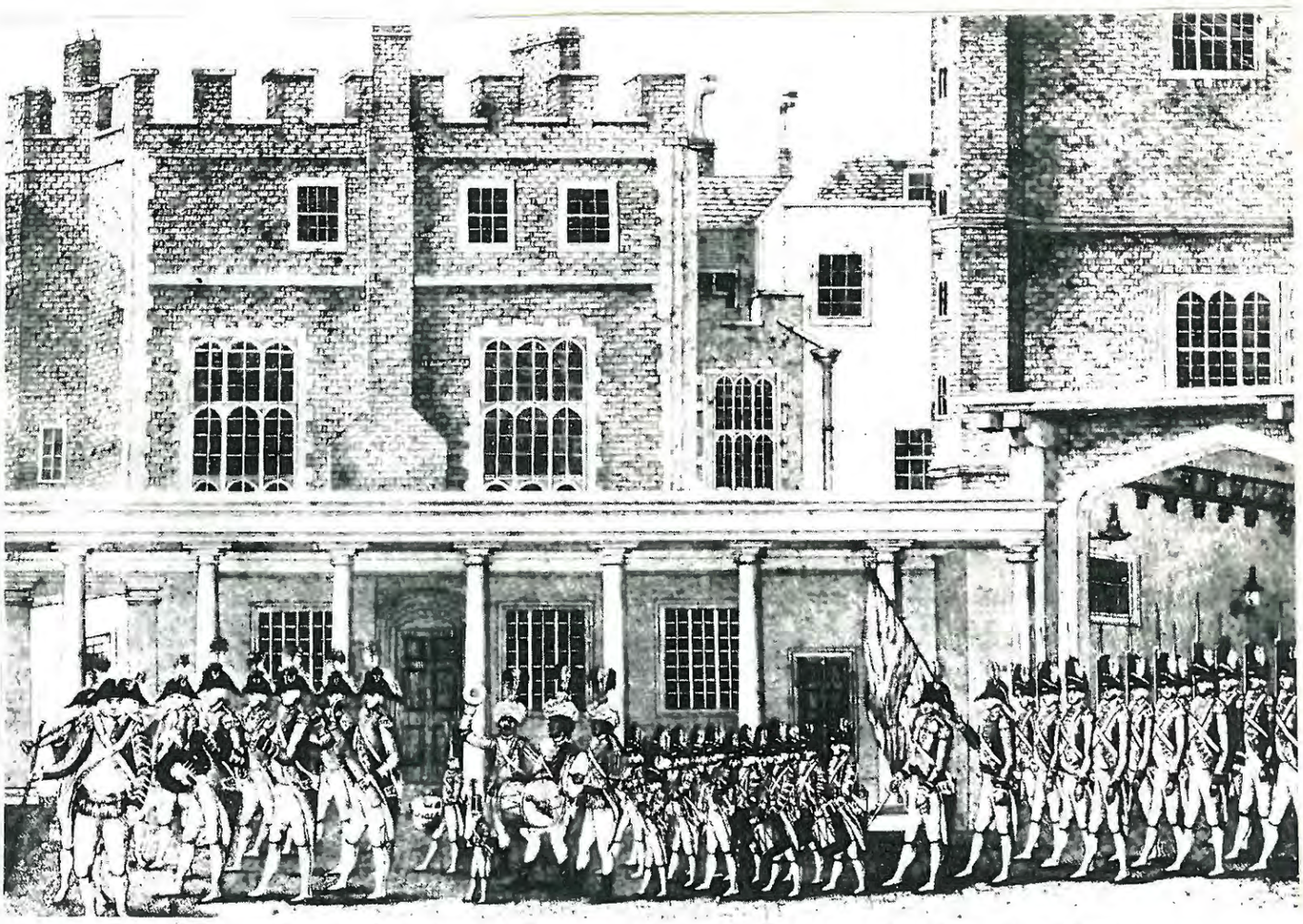

THE COLDSTREAM GUARDS AT ST JAMES' PALACE (c. 1790)

Showing eight musicians with Drum Major, "Turkish" percussion and Drum and fife Band. (From an early print)

THE HISTORY, ORGANIZATION AND TRAINING

OF

WIND BANDS

A dissertation in partial fulfilment of the requirements for the degree of Ph.D. in Music at Rhodes University.

by

ALBERT EDWARD HONEY

1972

VOLUME III

The Training of Wind Bands

Chapters XII to XVIII

and conclusion

PART 111

C H A P T E R XII

THE TRAINING OF WIND BANDS

THE DIRECTOR

The Director of any musical combination should himself be a competent performer on at least one instrument other than Pianoforte or Organ. In the case of Wind Bands the Director should be sufficiently competent to play a few notes of either the basic scale or the harmonic series of every one of the instruments on which he proposes to instruct other players.

This is unfortunately not always the case and such a Director cannot be in touch with the intimate technical problems of the various instrumentalists of his ensemble.

The most successful Conductor is one who has served his time in the body of the Orchestra or Band, in even the humblest capacity, for at the very least he has experienced the Direction from the actual receiving-end of the Baton and is bound to regard his players with more sympathy and understanding than the Pianist or Academician with little or no idea of the capricious behaviour of reeds and tubes under certain circumstances.

Personality of course plays a major part. Most conductors are by very virtue of their chosen role, dynamic egotists, and as such they stand or fall in the opinions of their subordinates and listeners. "The Stick is always in the Key of C!" - to quote a distinguished colleague.

The late Professor Percival R. Kirby once remarked that "the only difficult aspect of conducting is getting people to let you do it!" and this of course is sadly true. Like all leaders and governments, "the man on the box" is extremely vulnerable, and ever open to often unjust criticism and while the successful performance of Music demands sensitivity from every member of any ensemble, - the Rostrum is no place for the shy or thin-skinned individual.

The Director or Conductor of a Wind Band may be in the fortunate position of finding his players already competent and perhaps well-trained by a former authority, or more likely, he may be obliged to build up the Ensemble almost player by player, patiently teaching the technique to each individual until

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at length comes the time when "The Band" play their first simple pieces, and those rewarding feelings of satisfaction and promise must truly be experienced in order to be believed.

The Director should be thoroughly competent in Musical Theory, including Advanced Harmony and Counterpoint. If he is interested and conversant with the biographies of most of the Great Musicians, and knows even a few of the many absorbing or amusing anecdotes connected with Music, then the players will be kept happy and interested during those necessary pauses for rest and breath between numbers at Rehearsal. A sense of humour is a necessary part of any conductor's make-up, and I would even say that I have never met one really great orchestral conductor who lacked just that spark of wit and fun yet without once losing his authority or the absolute respect of his players.

It is of great advantage to any Director to be capable of arranging or even composing music for the band to play. This is not absolutely essential, since there is a wealth of printed music for all types of Band, but speaking for myself, there is no greater satisfaction in our Art of Music than that of hearing one's own written notes sounding out from the instruments of those pupils whom one has taught from the very start of their careers. But this is a purely personal observation.

The Director, then owes it to himself and to others to be as musically well-educated in every possible aspect which concerns his task of building, training and maintaining a group of instrumentalist to their maximum efficiency.

It is said that "conductors are born and not made." This statement may be quite true - especially with regard to the great Arturo Toscanini, Sir Thomas Beecham, Sir John Barbirolli or Sir Malcolm Sargent (under all of whom I have had the privelege of playing in the past) - and yet even the most modest of conductors should be capable of giving:

(1) a clear indication of the required tempo and
(2) a recognizable gradation of nuance or light and shade.

3

There have been many treatises, handbooks and other works upon the technique of conducting and without demonstrating any prejudice or preference for any one of the many styles and differing techniques available nor, on the other hand, venturing to instruct those who may be better informed or more talented than the writer, it is felt that some brief guidance should be offered for those who might be unfamiliar with "stick technique." A few of the simpler beats are therefore given here, which may be of help to the Beginner, but must not be regarded as by any means the best or final word in the matter. These are the beats and gestures which have served me, personally, over several years without too much confusion or mishap amongst my players during performance.

The length, weight or shape of the baton is a purely personal matter although I personally prefer one fairly long (approx. 19 ins.) and not too heavy. A cork handle if not too wide helps to prevent slipping and gives a useful friction against the underside of the middle finger of the right hand (assuming that the conductor is right-handed). Held lightly between forefinger and thumb, the baton now functions as an extension of the thumb, swinging either as a lever with its fulcrum at the point of contact under the middle finger (in the case of very small beats given by the fingers alone) or holding the entire baton steady yet flexible in the same grip while the entire wrist relaxes on the entire beat given with either the forearm from the elbow or the entire arm from the shoulder. Any beat given now by either forearm or from the shoulder will naturally sub-divide from the wrist.

If the right wrist is held so that back of the hand is always uppermost then the utmost clarity will result whatever the tempo required.

The action of the left arm to supplement the right arm in giving the beat has been condemned for many years at the Royal Military School of Music at Kneller Hall, but is sometimes necessary when many players are situated at either side of the Conductor and especially in Tutti passages. Far from keeping still the left hand should be constantly employed to show the required dynamics or to shape phrases. Quite simply - a crescento may be indicated by raising the left hand palm uppermost while a diminuendo is shown by bringing the palm downwards towards the players.

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Entries for individual instruments may be given by either hand and most important are the eyes of the Conductor, in giving a lead or tacit instruction to a soloist or particular section. Violent body movement should be avoided. A downward movement of the head accompanied by a shortening of the swing (either from shoulder to forearm or from elbow to wrist) will ensure less weight of tone, while the lifting of the head together with a wider swing, especially with the left hand held well out and palm uppermost, will allow the players to swell to a desired crescendo. To indicate the approaching finish to a piece or to prepare in advance for a pause or fermata I usually hold the left arm straight up with the forefinger extended, glancing around at the players ensures that each one has seen and noted the approaching change in the progress of the music.

"Stick-technique" is all really a matter of sufficient practice, and like all musical subjects, the more one conducts the easier and more flexible and fluent one becomes. Once the initial stiffness and self-consciousness have been overcome, the Art of Conducting seems to come naturally to the conductor who genuinely feels his music so powerfully that he transmits his intentions to his players. This, I am convinced was the secret of Sir Thomas Beecham's magnificent results with his players when the sheer weight of his personality rose above mere "stick-technique" to such an extent that those musicians who played for him have described their experiences as being similar to playing under Hypnosis. Most truly great conductors of the World have a similar effect upon their orchestras.

Above all, the main duty of a Wind-band Director lies in training his players (either individually or in sections) and maintaning the entire ensemble in the highest possible standards of efficiency in order that it will become, potentially, a competent and sensitive body of players able to give of their best no matter who may be attempting to direct them.

Perhaps the greatest hazard which faces the Directors of Amateur groups is that of convincing the players of the necessity for private individual practice upon their instruments. Professional instrumentalists are well aware of the importance of keeping "in trim" but amongst amateurs who regard their music as a hobby or pastime, many players neglect to touch their instruments from one band practice to the next.

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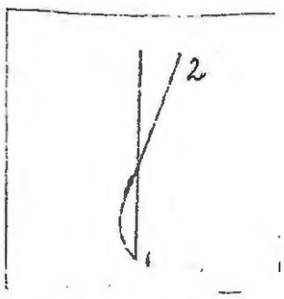
If an amateur band is to succeed then each one of its members should be made fully aware of these facts and the responsibility for initiating and keeping alive the keenness of each instrumentalist for his particular task must rest squarely on the shoulders of the Director.

DIAGRAM OF CONDUCTING-BEATS

One in a Bar

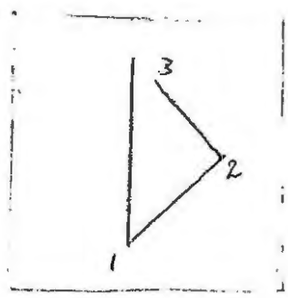
The baton point should arrive at the same level on each Down-beat recovering as rapidly as possible in the upward direction.

Two in a Bar



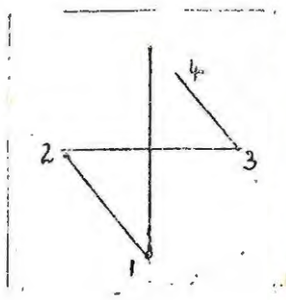
The movement should proceed in slight graceful curves.

