VOICE CULTIVATION.

BY

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PREFATORY NOTE.

I CANNOT allow the reader to give me all the credit, if any be due, for "Voice Cultivation." I have received assistance which certainly amounts to collaboration, and, although I am not permitted to say more, I must at least express my gratitude for it. Without it I do not think I would have ventured upon publication.

GULI HACK.

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VOICE CULTIVATION.

Chapter I.

INTRODUCTION.

In having this short work printed my purpose is to place succinctly before my students the elementary rules which govern the production and training of the voice. The discrepancies disclosed in a comparison of advocated methods necessitate a definite avowal by public teachers of their adopted systems, and this I may, perhaps, call my second purpose.

The leading present day authorities are calling with a convincing unanimity for a revival of "the old Italian school" which, in generations now past, gave the world so many great singers and so many great masters. Are the methods of the old school mysteries? And, if mysteries, have all clues

perished with the priesthood? There are writers who pessimistically affirm these things, but I cannot take so hopeless a view. It was not, after all, so very long ago, and there are connecting links.

It is said that Anzani taught Manuel Garcia (the elder) the secrets of the school, with all its theory of vocalization, and it was upon these secrets that Garcia based his system. Then Manuel Garcia (the younger and greater), pupil and assistant to his father, spent his life, as he has told us, in developing the father's method. During my studentship at the Royal College of Music I had the advantage of the tuition of Gustave, the son and pupil of the great Garcia, and through him I feel that I am able to peep back and to understand some of the lost arts. And since authorities agree that the latest scientific advances in physiology and physics add force to the correctness of the old school methods, so far as they are known, I do not despair of the return of a golden age of song.

Above all, students must recognise that vocalization is not a pastime, but a study calling for intelligent, patient, life-long effort. Great singers have always *worked.* Indeed, it is one of the wonders of voice production to note how often an excellent and even great voice may be developed from unpromising beginnings by intelligent *work.* A voice is given to us all—the volume, the quality, the range of it, are very much of our own making. *Work* is certainly one of the lost secrets, and the selection of the right vowel sounds for opening the individual throat and rounding the individual tone is another. Dr. W. A. Aiken, in his admirable little book "The Voice," does not hesitate to say that, in his opinion, the richness of the Italian language in vowel sounds has made it the basis of voice culture and the producer of so many great singers. I entirely agree with him, and would even hazard a reading of the famous riddle by saying that the linguistic accident of so many rich vowel sounds at the ends of Italian words prepared Italian throats for

natural song of a high order, and that the genius of the early masters, in systematising those vowel sounds for the purpose of voice culture, created and continued to develop a great school. But they worked in those days. It is related of Porpora that he, for nearly six years, restricted Caffarelli to the assiduous practice of one page of exercises before allowing him to venture upon a simple melody. We are not so heroic now-a-days.

The student should realise at the outset that voice, as a function, is capable of a purely physical explanation. It is a wind instrument which Nature has constructed out of certain organs and muscles—that is to say, it is an instrument which has the lungs, the muscles and ligaments of the larynx, and the muscles of the throat and mouth as its principal component parts. It will, therefore, be seen at once how necessary it is to approach the subject physiologically and anatomically. I shall deal with the matter more in detail later on,

but I strongly urge everyone not to rest content with what I may say. Every opportunity should be seized of reading more widely and attending lectures upon the structure of the Respiratory Organs, and upon Acoustics, and upon the application of Acoustics to the Human Throat.

It is not enough that we should sing; we must know exactly what happens physically *when* we sing. It is then that we are able, by the application of will power, to develop and control the muscles involved and so produce desired effects. One phase of modern life is physical culture by means of scientific exercises, and it is precisely this principle that we must apply to the instrument which gives us voice. Authorities say we can build this instrument as we can build a violin, and that a great singer is physiologically a Stradivarius. It is because the process is one of physical building that we should begin early in life. It is not impossible, but it is difficult, to

acquire true flexibility if we delay until the muscles are set.

I shall take the physical explanations in the following order :—

1. Breathing.
2. Vocal Cords.
3. Resonator.

To give courage to those who are entering upon the study, I will assure them that, although peculiar excellence often depends upon a rare natural structure of the vocal instrument, almost everyone may have a a cultivated voice. The measure of success will be ascertained by the individual intelligence and assiduity thrown into the balance.

Chapter II.

BREATHING.

The first essential requirement of the singer is to learn to breathe properly; and in the explanation which follows I shall avoid digressions involved by a discussion of the various rival systems and confine my attention to the method which has emerged again from confusion to be accepted by the best authorities. The lungs have been aptly described as "aërial sponges." They always contain a certain quantity of air, even when we have expelled as much as possible by muscular contraction. In order to sing, it is necessary to abnormally inflate the lungs, and the proper method of doing this has given rise to much controversy.

