Thesis

Concerning the

Laryngoscope

and some

Laryngeal Diseases

by

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"Sire,czącoker, good reader, the God speed thee! Do not open it at adventures and by reading the broken pieces of 2 or 3 lines judge it; but read it through and then I beg no pardon if then dislikest it.

Farewell"

Thos Adams.
The Statute of the University of Edinburgh, relative to the production of a Thesis by every candidate for Graduation, would be much improved by the addition of a clause to the following effect—that a Thesis consisting of a compilation from various authors would not be accepted, but that every Thesis should consist mainly of observations on any subject which may have especially come under the notice of the Student during his pupilage.

Of course, amidst these remarks continual references would necessarily be made to the writings and doings of others. It surely is utter waste of time to copy a little from one author and a portion from another regarding perhaps a subject with which the student graduate is practically unacquainted, until he has amassed sufficient to constitute what is termed a Thesis. The opinions contained in which he is supposed to be able to defend.

If such an addition were made to the Statute as that above suggested, a Student would be compelled to make a greater use of the "Five gateways of knowledge" and instead of "Walking the Hospital" as is so frequently the mode of attending its Practice, he would have greater inducements...
placed before him to make observations in that wide field for research and study. It must not however be supposed that all the men who make compilations require any stimulus to make them work, for they are obliged thus to do on account of the scarcity of the time at their disposal for thought and reflection. Until therefore the education of the Medical Student be so arranged as to give him time for the digestion and assimilation of the materials daily forced on his attention by his teachers, the alteration suggested is not likely to succeed. Some of Mr. Syme's remarks on Medical Education delivered at the College of Surgeons are perfectly correct. A Student is continually on the eve of an examination and is so necessarily worried by these tests of his proficiency, as to have insufficient time for quiet thought. Amongst the many existing evils which show the great necessity for reform, not the least are to be found in the manner in which individuals commonly called "Grinders" flourish, and in the abundance of those books known to all by the name of "Lrams". There are many unanswerable objections to the
Proposal for a reduction in the severity of the examinations or for the curtailment of the number of subjects studied.

It is almost incredible, but is a lamentable fact, that there are men in this enlightened 19th century who consider that the sciences accessory to that of medicine are useless and unnecessary for Medical Education, because they have nothing to do with "physicizing." The majority, however, must agree with the remarks of Professor Balfour, at the meeting above referred to, relative to the absolute necessity which undoubtedly exists for a Physician to be acquainted with the Natural Sciences. A very illustrious and wise man once said:

Nec minus scientia existimanda, sunt, quam minus est usus, si ingenia acceat et ordinem.

The change necessary in the number opinions of the writer, is a reduction of the excessive number of lectures on some of the subjects and above all, a longer period of study should be enforced. To argue, that, because Medicine and its allied sciences have expanded to a very large extent,
that, therefore, the Student should only have a general knowledge of them is surely a very false deduction.

Time, then, is essential for the study of those Sciences which have so much enlarged since the days of the Father of Medicine. As it was, in all probability, who enumerated the advantages which a Student should possess who was desirous of obtaining a thorough knowledge of Medicine in the following passage:

"Χρή γὰρ ὅσιοι μελετείς ἱπποτικῆς
συνεδίω ἅτρεκες, ἀρμοζεσθαι τῶν ἐν ἕπηβολος γενεσθαι. Φύσιος: διδασκαλίας
τοῦ εὐφυεῖος παιδομαθῆς: Φίλοπονίτης
Χρονοῦ"

I would only desire to call special attention to the word in this quotation which, although the last, is not by that account the least in importance.

Again, in the Earliest Christian University, that of Salerno, in Italy, which as a School of Medicine reached its highest eminence in the 12th and 13th Centuries, the requirements
in this respect were more extended than those which first at present, for no candidate could be admitted to public examination who was unable to afford full proof of his having diligently studied during a period of seven years. If this time was required when Medicine and the allied Sciences were in their infancy, how much, prayer, is the necessity now for lengthening the period of study.

Hoping the above criticisms may not be considered presumptions, I will proceed with what more properly belongs to the subject of this paper. The following remarks are the results of observations relative to the Laryn报废, and to some cases of Laryngeal disease which came under my notice at Kings College Hospital. They are prefaced by a short sketch of the History of the Instrument, the main object in giving this being to supply omissions which have been made in published accounts on the subject.
The introduction into general practice of the Laryngoscope and its modifications, the Rhinoscope and Autotaryngoscope, by Professor Czerny of Prague, produced no little surprise and astonishment among the members of the Medical Profession. The resuscitation of the Laryngoscope was attended by that ordeal through the several stages of which all novelties pass before they become established in Medical Practice.

1. The report that the interior of the larynx and even the bifurcation of the trachea could be seen by means of reflected light, elicited the adjectives "absurd, impossible, preposterous." The 2nd stage, which usually consists in the denial of the utility of the instrument in general practice, then arrived.

3. Everyone at last discovered that there was nothing new in the Laryngoscope, for the Glottis had actually been seen so long ago as 1829 by means of a fragment of a looking glass attached to a piece of wire.

Notwithstanding this opposition, this instrument has become thoroughly acclimatized and supplies us with another most valuable aid in the
physical diagnosis of disease, ranking in its utility with that great invention of Professor Helmholtz —
the ophthalmoscope. The education of every physician will no doubt in a few years be considered incomplete
without a thorough knowledge of the mode of using this instrument.

On speaking of the urethroscope, very recently, to a M.D. which had been employed in Paris at
the hospital Necker by M. Desormeaux and through it had examined structures of various
kinds, such as the conjunctiva, postly as situated at the membranous portion of the urethra, I could
see that my friend considered that there must be some mistake on my part for such a thing was
perfectly impossible. Then the 2nd of the stages, above referred to, commenced and all the 3rd doubted
the advantage of such an instrument to any one but the maker. If I had assured him, which I
might have done, with perfect truthfulness, that by means of this same instrument, calculi have
been seen in the bladder, no doubt the two stages would have been characterized by stronger language.
But although it may be thought by some that such a statement should be received "cum grano salis".
yet it involves nothing new for Mr. John Avery
of St. Mary's Hospital, by means of specula with
which he experimented about 17 years ago, stated
most positively that he saw a stone in the bladder
from which one was subsequently extracted.
It is not generally known, perhaps, that the Japa-
inese have long employed tubes made of brightly polished
silver wire coiled in spirals for examining the
interior of the bronchial passages of the body. Might not
a spiral of this material, highly polished on its inner
surface, be made applicable for introduction into the
oesophagus through which light could be reflected and
the viscera of that canal thus brought to view?
The great difficulty in the examination of the
oesophagus is, of course, owing to the apposition of its
sides, except during the passage of food.
In the summer of 1861 the British American Medical
Journal referred to an instrument, used by a
celebrated "stomach man" for the examination of
the interior of the stomach, called a Gastroscope, which
consisted of a tube passed down through the
oesophagus and a series of reflecting surfaces,
the means membrane of the digestive cavity being
seen in a mirror placed in the Pharynx.
The feels inclined to disbelief in the probability of an ocular examination of this organ, and to be rather amused at the idea of occasionally taking a preb to see how the digestion or "concoction" that Old Celsus talked so much about, is proceeding. No doubt if our ancestors had been told that it was possible to see the bifurcation of the trachea, to take photographs of the larynx and posterior nares, they would have considered their informant to be a most-striking individual. It surely is neither "absurd, impossible, or preposterous" then to anticipate the arrival of a period when the art of illuminating the open passages of the body shall have so advanced, that it may be possible for the eye of the Physician to penetrate them all. Let us not then allow ourselves to be swayed by that aversion to all innovation which seems to afflict the minds of elderly practitioners. It is far easier to decay a new mode of investigation than to become familiar with its application; much easier to speak slightly of a new instrument than to acquire dexterity in its use.

"There are some," says Sydenham, "who adding nothing to Medicine of their own, are angry at the most trifling addition of another."
Having made these preparatory remarks, I will divide my subject in the following manner—

1. A sketch of the History of the Laryngoscopes;
2. A description of various forms of Laryngoscopes, of the difficulties in using them, and of the accessory instruments employed;
3. Cases illustrating its great value as a means of diagnosis and its occasional "failures" with accompanying Remarks.

To commence then with the 1st division of my subject namely,

1. The History of the Laryngoscopes

which, of course, must be wholly obtained from books and other publications.

In the year 1807 was published at Weimar a pamphlet by Bozzone of Frankfort-on-the-Main on the illumination of the principal cavities of the body. The pictures were omitted but the posterior nares included.

In 1827 Dr. Jann of Geneva endeavoured to obtain a sight of the larynx of a child, on whom he was about to perform tracheotomy, by means of a small mirror. He was unsuccessful; however, in his attempts, on account of non-illumination of the vocal organ.
Vide Case in Journal de Propriés 1829.
D. B. G. Babington exhibited to the Hunterian Society,
on March 18th, 1829, an ivory piece of looking-glass set in silver wire with a long shank, which he called the "Glottoscope." By placing this instrument against the palate and reflecting therein the light of the sun by means of a common, back-hair glass, he saw the epiglottis and upper part of larynx.
D. B. afterward united a spatula to the laryngeal mirror, the former being fixed in such a way that by pressing the two handles together, the tongue was depressed. Vide London Medical Gazette for the 28th of March 1829.
Bozzini then was the first who practiced Rhinoscopic whilst D. Babington was the discoverer of Laryngoscopic Sphenous, an ingenious Mechanic, affected with Laryngeal Phthisis, is mentioned by Troussseau and Bellus in their Treatise on that disease as having in 1833 made a speculum of two tubes, one of which served to throw the light upon the plates, the other to reflect the image of the plates upon a mirror placed at the pharyngeal extremity of the instrument. The authors state that this apparatus was very difficult of application and that not 1 in 10 could bear its introduction.
Fig. 1.

c. Camula
b. Prism
a. Ring at end of
b. Handle
s. Screw

Liston in his 3rd Edition of Practical Surgery, p. 417 published in 1840 speaks of obtaining a view of an ulcerated pothole by means of a speculum, similar to that used by dentists, on a long stalk and dipped in hot water before its introduction into the pharynx.

