminuendo* will result. In many organs all the pipes of *one* manual will be enclosed in a huge box, one side of which is closed by a set of shutters which are opened or closed by the movement of the pedal, the result being an increase or decrease in the volume of sound. There will be found one for each set of stops thus enclosed; thus, if the "Swell" and "Solo" are enclosed, the pipes will be enclosed in two boxes, and two pedals will be found. For cinema purposes, the *whole* of the organ should be so enclosed, thus making every stop expressive; in such case, a "Crescendo Pedal" will be found for each manual.

There will also be found, as a rule, an extra pedal placed either by the crescendo pedals, or, as a lever, at the end of the right-hand side of the pedal board, often termed "Crescendo Pedal" but, more correctly "Sforzando Pedal." By pressing this pedal, or lever, with the foot, all stops in the organ are gradually brought into use, being added by degrees until, when the pedal is fully depressed, the full power of the organ is heard. By a *sudden* pressure of the foot, a greater or lesser degree of *sforzando* is secured as required, and it is more for that purpose that this pedal will be found useful to the player.

WURLITZER ORGAN.

These organs represent the most advanced form of orchestral organ. The main differences (to the player) between these organs and the British type of instrument are:—

1. All stops are interchangeable. The whole of the organ is enclosed in chambers (or huge boxes), on one side of these being the shutters controlled by the swell pedals. Briefly stated, any set of pipes can be played from any manual at any pitch; and though each manual has its own set of stop-keys, the player must bear in mind which of the chambers contains the pipes of the stop which he is using. In the usual type of British organ each swell pedal acts only upon all stops of one manual; in the Wurlitzer organ, the swell pedals are not attached to any particular manual. The pipes in any of the chambers being playable from any of the manuals, the player must, in the use of the swell pedals, think of the chamber containing the pipes, irrespective of the manuals, and bear in mind which chamber is being used. This is, at first, confusing to a player who is unaccustomed to the "Unit" organ.

2. There are no "couplers." The pedal department will contain

an adequate number of stops, suitable in tone and power, for all combinations of manual stops from "*pp*" to "*ff*"; and practically all speaking stops will appear at 16 ft., 4 ft., and 2 ft. pitch, in addition to 8 ft. pitch; thus dispensing with "octave" and similar couplers, and extending considerably the possible varieties of tonal effects and combinations. The action is electric. These organs are standardised, and a player once having acquired complete control will find no difference in any of the organs, excepting as to size and number of stop-keys. To completely master and control these instruments requires considerable skill, but when mastered, they are simplicity itself to the player.

DOUBLE-TOUCH.

Finally, to this catalogue, must be added the "Double Touch," or "Second Touch," a most useful device usually found only in organs of electro-pneumatic action, though it can be obtained by tubular pneumatic. If the organ possesses "Second Touch," the player by pressing a key down *beyond its usual fall*, can add variety of tone. For this purpose, the pipes of certain selected stops are reserved, and such stops will be labelled accordingly. Thus, for instance, we may find on the Solo organ, "Clarinet, Second Touch," which will signify that if the player is using a string-toned stop, such as a "Gamba," by pressing a key down beyond its usual fall, each note so pressed will sound a clarinet tone in addition to the tone already employed. This additional tone may be derived from any of the other manuals, and not necessarily from another stop on the *same* manual. It will be seen that, with second touch, it is possible to play a solo and accompaniment upon the same manual.

Similarly, on the Pedals for instance, by "Side Drum, second touch," each pedal note given an extra pressure with the foot will sound a side-drum tap, or, if held down, a roll.

Although this description of the organ may seem extensive, it is by no means exhaustive; it is, however, necessary to mention these several points as organs vary considerably, and many of the effects and accessories enumerated will be found in comparatively small organs of two manuals. I have played upon a small two-manual instrument which contained no fewer than *twelve* special effects in addition to the usual stops.

The various stops and effects enumerated will be found to comprise practically all that the player is likely to find himself

confronted with in any organ of from two to four manuals. The various tone-colours provided by the stops, and the possible methods of combining those stops to produce varied effects and tone-colouring, offer a scope to the player which is practically without limit. The subject of stop combinations will be further dealt with in the next chapter.