A glance at Plate I. will show that the air when forced out of the lungs passes up

the windpipe, through the larynx, past the lid of the larynx into the upper throat, and so out through the air passages of the nose, or through the mouth. When air is drawn down into the lungs, it is not the incoming air that expands the chest as is generally supposed; the muscles outside and inside the ribs and the large muscle called the diaphragm expand the cubic content of the chest and the air rushes in to fill the vacuum which would otherwise occur in the lining between the lungs and the ribs. The action of the muscles and the inrushing of the air are, of course, simultaneous, and consequently a confusion of cause and effect may easily arise. The first step, therefore, is to develope this muscular action by systematic exercise, in order that a large store of air may be held within the lungs which are the bellows of our musical instrument. Plate II. shows the chest, or thorax, with its casing of ribs, and the lung space and outline of the diaphragm within. There are twelve ribs all of which are fixed to the backbone, or vertebral

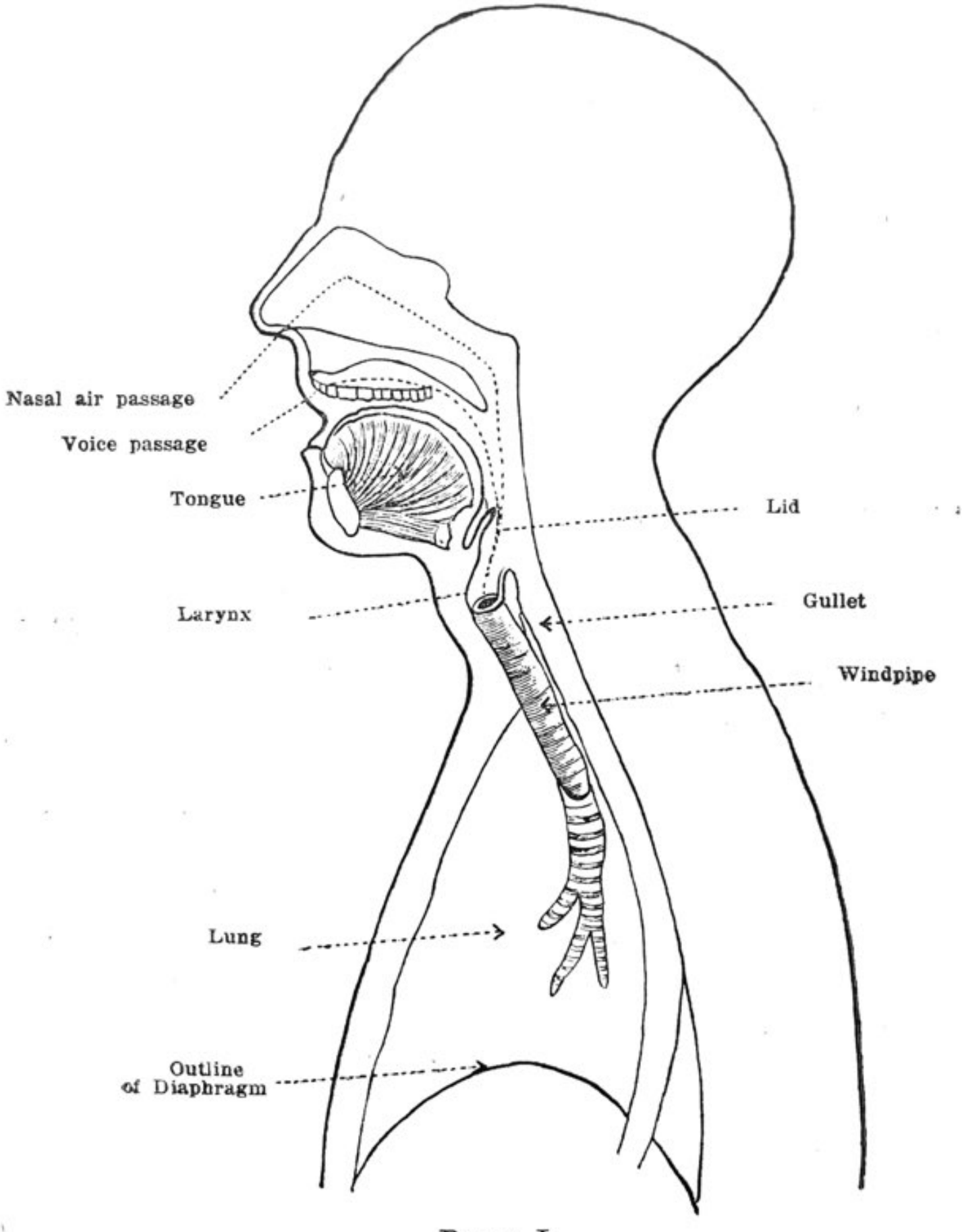


PLATE I.

Transverse section of the human body (adapted by Brown and Behnke from Küss and Czermak).