Three in a Bar



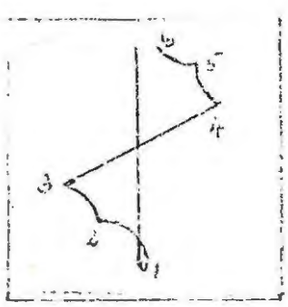
The second beat must be taken to the right and not the left.

Four in a Bar



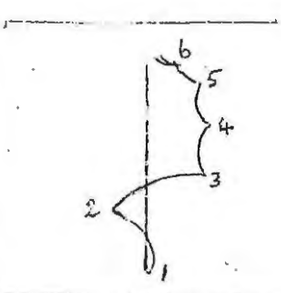
The third beat should be very deliberate since it is the next strongest after the first beat.

Six beats (compound)



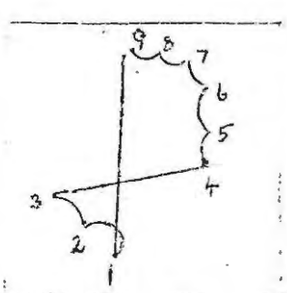
The fourth beat should be very deliberate.

Six beats (subdived three)



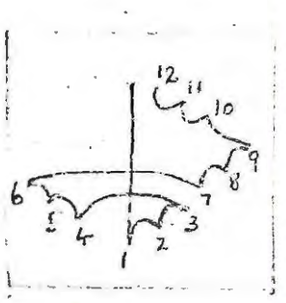
First, third and fifth beats are strongly accented.

Nine beats



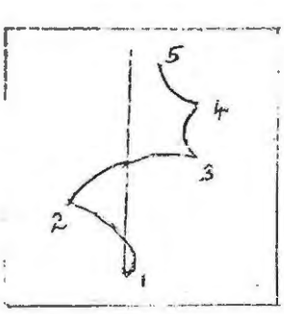
First, fourth and seventh beats are strongly accented.

Twelve beats



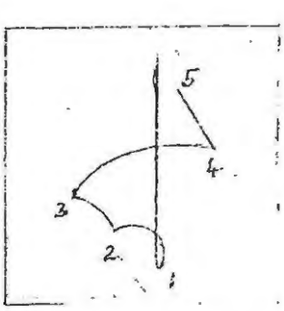
The Quadruple rhythm must be clearly accented on first, fourth, seventh and tenth beats.

Five beats (2 + 3)



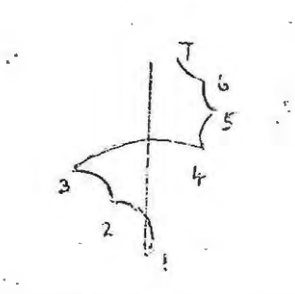
Without a definite marking of the third beat.

Five beats (3 + 2)



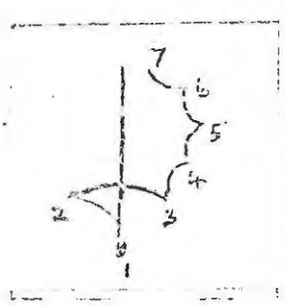
Sometimes indicated in this different order.

Seven beats (3 + 4)



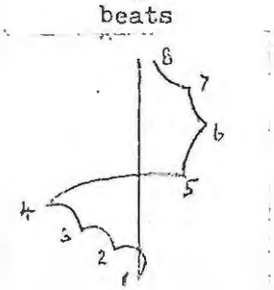
Accenting the fourth beat.

Seven beats (2 + 5)



Accenting the third and fifth beats.

Eight beats



Formata and Cut-off.

Baton moving slowly.

A.E.H.

C H A P T E R XIII

ACOUSTICS OF WIND INSTRUMENTS

Every wind instrument used in bands and orchestras consists primarily of a tube of sufficient strength and rigidity constructed in order to maintain its dimensions and shape (whether cylindrical or conical) during the process of playing.

The sound in wind instruments arises from the vibration of air inside the tube or Resonator which must be open at some point (usually at one end) in order that the vibrations are in touch with the surrounding air. In addition to the tube or Resonator all wind instruments are provided with some means of causing the column of air to vibrate and this portion of the wind instrument is known as the Generator. The air-stream of wind from the player's mouth is compressed or intensified as it is injected into the instrument in order to set up the vibrations which are communicated to the column of air in the Resonator and which create the musical sound.[1]

The quality of sound in a wind instrument is mainly governed by the manner in which the vibrations are generated and also by the proportions of the tube or Resonator (whether wide or narrow according to its length and whether expanding in Conical shape or of equal diameter or Cylindrical Shape). In addition, on all but the simplest form of wind instrument, there must be some means of decreasing or increasing the sounding-length of the resonator instantaneously which may conveniently be termed the Mechanism.[2]

The two types of mechanism in wind instruments are:

1. The "Shortening-Hole" mechanism (finger holes or keys) applied to Woodwind instruments
2. The "Lengthening-Tube" mechanism (valves or slides) applied to Brass instruments

In all brass instruments the vibrations are generated by means of a cup-shaped mouthpiece, the wide end of which is placed against the almost closed lips of the player who forces a stream of air between the lips causing them to vibrate as reeds. These vibrations reach the air-column in the main tube (Resonator) through the narrow end of the mouthpiece.

The shape of the hollow of the cup of a mouthpiece can vary between a true hemispherical cup as in the Old Trumpet and a gently contracting funnel shape which is peculiar to the French Horn; the shallower cup giving a bright assertive tone and the deeper cone shape giving a more mellow and veiled quality (figure 78)[3]

It should be explained that the term "Brass" is generally accepted as a technical description of all metal instruments played by means of cup-shaped mouthpieces and while brass is mostly used as the material for their manufacture, this and other metals have been used to construct Reed instruments which in most cases are made of wood or plastic.

Woodwind instruments are so called because wood is the most usual material from which they are made but while in every case Flutes, Oboes, Clarinets, and Bassoons have all been made in metal, this has never been popularly accepted by players, except for the Flute which at the present time is constructed more often in silver, gold, brass or alloy more frequently than in wood,which was the case some thirty years ago.

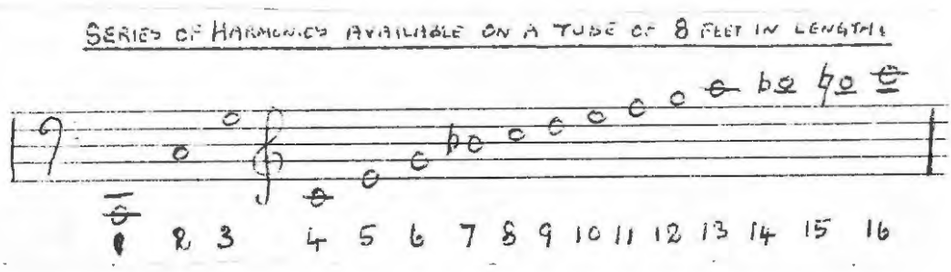
Saxophones which are invariably constructed of metal (usually brass) fall well within the designation "woodwind."

While no modern woodwinds use lip-reed mouthpieces,their generators vary in type between every one of the different woodwind families and the chief difference between Brass and Woodwind lies mainly in the type of Mechanism used to increase or decrease the sounding-length of the Resonator in a particular instrument.

Brass instruments, being narrower in bore proportionately to their length employ the "Lengthening-Tube" mechanism which lengthens or shortens the Resonator, at the player's will, by means of slides or valves to control various lengths of tube.

Woodwind instruments being proportionately wider in bore to their length employ the "Shortening-Hole" mechanism by which the sounding-length of the Resonator is controlled by the Player's fingers, either stopping holes in the tube or working keys for the same purpose which will lengthen or shorten the air-column as desired.

The main reason for this distinguishing feature between Brass and Woodwind resonators may be explained as follows:



from
(Adam Carse)

The column of air in a tube may be made to vibrate at certain rates and according to Natural laws, a tube of given length can be made to produce only certain sounds and no others provided the length of the tube remains unaltered.[5]

A wind-instrumentalist may produce all or some of the sounds at will by varying the intensity of the air-stream, and by compressing the air-streem with the lips the rate of vibration is increased to produce the higher sounds while de-compressing or slackening the intensity of the air-stream lowers the vibrations to produce lower-pitched sounds.

The Fundamental or lowest note which the tube is capable of sounding may be raised an octave, a twelfth, a double-octave and beyond, the sounds becoming higher and closer by intervals as they ascend.

These higher sounds are known as Harmonics or Upper Partials and are conveniently labelled by number upwards from the Fundamental or lowest note which counts as No. 1.

The diagram shows the series of harmonics available on a tube of approximately 8 feet in length. A longer tube would produce a corresponding series of sounds proportionately lower in pitch according to its length, while a shorter tube would give the same series proportionately higher.[6]

Theoretically this harmonic series is present in any tube but in actual practice the human lip is hardly able to vary the pressure to such an extent that all of them may be sounded on the same tube with the same mouthpiece. Again, the tube may be too narrow or too wide that no musical sound could be

produced from it. A Wide-bored tube would yield its fundamental more easily than a narrow one, while a narrow tube could be made to sound up to the 16th note of the series but may fail to sound the two lowest notes. A primitive instrument such as that made from an ox-horn or elephant's tusk may be so wide and so short in proportion as to give only one note (the Fundamental) and yet an orchestral Horn, which is long and proportionately narrow, is able to sound from the 2nd note of the series up to the 16th note.[8]

The essential difference then, between Woodwind and Brass instruments is that the Woodwind with the comparatively wide bore for their length play freely at the lower end of the harmonic series, while the Brass Instruments, being narrow for their length play freely in the middle or upper part of the harmonic series.[9]

Since the woodwind instruments are able to sound only the fundamental and a few harmonics on one tube length,the tube is pierced with holes controlled by fingers or keys to give the fundamental note on each degree of the scale overblowing the octave-harmonics of these same notes to give the next register and extending the scale still further into the third octave by greater compression of the air-stream.

All wind instruments with a conical or partially conical bore can sound the Harmonic Series shown in the diagram and the actual pitch will vary according to the length of the tube. Cylindrical instruments with an opening at both ends (e.g. a Boehm Flute or Fife) obey the same laws unless one end of the cylindrical tube is closed. The relations between length of tube, pitch and sequence of available harmonics are now modified since the tube now behaves as a Stopped Pipe (the fundamental sounding one octave lower - a feature employed by organ builders in the Stopped Diapason pipes which allow enable short pipe stopped at one end to give a note one octave lower than an open pipe of the same length).

The Clarinet acting as a cylindrical stopped pipe in its fundamental register sounds very much lower than an open tube such as a flute and this may be observed in the case of a Clarinet in C which is shorter than a Concert Flute, yet is able to sound its lowest fundamental (e) at a minor sixth lower than that of the Flute (C^1).

Another peculiar property of stopped cylindrical pipes is the absence of the alternate harmonics (nos. 2,4 etc) and when a Fundamental is overblown the twelfth will sound in place of the octave.[10]

Thus the Clarinet Family of all the woodwinds are the only instruments which sound alternate harmonics while among the Brass or Lip-reed instruments every one is able to sound all the harmonics in the Series.

A Bugle which consists of 4½ feet of conical tubing with a bore rather wide for its length is limited from its Fundamental at B flat up to No. 6 of the Series and this is why Bugle-calls consist only of various arrangements of the notes b flat, f^{1}, b^{1} flat, d^{11} and f^{11} (while extra pressure can produce two more harmonics: a^{11} flat and b^{11} flat, and the "Pedal" or Fundamental B flat may be sounded with very loose lips these notes are uncertain and inferior and are not very effective)[11] if the length of the bugle tube could be changed at will by the player then a further set of harmonics would be available.

The application of keys or clappers to the bugle in 1810 is an interesting example of the shortening-hole system applied to a brass instrument which remained effective for about fifty years until it was displaced by the valved Cornet. The Serpent, Ophicleide and Bass-Horn or Russian-Bassoon have likewise departed from the Musical Scene and no existing example of lip-reed instruments using shortening-holes or keys is to be found in modern orchestras or bands.