In April 1844 Dr. Adam Warden, a Physician of Edinburgh, read a paper to the Royal Scottish Society of Arts on the employment of a Reflecting Prism for illuminating the sin cavities of the body and illustrated by an Anæroscope adapted to this mode of observation. Through the kindness of Dr. Argyll Robertson, I have seen this instrument which is described in Edin. New Philosoph. Journal, Vol 37, p. 73 and sketched here Vide Fig. 1. Dr. Warden subsequently saw two cases of disease of the pothole by means of a prism so arranged as to throw light on the larynx.

The following statement I obtained from a letter sent by him to the Editor of the Lond. and Edin. Month Med. Journal, Vol 5, p. 552, "The epiglottis was immediately seen to be nearly 3 times its natural thickness."
but, it was only when efforts to swallow were made or repeated that the arytenoid cartilages were raised out of concealment and brought brilliantly to show their picture in the reflecting face of the prism. Observation was thus repeated and suspended at intervals by the momentary dimness of the prism during inspiration. In no work on the larynx, says the author, are the claims of this Scotch Physician to recognition acknowledged, with the exception of a short passage in Mr. Gibbs' latest edition, who seems to have derived his information from a communication in the Brit. Jour. For. Med., Chirurg. Revue January 1863 by W. Windsor. From the years 1846 to 1848 Mr. Avery of Charing Cross Hospital used instruments for looking at the throat, posterior nares and interior of the larynx. In 1850 he obtained the medal of the Society of Arts for an instrument to view the larynx similar in principle to those now employed, consisting of a mirror and small reflectors made of solid lamps of metal. He affirmed that with it he had occasionally been able to see as far down as the bifurcation of the trachea. Mr. Desormeaux, Surgeon of the Hospital Necker, Paris, has used the laryngoscope for the last 11 years which instrument is alike applicable for the
inspection of the nasal fossa, pharynx or indeed any deep canal. Strange to say no allusion has been made to his name, as far as I can discover, in any publication on the Laryngoscope. For a description of the Wettsteincope Vide Gazette des Hopitaux Feb 14 1863.

Garcia worked with the Laryngoscope in 1855 with the object of studying the mechanism of the human voice. Vide Proc. of Royal Society Vol 7 P99. He was the first to succeed in obtaining a view of his own larynx and is therefore the originator of Antilaryngoscopy.

In the summer of 1857 Dr Zipck of Ulema used the instrument medically and he was subsequently followed by Czermah, Battaile, Merkel and many others. To Professor Czermah, who is named by Dr Gibb the "Father of Laryngoscopy", does the credit belong of having perfected and introduced the Laryngoscope to the medical profession.

Czermah's first essay on the subject appeared in 1858 and was entitled "Physiological researches with the Laryngal mirror of Garcia". This was followed by various papers, the most complete and comprehensive of which was published by the New Syd. Soc: in 1861 andnamed "The Laryngoscope and its application to Physiology and Medicine."
The most recent labours of Semelkiz, Storrs, and especially of Dr. Gibbs in this extremely important and interesting part of medicine should not be omitted.

Before proceeding to the 2nd division of my subject, it may be remarked that in some rare cases the epipharynx can be seen by the unaided eye. In these, the individual has usually a very capacious throat and is able to protrude his tongue to a great extent. Persons in whom this condition existed, have thought that the lump seen in the throat was an abnormal growth. Vide Case 13 Pbs. of Czermak's work on Laryngology.

In Bartholomew's Hospital, Dr. Lawrence had a patient with some secondary syphilitic affection and who one day drew Mr. L's attention to some "lumps in his throat." These were found to be enlarged papillae at the back of tongue which were readily observed on its protrusion. At the same time, the epipharynx could be distinctly seen to the extent of 1/2 of its length possessing its natural colour and appearance. The patient could protrude his tongue so fully that its point reached the chin. I remember seeing several years ago a similar case in Cornwall. It was that of a fine well-developed servant man who, living in a
wealthy family, was accustomed to feed well. He was of an extremely nervous temperament and everlastingly complaining of his throat. His principal symptoms were occasional slight huskiness of voice with "unpleasant indescribable sensations" about the larynx. He was always excessively wrapped up about the necks and very diligent in seeking out and reading medical works. On examination of the throat nothing abnormal could be detected but apparently in consequence of the great capacity of his larynxes and partly owing to doubt to his power of protruding the tongue to a great extent, the epithelium of normal size and appearance was most readily seen. His medical attendant considering the affection of which he complained, as one of a nervous description and treated him accordingly. As the laryngoscope was not then known in the provinces, the state of the larynx could not be ascertained.

2. A description of various forms of Laryngoscopes; of the difficulties in using them, and of the accessory instruments employed.

The larynx may be seen from two points of view. The usual one obtained is from above downwards and will be alone described in this paper.
The other view i.e. from below upwards is only obtainable under certain conditions. To see the under side of the vocal cords and potholes, it is necessary to introduce the reflecting mirror of Gendover, into the trachea or lowest part of the larynx, through a fenestrated cannula and is only applicable in cases where tracheotomy or laryngotomy have been performed, or in the dead. Vide Czernyak, p. 49.

Although the introduction of the laryngoscope is of so recent a date, the variety of modifications already existing produce some difficulty in coming to a conclusion relative to the best and at the same time the simplest instrument. The difficulty of course arises from the necessity of carefully examining and testing these different forms. It is moreover an unsatisfactory piece of labour for the form of instrument which a man is accustomed to employ, is the one he generally considers the best, and those gentlemen who bring out the various modifications prefer the children of which they are the fathers to the productions of others. The opinions then on this subject although perhaps worthless are intended for those who are not prejudiced in favour of any instrument or those dissatisfied with the one they already possess.
The Laryngeal Mirror is the most essential part of the instrument and is made of different forms, sizes, and materials. The mirrors employed by Czermak are plane and square with the angles rounded, the stem being attached to one angle; whilst circular, elliptical, and ovate ones are preferred by Dr. Türek. Vide Méthode pratique de Laryngoscopie, Paris 1861, pp. 16-20. Dr. Leun of Berlin has long been in the habit of employing mirrors of a semicircular form with a concave inferior margin. With regard to the material best suited for laryngeal mirrors, those manufactured of steel are preferred by Czermak, but the reasons for his preference are not clear. Dr. Gibb employs for very minute examinations slightly concave metallic mirrors of a circular form, plated with gold and silver, which he states offers beautiful and brilliant reflecting surfaces which do not tarnish. Suppose the object in having the mirrors slightly concave is to magnify to a small extent the parts under observation. Dr. G. considers however, that for ordinary purposes, the glass mirror is unrivalled. Laryngeal mirrors are also made of spurious metal and silver. From my very limited experience, I should say that the steel mirrors are infinitely superior to...
will make poor ones and for the following reasons—
1. If a steel mirror is not quickly cleaned after use, the mucus leaves a permanent stain which renders it useless until refurnished.
2. The beginner will not see much with them, for instead of reflecting all the light thrown on their surface like the silvered mirrors, the dark grey surface of a steel mirror absorb's much and thus deficient illumination results.
3. Steel mirrors are liable to rust if kept in a damp place or imperfectly dried after use, and they rapidly lose their polish requiring the assistance of the instrument maker.

4. A metallic mirror cools more rapidly than a glass one, and thus becomes sooner dimmed by the breath of patient.

The size of the mirror employed will depend on the capacity of the pharynx and the tolerance of the soft palate to the presence of a foreign body. In order to operate the necessity for moving the mirror from one side of the throat to the other, that a view of all that it is desirable to see may be obtained, a large mirror should be employed. It is best to use the largest that can be conveniently introduced and tolerated so as to see as much as possible
at a single glance, for by this means the relations of the various parts are most readily determined. The moving about of the small mirrors which is necessary, is not only apt to cause pitching but is troublesome to the operator and those friends who may perchance be looking over his shoulders. The mode of warming the mirror by means of a spirit lamp flame seems more convenient and less formidable to the patient than a jug of boiling water which was Mr. Leston's plan. It will be found exceedingly useful, if laryngoscopists accustom themselves to the use of the laryngeal mirror with the left hand for the right is required very frequently in the application of topical remedies to larynx.

The laryngeal mirror most generally useful then is a quadrilateral or circular, plane, flat one, about an inch in diameter, although it will be found necessary to possess several sizes. To add to the portability of the instrument, the backs of the various mirrors should all be made to fit into one handle instead of each mirror having a separate one.

Dr. Morcell Maclean, prefers a laryngeal mirror with a curved rod which arches over the convexity of the tongue.
The exact locality for the laryngeal mirror, if we wish to look straight down the larynx, is the compressed and slightly elevated uvula. Dr. Türek has given to the profession a great number of rules, as to the position and inclination of the laryngeal mirror necessary for the examination of each particular part of the larynx. All these directions, however, are perfectly useless. These minute respecting the management of the mirror, being only learnt by practice on a patient or better still on one's own throat.