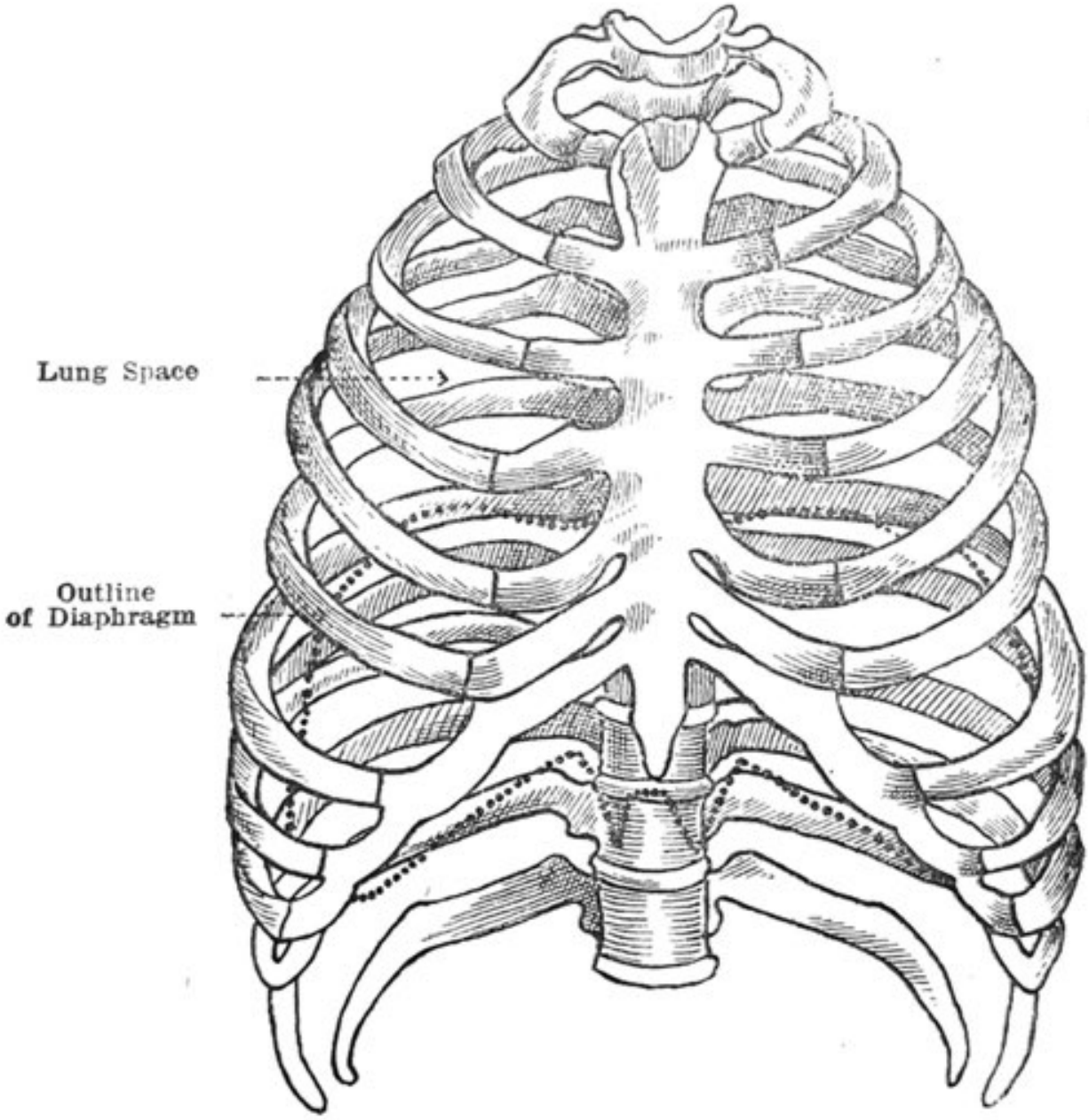


PLATE II.

column, at the back. In front, the upper seven join the breastbone, but each of the next three joins—not the breastbone but—the cartilage of the rib above it, and the last two are free. The upper ribs can be made to expand a little, but the greatest expansion is attained with the lower. This expansion of the lower ribs is effected by the muscles which line them inside and out, and by the drawing down of the diaphragm , which runs through the body immediately below the lungs like a large inverted basin. When the diaphragm is drawn down, and the ribs are forced outwards and upwards, it will be seen at once that there is an extension of chest area in every direction.

To breathe properly the abdominal muscles must be slightly drawn in and the ribs *expanded* as far as possible. This is the method of the old Italian school. It is the method of Garcia and the one which I have used always with complete satisfaction. With constant practice the muscles

of the chest, and in particular those around the lower ribs, enlarge and strengthen in a way that is at once interesting and remarkable.

Referring to this question in his "Hygiene of the Vocal Organs," Sir Morell Mackenzie writes :—

"The old Italian masters taught that in inspiration the anterior abdominal wall should be slightly drawn in, and this method was practised for more than a hundred and fifty years ; but in 1855 Mandl opposed this method of breathing, on anatomical grounds, maintaining that the descent of the diaphragm is facilitated by allowing the abdominal wall to be flaccid and to project forward in inspiration. In England the views of Mandl have been advocated by Messrs. Browne and Behnke, and I was myself inclined to accept these doctrines. I felt some misgiving, however, on the subject, more especially as Gottfried Weber, one of the most acute investigators who had studied the science of singing, says

that it is impossible to explain why it is so, but *that undoubtedly the old Italian school is the best.* In the early editions of this work I endeavored to harmonise the conflicting views, but further investigation of the subject has convinced me that the old *maestri* were right, and that in the abdominal cavity there is ample room for the slight descent of the diaphragm, without any protrusion of its anterior walls. . . . I may remark that by the old Italian method complete control is obtained at the commencement of the act of expiration, and undue escape of air—i.e., waste of breath—is thus prevented. In other words, by the Italian system greater effect is produced with less expenditure of force."

Charles Lunn, in his "Philosophy of Voice," quotes this passage with approval and I hope the return to the old method will soon be universal. Its superiority lies most certainly in the direct control which the singer has over the breath store and in the quickness with which the inspiration can be made.