NOTES CHAPTER XIII

1. Adam Carse "Musical Wind Instruments"
   Da Capo Press. N.Y. 1967 pp 9, 10.
2. ibid p 10.
3. ibid pp 12, 13.
4. ibid p 16.
5. ibid p 16.
6. ibid pp 16, 17.
7. ibid p 18.
8. ibid p 18.
9. ibid p 19.
10. ibid p 19.
11. ibid p 20.

C H A P T E R XIV

WOODWIND AND BRASS INSTRUMENTS

Obviously it would not be possible here to present all the many fingering-charts for the various key or valve-systems pertaining to those wind instruments to be found in wind-bands, and it would be superflous to quote in detail from the many tutors and instruction books which are easily available to Directors and Teachers everywhere in the Civilized World.

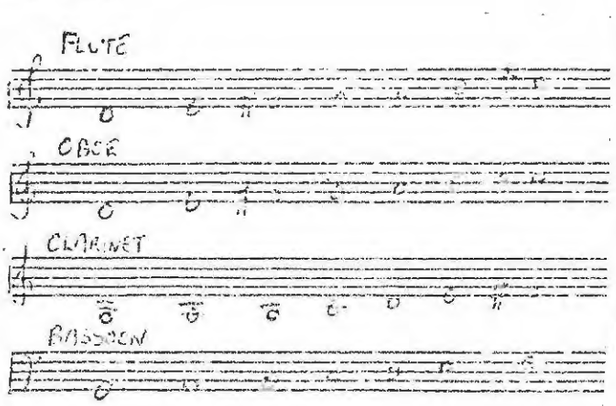
A brief account is therefore presented which will explain the basic system concerning each group of instruments together with a short description including compass, capabilities and history of each one to be found in the modern Wind Band.

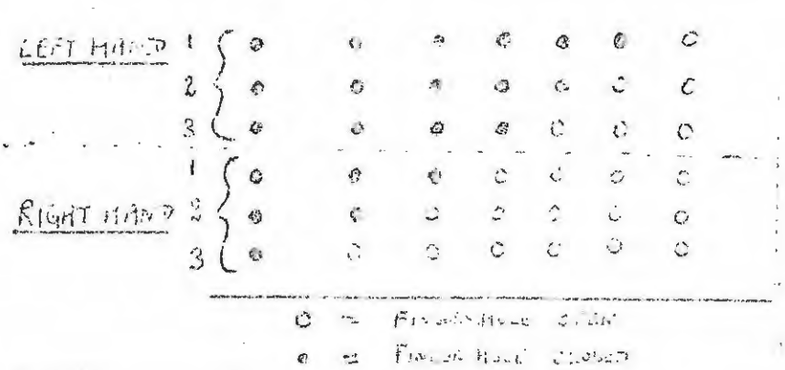
The Shortening-Hole System, which includes every one of the modern wood-wind instruments, consists basically of six finger-holes bored in line along one side of the body-tube. Whatever type of Generator may be in use upon a particular woodwind, the following rules are applicable to every one in its simplest form for the Fundamental register.

LEFT HAND 1st finger on top hole, 2nd finger on 2nd hole, 3rd finger on 3rd hole

RIGHT HAND 1st finger on 4th hole, 2nd finger on 5th hole, 3rd finger on 6th hole.

FUNDAMENTAL OR "1ST OCTAVE" SCALE FOR WOODWIND INSTRUMENTS

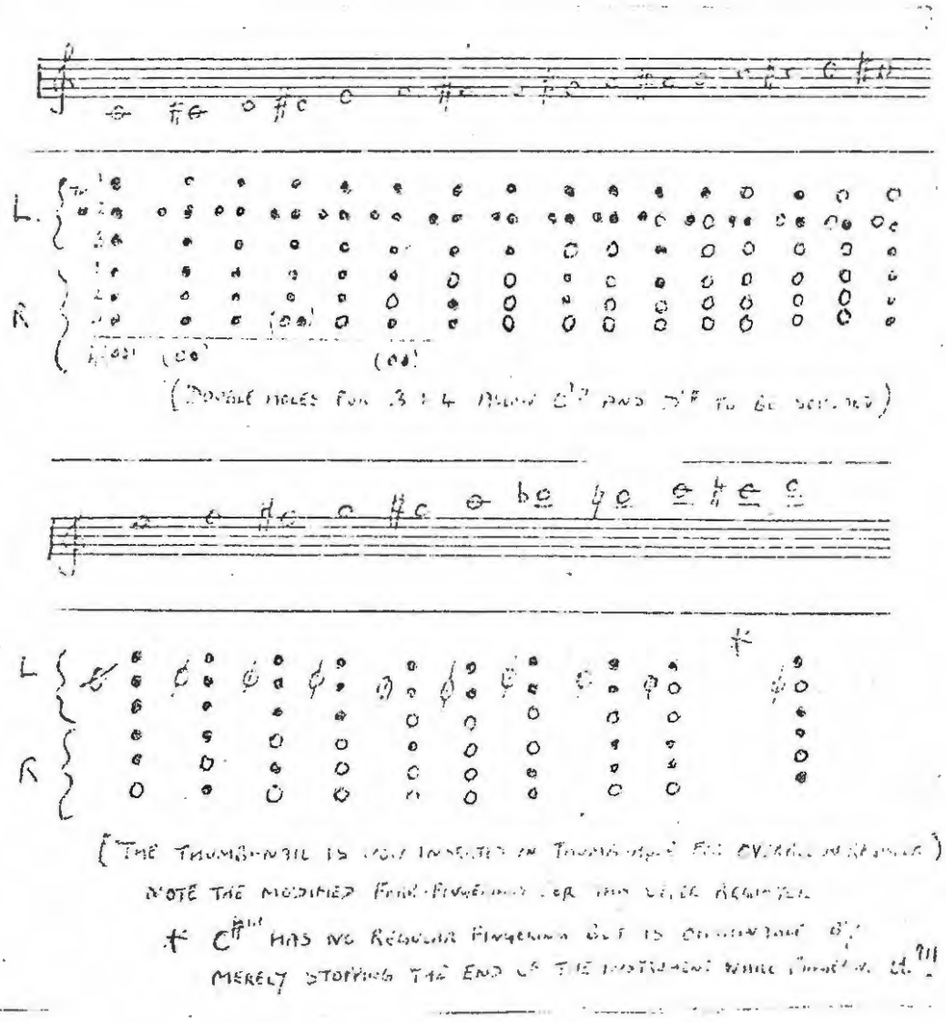




On primitive wood wind instruments without keys the chromatic notes could be obtained by "forked" or cross-fingerings and while many of these were unsatisfactory in intonation or unequal in tone-quality (leading ultimately to the development of keys to replace or improve these notes) "forked" fingerings are still used on some modern key-systems such as the Oboe and the third register of the Flute, and are so satisfactory when applied to the Recorder that it is worth reproducing the complete scale of that popular if simple instrument which has changed very little since its reconstruction under Hotteterre in the late seventeenth century (see chapter IV).

CHROMATIC FINGERING-CHART FOR THE RECORDER IN C

(Other Recorders pitched in F use identical fingering but the lowest sounding note is F^1 and the player modifies the transposition by fingering the written notes accordingly).

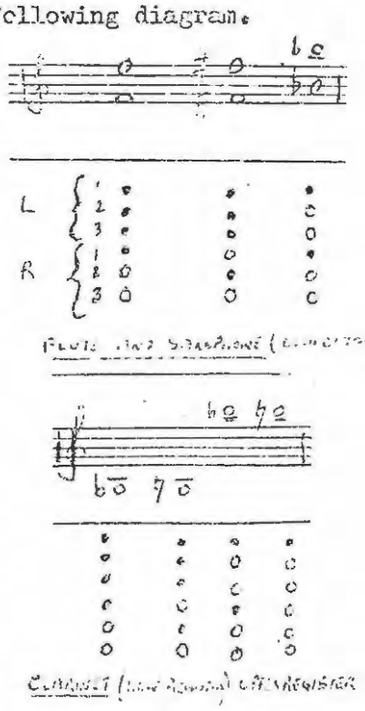


These basic scales of the Fundamental register of all woodwind instruments have changed very little over the past three centuries but there have been many improvements including the addition of extra keys or levers, some controlled by only one finger during playing, more scientific designs and modifications to mouthpieces and dimensions of bore with better and more durable materials used in construction, still in process at the present time.

The most important improvements to woodwind instruments followed the work of Theobald Boehm (1793-1881)[1] whose efforts in 1832 to design a key-system for the Flute which would allow widely separated tone-holes to be easily controlled by means of rings adjacent to the player's fingers, resulted in the Rod-Key Mechanism in which keys were now mounted horizontally down the body-tube of the instrument instead of vertically or cross-wise. This method of mounting keys was immediately adopted on all the other woodwinds although Boehm's actual improvements to the flute suffered much opposition and controversy for many years following their invention.

The basis of Boehm's Flute-System has been successfully applied to the Clarinet by Hyacinthe Klosé (1808-1880)[2] in conjunction with Auguste Buffet in 1843, and to the Saxophone by Antoine-Joseph Sax (1814-1894) in 1845. Unfortunately, it has never been successfully applied to the Oboe or Bassoon for it would undoubtedly have simplified many difficult musical passages for these instruments.

The main difference between the Boehm and so-called "simple system" is in the fingerings of f and f sharp, and the extra fingering available for b flat or A sharp shown in the following diagram.

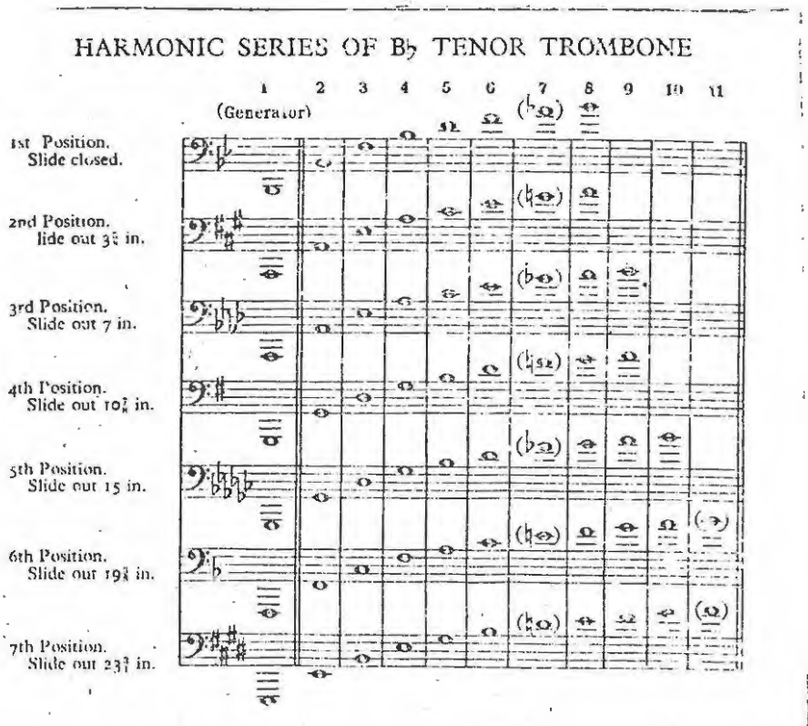


Any Brass instrument may be lengthened by inserting a piece of detachable tubing at some convenient point, and for over three centuries it was the practice to use such pieces known as crooks or shanks for the purpose of altering the pitch of Brass instruments. This method of lengthening necessarily interrupts the playing and until the valve was invented, or unless a slide was employed, it did not serve as a means of supplying the adjacent sounds which are missing in all but the highest part of the harmonic series.

The slide system, which is used in Trombones requires that the cylindrical portion of the tube be cut in two and the pieces placed parallel to one another and held by a stay or cross-piece which is not part of the sounding-tube. The actual slide is another tube of slightly wider bore bent U-shaped with long parallel arms which are also steadied by a stay.

This slide now fits over the two ends of the other tube so as to slide freely to and fro, so that when the slide is pushed outwards the whole tube is lengthened and the entire harmonic series is lowered in pitch. [4]

There are seven positions of the slide on the trombone.