2. The illuminating mirror is either flat or of concave, perforated or non-perforated, either adapted to a large spectacle frame or to a pack with an elastic band or attached to a mouth-piece. The last arrangement is the one preferred by Czermak, but this has not become general for it is awkward, unpleasant and one is unable to speak during an examination. Dr. Gubitz considers the large spectacle frame of Smecker the most convenient. The concave mirrors are now almost universally adopted and the non-perforated ones deservedly becoming more popular. The illuminating mirror was, during the infancy of laryngoscopy, suspended from a support screwed to the corner of a table.
Now a days, however, it is, if perforated, placed in
front of the eye, but, if non-perforated, on the forehead
or between the two eyes.
Dr. Moura-Bonvillon, in his "L'oeuvres Complet de
Laryngoscope" published in 1861, refers to the advan-
tages of a non-perforated mirror worn on the forehead.
Dr. George Johnson of London, unaware of Dr. M. B.'s
suggestions, brought the same subject under the notice
of the Professors in February 1863.
When the observer with a perforated mirror looks into
the throat of a patient, he is annoyed with the effort
required to keep the eye adjusted to the aperture, and
this is more especially the case, when it is necessary to
employ both hands. It produces great discomfort and
inconvenience to be obliged to peer through a small
hole, and it is far more pleasant to have both
eyes at perfect liberty. The luminous circle produced
by the reflection of light by the perforated mirror, has
a dark spot in its centre which is very undesirable.
The superiority of the frontal mirror is not only shown
by its freedom from the above objections, but
also by the following advantages—as the manipulator has the unimpeded use of both
eyes, he finds it much easier to direct light in their,
to keep the large glass mirror in the required position, and in short to do everything for the performance of which two eyes are of more service than one.

As regards the relative illuminating powers of these instruments, the difference is slight. Vide experiment described at p. 51. The advantage is on the side of the frontal mirror which, in consequence of the absence of a hole, reflects a little more light than a perforated one.

Lastly, an illuminating mirror having a central hole is more simple and less costly. In place of a curved piece of wire connecting the illuminating mirror and pole which makes it to be moved in any direction, a ball and socket joint has been substituted. The slight advantage thus afforded, however, is more than counterbalanced by the greater space which the instrument occupies in a case and by its greater expense.

Care should be taken, when employing the rays of the sun, to avoid bringing them to a focus, for as Dr. Lewis D. Johnson remarks, "Solar caustic may be made even more powerful than lunar." The concavity of the illuminating mirror should be such, that a nodular mass of light about the size of a 5 shilling piece be produced, without, when the
Mirror is at a convenient distance from patient's mouth. A mirror 3 or 4 inches in diameter should have a focal distance of from 8–12 inches. The size of the tube of light reflected into the throat should vary according to the magnitude of the laryngeal mirror employed. To have the mass of light larger than the facial mirror is objectionable for the following reasons: if the light reflected by the frontal mirror is so large as to illuminate the whole of the fauces, the attention of the operator cannot be so concentrated on the part under his examination as it otherwise would. The validity of this objection having been questioned by a friend I will give those who may be like him sceptical on the point an analogous instance. The concentration of a man's thought and attention is very much facilitated whilst listening for some exceedingly faint murmur with the stethoscope, by closing the eyes and the unoccupied ear. The same result is best obtained in the examination of an illuminated object by excluding all superfluous light. The concave frontal mirror will be found very useful in examining the tonsils, pharynx and palate. For illumination by Transparency Vido Egermann P. 17.
Fig. 2.

d. Solar rays
k. Laryngeal mirror
A. Illuminated
b. Obscure
As regards the illumination of the part to be examined, there is no question but that the best of all lights is that of the Sun. García testifies, that the patient should be placed facing the Sun, so that the observer himself can turn his back towards it and allow the rays of light to pass by the side of his head, or to the laryngeal mirror in the patient's throat. The objection to this mode of examination, which also applies to Dr. Walker's light-condenser, is that the observer is very liable to throw a shadow on the laryngeal mirror. Czerny raises another objection to García's method, by stating that the operator is looking in a direction that is imperfectly illuminated, and gives the annexed (Fig. 5) to illustrate his meaning.

Although this is of course correct both in theory, yet practically is of no importance whatever. For example, the larynx can be as well seen when the illuminating mirror is worn on the forehead as if the observer looked through the axis of the mirror. In the former case, the rays of light, thrown on the laryngeal mirror, do not of course coincide with
the visual axis. As a proof of the truth of this, the following experiment may be tried—place a stethoscope on a newspaper, the sur-
face being in contact with the print. Then throw light, by means of an illuminator, down the tube through the inter-erion of a large glass mirror adjusted at its opposite extremity. It will be found that the letters can be seen with equal distinctness, whether the illuminating mirror is placed in front of eye or on forehead.
Czernak seems to prefer artificial light to that of the sun, as it is more universally applicable at all times of the day and seasons of the year.
The most convenient time for an examination is on a summer afternoon, when the rays of the sun are powerful and approaching more or less a horizontal direction. The situation of the apartment, obstruction of the light by clouds, the vertical direction of the sun's rays during the middle of a summer day, may be obstacles to the use of the sun as an illuminating source.
Artificial lights, then, must be had acess to when either of the above obstacles occur, and various methods have been adopted for increasing their intensity.
I believe, however, that the intensity of light is not of any very material importance in examining the larynx to those who have practiced much with the laryngoscope, and that a very strong light is only essential for the unskilled. Of course, if it be desired to look beyond the larynx into the trachea and see the bifurcation, a powerful light is requisite for every one. The more one becomes accustomed with the various parts of the vocal apparatus, the less light will be required. I have seen Prof. Czermak make himself thoroughly acquainted with the condition of a larynx in an incredible short space of time with the artificial light employed was very feeble and unsteady, barely sufficient indeed for an amateur to obtain a glimpse of the epiglottis.

On the introduction of the laryngoscope to the world by Czermak, a dark room was considered a "sin qua non," but we all now know that this is quite unnecessary, for if we diminish the glare of daylight by drawing down the blinds, it is sufficient. The artificial lights employed are oil lamps, argand gas lamps and the electrical light. Plated or silvered reflectors adjusted behind these lights are found serviceable.
I should prefer the oil lamp to the gas because the light is generally more steady. The light afforded by the argand gas lamp is sometimes very flickering, especially if there is any draught in the apartment.

Some very pretty and expensive oil lamps for the ladies are manufactured, especially on the Continent. The best and cheapest oil lamp I have seen is made by Withered of New Bond St., who calls it the "Microscope or Reading Lamp." It is constructed on the principle of the argand and is furnished with a plain, enamelled shade, which is white on its inner surface so as to throw down white light—a great desideratum to the Microscope. This shade can be readily removed and a plated reflector might be easily adapted.

But for all practical purposes the moderator lamp leaves nothing to be desired.

On meeting some short time ago in London a medical friend who had settled down in country practice, and on inquiring if the lacey-lamps had arrived amongst him with his brother Practitioners, he replied that it had reached them, but the trouble attendant on its use prevented it from being much employed.
by the overworked country doctor. He stated that the trouble referred to consisted in the necessity for hot water and a dark room, in the inability of the lamps used to cast a steady light and above all the difficulty in obtaining sufficient light. The instrument had, in fact, been laid aside by the majority as one of the novelties and refinements continually coming into existence but of no practical service whatsoever. My friend soon, however, became convinced that neither hot water nor a dark room were requisite, that mirrors liable to rust were not essential, and that nothing better could be desired in the way of light than that of the sun or this source, failing that of a moderator lamp and above all some skill in the use of the instrument alone obtainable by practice. He returned to the country to inculcate his brother practitioners who had all obtained their knowledge of the subject from the medical periodicals, the writers in which instead of simplifying matters, too often encumber the essentials of a subject with superfluous and useless details.
Fig. 3.

Oil Lamp made and employed in Germany

Fig. 4.

Argand Gas Lamp used by Dr. Johnson
The concentration of light has been proposed to be adopted by increasing the concavity of the illuminating mirror, but this alteration would necessitate a closer approximation of the operator's face to the mouth of the patient, than is at all times desirable.

Condensing lenses are most commonly employed to increase the intensity of the light and are adjusted to the various forms of lamps vide figs. 384. Mr. Durham employs a modification of a magic lantern, but acknowledges that it is expensive and not portable. Dr. Stork and Dr. Walker of Peterborough do not employ an illuminating mirror, but use large plates of glass filled with water for the concentration of light. Dr. Stork also formerly employed a glass plate, but has since abandoned it. An objection to all fixed illuminators is that the observer cannot readily change the direction of the light, so that he is unable to adapt it to the various movements of the patient.

The most recent and improved form of Dr. Walker's condenser is described in Med. Times & Gaz. April 23, 1864. A representation of this instrument is given on the following page Vide Fig. 5 and the various heads
Fig 5.

a. Glass plate
b. Crossbar, which slides on

c. C. Upright post (22 inches high)
d. Screw for fixing crossbar

e. Plane mirror (3 1/2 by 2 1/2 inches)

f. q. Sliding arm attached to mirror.
g. Arm to allow inclination of mirror at any angle.
h. Arm, movable on c/with screw.

The patient himself and individuals (k & l) see the larynx in mirror (e) whilst operator and individual (k) see it reflected in the laryngeal mirror.
are in the position which they occupied when every one of the five persons, including the patient, had a full view of the interior of the larynx.

The advantages possessed by this instrument are the following – the patient sits five in D2 W's own words: "The apparatus being independent of the head of the observer, he is able to move about and bring his eye nearer to or farther from the mouth of his patient (without interfering in any way with the illumination?); whilst on the other hand, with the reflectors which are attached to head of operator, he cannot bring his eye nearer to the mouth of the patient, so as to observe more accurately the laryngeal image, without diminishing the intensity of the light."

It is a very convenient instrument for the simultaneous examination of the patient's larynx by several persons.

The first is undoubtedly a very great advantage and one in which it surpasses all other instruments at present in use. People complain so much of the inability, when employing the head illuminator, to bring their eyes nearer to or further from the mouth of patient so as to scrutinize the object
reflected in the laryngeal mirror at different distances. This feat desideration however is possessed by a far more simple and portable instrument to be hereafter proposed by the author. The objections to Dr. Walker’s apparatus appear to me great and immediate.