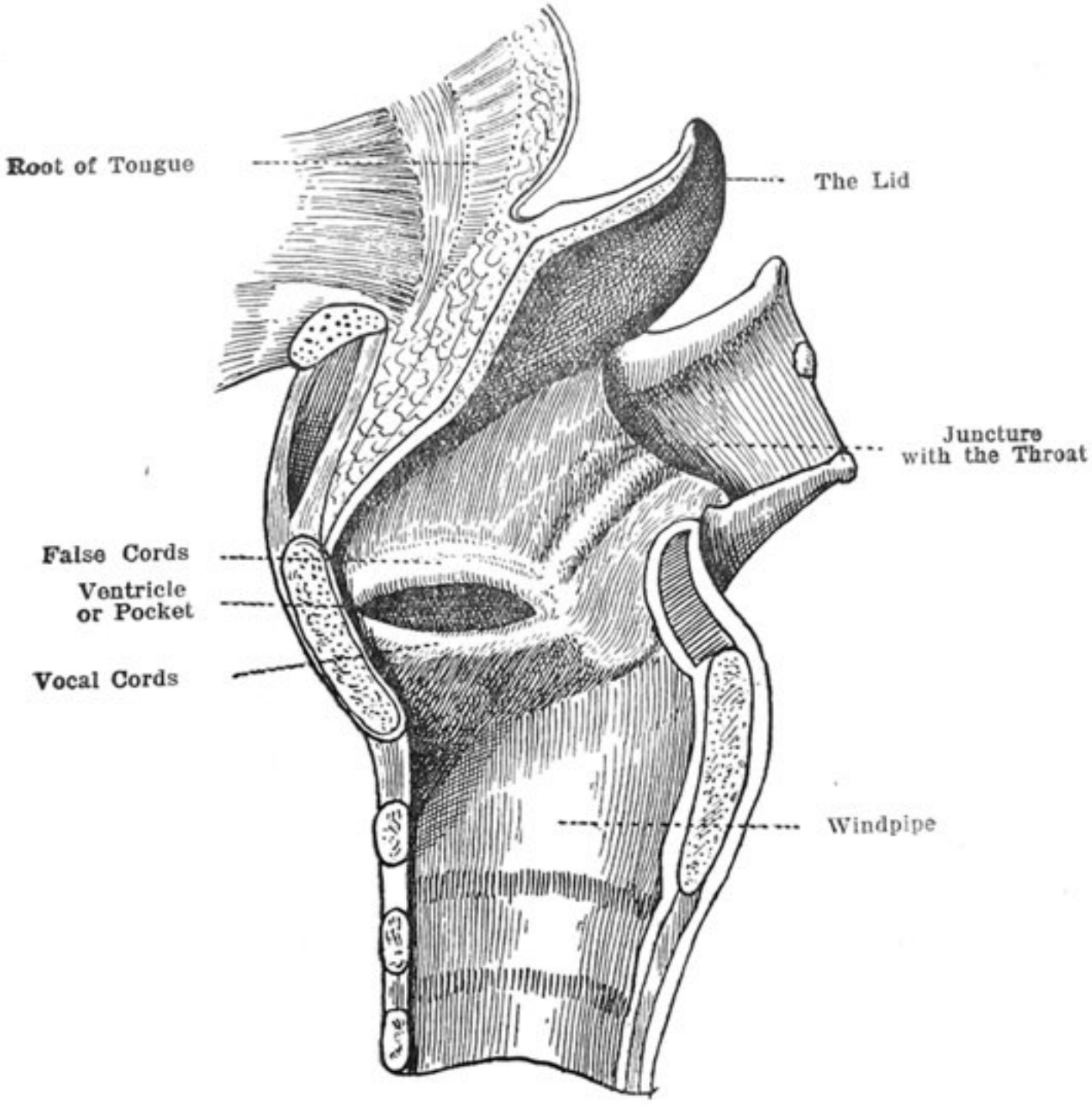
The practice of inspiration should be indulged in every day, in walking, in physical exercise, and in repose. It has been recommended that beginners should, if walking, inhale during (say) three steps, hold the breath during three steps, and exhale during three steps, and gradually increase the number as the capacity grows. It is certainly a good habit to acquire.

In singing, the breath must always be taken in through the mouth. There are many objections to inspiration through the nose. Amongst them may be mentioned noise, slowness of supply, greater effort, and danger of nasal intonation. As it is necessary for the singer to keep the passages of the nose hermetically sealed in expiration, it is tempting Providence to be perpetually opening them with inrushes of air.

This, briefly, is the true method of taking in supplies of air, and our next care will

be to show how they may be returned in the diviner form of tone.

Before leaving the subject of right breathing I must give a word of warning to all women. No corsets which interfere with the free play of the lower ribs should be worn. Even though not laced tightly, they will, in addition to deforming the internal organs reduce the respiratory capacity by one-third. Upon this there is no conflict of authority.



(Adapted from "Anatomie Humaine")
L. Testut.

PLATE III.

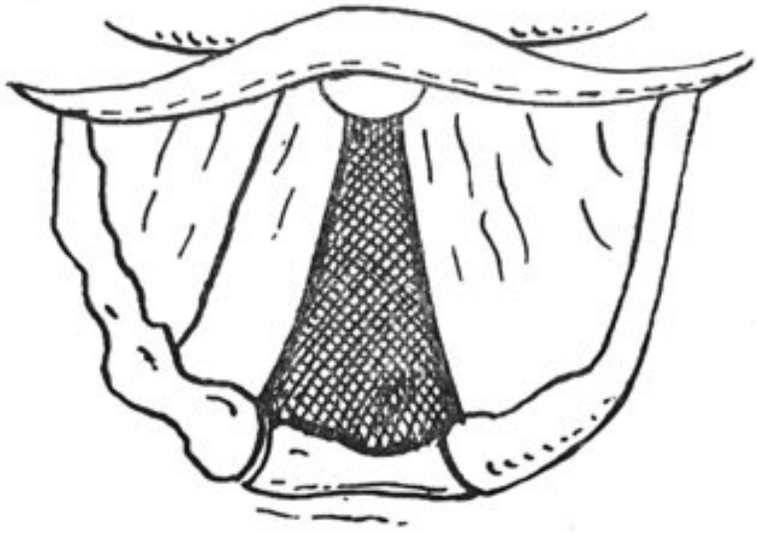
Chapter III.