From H.E. Adkins "Treatise on the Military Band"

Boosey & Co. U.S.A. 1945.

5

The valve-system also provides the six additional harmonic series but automatically adds tubes of fixed lengths when the valves are operated by the player. A mechanical tap is connected with a loop of tubing (called the valve-tube) which diverts the air-passage through the instrument to increase its sounding-length. Three such valves are provided with separate valve tubes and, when opened, increase the sounding-length of the instrument by, respectively, a tone, a semi tone and a tone and a half. These valves are so placed that the first valve, nearest the player, is operated by the first finger, the second by the second finger and the third operated by the third finger.

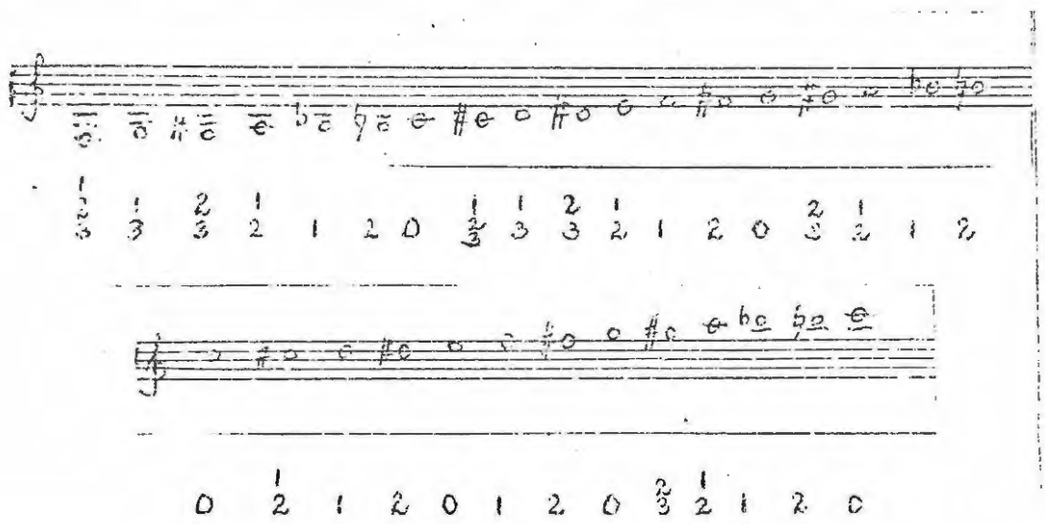
Used in combination the three valves provide a complete chromatic scale from a diminished fifth below the octave harmonic (or second open note) and upwards as far as it is possible to play).[5]

One defect in the valve-system which was very pronounced in earlier types has, to some extent, been mitigated by means of compensating devices. If a valve-tube is of exact length to lower the pitch of the open note by the required amount it cannot at the same time be of sufficient length to lower the pitch by the right amount if the original tube is already lengthened by one of the other valves. The discrepancy is very slight in the case of the first and second valves but is more pronounced when the third valve is used in combination with the others and on the shorter instruments such as trumpets or cornets the third valve-tube is made rather longer than necessary for a minor third so that the extra tube-length more or less compensated for the shortage when the valves are used together and players generally use the first and second valves combined instead of the third valve alone for sounds that are a minor third below the open note.[6]

Faulty intonation through insufficient tube-length is more pronounced on the larger Brass instruments when the valves are used together and there are various compensating systems which automatically add extra tube-lengths when the valves are combined or the instrument may have a fourth, fifth or even sixth valve which serves to compensate for lack of tube-length and also to carry the chromatic compass right down to the Fundamental.

The smaller Brass instruments and horns are usually provided with three valves but the wider-bored instruments which make use of the Fundamental (the Euphonium and Tubas or Bombardons) are usually provided with a fourth valve equivalent to a perfect fourth lower in compass.[7]

CHROMATIC SCALE (WRITTEN NOTES) FOR A 3-VALVED BRASS INSTRUMENT

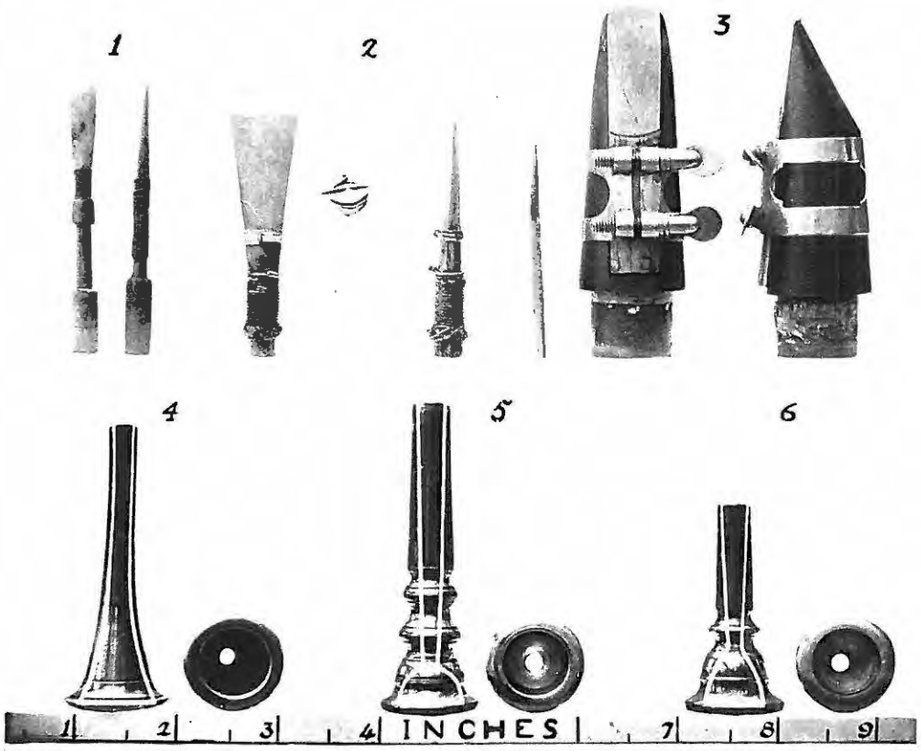


The open notes are nos. 2,3,4,5,6 and 8 of the Harmonic Series. no. 7 is not used since it is not in tune with the Tempered scale.

NOTES CHAPTER XIV

1. Theobald Boehm "The Flute and Flute-playing) 1908.
   Dover Publ. NY. 1964 p 7.
2. Anthony Baines "Woodwind Instruments and their History" Faber.London 1962.
3. Adam Carse "Musical Wind Instruments" Da Capo publ. NY. 1967 p.30,p 113.
4. ibid pp 30,31.
5. ibid pp 32,33.
6. ibid p 34.
7. ibid p 35.

FIGURE 78 GENERATORS FOR REED AND BRASS INSTRUMENTS

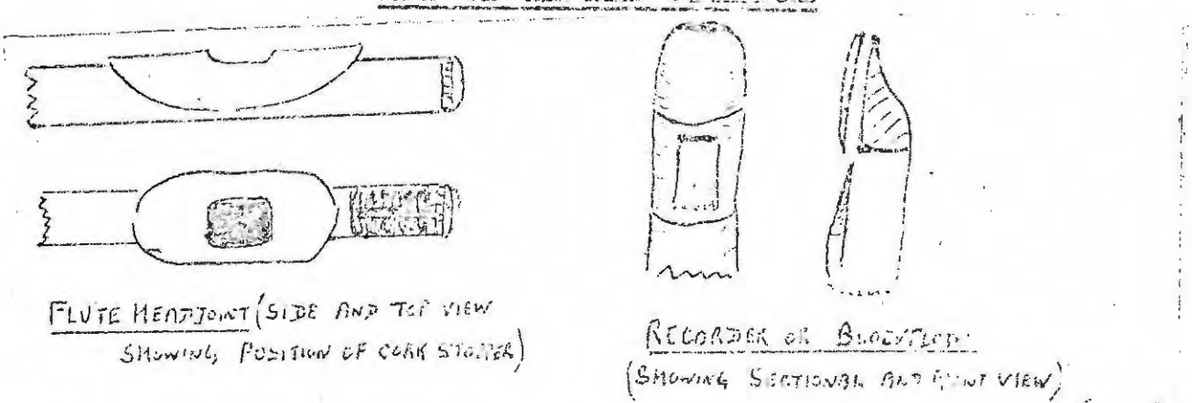


1. Oboe (double reed on metal staple)
2. Bassoon (tied and waxed to fit over crook)
3. Clarinet (single reed clamped by ligature against mouthpiece)
4. French Horn (end and sectional view showing conical curve)
5. Old Trumpet (showing shallow cup)
6. Modern Cornet.

From Daubeny
"Orchestral Wind Instruments"

FIGURE 79

FLUE OR AIR-REED GENERATORS



[A.E.H]

Flute Headjoint (side and top view showing position of cork stopper)

Recorder or Blockflöte (showing sectional and front view)

(A.E.H.)

CHAPTER XV

DOUBLE AND SINGLE REEDS

As was shown in chapter 1, reeds were used for musical instruments from very earliest times (vide notes 34 and 35 chap. 1) and there have remained two distinct types - the Double-Reed and the Single-Beating reed, either of which is used at the present time.

Amongst modern Reed instruments one finds the Double-reed used with the Oboe family (including the Bassoon, Sarrusophone, and the curious modern Shawms which are typical of the Sardana Bands in the Costa Brava). Single-beating reeds are used in the Clarinet and Saxophone families.

The reeds are usually fashioned from a grass called Arundo Donax which is cultivated in Northern Spain and Southern France, and while experiments have been made with other materials such as plastic or even metal, it is generally agreed among musicians that Arundo Donax remains the most satisfactory material for reed-making.

A double reed is constructed by folding over one strip of gouged and shaped "cane" (as it is called) and tying it firmly to a metal staple or tube in the case of the Oboe. Bassoon reeds, which must fit over the end of the metal crook, have no staple but are shaped on a mandrel and split longtitudinally before tying, so as to form a cylindrical tube at the original ends of the strip which are secured by thread and then covered in sealing-wax to render the splits completely airtight. The folded portion of the doubled strip is then cut through with a sharp knife to form two separate blades which are shaved down to a suitable thickness which would enable them to vibrate between the player's lips.

Single reeds are slips of similar material which have been planed to precision on the inner surface and shaved down on the bark surface about half way in order to leave the original portion of the bark at the end which is not required to vibrate.

The planed inner-surface is now placed against the "lay" or open side of a beak-shaped mouthpiece and held in position by a screw-clamp or ligature.

Orginally it was the practice to tie the single reeds onto the mouthpiece and this method is still favoured in Germany where I have seen Clarinet-players tying their reeds onto their mouthpieces.

The vibrations are governed by the pressure of the player's lips and articulation of separate notes is governed by the player's tongue which momentarily touches the reed in order to arrest the vibrations.

This tongue-stroke is a very necessary feature of all wind-instruments, just as the Violin bow is able to attack or reiterate certain notes when required to do so. The tongue acts simply as a valve or flap which is able to arrest or release the air-stream without upsetting the embouchure or impairing the tone production on a wind instrument.

Many Oboe and Bassoon-Players make their own reeds, although this requires considerable practice and skill. Single reeds for Clarinets and Saxophones are mass-produced, each one being made to precise measurements and very few players are able to take the time or trouble to make their own single reeds when ready made ones are so easily procurable.

I am currently experimenting with the Arundo Donax which I discovered growing wild in South Africa in 1968, and two clarinettists in America are using the samples, which I have grown here, to make single reeds for clarinet by hand, with varying degrees of success.

The tonal quality of all Reed Generators whether double or single has a distinctive nasal timbre irrespective of the type of Resonator in use. All of the Double-Reed Generators are used in conjunction with a Conical bore while the Clarinet family have a bore which is mainly Cylindrical and only partially Conical.

The Saxophone, which is a hybrid instrument, employs a Single-beating reed similar to that of the Clarinet but with a Conical Resonator or body-tube usually made in metal. The Saxophone was originally designed with basic Oboe-fingering but the addition of Boehm mechanism is now standard.