The 1st, which is applicable to all figure illuminators is referred to at p. 59.

2. The glass probe takes the place of the free observer’s head, the light from which he is continually liable to intercept not only by his head but by the hand, which holds the laryngeal mirror. When it is necessary to use both hands, the other being employed in depressing the tongue or holding this organ out of the mouth, the liability to cast a shadow on the laryngeal mirror is of course increased. If we wish to examine the posterior naso with this instrument and face an unruly tongue to deal with (nothing being more common) 3 hands are liable together with the head to obstruct the light, one hand being necessary to depress the tongue, another for laryngeal mirror, and a third for raising the soft palate.

I am well aware that there is an instrument intro-
A depressor and laryngeal mirror, but it is not recommended by Dr. W. and those who employ this instrument.

If, again, any operation such as removal of a polypi, is required, then extremely inconvenient to be continually interfering with the passage of light into the throat.

3. The size and weight of the instrument preclude the possibility of carrying it about.

A large cumbersome complicated laryngoscope meets with the same fate as a microscope of a similar description namely reflect. The laryngoscope is just one of those aids to accurate medicine which ought, like the stethoscope, to be in the hands of every practitioner. In order that it may become generally applicable an instrument is required which combines efficiency and simplicity with portability.

We want one by which not only a patient's, but also our own larynx can be readily viewed.

It is very desirable that an incipient laryngoscopist should first practice on himself and so as to let over all his preliminary simples and clumsiness before examining patients. To accomplish either operation with facility and facility a condenser is requisite.
Fig. 6.

a. Frontal mirror
b. Plano-convex lens
c. Ball & socket joint
d. Frontal elastic band
e. Grooved arm, in which
f. Slides

h. Transverse section of barrel (f)

m. Screw.

n. Transverse section of slide (f)
Now the means hitherto employed for condensing the light have been, as already mentioned, lenses attached to lamps vide P. 58.

To render a lampapparatus portable and universally applicable, the condensing medium should be transferred from the lamp to the illuminating mirror and the sources of artificial light usually found in private houses be adopted.

I have the presumption to think that the joint desirable viz. efficiency, simplicity and portability are combined in the instrument about to be described and represented in Fig. 6.

The concave, non-perforated illuminating mirror is connected in the usual way to the frontat pad, by means of a bent hook which allows of motion in all directions. An elastic band with a buckle attahes this pad to the head of observer. A plano-convex lens is fitted, by means of a ball and socket joint, to an arm which can be moved backwards and forwards in a slide attached to the base of the illuminating mirror. The degree of curvature of the lens, which is required, I have not yet had time to determine in consequence of not possessing suitable lenses.

The lens is capable of motion in any direction by
Fig. 7.

a. Concave mirror.

b. Lens. Rays 1 and 2 would be lost if lens was absent.

c. Light.
Virtue of its universal joint, so as to conduce the rays proceeding from light placed in different positions, as in the mirror. The movement of the arm in the slide is very similar to that employed in the adaptation of the diaphragm to some microscopes and permits of the regulation of the focus. If an instrument is well made, the screw represented would hardly be necessary.

The instrument above described and sketched appears to me to possess many advantages over those now in use. The appended illustrations of my remarks are not drawn with exactitude although they are practically correct.

This magnifier then surpasses those destitute of condensing lenses in producing more light. Vide Fig. 79.

As compared with a laryngoscope furnished with a condensing arrangement attached to lamp, one of the most striking advantages is its great portability. If the instrument above suggested be employed, the eye of the observer may be brought nearer to or farther from the mouth of the patient, so as to scrutinize the object reflected in the laryngeal mirror at different distances with the greatest facility, whilst the original focus is maintained of the greatest brilliancy.
A. Lens
B. Light
C. Laryngeal mirror
D. Illuminating mirror
If a laryngoscope without a condensing lens be employed, and the head is moved backwards and forwards, the result is a great enlargement of the mass of light, the cause of which is obvious. To maintain the light of the same size in the throat as the head of the operator is advanced, it is necessary to gradually move backwards the lamp from the patient, and thereby light is of course lost and considerable inconvenience results.

Again, if a laryngoscope furnished with a lamp adapted to which in a lens be used, or approximating the eye towards the mouth of the patient, the mass of light is much increased in certain directions. Vide Fig. 8. The objection to a light larger than is sufficient to cover the funicular mirror has been adverted to P 47.

Here then is a condensing arrangement which combines the great advantage possessed by Dr. Walker's laryngoscope over instruments employed by others, with an absence of those irremediable objections to Dr. W's apparatus.

The illuminating and laryngeal mirrors, the condenser above proposed, and a hook for raising the Palate, are all that are essential for
Laryngoscopy, Antrolaryngoscopy & Pharyngoscopy. These articles, if closely packed in a pocket-case, would constitute a very portable laryngoscope which the general practitioner might readily carry with him on visiting the sick. In almost every house we are pretty sure to find either a lamp or gas light which is available. Until the laryngoscope is simplified and rendered generally applicable, its use in the diagnosis and treatment of laryngeal diseases must necessarily be much restricted. The microscope would never have come into general use had it not been pared and pruned of superfluities and made as simple and portable as possible.

The mode of employing the instrument, above recommended, on a patient requires no description. The method pursued in practicing Antrolaryngoscopy requires however a few remarks and is that which was introduced by Dr. Johnson. Vide Fig. 9.

The operator seats himself about 18 inches in front of a common looking-glass, one side of and 2 or 3 inches behind which is a lamp. He then directs the concentrated light on the looking-glass at such an angle, that it may afer
a. Tragal mirror.
b. Lens.
c. Light.
d. Looking glass.
2. Laryngeal mirror.
3. Eyes of operator.
4. Larynx.
be reflected into his throat on to the laryngeal mirror. All objects reflected by the faciesal mirror are of course seen in the looking plate before him. In consequence of the occurrence of several reflections, some light is unavoidably lost and unless the source of light is powerful, this method does not equal Czermak’s for demonstration to numbers of people. By Dr. S’s mode, however, the larynx and trachea can not only be seen by its owner, but by those who look over his head and shoulders. Prof. Czermak’s instrument for autolaryngoscopy is rather a formidable and offensive piece of apparatus—vide Czermak on laryngoscope, P. 19.

An advantage possessed by Dr. S’s mode of auto-laryngoscopy, in addition to those obvious advantages, such as simplicity and the necessity of any extra instruments, is the following—whilst holding the laryngeal mirror with the right hand and changing the position of the head so as to obtain different views of the larynx, the operator can keep the light directed where it is required by adjusting the frontal reflector with the left hand. This adjustment of the light cannot be so readily done with Czermak’s apparatus on account of the
distance at which the reflector is fixed. For beginners this mode, by means of the frontal reflector and the looking-glass, of learning the use of the laryngoscope, is exceedingly useful. He not only gets over all his awkwardness in the management of the facial mirror, but that great difficulty which is experienced of reflecting a steady light.

Difficulties in the employment of the Laryngoscope. In those rare cases where the epiglottis is visible to the unaided eye (Vide Cases P.29), the larynx is of course examined with most facility by the laryngoscope. On the other hand, cases very frequently occur where, owing to the position assumed by the epiglottis and sometimes to the contraction of its arch, it becomes totally impossible to see the interior of the larynx. Vide Cases Pages 183, 197 and 201.

Dr. Gibbs showed in 1862 that the opinion regarding the naturally erect position of the epiglottis was wrong, and as the result of his experience, he now states that in "11 per cent of mankind the epiglottis is oblique, very much, or semiretendent, or nearly quite horizontal in persons apparently healthy." Vide, Gibbs on Diseases of Throat and Larynx, P.53.
Dr. Morey Maclean contended on instrument (the epiglottic screw vibrate) for raising the epiglottis in these cases but he found that it caused so much irritation, that he abandoned its use.

Dr. Russell states that, in cases where the epiglottis is recumbent, he obtains a view of the interior of the larynx by desiring the patient to sound a high-pitched E. The larynx instantly rises to a considerable extent and so approaches the laryngeal mirror. Brit. Med. Journ.

But when the larynx is hidden from view, the laryngoscope enables us to observe the condition of the epiglottis, sides of pharynx and sometimes arytenoid cartilages. The examination of which parts will sometimes enable us to draw inferences regarding the pathological condition of the interior.

One of the greatest difficulties in the use of this instrument was considered to be occasioned by the great irritability of the throat. If a man, unaccustomed to the use of the laryngoscope, practices with it on a number of people the chances are that nearly all the throats he examines will be found irritable. This fancied irritability was on the introduction of the instrument by Czermak thought to present an insuperable obstacle to its use. Now however that men have
become better judges, psychologists, how comparatively little is heard of it. The cause, then, of the apparently extreme sensitiveness of the throats of most people is generally clumsy manipulation: the operator touches the back of the tongue or the fauces, the palatine arches or perhaps even the epiglottis with the large oval mirror. Even the uncertain, hesitating and flaky movements of the instrument by the ineptent laryngoscopist give rise to very objectionable sensations.

Dr. Sievelder states that, from his experience, he has come to the conclusion that there must be a difference in the tolerance of German and English throats, and that we have fewer difficulties to deal with as regards suicidal irritability than our German confrères. He cannot otherwise account for the complaints which German authors make with regard to the intolerance of the instrument on the part of the examinee.