THE VOCAL CORDS.

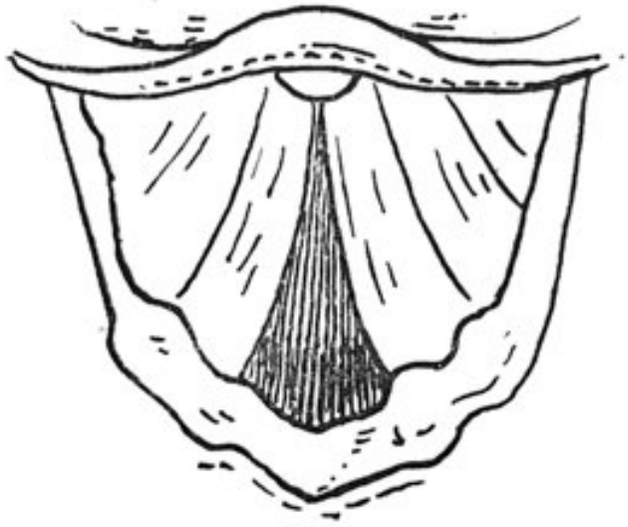
An explanation of the nature and action of the vocal cords involves a short description of the general structure of the larynx in which they are imbedded. This description, however, will be intentionally curtailed. Plate III. gives a lateral section of the larynx. The lid, or epiglottis, in the shape of a broad pliable leaf, projects above and guards the junction between the lung passage and the gullet. A reference to Plate I. will give a better idea of its position. It remains open during inspiration and expiration, but closes automatically during the swallowing of food or liquid and so prevents the entrance of foreign matter into the larynx and lungs.* The vocal cords, which look like fleshy projec-

* Dr. Iredell, in his work on "The Voice," denies the epiglottis this function, and quotes Prof. Anderson Stuart as his authority.

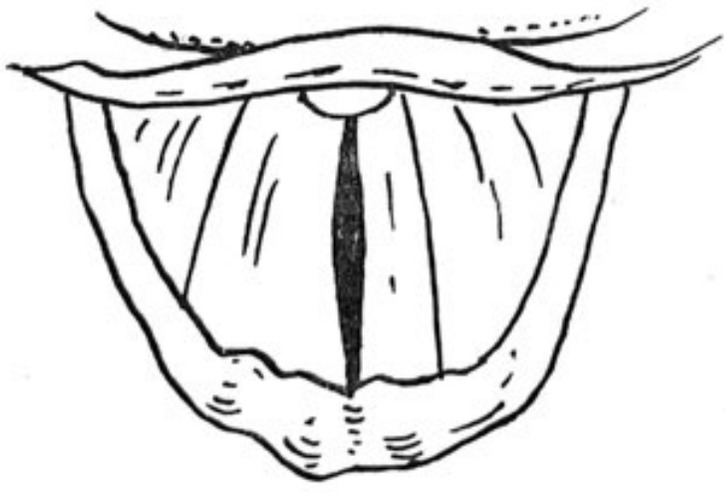
Various Positions of Vocal Cords.



Ordinary Breathing.



Whispering.



Singing a Strong Note.

Plate IV.

tions on the inside of the windpipe, are sharp, straight, smooth, and exceedingly elastic on the margins and capable of being drawn tightly together.

Plate IV. gives views of the vocal cords in varying degrees of tension, stretched over the entrance to the windpipe, and looked down upon from above. The nature and position of the true cords, which when seen through the laryngoscope shine like mother-of-pearl, have been well described in the following words :—

"Suppose two tight bands of any elastic membrane, such as thin sheet of indiarubber, stretched over the end of a wide glass tube, so as to leave a narrow chink between the free borders of the membrane, and that a powerful blast of air is driven through the tube by a bellows. The pressure would so distend the margins of the membrane as to open the aperture and allow the air to escape ; this would cause a fall of pressure, and the edges of the membrane would

spring back by their elasticity to their former position; again the pressure would increase, and again the edges of the membrane would be distended; and those actions would be so quickly repeated as to cause the edges of the membrane to vibrate with sufficient rapidity to produce musical tone, the pitch of which would depend upon the number of vibrations executed in a second of time."

The number of vibrations, of course, varies very greatly. For instance, in a man's voice it ranges from 75 to 354 per second, and in a woman, or boy's soprano, from 239 to 1,417. It must be remembered, too, that the pitch of the note is affected by the length of the vocal cords. This is usually about seven-twelfths of an inch in men, and about five-twelfths of an inch in women and boys. Then, again, the pitch is affected by the tightness with which the delicate network of little muscles surrounding the cords stretches them over the opening; and the tighter the tension the

greater is the number of vibrations. It is obvious that the object of systematic exercise is to so strengthen and control the little muscles as to enable the singer to sustain and vary the tension (and consequently the pitch) in obedience to the will.

It is advisable to mention the existence of the pocket ligaments, or false vocal cords. They are horizontal projections only (not true cords; see Plate III.), running just above and almost parallel with the true cords. Their exact use has been the subject of great discussion, but it appears to be established that their function is to form a little ventricle, or pocket, above the true cords, into which the escaping air passes. This eddy then becomes as it were an air cushion which assists the return vibrations of the vocal cords and so gives steadiness to the tone. These false cords are not capable of being hermetically sealed, as are the true vocal cords, and are always open during the production of tone. A very simple experiment which makes us

conscious of the existence of the muscles which control the vocal cords is to take a deep inspiration, and then hold the breath. A binding or grip is at once felt in the larynx, and this means that the surrounding muscles have drawn the vocal cords tightly over the aperture and prevented all egress of air. The sudden bursting into tone from this position is the *coup de glotte* of Garcia. This *attack* of tone—which may, of course, be made in any pitch—is very important in finished singing, but it is, by virtue of the severity of the sudden strain upon the cords, an act requiring cautious and careful preparation.