FLUTES AND RECORDERS

All flue-pipes are dependent for the generation of their vibrations on the division of an air-stream against a sharp edge which may be part of, or connected to the Resonator or body tube.

In the case of the recorder and Flageolet, Tin Whistle or the Diapason Organ-pipe the channel for the air-stream is fixed or predetermined, with one advantage in that no skill is necessary in order to make the sound. A disadvantage, especially in the case of the Recorder, is that the player has little or no opportunity to vary the colour and quality of the sound produced since the direction and dimensions of the air-stream have already been pre-determined.

In the case of the Transverse or Side-blown Flute, the player is initially faced with the problem of acquiring the skill in directing the air-stream across the Embouchure or Blowing-hole so that it strikes the opposite edge accurately and at the required velocity.

Once this skill has been acquired and developed the range and variety of tone available to the Flautist raise the potential of the Side-blown Flute to such standards as are quite impracticable upon the Recorder and Whistle-type flutes.

This is not to disparage the Recorder which, by very virtue of its simplicity and ease of blowing, has made it an important contribution to music-making amongst young people and those who have limited time for practice or lack the means to study a more sophisticated instrument.

It does, however, explain the decline of the Recorder in the Orchestra when in the early eighteenth century, following an equal start with the design of both instruments by the Hotteterre family and others (vide chapter IV) the Transverse Flute rapidly superseded the Recorder or flûte à bec by reason of its greater volume and carrying power.

The Recorder, as has been noted, suffered the decline and comparative obscurity until its resuscitation following the work of Arnold Dolmetsch in 1919, by which time the flute had not only been established in the Orchestra, but had undergone such drastic changes in mechanical and acoustic design by Theobald Boehm in his two models of 1832 and 1847, that it became known as "the nearly-perfect instrument".

4

Until Boehm's model of 1847 all flutes, including the Recorder, consisted of a Cylindrical Generator (or headjoint) with a Conical Resonator - the cone tapering away from the Generator. Present day Recorders still maintain this feature. Boehm reversed this cone to a "Parabola" (or truncated cone) in the headjoint which now allowed a Cylindrical Resonator resulting in more exact intonation and mathematical positioning of the tone-holes. The result is the modern Concert Flute made in either wood or metal, which is standard in the modern Band or Orchestra.

The Recorder has struggles along with few effective attempts to improve its key system or volume, and yet, by very virtue of its conical shape (opposite to that prescribed by Boehm) its "forked" notes are so satisfactory that its chromatic fingerings, perfected in the Baroque period are quite acceptable in the present time, albeit that its compass barely exceeds two complete octaves.

It remains therefore as a useful instrument for young people or those who have little time or substance to spare, or for students of Baroque music but has little place amongst the stronger voices of the Band and Orchestra.

Both Recorder and Flute are open-pipes (i.e. sounding Generators open at either end.) As such they will overblow at the octave although the Cylindrical Boehm Flute will easily overblow at a twelfth (like the Clarinet.)

Tonguing is rapid on either instrument. Recorders and Flutes will blend well together and I was once pleasantly surprised to find that an expert Recorder-player was not only qualified to play an adequate Second Flute to my Concert Boehm Flute in a performance of Sullivan's "Iolanthe" but was able to add the Piccolo parts on a Sopranino Recorder whenever required.

C H A P T E R XVI

TRAINING IN SECTIONS

The Clarinets are the Violins of the Wind Band, assuming that the Ensemble is not to be Purely Brass. Dr. Harold Hind, whose work upon the "British Wind Band" and "The Brass Band" has been freely quoted in this work, recently wrote to me upon the subject of Clarinets in Wind Bands and confirmed my own belief that one could scarcely have too many of them in a good Wind Band.

Adkins specifies seven in the Standard Military Band Instrumentation (2 Solo, 1 Repiano, 2 Seconds, 2 Thirds), while the average number taken from Kastner's "Military Music" for Germany,Austria,France,Russia, England and Italy shows 8 B flat Clarinets as the minimum number in each Band. Discounting the higher pitched Clarinets in A flat and E flat, against which, being a Flautist, I have a personal objection, the B flat Clarinets are capable of covering a range from low d up to g^{111} which is sufficiently high for any Wind Band providing that it possesses a Flute-Player to soften the very high Clarinet notes.

As a Director faced again with forming a Wind Band from absolute minimum, I truly consider that I should let History repeat itself, and by choice I would start with a Quartet of Clarinets.

The Clarinet presents to the Beginner the simplest manner of producing (in its lowest register) an almost faultless tone. Because the instrument is mainly cylindrical the lowest or Fundamental register speaks very easily with a minimum of breath. This is not so in the case of the Oboe and Saxophone, which both have Conical Bores and therefore speak more easily in their upper registers, than in their low notes.

The main difficulty with the Clarinet is in the connection between the lowest or "Chalumeau" register and the upper Harmonic or "Speaker" register. Every woodwind instrument has a "Break" between registers, and the Clarinet is generally considered to present the greatest problem with regard to the smooth execution of passages over the notes a^1, b^1, b^1 flat, c^1 and c^1 sharp. After sufficient individual practice the Player becomes quite fluent in negotiating this inherent "Obstacle"

towards good technique on the Clarinet.

Pupils with slender thumb-tips may experience great difficulty in controlling the "Speaker" or Register-Key with the same thumb which must hermetically seal the thumb-hole at the back of the Clarinet. If this hole is allowed to open, even for the smallest fraction, then the Speaker-Key will raise the harmonic as from that portion of the instrument, resulting in the squeak associated with Clarinet-Beginners.

The Director should be patient, indeed it is difficult not to smile at such accidents, since, speaking for myself, a squeak on a Clarinet is one of the funniest sounds in Music - (except perhaps for the offender!)

Several printed arrangements for four Clarinets exist such as "Three Mozart Movements" (arr. Neil Butterworth) in Chappell's Instrumental Ensemble series (no. 45695) and Anthony Baines' useful "Nine Easy Pieces for Wind Groups" (O.U.P.) has four separate Clarinet parts which contain the complete harmony.

If the Director is truly dedicated he will perhaps consider making his own arrangements for the four instruments.

Suitable pieces are the "Gavotte" from J.S. Bach's "Suite in D" (suitably transposed to allow for simpler keys), the "Romance" from Mozart's "Eine Kleine Nachtmusik" (K. 525), "Soldatenmarsch" from Schumann's op. 68 and many others which might have to be transposed into suitable keys, the most practicable ones being (at Concert pitch):- B flat, C, E flat and F, for absolute beginners on B flat Clarinets.

If a B flat Bass Clarinet could be added then the Bass part would benefit from greater depth of tone, perhaps freeing one of the lower parts to move upwerds and to double an upper part instead.

Flutes or Oboes may now easily be added to this basic group, but the Director from this point onwards should never neglect the opportunity to add as many Bass instruments as possible to his growing Ensemble. In my own experience it is most difficult to find suitable Players for these lower instruments.

3

Unison Scale Practice should be organized for all players who attend the Rehearsal. At this stage the Director may write the scales on a blackboard, since the instruments are all mostly of similar range and pitch, but at a later stage it is advisable to purchase a set of Band Books in which Unison scales and rhythmic exercises are printed for each transposing instrument. "The Universal Band Primer" published by Boosey and Hawkes (1912) is very useful for young Bands.

During my period of service with London University Adult Education Dept at Goldsmith's College New Cross S.E.14.I found it convenient to split the three-hour class into two periods allowing for a thirty minute refreshment break after the first hour.

This first hour was devoted to Individual and Small-group Tuition by my two assistants and myself, and following the refreshment break the entire Band assembled to work together on larger works.

The many Duets, Trios and Quartets available for similar instruments proved invaluable for the small groups such as Flutes, Oboes, Clarinets and Saxophones, and our particular music-block at Goldsmiths' was fortunately well-endowed with many individual sound-proof practice-rooms, all of sufficient size to house four or five Players at one time.

Brass Quartets, consisting of 1st Trumpet or Cornet, 2nd Trumpet Tenor Trombone or Horn, and Bass (played on either Euphonium, Tuba or even a Trombone), are extremely useful for introducing Brass instrumentalists to ensemble playing. Ordinary Hymn-Tunes and later some of J.S. Bach's Chorales are especially suitable for this combination and may quite easily be arranged in a graded order of difficulty.

Reading music at sight presents one of the biggest problems to Amateur musicians. The very high standard of sight-reading amongst British Professional instrumentalists appears to be unequalled in any other country in the World, judging from the conversations which I have had with Musicians from Overseas, including several Conductors of international repute. Possibly the reason for this could be the overcrowded state of the Orchestral Profession in Britain which demands the highest

standards of technique and tone-quality from every instrumentalist who wishes to survive in a tough and competitive existence.

Constant practice, not only in scales, chords and technically difficult passages but in reading new material daily, is the only certain way towards faultless sight-reading. All pupils and students on every instrument should be instructed to memorize at least one bar of the passage being played, in order that the eye of the Player is actually seeing and taking in the contents of the succeeding bar which in turn is memorized temporarily, and thus the process continues to the end of the passage.

This is a discipline which may only be applied after acquiring the habit of "Reading ahead" and not staring at the notes being played. I usually explain this process to pupils by comparison with the action of driving a motor-car, when the eyes of the driver must be alert to the approaching road through the windscreen and not wandering through the side-windows in order to admire the passing scene!

At Paris Conservatoire a special class in "Deźhiffrage" or sight-reading is held for all instrumental students and the Instructor actually obscured the bars being played,by covering these with a piece of paper thus forcing the player to read ahead.

In sight-reading one should endeavour to keep moving at the correct rhythm without halting or hesitating even when slips or wrong notes may have been made. In time one learns to keep these down to a minimum but to allow them to interfere with the general flow of the musical passage is tantamount to showing even the least observant or unmusical listener that a mistake has been made.

Together with sight-training, the teacher should encourage every one of his instrumentalists to practise transposition up to at least a major and minor third above or below the written notes.

Apart from its value in improving the sight-reading and general mental alertness of every Player it has a very definite and invaluable purpose in the Wind Bands which will shortly be given.

5

The development of Technique which is associated with the smooth and precise execution of difficult and rapid passages is by quite the opposite method to that used in sight-reading. In this case every note must be correctly played, with precise articulation and with special attention to tone-quality and nuance.

When a passage presents great difficulty it should be broken up into smaller sections and practised at a very much slower tempo. A very useful method which I learned while a student at Paris Conservatoire and which I have successfully applied in my own private teaching methods is what I prefer to describe as "The Hopscotch Technique." The name is derived from a British children's game which involves much chalking over the public footpaths and consists of numbered squares which are hopped on in sequence by the child using one foot.

This method, applied to the study of a difficult musical passage, allows the eye time to travel forward and to observe the succeeding note before playing. It consists of a dotted quaver and semiquaver rhythm applied to the passage or portions of the passage to be practised staccato. After many repetitions the student is able to play the correct sequence of notes but still in the "Hopscotch" rhythm.

The same rhythm is now used, but with the correct articulation according to the printed notes. After some repeated attempts the passage may now be tried in slow tempo with correct articulation and in the original rhythm.

A Metronome may be used, and will be found most beneficial if the speed is set slower for the first attempts and then gradually increased as the passage becomes more fluent until the desired tempo is reached at which the student is able to play the passage satisfactorily.

There is no doubt that a thorough acquaintance with all the Major and Minor Scales, their Arpeggios and the attendant chords of the Dominant and Diminished Sevenths, all Augmented and Diminished Chords and the Chromatic Scale commencing on any note and practised in duple, quadruple and triple time besides the compound duple or $\frac{6}{8}$ rhythm, forms

the basis of all sound technique upon any Wind Instrument.

There is little time to spare at Band Rehearsal for this very Individual practice, and every member of a Wind Band should understand and accept the responsibility for private study in this manner if the Band is to reach a good standard of efficiency.

Intonation is of paramount importance especially where groups of Wind instrumentalists are playing together. Many Instructors and Directors are prone to overlook bad tuning and faulty intonation when training young players. On every-well constructed wind instrument it is possible to vary the pitch of most of the notes by at least one quarter of a tone either sharp or flat to a given note by varying the intensity of the air-stream by altering the pressure of the lips or embouchure during playing. This process is known among players as "lipping."