But in some cases the soft palate on which the mirror should rest is abnormally sensitive. This occurs sometimes, where there are urgent laryngeal symptoms, where there is inflammation or engagement of the fauces and in very nervous patients. It is lessened by making the patient breathe chloroform.
for a few minutes. Dr. Johnson places about 20 drops on a handkerchief and allows the patient to inhale the vapour, but without permitting him to become drowsy. Astringent gargles are employed by some. Ice allowed to melt in the mouth and the cold water swallowed, have also been used with less success. The bromide of Ammonium and of Potassium have also been administered both internally and as a gargle to produce anaesthesia of the fauces. Dr. Gibbs stated, at a meeting of the Pathological Society held in Jan. 1863, that 15 p.s.-3 j. of Bromide of Ammonium from every 4 or 2 hours usually had the effect of inducing the patient to complain of numbness in tongue and palate. Dr. Rennie, who has freely tested its virtues, does not believe in it. The bromide of Potassium was suggested as a local anaesthetic in Gazette des Hopitaux April 6th. I have not as yet seen it of any service but have had little experience in the use of this salt.

If the case is chronic and there is no necessity for an immediate examination, the patient should be directed to accustom his throat to the presence of a foreign body by very frequently introducing his fingers. When Mr. Ferguson is about to perform the operation of Staphyloraphy, the throat generally
requires to be made tolerant of the presence of
instruments and the above preliminary step is adopted.
Frequent laryngoscopic examinations will also have the
desired effect.
It has occurred to me, to see a physician experienced
in the use of the instrument, take a large ward filled
with convalescents who had never before been examined
and show the larynx of every patient but one, with
the greatest care to bystanders. I have also seen Prof.
Czermak himself entirely defeated in his endeavours
to obtain a sight of a larynx where chronic illness
existed, so fast was the irritability of the patient's
throat. But this was a very exceptional case, the
man being extremely nervous. He appeared very
thankful to Prof. C. for making so many unsuccessful
attempts to see his larynx, which endeavours had
(so he said) a wonderfully beneficial effect on his
disease.
Patient, who have been previously addicted to swallowing
meat spirits are very poor subjects for examination,
because the sensibility of their throats are blunted by
the alcohol.
The greatest obstacle to the successful examination
of the larynx is the exceedingly troublesome behaviour

If that unruely member—the tongue. People have such a partial propensity to arch the tongue upwards against the palate and this involuntary tendency very often departs on nervousness. It is desirable before making a laryngoscopic examination for the physician to show to the patient on his own person what he proposes to do to him or her as the case may be. The patient will then be satisfied that the apparatus, as a comb-like complicated laryngoscope may truly be called, is not to be feared, and that its most essential part is a small looking glass "whose end is to hold, as 'twere, the mirror up to nature" a quotation which by the way seems rather popular among writers on the laryngoscope. It is also a good plan to occupy the patient's thoughts during the examination either by desiring him to hold his tongue out of his mouth, or by some other means. But even when the tongue is drawn out of the mouth either by patient or operated, the base of this rebellious organ sometimes rises upwards obstructing both light and vision. Under these circumstances, it is necessary to make the patient hold out his tongue, whilst the manipulator depresses its upward tendencies. We are told by one of
Dr. Tuch's tongue forceps are said to be useful but liable to terrify a nervous patient.
Those enthusiastic young practitioners who attract themselves to the notice of the Professional Public so frequently, by writing on subjects concerning which they are practically ignorant, that when any difficulty is found with the tongue, “the patient should be requested to turn this organ in the floor of the mouth.” It is very rarely that a patient possesses such a power, but this voluntary control may be acquired by practice. Dr. Watson directs patients to seat themselves before a looking glass, so as to be aided by the sense of sight, whilst learning to control the movements of these organs. If such a request be made to a patient as that recommended by the ambitious young practitioners, the tongue twists about in every conceivable direction, making “confusion worse confounded.”

The part of laryngoscopy which is the most unpleasant is the dragging sensation felt at the base of the tongue, when this organ is held out of the mouth; for having experienced it frequently myself, I can quite sympathize with the patients who complain of it. Another objection to holding out the tongue is that the anterior pillars are by this means drawn forwards and slightly upwards, and the
space for manipulation is thereby diminished. It is preferable to depress the tongue either with the forefinger or by a metallic depressor which is more agreeable both to patient and operator. The metallic tongue depressors usually employed have the effect of forcing the posterior part of the tongue backwards, so that it nearly or sometimes completely touches the pharynx. In this way, of course, the pharynx is most effectually closed by pressing back on it the epiglottis. What is requisite is a depressor which will not only depress the tongue but at the same time draw it slightly forwards.

Some will perchance say that the slight curve at the extremity of nearly all tongue depressors will fulfill the latter object. & percentum dext.

The curve of these depressors gives the operator no power of traction on the tongue, for if placed sufficiently far back to have any, filing is excised.

I would propose then a depressor, the undersurface of which is covered with teeth looking towards the observer, as he holds it in his hand. Vide fig. 10. Accessory instruments, Page 92. Of course these teeth should not be sharp enough to cause any
Fig. 10

Tongue Depressor.
The inferior surface covered
with blunt teeth which
look towards the handle.
pain, when the instrument is employed, but still sufficiently so to afford a means to the manipulator of exercising some traction on the tongue. Another trouble, which usually besets beginners, is the difficulty in keeping the head steady so as to maintain the light on the laryngeal mirror. Practice in the use of the laryngoscope is the principal remedy, for those who work much with it are not thus incapacitated. Autolaryngoscopy is an excellent training for those who would examine patients with facility. If the trachea is enlarged, or other tumours be present, the examination of the larynx is sometimes very difficult. It will be necessary to use a very small laryngeal mirror and even then it is occasionally impossible.

Accessory Instruments.
The most essential is a tongue depressor which will not only depress but exert some power of traction on this organ. See Fig. 10. The result of pressing down the tongue without, at the same time, drawing it slightly forwards has been above adverted to.

The instruments which come next in importance are Gibbs' Laryngeal Forceps, Palerzes,
Camel hair brushes for the application of medicinal solutions. The Pulverizer (Vide Fig. 11.) consists of a curved silver tube, with an Italian rubber bag at one end, and a platinum capsule at the other, so finely perforated that the holes are invisible to the naked eye, yet permitting of the injection of a fine spray into the larynx and trachea throughout its entire length.

The camel hair brushes should be firmly attached to whalebone handles bent at a suitable angle. (Fig. 12.) The laryngeal pulverizer of Schwab introduced by Dr. G is an excellent instrument and indispensable to the laryngologist.

The great objection to camel hair brushes is the liability of the hairs to become brittle after a short time and break away in small portions. This effect is owing to the action of the solutions which are employed, and especially to the most useful one, viz. nitrate of silver.

Sponges in my opinion should never be employed for touching such delicate structures as the pharynx and interior of the larynx. They abrade the mucous membrane, and do a considerable amount of mischief, especially if any ulceration is present.
I have frequently seen the injurious effects of applying solutions by means of sprays to the throats of patients with scarlet fever. No man but a very ignorant one would think of wiping and "dabbing" the surface of an ulcer, situated on the integument, with a spray, for he would not only in all probability rupture the minute vessels in the process of formation but leave behind very minute portions of the spray, and perhaps some of the spicula it contains, to irritate the ulcer and act as foreign bodies.

Next, perhaps in importance are scarificators for lesions of the larynx. Dr. Gibb recommends a small hooked-shaped one, when a number of small incisions are required. Vide Fig 13. a & b.

Curved spoons are necessary after an alternative larynx has been scarificated to press out the serum through the punctures.

The pulverizer of flowers made by Wessel is a very useful instrument, for the dissemination of medicated fluids in the form of a fine spray by means of inhalation, through the larynx, trachea and bronchial tubes. It is an improvement on that shown in the Exhibition of 1862 by Dr. Sales Giroux which is extensively used in France. Vide Fig 14.
Fig. 15.

An assistant turns the electro-magnetic machine with one hand, and applies a handle to side of neck with the other. The operator should hold laryngeal mirror with left hand, and with the right introduce the laryngeal Galvanozer below the epiglottis. He then touches the handle (I) when the spring (S) connects the two rings (A) and (B) and the current then passes to its destination.
Matthew's Irrigator is much recommended, especially by Dr. Stewart, for the application of medicated solutions.

Dr. Morison has invented a Galvaniser, whereby an electric current can be directly applied to the vocal cords, and employs it in some cases of aphonia. He states, that the absence of any structural focus or inflammatory changes on the one hand, and a state of impaired innervation on the other, are the features which promise the most satisfactory results from this method of treatment. Vide Fig. 15.

With regard to instruments which may be required less frequently, I can do little more than enumerate the most important, referring the reader to the most recent works on the subject. There is first Gibb's "Laryngeal scissors," for removal of polypi from larynx. Dr. Moreau-Bouronville's is on the same principle, but growth is pierced by an arrow. Vide Gibb on the Larynx and Dr. Moreau-Bouronville's pamphlet "Polypi of Larynx.

Caustic holder of Matthews is very seldom required, except for osteitis ulcers or to destroy growths. Vide Fig. 16, a curved forceps for the removal of foreign bodies from the throat or larynx, and a graduated
Glass Syringe for injecting regulated quantities of fluid, such as solutions of strychnine, as may rarely be required.

3. Cases illustrating the great value of the laryngoscope as a means of diagnosis and its occasional failures with accompanying remarks.

In making a choice of cases for this paper, the author has been actuated solely by a desire to introduce the most interesting he has seen. He cannot find words to express his great delight at the practice. Alas, so many of the recording successful cases only, for it is neither honest nor honorable, we mark when we hit, as Lord Bacon, has so truly observed, but not when we miss.

Case of Epitheliosis of Epiplottis.