Chapter IV.

THE RESONATOR.

The resonator extends from the vocal cords to the lips, and it is through this extended cavity that the vibrations of the air caused by the cords *resound.*

A reference back to Plate I. (p. 15) will show that these six and a half or seven inches of cavity take in through their course the pockets, the pocket ligaments or false cords, the lid, the upper throat or pharynx, and the mouth. It is a complex passage, capable of a most marvellous adjustment of muscles. But it must be remembered always that these adjustments of muscles have no very marked effect upon the pitch of the voice, which is determined by the tension of the vocal cords; they do, however, add resonance to the air vibrations.

Many attempts have been made to establish comparisons between the apparatus of the human voice and different musical instruments, but there is no instrument so remarkable and delicate in structure, or so potential in resulting tone.

The principal use of the muscles of the resonator in speech is to make the human voice articulate—that is, to produce the sequence of vocal sounds which constitute language; and in singing, both to articulate and to give a maximum of resonance. The key to the superiority of the human resonator appears to lie in Helmholtz's law, that a narrow tube has a resonance limited to the particular note which has a vibratory wave-length corresponding to length of the tube, *but that a wider tube is not so selective.* The wider tube resounds not only on its own particular note, but upon the neighbouring notes, some tones above and below it. The wide tube has, therefore, a resonating *range,* and it is easily under-

stood that the range of the human resonator may be immensely increased by the expansion and contraction of the muscles which form its walls, and by the lengthening and shortening of the tube effected by the rise and fall of the larynx and by the action of the lips. We are now able to see that a wide adjustable cavity is the best resonator, and to realise the value of "the loose open throat" which is so much the aim of the best teachers.

The violin depends for its pitch upon the tension of the strings; the reed instrument upon the length of its tube, which varies with the distance of the first open note from the reed. The instrument of human voice, although it depends almost entirely upon the tension of the vocal cords for its pitch, has yet a marvellously supple resonator which may vary much in cavity and even a little in length. It is this combination of attributes that leads to comparisons which, after all, can never be exact.

It is desirable that the several parts which together compose the resonator should be photographed upon the mind. The probable function of the pockets formed between the pocket ligaments, or false cords, and the vocal cords has been already described (p. 27). The pocket ligaments, or false cords, are, as has been said before, always open during voice production and do not call for extended notice.

The lid, whose office has been already described in dealing with the larynx, differs greatly in size and shape in different individuals. It has been suggested that the lid gives the distinguishing ring which enables us to recognise the voice of a person we know, but there are probably other factors. The upper throat, or pharynx, extends from the lid to the entrance to the nasal cavities just behind the uvula. The uvula is that pointed pendant of flesh which hangs down from the middle and back of the soft palate. It can readily be seen with the aid of a mirror and a deep breath.

The mouth extends from the upper throat to the lips, and has the tongue for its floor, and the hard and soft palates as its roof. The point of division of the hard and soft palates can be readily discerned by running the point of the tongue back from the front upper teeth along the roof of the mouth. The soft palate is exceedingly pliable, and plays an important part in the proper production of vowel sounds. It is well supplied with muscles which draw it down, or elevate it, at will, and those attached to the back of the uvula form a cushion over the entrance to the nasal passages and completely close them when we sing. It may be added in passing that, although closed in this way, there is always a slight sympathetic vibration in the nasal passages.

The muscles, then, of the upper throat, the soft palate, the tongue, and the lips are the agents which so shape the resonator as to give a maximum resonance to the air vibrations which pass through it from the vocal cords.

Chapter V.

VOWEL SOUNDS.

The importance of the proper use of vowel sounds in the cultivation of the voice will be realised when the student remembers that, during the utterance of them, no portion of the resonator is so displaced as to interfere with the free passage of the air vibrations from the vocal cords to the open lips. It is upon vowel sounds only that we are able to obtain full and sustained resonance, and to give the vocal cords that even exercise in tension and adjustment which will ultimately make them our prompt and faithful servants. The consonants all involve total or partial closing of some portion of the resonator, and consequently in proportion as a language is rich in consonants it is impoverished in song.

The English vowels, **a**, **e**, **i**, **o**, and **u**, are not a satisfactory series for vocal exercises,

inasmuch as the broad **a** (ah) is not included; and the sound **u** necessitates a raising of the outer edges of the tongue against the upper teeth, to the serious obstruction of the air passage. It is customary, therefore, to accept the Italian vowel sounds, as being purer and better adapted to the work of throat-opening.

The Italian sounds are—

a	**e**	**i**	**o**	**u**
(ah)	(eh)	(ee)	(aw)	(oo)

and these will be adopted throughout all subsequent explanations.

The vowel **a** has been called basic, because in the production of it the positions of the various parts of the resonator are natural and unstrained. The teeth are open about one inch, the lips rest naturally upon them, the soft palate is arched so that the muscle at the back of the uvula closes the nasal passages, and the tongue is at rest.

The vowel **o** is obtained by preserving the same positions as for **a**, save that the lips are protruded, and the corners of the mouth drawn together a little.