Some instruments are better able to respond to this temporary adjustment of the lips than others. The double-reed instruments such as the Oboe and Bassoon are not easily adjustable either by "lipping" or by retraction or adjustment to the various joints of the body-tube as is fairly practicable on Flutes, Clarinets and of course the Brass which are fitted with moveable sleeves or tuning slides. This is one of the reasons why the Oboe is chosen for giving the tuning a^1 in all Orchestras.

Flutes, if properly blown, have rather more than a quarter-tone "lee-way" especially in the middle and upper registers and this is controlled by means of the Player's lower jaw (e.g. forward to sharpen and drawn back in order to flatten the pitch of any note.)

Clarinets, if blown hard tend to sound flat and this is because the force of air causes the cheeks to puff out, thereby reducing the pressure of the lower lip on the reed, conversely pressure on the Clarinet reed by the lower lip tends to sharpen the note. If the cheeks are forced out then the muscles controlling the pressure of the lower lip are unable to work. I usually demonstrate this fact to young beginners by making them substitute the Clarinet mouthpiece by placing the forefinger in the mouth at the correct embouchure-position (i.e. lower lip drawn well over

the lower teeth, reed laid on lower lip, upper teeth on the top portion of the mouthpiece-wedge and the remainder of the mouth wrapped like an elastic-band around that part of the mouthpiece in contact with the lips). The pressure of the lip-muscles may easily be felt by the inserted fore-finger and when the cheeks are consciously puffed out then this pressure disappears.

Saxophones do not need nearly so much pressure of the lips as the Clarinet demands,and for this reason I have always recommended the choice of instrument for ladies and very young beginners rather in favour of the Saxophone than the Clarinet. I, myself, find the Clarinet extremely tiring to play even for a short while, although I have played both Alto and Tenor Saxophones literally for hours without too much fatigue.

Incidentally, the Clarinet family are the only wind instruments which are flattened in pitch by strong blowing. In every other case, even with the Double Reeds, the instruments tend to sound sharper by stronger blowing.

Student-instrumentalists should be instructed to listen carefully to those other instruments which are playing near them. Orchestras and Bands are not quite like organs and pianofortes, since these latter instruments are already "pre-tuned" usually in equal semitones according to the accepted "Equal Temperament."

But all single-line or melody instruments (including the Human Voice) must approach the degrees of each scale in quite a different, if almost impearceptible, manner. Without venturing into a lengthy explanation on "Tuning and Temperament," it would perhaps be sufficient to explain that in every scale the penultimate or "Leading Note" requires much raising or sharpening in relation to the Key-note or Tonic (to which the "Leading Note" actually "leads" the ear in an upward direction to form the "Close" of the Scale).

In the Scale of D Major, C sharp which is the leading note, could scarcely be made too sharp if it precedes the tonic. I have a very special fingering on the Flute which raises this c^{11} sharp beautifully

towards d^{11}, but if that same fingered note were preceded by ordinary c^{11} natural (meaning that technically the c^{11} natural is now itself a "Leading note" in D Flat Major!) the result is excruciating. I have used this as a practical demonstration of the Pure Scale to Music Students.

Good intonation, like the taste for good wines, comes only with mature experience, but from the very start the beginners in every young Band should be told: "Listen to each other!"

Training instrumentalists to transpose at sight (even to the limits of one tone upwards or downwards) will be of great value in helping them to become thoroughly accustomed to their instruments. It also has a practical value, especially in small groups where certain instruments may not be available to play the necessary parts in a score.

The E flat Alto Saxophone - player should be capable of reading parts for Horn in F (which involved the simple transposition upwards of one tone.) B flat Clarinet - players are sometimes required to read from Oboe or Clarinet in C parts, while the Flautists in all Military Bands have long been accustomed to the transposition of one semitone upwards or downwards (from D flat Flute parts to Concert, or vice versa) while a knowledge of Bass Clef assists the transposition of a minor third (E flat Clarinet to Concert) and the simple transition of an E flat instrument straight off the Bass Clef or a B flat instrument from Tenor Clef into Treble is perhaps too well-known for further comment.

An instrumentalist should acquire every possible skill which may concern his instrument and transposition (even in elementary form) will go far to increase the confidence and interest of every member of a Band or Ensemble.

C H A P T E R XVll

THE FULL BAND

For rehearsal and concert purposes the Band should always be seated, although when I served in H.M. Brigade of Guards it was the custom during the process of "Changing the Guard" for the Band to play standing in a large circle, facing inwards and reading from music-sheets held in front by members of the "Corps of Drums" who invariably accompanied the Military Band, playing alternately with it during the march returning the "Old Guard" to barracks.

The positioning of instruments in any band, whether large or small, is very important. Every Player should have adequate space in which to play and should be able to see the Conductor at all times. There should not be more than two Players sitting at one desk at any time except perhaps on the occasion of Rehearsal, when it may be expedient to seat learners beside more experienced Players in the case of Clarinets or Cornets.

Traditionally the softer Reed instruments are placed in the foreground of the stage or bandstand while the heavier Brass and Percussion instruments occupy the rear seats.

There are several acceptable patterns in placing the Players of a Wind Band and some of these are given here.

For the standard Military Band of 25 which is used by every regiment of the British Army (including the Brigade of Guards Bands, some of which have up to 56 or more Players but use only 25 for normal concert programmes), the Kneller Hall method of placing Players is used with only a slight variation in the case of the Brigade of Guards.

It consists of two semicircles placed roughly parallel and facing the Conductor at the centre. The inner semicircle from the left of the Conductor consists of seven desks in the order : Solo Clarinet, Ripieno Clarinet, Second Clarinet, Third Clarinet, Oboe, E flat Clarinet and Flute (this order is sometimes reversed especially in the Guards' Bands).

2

The outer semicircle from the left of the Conductor consists of twelve desks in the order : Solo Cornet, Second Cornet, First Tenor Trombone, Second Tenor Trombone, Bass Trombone, First Horn, Second Horn, Basses, Euphonium, Bassoon, Tenor Saxophone and Alto Saxophone.

The Percussion Players stand at the rear of the band their equipment occupying almost half the length of a semicircle parallel to this outer rank.

The Guards' variation of the official Kneller Hall method has a distinct advantage for the Flute-player as his instrument is now projecting outwards from the Band towards the audience. (a position which I have always favoured even when playing Flute recitals with Pianoforte accompaniment). In Band Instrumentation too, the Flute and Oboe are frequently playing in Unison or Octava with the Solo Cornet, and this seating position ensures better ensemble and more certain intonation between these important instruments.

The Solo Clarinet and High Reeds (Flute, E flat Clarinet and Oboe) often play antiphonally across the band when the High Reeds echo the Clarinet passages and this variation of seating would not interfere with this effect.

An excellent method of placing a larger band, and especially one in which more and varied woodwind instruments may be found is that used by the famous Eastman Wind Ensemble. The entire Woodwind Section together with four Horns is placed in two semicircular ranks in front of the Trumpets and heavier Brass Basses while the four Trombones (2 Tenor and 2 Bass) are set over to the left side and in front of the line of four Percussion Players while the timpanist is seated in the space next to the brass. A string bass is a most useful addition to any Wind Band for concert purposes and occasionally one meets with Players in the British Army Bands who play String Bass when the occasion demands it.

In my opinion, the Eastman Wind Ensemble offers the ideal Wind Band combination and the seating-arrangement could hardly be better chosen. Directors must, of course, "cut their coats according to their cloth" and a study of these arrangements may be helpful in setting up a smaller group when balance of tone and general symmetry must be carefully considered in order to achieve the most satisfactory results.

When the Players have been comfortably positioned, the first important matter for the Director's attention is that of tuning the Band.

Pitch has been a vexatious problem for many years, since in various parts of the World there has not been a rigidly maintained standard fixing the number of vibrations for the note a^1.

At a conference in London in 1939 it was agreed that the International Standard Pitch of a^1=440 should be universally adopted, but there is a general tendency on the part of instrument manufacturers to build present-day Wind Instruments very much sharper, and I have actually met with a^1=445 as an accepted standard for tuning pianos in South Africa. The Boston Symphony Orchestra were already tuning to this same pitch in 1956 at their London concert.

The old "High Pitch" or "Sharp Pitch" which was the standard pitch in England in the late nineteenth century fixed the a^1 at 452 vibrations. This pitch is still to be met with in amateur bands where the expense of purchasing new instruments has not been practicable.

I can remember that when I was a young Beginner (in the 1930's) both "High Pitch" or "Old Philharmonic" pitch and "Low Pitch" or "New Philharmonic" pitch existed simultaneously amongst amateur and some professional Orchestras and Bands, although the tendency for professional Players to use "New Philharmonic Pitch" (a^1 = 439) was rapidly becoming more general. Some professional instrumentalists carried instruments in both pitches. The final changeover to a^1 = 439 caused little hardship to String-Players, while the Brass were at least able to rectify most of their sharper notes by means of extra tubing or shanks, but the unfortunate woodwind Players in every case, were obliged to forsake their cherished Flutes, Oboes, Clarinets and Bassoons and purchase

new instruments built in the flatter pitch.

(The finger-holes of a shorter tube now being out of ratio if the sounding-length be changed without re-positioning these holes accordingly).

Yet another pitch prevailed on the European Continent which was known as "Continental Pitch" or "French Pitch" (a^1 = 435) and many of these French and German-made instruments found their way into British Bands during the 1930's.

Assuming, then, that the Director's Band, whatever its pitch, has all its instruments matching in accepted standards of manufacture - all at the same tuning - the first requisite is to get the individual Players to adjust their instruments to a given note.

Orchestras invariably tune their instruments to a^1, taking this note from the first Oboe (by reason of the penetrating tone of that instrument, its ability to sustain a note and for another reason that the Oboe is not easily able to adjust its basic tuning to other instruments).

It is found more satisfactory in Wind Bands, where there is a prevalence of instruments built in the flat keys (B flat and E flat), to use b^1 flat Concert as the Tuning-Note. The Cornets, Clarinets and other B flat instruments playing their c^1, while the E flat instruments play G (both of which are "Open notes" on Brass instruments.)

If one has an Oboist, then this Player should give the b^1 flat. Absolute silence should be observed by all the Players while the Solo Clarinet tunes to the Oboe note (or gives this note in default of an Oboist) each Clarinet-player now tunes in turn with the Solo Clarinet note. The entire Clarinet section now sounding the note together, with Flutes adding in their turn.

Although there is a margin of adjustment to tuning by the embouchure or lip-pressure in the case of all good wind-instrumentalists, it is

always necessary to set the tuning of the instrument by either retracting or else lengthening the body tube, usually at the upper end where most well-made instruments are fitted with tenons and sockets for this purpose.

Lengthening the tube-length by "pulling-out" will flatten the pitch of the instrument while shortening ("pushing-in") will sharpen it. Temperature too, must be carefully observed when tuning a wind instrument. A cold atmosphere will cause a wind instrument to flatten in pitch while heat has a converse effect. On String instruments this entire effect is reversed: cold causing a sharpness in pitch through contraction of the sounding string, while heat causes expansion and consequent flattening of the pitch.

On concerts or occasions when the Wind-players are at all anxious or tense, the initial tuning of all instruments should be adjusted in order to allow for the rise in body-temperature which soon warms the instruments and causes them to rise in pitch.

After the initial tuning in score-order (the Solo Cornet giving note to each of the Brass in turn) it is always a good idea to play a "Warming-up piece" - usually a favourite march which the Band knows very well - or in the case of young beginners, a unison scale or even a simple hymn-tune or chorale.

It is useful to have a number of contrasting pieces to be prepared ready for a concert, even if there are no immediate plans to present the Band in public at this stage.

Different Players will almost certainly have widely different tastes and the Director should, as far as possible, consult the members of his Band in order to try and please all of them. I know of one case where the Bandmaster of an Amateur Military Band invariably chooses items for local concerts in which his own instrument is prominent (needless to say this instrument is played by himself when the Band is Conducted by a Guest-Conductor!).

6

Soloists should be encouraged, particularly amongst Cornet, Trombone and Euphonium-players, since these are the traditional Solo-instruments in both Brass or Military Band.