W.H. aged 64. Admitted March 13/63 a temporary hunger which occupation he carried on up to 6 months ago, when he became so very nervous and his sight so defective, that he was obliged to enter a workhouse. About a month previous to his entry, he experienced some difficulty in swallowing solids which has gradually increased, so that during the last 3 or 4 months he has been only able to swallow "slops". Has enjoyed good health up to date of present illness. No hereditary tendency to any disease.
and no appearance of cancerous cachexia. Complains of an obstruction "in the passage," no laryngeal hoarseness, but he speaks like a man with enlarged tonsils. No enlargement of cervical gland. Has lost much in weight of late. On laryngoscopy the epiglottis was found enormously enlarged, apparently one inch in thickness. Its surface was very uneven, both here and there spots of ulceration. It had a very firm dense appearance, and felt to the touch hard and brown. Larynx probably healthy.

Chlorate of Potash, Glycerine and Water, etc. March 27. Complains of dyspepsia with cough, which is of a stridulous character. Morphine added to mixture.

28. Have a sudden fit of dyspnea whilst walking just against the wind, which continued for half an hour.

April 10. Is thinner than on admission. Manages to swallow fish which he enjoys. The following to be substituted for medicine ordered on admission:

Potassic iodide, fruit with a little morphine and water, etc.

May 6. Dysphonia has greatly improved. Can swallow bread without much inconvenience.

Discharged May 27, 1863.

Readmitted August 17, 1863, when he stated that a month previously, he coughed up about a sile of blood. This was followed by the expulsion of a mass about the
That is the enlarged epiglottis.
size of a plum. After a few days, he was enabled to swallow much better and began to eat fat and wine. On his readmission, he could eat apples, fish and even tender meat, after a good deal of chewing and insalivation.

Dr. microscopic examination of the mass expelled, Dr. Johnson found it to be composed entirely of epithelial cells. On laparotomy, it was found that a large portion of the mass had disappeared, and left an uneven everted surface, which had an extremely altered appearance. Spots, which looked as if they would bleed on the slightest touch, were here and there observed. One little elevation of this uneven surface seemed almost detached and was only connected with the tumor by a delicate pedicle.

Chromic acid was applied several times to the Epithelium as a Corrosive but was abandoned as useless after a short stay in the Hospital he was returned to the Workhouse.

Remarks.

Professor Czermak, who happened, during one of his visits to St. Thomas's Hospital, to see this man, stated that he had never seen a similar case. Dr. Giff, although he has had a large experience, does not appear to have seen one, nor does he mention in his work on the Throat, Epithelizing as a desces.
of the Epiglottis. I have not been more successful in 
looking for, other Medical Publications, and believe 
this case to be perfectly unique. It is rather singular, 
that the man's health was so little affected, and 
that his cervical glands showed no sign of enlargement. 
Although it is possible for non-malignant epithelial 
tumours to exist yet the examination by sight and touch 
induced all to pronounce this tumour as malignant. 
Epithelial cancer occurring in the larynx as a primary 
disease is very rare. There is a case recorded in the 
Path. Soc. Trans. Vol 9, P.39, and an epithelial 
carcinoid growth of larynx on p.8 of same Volume. 
Epithelium, originating in and affecting epiglottis 
alone, is exceedingly rare. Pyland does not mention 
it. Paget in his Pathology p.691 speaks of a case, 
where an epithelium involved the left border of 
the epiglottis together with adjacent structures. 
Haller, refers to a woman, in whom aphonia existed 
and was dependent on the presence of a malignant 
tumour, seated upon and covering one half of the 
epiglottis. 
Epithelial growths are not uncommon on the vocal 
cords and other parts of the larynx, and are 
for the most part benign in character.
Case of Chronic Inflammation & Ulceration of
Larynx with Puffiness & Decreased Arytenoids.

A.B., about 50 years, admitted Feb 12/63, suffering from
the greatest dyspnea. Nothing was known of his history
by those who brought him, and the only part of it that
was afterwards discovered, was, that he had suffered
from syphilis and was intemperate.

On admission, there was complete loss of voice, staring eyes,
laborious efforts to admit more air into the lungs, and other
symptoms which pointed to the larynx as the seat of mischief.

This organ was therefore examined by the laryngoscope, but
the soft palate was so irritable, and the dyspnea so great,
that a satisfactory view could not be obtained. The only
points made out with this instrument then were, that
no foreign body was present obstructing entrance of air,
and that the cornification was very narrow. P120.

He improved somewhat after admission, but on evening of Feb 13 at 5 p.m., as the dyspnea became urgent, tracheotomy
was performed, which gave relief. Ruins of trachea found
to be somewhat ossified. Notwithstanding the free use of
stimulants and narcotics, he became weaker, and sank
on the 45 day after the operation.

At the post mortem examination, the larynx was found to be in
a swollen, inflammatory condition, with several cavities
or pouches, formed probably by chronic destructive ulceration. Vocal cords destroyed by ulcerative process at their posterior extremities. Arytenoid cartilages were ossified and necrosed, forming small shells of bone. There was atheroma of the arterial system. No tuberculous disease of lungs.

Remarks.

Although the above account is unfortunately extremely imperfect, yet the case, short as it is, is one of very great interest. It shows 1. The great difficulty which occasionally occurs in employing the laryngoscope, where urgent symptoms are present. 2. That, although the examination may be necessarily incomplete, some important points are nevertheless invariably made out. In the above case, the absence of any foreign body which might have been the cause of the dyspnoea, was valuable negative evidence in a man concerning whom no history could be obtained. He was in an extremely debilitated condition and sank apparently from exhaustion. The destructive ulceration in his larynx was probably syphilitic. The transformation of the arytenoid cartilages, into little pyramidal ossous shells of necrous bone, was very remarkable. These little bone-like masses were not examined.
Jones and Secking, in their Pathological Anatomy, speak of ossification of the laryngeal cartilages, as a result of chronic laryngitis, in patients of a Rheumatic Diathesis.
microscopically, so that there is not that certainty respecting their composition, which would otherwise have been obtained. Some would perhaps consider that calcification might possibly have been the change in these cartilages, because the arteries were atheromatous. Think not for the following reasons: The masses, into which the arytenoids had been transformed, for no resemblance to the calcareae materne formed in atheroma.

2. The rings of the trachea were ossified in this case.
3. Trousseau and Bécourt state, that the cartilages of the larynx may become ossified, even in the young, as the result of continued irritative or chronic inflammation. The general condition of the man’s larynx showed that chronic inflammation had for some time been going on, especially at those parts of the cords, which were attached to the affected cartilages. This inflammation was without doubt shared in by the arytenoid cartilages in consequence of their close proximity.

The same change occurs in another permanent cartilage, under the effect of chronic inflammation, e.g. in chronic rheumatic arthritis, the articular cartilages ossify. If it be said that this is not
a parallel instance, because the inflammatory action is modified by a blood poison, viz. the rheumatic; truly, that the chronic inflammation in one case, was doubtless modified by another blood poison, viz. the syphilitic. The fact, that the arytenoid were the only laryngeal cartilages affected, proved the supposition, that the change was ossification, and due to chronic inflammation. Ossification of the laryngeal cartilages is not at all uncommon in advanced age. Baillie, in his Modern Anatomy, Vol. 2, P. 107, states, that in some cases of this affection he observed, there was a total inability to swallow which destroyed the patient, and on p.m. examination no dimple was discoverable. Sir Astley Cooper speaks of an old person from whose larynx an expelled portion of the ossified thyroid cartilage came away. He had some long time before received a wound in his throat. In Mr. Cautley's book on Ovaries, Sclerosis is represented the larynx of a man, at 103, all the cartilages of which were more or less ossified, and the microscopic appearances of the ossified parts are also depicted. Ossification of the arytenoid cartilages was formerly
considering so rare, that Anderson, in his Pathological Anatomy (Vide Trans: Vol. 2. p. 93), remarks, that he is not aware they have ever been found ossified. Pigman, in his work on the Larynx, describes a case (Vide 905) of chronic laryngitis, where the arytenoids were found ossified and cartilaginous, whilst the other laryngeal cartilages were unaffected.

Mr. Prescott Hawitt stated, at a meeting of the Pathological Society, in April 1863, that necrosis of the laryngeal cartilages is not rare, for pieces of bone are not infrequently coughed up. He had seen several cases in which this had occurred, as regards the arytenoid. In one, the fragment had passed into the windpipe and nearly suffocated the patient.

Mr. Gray, who wrote the paper on Diseases of the Larynx in Holmes' Surgery, considers that this form of laryngeal disease is not infrequently accompanied by pulmonary phthisis.

Case of Syphilitic Ulceration of Tonsils with Atrophy of the Glottis.


History. Primary syphilis 8 months ago, for which he was treated with mercury. 2 months since, he has
A severe sore throat, which was followed by a secondary skin disease. Affecting the throat has returned to a chronic condition. Eruption on skin has almost disappeared.

There is a deep ulcer of syphilitic aspect in left tonsil, also superficial ulcerations of both tonsils. No evidence of pulmonary or cardiac disease.

Sulates of Potassium & Quassia Eds. Steam insulations and a liberal diet were ordered.

After a stay in the Hospital for a few days, he began to complain of a sensation of choking and attacks of dyspnea after swallowing his food. During one of these attacks of difficulty of breathing or stridor which was unusually severe, he ceased to breathe. Tracheotomy, artificial respiration and salivation were successively, but unsuccessfully practised.

As the larynx was not at that time known, in King's College Hospital, the aperture of this larynx could not be seen during life, but we had the melancholy satisfaction of examining it after death. The epiglottis and the margins of pharynx were found very much thickened and adherent. Inflammation had evidently spread from the ulcerated tonsils to the "Soma Viva."
Remarks.