The vowel **u** is obtained by a still farther protrusion of the lips and drawing together of the corners of the mouth.

To obtain the vowel **e** the lips are kept in the natural position of **a**, but the tongue is raised in the middle so as to project the outcoming air vibrations upon the front of the soft palate.

The position for **i** is the same, save that the tongue is raised in front sufficiently only to project the vibrations upon the front of the hard palate.

The important matter in the production of these five principal sounds and of their intermediate modifications is the maintenance of the loose open throat. It is for

this reason that we make the natural position of **a** our starting point. The other sounds are produced merely by changes in position of the lips or tongue.

		A		
Tongue	E		O	Lips
	I		U	

Diagrams of the mouth during the production of these sounds are not very satisfactory as guides, and in preference to them, the following plan for ascertaining the positions of maximum resonance is recommended :—

Whisper the vowel sound loudly, and open the mouth and adjust the resonator until the sound comes most clearly, crisply, and resonantly. Then, without moving any part of the resonator, take a deep breath and sing the vowel. The advantage of this method lies in the fact that, in whispering, the muscles are not unduly constricted, but assume the loose openness

which should be preserved during the production of the subsequent tone. Another advantage is that during a whisper the student is better able to direct his thoughts to the dispositions of the various muscles of the resonator. Dr. Aiken has written a very interesting and suggestive chapter upon whispered resonances, but any discussion of it would carry us beyond the limits of this work.

The vowel sounds may all be lengthened, shortened, or modified, in consequence of their occurrence before, after, or between consonants, but it must never be forgotten that it is the presence of the vowel that gives fulness of tone to the syllable, or word, when sung. The two English vowels, **i** and **o**, occur so frequently in English song that it is not well to omit them from our exercises. They are not pure vowel sounds. The first is to some extent a combination of the two sounds i-ee, and involves a movement of the tongue; the second is to some extent a combination of

the two sounds o-oo, and involves a movement of the lips. The Italians as singers are more fortunate than we. They are fortunate in the purity of their vowel sounds, and the wealth of them at the ends of words makes their language glitter with tone-jewels.

Chapter VI.

CONSONANTS.

We may begin by accepting Garcia's division into explosive and sustained consonants. He says:—

"Consonants are produced by two different operations of the articulatory organs. First, by pressure of two parts of the instrument against each other and the explosion of air heard at the moment of their separation. Secondly, from the incomplete and variable meeting of these same organs, and the different and continuous sounds emitted by the air so confined. It is from these two processes that we derive the classification of consonants into explosive and sustained—a division of the first importance in the art of singing."

Without elaborating his division, we may accept **b**, **c** (hard), **d**, **f**, **g** (hard), **k**, **p**,

and **t** as the explosives. The rest are sustained consonants, some of which produce a whistling sound, such as **ch** (soft), **x**, and **s**; and some a continuous noise, such as **m**, **n**, **gn**, **l**, and **gl**. The parts of the resonator to be employed in the production of each may readily be ascertained by experiment, and it is important that only the parts required *should* be employed—that is to say, do not extravagantly move the jaw, when the lips will do all that is necessary; or the lips, when the tongue is producing the sound. Perhaps the most useful advice that can be given is,—make the consonant clear and short, so that the articulation may be good, and no time lost in impeded resonance.

Chapter VII.

POSITION.

It is advisable to practise before a mirror whenever it is possible—before a full length glass for position of the body, poise of head, and avoidance of grimaces; and before a hand mirror for the proper drawing up of the soft palate and depression of the root of the tongue.

In position of the body, the aim must be naturalness. Leaning forward contracts the chest, depresses the larynx, and projects the voice upon the floor in front of the singer. Leaning backward binds the muscles of the chest, raises the larynx, tightens the muscles of the jaw, and projects the partially strangled voice at the ceiling. The naturally upright position leaves the breathing, larynx, and jaw free, and projects the voice across the room or hall.

It may be laid down as a general law that there must be no straining, or binding, in any part of the voice instrument. Even the minor fault of thrusting forward or drawing back the chin must be avoided.

With the aid of a hand mirror the various parts of the resonator may be studied and a facility of adjustment acquired which will enable the student to ascertain for himself the positions of pure tone and maximum resonance. It will also lead to an intelligent control over the muscles of the tongue and soft palate, which cannot be acquired in any other way.

Chapter VIII.

EXERCISES,

I do not propose to deal with the subject of exercises at any length, because of the difficulty which attaches to the establishment of general principles applicable to the great variety of faults and shortcomings met with in different voices. It is necessary to consider each voice separately, and to apply the exercises best adapted to its correction and development. Scientifically there is nothing superior to Garcia's system of graduated scales and exercises, and I have, with very little alteration, based my method upon it; but the selection of scales, and the vowel sounds on which they are to be taken, must depend upon the individual voice.

I entirely disagree with those authorities who would confine all exercises to the one

vowel sound **a** (ah). It is admittedly basic and the most important, because of the natural position of the resonator during its utterance, but it is prone to produce harshness of tone if persistently carried into the upper notes of the middle register. Apart from this, it is not reasonable to expect flexibility in the muscles of the resonator unless their work be varied. Even though scales on **a** (ah) may be freely indulged in, it is advisable to round the sound to **o** (aw) in the higher notes of the scale.

One matter of first importance is that the student should not in exercises strive to add to the voice range by straining at extremes either in the upper or lower register. The scales should be carried only over a range which involves no straining, and as the notes within this range become full, true, and resonant, it will be found that other notes at the extremes have come within easy reach and may subsequently be included.