The rollicking Polkas and brilliant solos for Piccolo have rather gone out of fashion of late, but if a good Player is available, then "The Wren" (Damare) or "Deep Blue Sea" (Brewer) always makes a splendid virtuoso item on a concert programme. The Xylophone, too, is a very popular Solo item with such well-known pieces as "The Grasshopper's Dance" (Bucalossi) or "The Two Imps" (Alford) while the Clarinet may use one of the Weber Concertinos arranged with band-accompaniment or join the Flautist in the popular duet "Lo here the gentle lark" (Bishop arr. Le Thiere).

Cornet solos fall into two types - the sentimental ballad (e.g. Sullivan's "Lost chord" or "The Holy City") or else the brilliant works which display the technical abilities of the player in double and triple-tongueing. At once the limitations of the Trumpet in the Military Band may be seen. The only solos that are available seem to be "Hot Jazz" type or else one or two of the movements from Haydn's Trumpet Concerto.

Several marches should be prepared, and I usually rehearse a new march for the Band in the following manner:

(1) Very slow tempo first 16 bars (and repeat)

(2) Same tempo to the end of 1st section.

(3) Back to the beginning, repeating this at a brighter tempo.

The Trio should then be rehearsed in the same manner and any difficult sections dealt with while the remainder of the Players rest.

"The Five-Beat Roll" given by Bass-Drum, Cymbals and Side-Drum makes a stirring beginning to any Quick March and sets the tempo before the melody actually begins.

7

With regard to Quick Marches I consider the Drummers to be the most important unit in a Band, especially if it is an inexperienced Amateur Band. Once the Drums begin, the Clarinets and Cornets (even if they are professionals) are hardly ever likely to look at the Conductor. Changes of tempo in march rhythms are uncommon and it is far more probable that these Players will rely upon the strong beats of the Drums in their ears to maintain the tempo of the music. It is therefore vitally important that the Bass-Drummer closely watches the baton (especially during the opening bars) and does not deviate from the given rhythm. The slightest departure from a steady pulse will be immediately reflected in the playing of the remainder of the Band. I have actually experienced the public embarrassment which resulted in a Bass-Drummer actually hurrying the beat to such an extent that the Clarinets were unable to cope with their florid parts at the increased tempo!

Similarly in Waltzes, the side-drum which plays the 2nd and 3rd Beats to the Bass-Drum's 1st strong beat, can drag to such an extent that the Waltz becomes heavy and cumbersome as a result.

In "Band-Slang" these beats of the Waltz and termed: "Boom-chut-chut" (The "Boom" being the single Bass-Drum beat, while the "chut-chuts" are the prerogative of both Side-drum and the 2nd and 3rd Clarinets or Cornets, or 1st and 2nd horns).

If the Side-drummer strikes his drum too hard then he is unable to return for the second beat in sufficient time. In other words, if the entire arm (instead of the wrist) is used to hit the drum with full force, then there must be a time-lag between these two beats. The "Chut-chuts" in all Waltzes must be light and somewhat rapid (i.e. without dragging), and this should be pointed out, firstly to the Side-Drummer and secondly to those "inner" parts which play the second and third beats.

In one persistent case where I could not cure a young Side-Drummer of hard banging and sluggish rhythm before an imminent concert appearance,

I persuaded him to replace his drum-sticks with the wire-brushes which are familiar in Dance-Bands, and with quite satisfactory results (i.e. if he was still sluggish then the effect was somewhat minimized!).

The Players in any band should be encouraged to play softly and in Cantabile style unless the dynamics require loud, strident playing. Any combination of musicians playing a continual forte or fortissimo will pall on the ear of the listener after very many bars. It is much more difficult to play softly on a wind instrument and at the same time maintain a good carrying tone, and one persistent fault in young bands is the habit of blowing too strongly in the belief that this produces a more brilliant tone.

A wind-band to give of its best, must be able to play at controlled nuance with light and shade, (diminuendo and crescendo) so that when the crashing forte or fortissimo appears just at the right time and place in the music, then it has that impact and effect upon the audience which the composer or arranger originally intended.

The competitive spirit of Band Festivals has done much to raise the standard of musical playing, especially in Brass Bands where there is less choice of tone colour than may be found in Reed or Military Bands. The Adjudicators of British Brass Band competitions are always vigilant in judging the quality of each band with special regard to dynamics, and light and shade.

When a solo passage is to be played, then those instruments to whom the accompaniment is entrusted should keep their tones well under the Soloist, listening carefully and watching their Conductor for indications of more or less weight of tone.

Nothing is worse nor more uncomfortable for any Soloist than that of having to battle in order to "get over" an accompaniment which is too loud.

9

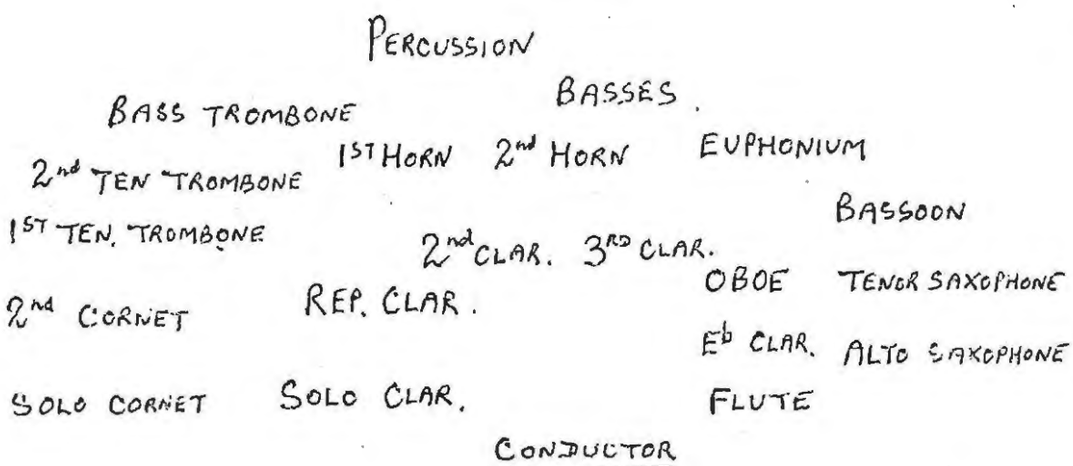
When I served as a Flautist in the Band of H.M. Royal Dragoons (1942-45) the Bandmaster insisted upon the practice of Hymn-Tunes played very slowly and "pianississimo," for several daily practice-sessions preceding an important broadcast.

Whether Amateur groups would tolerate such drastic treatment is a moot point, but there is little doubt that the tone-quality, control and general ensemble of any Band must benefit from it.

"If you cannot hear the Player on either side of you - then you are <u>too loud</u>!" - so goes the old Kneller Hall maxim.

In general, an extremely difficult technical passage for wind-instruments becomes very much easier to play if it is taken rather softly in nuance.

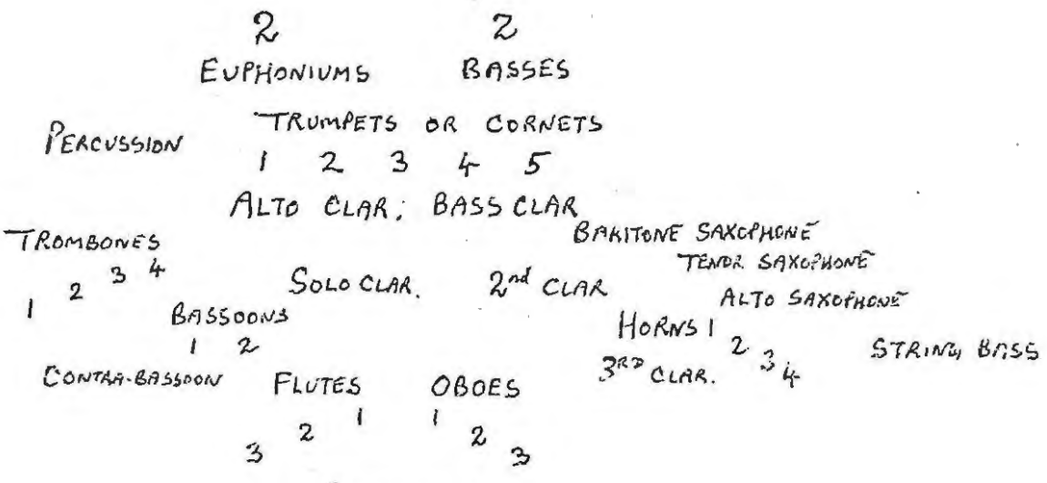
FIGURE 80



KNELLER HALL PLACING

(THE INNER CIRCLE OF WOODWIND MAY BE REVERSED).

(A.E.H)



EASTMAN WIND ENSEMBLE

(UNIVERSITY OF ROCHESTER. U.S.A.)

(FRONT RANKS ON FLOOR LEVEL, REAR RANKS ON RAISED TIERS)

(A.E.H)

Two useful seating arrangements for large Wind Bands.

C H A P T E R XVIII

A FEW TECHNICAL POINTS

The "Attack" or commencement of the first notes of any passage is very important if the performance is not to sound ragged, every instrumentalist should commit his first bar to memory and have his eyes squarely on the Conductor at the beginning of each piece and subsequent re-entry.

The tongue is most necessary in all wind-instrumental playing as it controls the point at which musical sound begins and determines the articulation and phrasing of every note to be played.

On every instrument there exist various schools of thought regarding the use of the tongue, and while Double and Single Reeds have little, if any, variation in methods of tongue-stroke, all the Brass and the air-reed instruments such as Flute, Piccolo and Recorder have two distinct types of single tongue-stroke:

(1) The "Attack" or "Martellato" (tongue-tip from the lips and between the teeth)

(2) The "Palate-stroke". (tongue-tip from behind the upper teeth with the syllable: "Doo")

Many brass-players use the first of these exclusively (i.e. for all purposes), It does support the embouchure or lip-formation and makes for a very clear and precise attack of a phrase. Personally I invariably use and teach my Flute and Brass pupils to employ this stroke in the commencement of every phrase, or to re-commence after taking breath.

The second example is nearer to speech-articulation, and while it gives a less precise attack, it is infinitely simpler to repeat several times rapidly without upsetting the tone-production which is controlled by the lips or embouchure.

It should never be pronouced "Tu", "Te" or "Ter" as this syllable constricts the throat and interferes with the tone. Moreover the practice of Double and Triple Tonguing (which seems to be possible only on Brass instruments and Flutes) is very much simplified in the syllables: "Doo-Goo" and "Doo-Goo-Doo" rather smoothing out the articulated passage than:

"Tu-Ku", "Te-Ke" or "Ter-Ker" which tend to make the syllables jerky and irregular. One cannot get a "K" syllable equal in weight with a "T" syllable (as may be demonstrated by blowing on to the palm of the hand using these syllables and noting the difference in wind-velocity).

The Human palate is so shaped that if the tongue is in contact with any portion of upper surface behind the top teeth, then no air is able to pass out from the mouth. (This is the basis of most consonants which are used effortlessly in our everyday speech).

It is very much simpler to pronounce "Goo" as an equally hard syllable to "Doo", and this is fundamental to my own system of double-tonguing which if played very slowly on a Flute (part of our rigid Metronome-practice) by any of my young pupils, cannot be distinguished in effect from single-tongue - even by an experienced listener!

This method may be applied to any instrument which is normally employed in rapidly articulated passages, and possibly could also be used on reed instruments since I once heard multiple-tonguing demonstrated on a Clarinet.

One of the chief obstacles to good technique on wind-instruments is faulty hand or finger-positions. Finger-tips should never be allowed to travel too far above their respective keys or valves. Stiff straight fingers must always be tense and unable to easily obey the commands of the brain during performance.

3

If the wrists are curved gently backwards all the fingers fall into a relaxed and curved positinn. When their tips address the surface of a key or valve-touch the finger should not be allowed to collapse or "give" - but remain in a curve or arc, pivoting from the main knuckle-joint of the hands.

Flute-players are inclined to bring the right thumb too far forward under the body-tube, which tends to thrust the first, second and third fingers too far over their keys.