With regard to this, it may be said by some, that tracheotomy should have been performed, before the man had ceased to breathe, but it must be remembered that there was hardly any dyspnoea except after swallowing, and that the attack, which terminated fatally, was one of unusual severity. These attacks would seem to have been produced by spasmotic action of the swollen false cords, which constitute the margin of the true folds. By observing the frequent approximation of the vocal cords, and consequent closure of the glottic aperture, which is produced by the slightest sensation in a healthy throat, we can readily comprehend, that any irritation of the flutes will cause an exaggeration of this movement, which is spasm. That death may suddenly occur from spasmotic contraction of the muscles of the flutes, we frequently see, in the affection termed "child crowing." But this result may occur in those past childhood, from the same spasm of arytenoid muscles. There is a case which occurred at St. George's Hospital and is narrated in Holmes' Surgery, Vol. 3, P. 226, where sudden death occurred from this cause, very...
although only slight narrowing by dilatation tested. In laryngeal affecting when the disease is situated within the larynx, there is generally permanent dyspnea, more or less severe, but when, as in this case, the parts around its aperture are affected, this is not universally the case. It is well to remember as a rule, that tubercular affecting commence on the inside of the larynx, whilst syphilitic attack it from without.

**Case of Syphilitic Laryngitis**

L.W. at 41, a woman, of temperate habits, admitted June 8/63. History. Never enjoyed robust health. Domestic employment. 3 years ago, soon after return of husband from the country, she noticed a vaginal discharge and a small hard sore on one of the labia. After the disappearance of these primary symptoms, she was laid up for 5 weeks with a bronchial attack, and soon after her recovery she had a severe sore throat. For the last 18 months she has been troubled with brown patches on the skin. In Dec. 61 she took cold, had slight cough, loss of voice, and hoarseness, which continued for 6 months. About 6 months ago, whilst sleeping in bed exposed to a draught, she was suddenly seized with a severe cough, and on the following morning found that she...
a. Vocal cords
b. Arytenoid Carts
c. Thyroid cart
d. Triangular splitting
had again lost her voice and became hoarse. 

Never had an asthmatic paroxysm. Ever since this date, notwithstanding medical treatment, the hoarse 

ness has been getting worse and the aphonia has persisted. During the past month, these symptoms 

have been accompanied by some dysphagia, which has 

obliged her to live mainly on bread and milk. 

On admission, spare woman, with patches of syphilitic 

psoriasis over the body, and remains of a node on 

right tibia. Slight puckering of face lips. 

Much dyspnoea with large inspiral struggle. Respirations 

chiefly abdominal. Chest rises in mass. Stern 

mastoids and other extraordinary muscles of respi 

ration contracting. Percussion over chest is normal. 

The noise in the larynx and diminished amount of 

air entering lungs prevent respiration mammae 

from being heard. Cannot swallow solids. 

On laryngoscopy, the mucous membrane covering the 

thyroid cartilages and the false cord, as well 

as that at the back and sides of the larynx, was seen 

to be swollen. There is great narrowing of the chink 

of glottis. She breathes through a very small tri 

angular opening at the back of glottis. See Fig. 17. 

No ulceration or mucous discharge. Epiglottis slightly
Infected but not thickened.

Potas. Iodid. fr. v. aqua 3 zips 0.5.

A leech was placed on the side of larynx and steam inhalations were recommended.

June 4th: In the afternoon, the dyspnea becoming greater.

Chloroform was inhaled, but it seemed to make the breathing more laborious and afforded no relief.

3 leeches were then applied to neck, but had no good effect. It was then proposed to sacrifice the patient by means of an instrument sketched in Fig. 13. a, but this proceeding was found impracticable on account of the nervous state of patient.

The surface of the body becoming cold, the pulse feeble, and the breathing more and more difficult, it was considered advisable to perform tracheotomy about 9 p.m. immediately preceding the operation, however, the larynx was damaged, although with some difficulty.

The mucous membrane of pharynx was seen to be intensely swollen, but no ulceration was present.

The trachea was opened directly above the isthmus of the thyroid gland, and she at once expressed herself as relieved and slept. The dusky hue of face soon disappeared, and she gradually improved.

Eggs, milk, and brandy were ordered to be given her.
Frequently, and the following mixture was also used:

Potass. Fod. brv

Leg. Hyd. Bichlor. 3 j. 2 Chs.

15th. Free discharge of mucus through tube, which is

thickened by the H.S evolved, thenceforward

voice is returning. Patient slightly affected by the

Mercury which is to be omitted. Condy's fluid

to edges of wound.

19th. Tube seems to irritate trachea and gave rise to

a slight cough. To resume the mixture as the

soreness of the parts has subsided, and to try solid

food. She was also directed to accustom herself to

the presence of a cork in the tube, for longer and shorter

periods of time, so as to be independent of the additional

opening for breathing. This she did and after a short

time the tube was removed, and the wound healed.

The larynx has been examined many times since

the operation, and the swelling and thickening of the

membrane have been gradually observed to

decrease. Her voice has almost completely returned,

a slight huskiness still existing, and she was

discharged cured on June 26th, 1863.
Remarks

This case, which was watched with great interest by the frequents of the Medical Wars, afforded a most complete history of Syphilis. There was first the chancre, secondly, the bronchitis which was in all probability that variety called by Drs Graves, Stokes and Munk "Syphilitic Bronchitis" by whom it was investigated and described.

When this bronchitis occurs, it is said to be a prelude to cutaneous symptoms, disappearing wholly or partly when they are established; on the other hand, if a syphilitic symptom should suddenly disappear, the syphilitic bronchitis will often ensue. But bronchitis may not only be a primary symptom, but occur as a secondary and tertiary one. When it is generally chronic, thirdly, came the sore throat and afterwards the syphiliticprocesses.

In examining the lungs of a patient with obstruction to the passage of air through the larynx, two obstacles are often encountered. 1. The noise at the seat of the obstruction is so great that the vesicular murmurs of the entering air is not audible, except at the extreme bases of the lungs. 2. A less amount of air passing into the lungs in consequence of the obstruction, the
vesicles of these organs are very imperfectly filled with air, which is especially the case in those organs where least laryngeal noise is heard. De Bovin stated in a clinical lecture delivered on the preceding case, that in syphilitic affections of the larynx the mucous membrane is generally smooth, but in tubercular disease it is invariably granular: also that the probable explanation of the fact that Chloroform increased the difficulty in this case, is that it relaxed the muscles which keep the larynx open, and so prevented them from neutralising, in some measure, the obstructive effect of the swelling mucous membrane covering the cords. The pathological change that occurs in these chronic forms of laryngitis is said to be, first, an effusion of lymph into the submucous tissue and then the organisation of the exudation which produces a permanent thickening.

Here there was a case, where there had been for some time a state of chronic syphilitic laryngitis, and where a sudden aggravation threatening death came on. Tracheotomy was immediately successful, and that in two ways: 1. It immediately arrested death. 2. Time was allowed for the introduction of remedies to counteract the syphilitic poison, and thus
a cure resulted.
The trachea was opened, according to Dr. Charles Edwards, above the isthmus of the thyroid. With regard to the situation for the performance of tracheostomy, I find that Delphax, Ferguson, and Pierce prefer to open the trachea below the isthmus; whilst Erickson, Farquhar, and Skey consider the operation above the isthmus best. The last of these surgeons does not hesitate to make a free incision into the isthmus, if he requires room, or even to cut it through altogether. Dr. Edwards' operation seems to possess several advantages over the other, not the least important being, the absence of that terrifying plexus of veins formed by the inferior thyroid. The operation above the isthmus should not perhaps be performed, if ossification of the tracheal rings is suspected, because, the upper rings of the trachea are generally more ossified than those lower down. The reason of this is perhaps seen in the apparent fact, that cartilagenous structures, which give attachment to muscles, generally ossify before those which are not thus connected, e.g. how much more liable are the laryngeal cartilages of old people to undergo that change than their articular cartilages.
I am aware that the inferior constrictor muscle is not described in anatomical books to have any attachment to the first two and sometimes 3 tracheal rings, but this is an omission on the part of their authors, for it is my exception to find it not so attached.

The blackening of the silver tube by the jet of jet from the wound, created considerable annoyance, for if not frequently cleaned, the formation of the sulphide gave rise to the formation of mucus. This was probably owing to the slightly-smoothed surface, favouring its attachment.

When it is necessary for a patient to wear a caudle for some length of time, it is liable to oxidation if not often polished up. A case occurred to Mr. Boyd of Guy's Hospital, in June 161, which was referred to in the Lancet Sept. 14th, where the tube was retained in the trachea without cleaning for 6 months. It was found on removal to be a mere shell of metal, almost breaking into several pieces, and covered with a powder resembling soot, which proved to be the black oxide of silver. The reporter also adds, that if the tube had been retained but a very short time longer, the patient would have
run a great risk of suffocation from the lodgment of any separating fragment.
If the print unwatched "have neither time nor inclination to keep their skins clean, it cannot be expected that they would remove a canula, and then cleanse and polish it.
To prevent accidents arising from oxidation, it seems desirable to make a canula of a material resembling Silver, as nearly as possible, but which is not prone to form compounds with Sulphur and Oxygen.
Aluminium, which is now so extensively employed for brooches and other ornaments, might be used for this purpose. It does not become tarnished by H₂S, and oxidation occurs with extreme slowness.
Mr. Young, the instrument maker, tells me that he has used this metal for Catheters, and that it is lighter, tougher, and stronger than Silver, which are of course unquestionable advantages.
The production of fecal gases from the wound should be corrected as speedily as possible, otherwise they will exert deleterious influence on the patient's health by their absorption through the lungs into the blood. The great value of the language was, in this case, exhibited in a very striking manner.
1. It enabled us to determine the exact nature of the disease in the larynx, thus showing when, and how far, an operation was called for.

2. It gave us information regarding the progress of the case after the operation and the action of the medicines. This, again, assisted us in deciding as to the time for the removal of the tube, often a very difficult matter to determine.

Comments on 3 preceding cases.