In approaching the limits of the upper register the last few notes should be taken softly and with the greatest care by beginners. The breath must be well under control and supplied gently and evenly. Any neglect of this rule will almost certainly produce a vibrating shriek entirely devoid of tone beauty. Evenly applied and sustained expiration is, of course, essential throughout the voice range, but I wish to emphasise the necessity for entering upon the development of the higher voice *softly* as well as evenly.

Beginners must be careful not to tire or destroy the quality of the vocal cords by too lengthy practice. At the outset the practice should be limited to five minutes' duration, and repeated at intervals of two or three hours, four times a day. Five minutes may be too long, and if the throat should tire, or a huskiness be produced, it is much wiser to desist for the time being. The length of the practice may be gradually increased as the vocal cords strengthen,

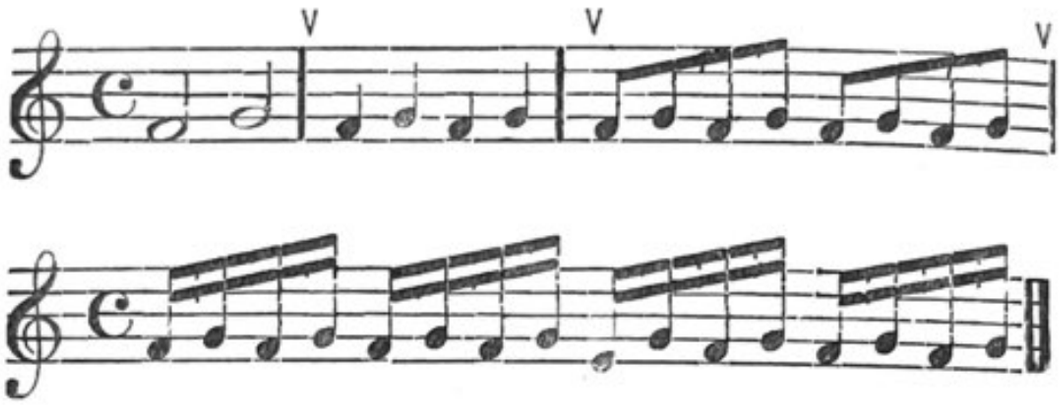
until at the end of a year of constant work the maximum of twenty minutes, repeated at intervals six times a day, is reached. More than this cannot be done without risk of satiety and injury.

The cultivation of voice attack can be best achieved by singing each note in the scale—keeping to the medium voice—four or five times shortly and decisively, with a breath between the sounds. The first vowel for this exercise should be **a** (ah), but the other vowels must also be brought into requisition. Voice attack is the capacity to hit the note required clearly and without any vocal groping. This definition is sufficient in itself to establish the importance of the exercise referred to.

To cultivate flexibility of voice, which involves a clear transition from one tone to another, it is well to begin with two notes of the scale only. Sing from the lower to the higher once in the bar, then breathe and sing the same notes twice in

the bar, then breathe again and sing them four times, and then eight.

Thus :



This is one of Garcia's exercises, and should be smoothly practised in semitones over the range of the middle voice. Later three notes may be included in the exercise, then four, five, and so on over the whole scale. The more difficult forms of exercises, such as rapid chromatics, all forms of arpeggios, and the shake, should not be attempted until the voice is thoroughly under control.

In all these things practice must never be allowed to become spiritless and automatic. Each note must have its earnest and intelligent rendering, for it is along this way that success lies.

Chapter IX.

SINGING.

Although I am desirous of keeping this work within a small compass, there are a few things which must be said upon the art of singing. There is a tendency—far too prevalent among singers—to aim at noise rather than at quality of tone. Singing as an art can only be re-established when all singers abandon the pursuit of noise, to seek quality of tone; without it volume of sound can never be anything but the unbeautiful in song. The student must, therefore, never be discouraged by what may appear to be a want of power, so long as the tone is true. Cultivation of tone quality will gradually increase the power, but any striving after power (before the tone is truly placed) will indubitably sacrifice quality.

Another matter which calls for special reference is the necessity for smoothness of transition in ascending or descending a scale. A very common offence is to introduce an aspirate or a suggestion of an aspirate before each note. The remedy will be found in the application of will power to the breathing and vocal cords.

The first duty of a singer is to study the words of a song with a view to becoming master of their meaning, for without this grasp the musical story, or poem, can never be rendered with what is usually called expression or soul. It is this understanding of the meaning of a song that also gives the key to proper phrasing. In singing, as in reading aloud, there are certain passages or sentences which must be given without pausing for breath, in order that the sense may be preserved. Quick supplementary breaths are sometimes unavoidable, but we must not readily admit the necessity for them. For this reason long phrases should be commenced

softly, in order that there may be a proper conservation of power. A strong beginning to a long phrase almost invariably leads to a feeble and breathless ending. Selections from Bach and Handel's arias will afford invaluable aid to those who would overcome the difficulties of this branch of song.

At the risk of repetition, I must again remind students that there can be no finished singing without absolute control of the breathing apparatus. *Sustained tone, diminuendo* and *crescendo, concentrated tone* and *sotto voce* singing (one of the most beautiful and useful acquirements of a finished artist), are all dependent upon control of breath. It is not enough to be able to take it in properly; it must also be properly expended.

In conclusion, I would say that I do not wish students to regard this little treatise as exhaustive of the subject; I prefer that it should be regarded as a spur to further study. It does, however, comprise a

statement of the principles which govern the cultivation of the voice; and if it does something to convince others that voice culture is entitled to a place among the sciences, I shall be content.

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