Trumpet and Cornet-players too, can suffer from the bad habit of not keeping the finger-tips over (if not actually on) their valves. Attention to such small details may go far to improve a Player's performance.

Incorrectly-played rhythmic figures are a very common fault amongst groups of inexperienced Players, and these tend to be more obvious as the group becomes more confident in playing together. These flaws must be rectified immediately by the Director, otherwise the Players will form the habit of playing certain rhythmic figures carelessly.

Ideally, these corrections should start with Beginner-pupils who should be taught to mentally sub-divide every rhythmic figure into the smallest fraction of the given tempo, for instance;

1 - 2 - 3 - 4 should be considered as 1 + 2 + 3 + 4 + (which sub-divides into quavers) or even $1^{111}\ 2^{111}\ 3^{111}\ 4^{111}$ (sub-dividing into semiquavers).

This will avoid the tendency to play the dotted quaver and semi-quaver in the time of a triplet (quaver and semiquaver) or will rectify the common fault of many good Players who, in order to avoid the suspicion of a "lazy triplet", actually exaggerate the dotted note to the extent of turning it into a double dot and demi-semiquaver. This particular fault is a very usual one in British Military Bands together with the error of playing a dotted crochet and quaver exactly like a double-dotted crochet and semiquaver.

4

The articulation of groups of four semiquavers to be played rapidly is usually set out as two slurred and two tongued, and this is a very useful method of gaining a clear articulation from a group of Players who are unable to use the single-tongue strokes in rapid succession or to use the double-tongue stroke.

The figure is usually printed with dots over the heads of the two notes following the two slurred ones. A dot over the head of a note reduces its duration-value by helf but should not affect its rhythmic value.

When the accent or emphasis is given on the first note of the group then care must be taken to observe the duration of the second (slurred) note that it is not played too short.

By playing the figure very slowly, sub-dividing each single semiquaver it will readily be seen that the second slurred note is in fact as long as the first, and no indication is given to shorten the duration of any note until after the third (tongued) semiquaver of the group has been attacked.

The practice of slow running scales, either individually or in unison, with the slurred pair played forte and the following tongued pair played pianissimo will make the players aware of this very useful and important articulation.

Another very common fault amongst many Players, both Amateur and Professional is that of playing compound duple time such as $\frac{6}{8}$ carelessly. The triple sub-division must never be absent from such rhythm unless it has been indicated otherwise by a duplet or quadruplet figure (two or four in common time against compound rhythm, usually bracketed with $\overset{2}{\sqcap\!\!\!\!\!\!\!\!\!\!\!\!\sqcup}$ or $\overset{4}{\sqcap\!\!\!\!\!\!\!\!\!\!\!\!\sqcup}$).

In general the band should thoroughly understand the importance of stress and accent at the correct points in all the music which they play.

The chief fault of the very best bands is the opposite tendench:- to over-accent, to clip notes short of their true value, and as mentioned before, to double-dot. I can only remark that this is, at least, an error on the right side and probably springs from a desire to bring "Military Smartness" to what is more often than not "Military Music." The Director will have his hands full in order to avoid "lazy" playing and reading on the one hand and stiff, mechanical, almost too-precise playing on the other.

Music has many moods, but in general it is considered to be a gentle art. Articulation should be crisp and unanimous where several Players are performing, and the slurred passages as smooth and cantabile as may be possible in the tempo.

Young Clarinettists and Oboists should early be taught that to look at one's fingers on the keys can be a very expensive business when the delicate reeds are snagged up in coat lapels.

General deportment, posture and good seating (legs uncrossed) should be emphasized in every band. Apart from the general appearance, when lolling or slouching instrumentalists can create such a bad visual impression, untold harm may be done to the respiratory organs, particularly in young Players, if good posture is not observed and strictly maintained by the person in charge.

The British Army not only encouraged but enforced Athletic sports on all its bandsmen, and while I, personally, have never displayed any prowess or enthusiasm for such activities, one cannot fail to see the sound common sense in getting young instrumentalists out of their chairs in order to exercise their breathing apparatus in other directions!

Instruments should always be kept clean, and without being a fanatic for "spit and polish", I would suggest that normal hygiene, oiling of mechanism, greasing of slide-tubes with regular attention to pads and springs will ensure a healthy and efficient Band.

Young instrumentalists should be instructed in the basic care of their instruments and shown how to undertake simple repairs and adjustments to the mechanism.

Special care is needed in handling the dismantled valve-pistons of brass instruments since an accidental blow caused by dropping the precision-made piston onto a hard surface (such as a stone floor) could impair the proper working of the valve for all time.

Trombone slides too,must be very carefully handled in order to avoid straining or warping. Dents and bruises on the metal tubes of instruments are not only unsightly, but can in most cases, upset the intonation of certain notes.

Wood instruments should be carefully protected from sudden changes of temperature. Hot sunshine or a cold atmosphere are equally causes of cracking in the wood.

The tempered needle-springs of woodwinds can last for many years without trouble provided that they have been kept free of rust. Springs, when they snap unexpectedly, seem always to do so on an important concert, but the usual temporary remedy for a broken spring is an ordinary elastic rubber-band which is tied or looped over certain parts of the key and anchored to adjacent pillars or rods in order to effect the closing or opening of the cup as desired.

Rubber-bands should not be left for any length of time in contact with silver or silver-plated keys. The sulphuric compound of rubber has a very detrimental effect upon the surface of silver, sometimes actually scoring a deep mark which may be difficult to remove.

Loose pads of Clarinets, Oboes and Bassoons can often be quickly rectified through warming the key-cup by means of a flame. The hardened adhesive-wax left in the socket behind the loose pad may thus be melted and the pad pressed back into its position in the cup. All instruments should, if possible, be regularly overhauled by an experienced technician.

This is not an easy matter for instrumentalists living in South Africa, and often it was necessary to send the instruments to Europe for expert repair, although Music Firms are now very aware of this hardship to their customers and I know of one or two of the more up-to-date Houses who are now able to offer a very good service in this direction.

Even so, there is still a growing need in every country for repairers who are able to manage a normal repair-job on wind instruments and for this purpose a very useful little handbook has been prepared by Erick D. Brand Elkart, Indiana entitled "Band Instrument Repairing Manual."

Although such work is highly specialised, many of the processes described could easily be undertaken by any good craftsman with the necessary tools.

Two of my former pupils and band-instrumentalists in England have taken up instrument-repairing as a full-time occupation.

C O N C L U S I O N

When one traces the story of Wind Music beginning in the mists of Time - from the Whistles, Pipes or simple Horns of early man - and through the ancient glories of China, Egypt, Israel, Greece and Rome, much must be left to conjecture. The chronicles of learned scholars remain, together with several specimens of some of the original instruments which are preserved in Museums and Collections all over the World. An examination of primitive instruments still in use today among some of the less developed peoples has served to give some idea of the very earliest types of Wind Instruments to a scholar of the present time.

We may note the behaviour of vibrations in variously shaped tubes and remark upon the contrast in tone-quality which is given by each of these in conjunction with the different methods of generating these vibrations - whether by means of the lips, reeds or simply by the breath of the Player skilfully directed against one edge of the tube.

Having now a practical experience in hearing some of the characteristic tone-colours peculiar to each species of Wind-instrument, it is surely not taxing the imagination too much to try and recall the sound of Pharoah's Trumpets, or those of the Children of Israel? The Tubas and Buccinas of Caesar's legions or the sudden alarm of the Thürmer in some medieval German city?

The types of Wind Instruments have remained basically unchanged throughout these thousands of years. A single Trumpet note is still the same recognisable sound whether played upon an early specimen such as one found in Tutenkhamen's tomb or upon a sophisticated modern instrument.

Reeds and Flues or Whistle-pipes have always had their individual tone qualities which have remained unchanged from those days when man first produced music from them.

All that the years have brought is a gradual improvement in shape and design, the addition of keys to assist and augment the fingers, and later when science was applied to their construction, valves, more advanced key-mechanism and rational standards with regard to shape, size and uniform pitch.

And what of the Players? Can we truly say that they, too, have kept a parallel course along with their instruments towards perfection and rationalization?

Allowing for the rapid developments in Education and Culture over the past century what has the Present-day Musician in common with his counterpart of over a thousand or more years past?

Morals, customs, tastes - even Humanitarian ideals have changed and re-changed many times during those years, and yet I would venture to suggest that one common bond unites those Players of old with those of today - the genuine love of making music from their instruments!

What kind of music is hardly important, but a close examination of every available picture of instrumentalists of ancient times up until the present will without any exception depict either intense concentration or utter bliss (in the case of some examples of Classic Art) in the facial expressions of the Players.

Throughout this work the contribution of Wind Instruments throughout History and their importance especially in outdoor entertainment and processions has been shown. The suitability of Wind Music for outdoor functions has led naturally to the development of Military Music where the highest standards were reached and regularly maintained while the tremendous progress in the improvement and construction of Wind Instruments in the early nineteenth century has given the impetus to the rise of Amateur Bands (notably those in Northern England and Upper Austria) followed by the rapid developments of Wind Bands and Ensembles in so many schools and universities of the U.S.A. where so wisely it has been decided to give an important place in High School education to the study of Wind Instruments.

Strangely enough, the United States while giving such an admirable lead to all other countries in the early education of young instrumentalists, makes little or no provision for their further continuance of these activities when school days are finished. Other countries by contrast, begin where America leaves off, and many young European

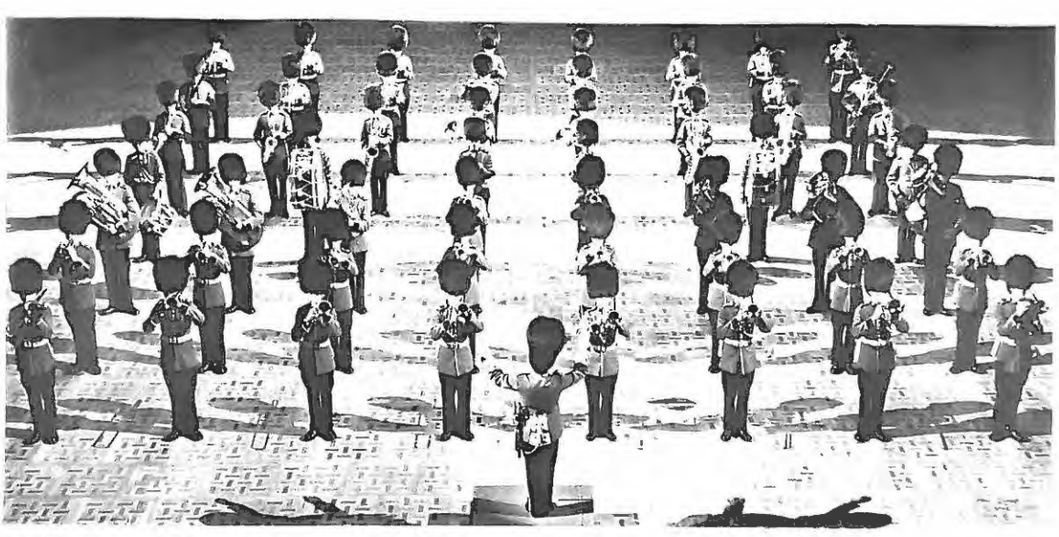
instrumentalists begin their studies at an age when school is past.

What is needed is a World-wide organization of School Music based upon American methods where the learning of a Band instrument is made part of every child's Education. And in order to avoid the colossal waste of trained or partly-trained instrumentalists who annually leave American Schools never to play music again, there should be a further organization subsidized by the Government of every country in the World which professes to prize civilization and culture to the extent of fostering and encouraging the study of Musical Instruments by all or any who wish to learn them.

We have seen the suitability of Wind Instruments for this purpose and the ease and rapidity with which they may be learned by young or old when compared to the long and arduous studies necessary for the Violin or the Pianoforte.

I may stand, possibly accused of personal bias in this statement, but I believe that most Music Teachers after careful thought would agree. And for those who truly love their Wind Music, then perhaps I could do no better than to close with these words from Samuel Pepys' Diary (27th February 1668):

"But that which did please me beyond anything in the whole world, was the wind-musique.....which is so sweet that it ravished me.....



Band of the Coldstream Guards 1970

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