Hyland states that Chronic Laryngitis is much more common in women than in men. Cracked and hoarse voices are exceedingly frequent amongst prostitutes, either from the effects of syphilis, or from drinking neat spirits.

Dr. Gibbs confirms Mr. Porter's experience, when he states, that he has never seen the larynx affected in syphilis, where no mercury had been used. Of the 3 cases which have been detailed, no information on this point could be obtained in AB; CK stated that he had taken mercury; but it is unlikely that LW was mercurialized, for she was unaware of the nature of the primary symptoms which were very slight. This is an interesting point for investigation.
and would furnish, if true, the Antimercuralists with a good argument.

In the cases CK and LW, I think that the Electro-therapeutic plan might have been tried which consists in the topical application of a very strong solution of Nitrate of Silver. Vide a very successful case of Traumatic Laryngitis treated on this principle which has been described in Med Times & Gazette May 4th 1863.

Dr. Horace Green strongly recommends this treatment for all cases of the affections. He employs a solution of this salt about 1/3 to 1/2 of water and applies it hourly. In the cases recorded by him, each application was followed by an abundant expectoration of adhesive mucous and a very early subsidence of the swelling. Two rather interesting cases of Syphilitic Stenosis are recorded by Dr. MacKenzie in Med Times March 3rd one of which was much improved by the inhalation of a "pulverized solution" of Perchloride of Iron.

Case of Aneurism of Aortic Arch with symptoms of Laryngitis.

J. H. Age 31, a lawyer, very intemperate. Admitted July 1863.

History: Has usually enjoyed good health. 6 years ago had primary syphilis followed by a severe sore throat which disappeared under the use of mercurial inhalations.
During winter of 1860 had some venereal affection. 18 months ago was troubled with a skin disease and pains in the bones, which were relieved by Potash. For last year he has been a hard drinker, his custom at one time being to get drunk every night. 7 weeks ago he had been drinking all night for 5 nights in succession, when on the morning after the 5th he experienced a sensation of a stoppage in the throat and lost his voice. Applied to Kings College Hospital as an Out-Patient, and has continued to attend up to present time. His case was considered to be one of syphilitic laryngeal disease and was treated with tonics and alteratives and steam inhalations. For the last 8 days has been unable to swallow food, but can manage meat and fluids. For 5 days, voice has been becoming more husky, and this has been accompanied by dysphagia and cough. His occupation oblige him to run after carriages. On examination, hoarseness and roughness with stertorous breathing. States that sometimes the noise in his throat entirely ceases and he partly regains his voice, but the noise is usually louder while he is asleep. Complains of pain in back and chest. Slight dysphagia. On laryngoscopy there was slight
perfusion of the mucous membrane of larynx, but no moist appearance could be detected to account for the laryngeal symptoms.

Heart and Lungs Healthy. Cough very slight. No physical signs of an aneurism. Pulse equal. In size on both sides.

18th He today spat up a few mouthfuls of blood, off an arterial colour, and felt rather faint at the time.

20th At 1.15 PM he suddenly became faint and brought up, apparently by vomiting, about 3/4 of a pint of bloody fluid. Brandy and ice immediately given. When Dr. Johnson saw him at 1.45 PM, he was very pale and faint, as if from internal haemorrhage. Pulse small and feeble. No more blood had been brought up, but on percussion over the stomach there was marked dulness, and it seemed probable that the stomach was bloating filled with blood. About an hour afterwards vomiting of blood returned and he died.

PM Examination 23 hours after death.

An aneurism, about the size of a small orange, was found at the back of the transverse portion of the aorta, which had produced erosion of the bodies.
of the dorsal vertebra. The tumour had opened backwards into the aorta by an oval aperture ¾ in long and ½ in wide, which had a vascular appearance. Stomach was distended with blood. The recurrent laryngeal of the left side, as it passed behind the tumour in its course upwards to the larynx, had evidently been stretched and compressed by the aneurysm. Larynx and lungs were perfectly healthy. Atheroma of arterial system.

Remarks

This case, treated as it was, at first, in the Out-Patient Department, where the laryngoscope, of course, could not conveniently be employed, as one of syphilitic laryngeal disease, affords another of the very numerous instances proving the great value of this instrument in diagnosis. On his admission into the Hospital, Dr. I found that his larynx was free from any morbid condition, and therefore did not persist in the treatment of the laryngeal symptoms. The cause of these symptoms was unquestionably due to the pressure of the aneurysm on the left recurrent laryngeal nerve. Dr. Watson, in his lectures on Medicine, states that those cases where tracheotomy has been performed...
whilst no disease has existed in the Larynx, have nearly all been cases of Aneurism of the Thoracic Aorta, pressing on the air-passages or on the nerves to larynx.

Senebier and Stieglitz have recorded cases of Thoracic Aneurism, with paralysis of vocal cords seen with the Laryngoscope. In Med Times and Gazette for March 23/61, an interesting case of Thoracic Aneurism, causing paralysis of left vocal cord, is described as occurring to Prof. Temme of Berlin, who first cleared up the long recognized relation between these affections with the Laryngoscope. The most curious part of this case, however, was that man's voice not only became hoarse and weak, but remarkably higher in pitch. In Med Times for January 2/64, is a case of Aneurism of the Subclavian Artery, which occurred to Mr. Cantor, in which the voice was shrill and childlike. In the case referred to of spasm of left vocal cord on Page 220, where an aneurism of the Thoracic Aorta was supposed to first, the voice of the patient gradually changed from a Hoarseness to a Squeaky and shrill note. This change of voice did not occur in the above case, and its cause is not very clear. Dr. Broadbent referred to a
Case at the Pathological Society meeting Nov 163, similar to that of our patient ST in most points, but differing in that the laryngeal symptoms instantly subsided in the patient assuming the recumbent posture. Dr. Gairdner, in his Clinical Medicine says that in all cases of laryngeal paroxysmal dyspnoea, the chest should be carefully examined. If we discover an aneurism, which is accompanied by aphonia, it should not be immediately concluded that the former is the cause of the latter, for the loss of voice may be produced by some disease of the larynx itself. E.g. some months ago, there was a case of aphonia at Kings College Hospital, which depended on a prosthesis attached to vocal cords, and occurring in an individual who had also a large thoracic aneurism. Sometimes the examination of the chest gives no definite information as in ST although a moderate sized aneurism is present. It is also possible for the recumbent laryngeal nerve to be flattened out by the pressure of a tumour, and yet not the slightest affection of the voice. Vide Med. Times & Gazette, p. 33 January 9/64. These however are exceptional cases and blur out the truth of the old saying, that "exceptions prove the rule".
Here then was a man who, in consequence of his very intemperate habits, has atheroma of his arteries, and as a result an aneurism of the aorta from the rupture of which he dies at the age of 31 years. Syphilis, from which he would appear to have suffered twice, was probably, through its poisoning and debilitative influence, a predisposing cause. Alcohol, with which he so diligently endeavoured to poison himself for so many years, was unquestionably a predisposing, if not an exciting cause of his death in so young a man. The operation he underwent by removing after carriages probably led to the production of this aneurism in his diseased arteries.

Case of Pulmonary Cancer with Paralysis of the Vocal Folds

II 17 at 27. A Plumber of Temperate Habits, was admitted on March 20th, 1863.

History. Health has generally been good. No hereditary predisposition to any disease. At commencement of last December, he took a severe cold. This was followed by cough, shortness of breath, hemoptysis, slight pains across chest and shoulders. He spat a small amount of blood daily for a fortnight. In a short time, he observed that the veins of his neck & face
were becoming enlarged, and soon after he suddenly lost his voice. His breathing became more difficult. Failed much in flesh. Left his occupation.

Maduressa. Shortness of breath, sensation of tightness about head and neck, with a feeling of distension of those parts; pains across chest and general debility; with loss of voice, are the symptoms now complained of. Has a stout appearance. Ulcers upon front of thorax and those of neck, face and forehead, and the epigastria on the abdomen, are enlarged.

Heart sounds normal. P/o.4.

Lungs. Dullness in front on left side from clavicle to lower edge of 4th rib, with absence of breathing over dull space. On right side resonance and respiratory movement are normal. An enlarged gland above right clavicle. Coughs a little & expectorates very slightly. Sputum occasionally tinged with blood. P/o.2.4.

On laryngoscopy, the cartilages of Santorini were close in closure of the flutters being attempted by the approximation of the paralyzed vocal cords, so that they touched one another like the two sides of the roof of a house. Almost complete immobility of the arytenoid cartilages existed. True vocal cords were parallel and about 3/4 apart. They did not open out during inspiration, nor
In health

Paralysed as in Case 7.7.

True Vocal Cords during Inspiration.
approximate each other sufficiently for vocalization.
No dysphagia. Vide sketch of Vocal Cords Fig 18.
I diagnosed cancerous infiltration of lung involving
the recurrent laryngeal nerves.
April 8th: Dulness and absence of breath sounds over whole
of upper lobe of left lung. Generating spasmodic pains
over the front of chest. Throbbing pain in head.
Superficial veins are more distended than on admission.
He is losing flesh. Night sweats and increasing dyspnea
complained of. No pain of breath.
20th: Dulness is spreading over the lower lobe of left lung.
And is accompanied with very feeble breathing.
Puerile breathing heard over right lung. Cannot lie
on right side, on account of increase in the dyspnea.
May 4th: Left lung seems to be almost entirely
involuted. The disease has encroached on the right lung
at its upper part, immediately beneath the sternal
end of the clavicle, where there is a dull spot as large
as the palm of the hand. Respiration chiefly abdominal.
Cannot lie on back or right side on account of the
dyspnea thereby occasioned. He has become extremely
pale during his stay in the hospital. He presents more of
the asphyxial type than the peculiar cachectic
appearance, so common in malignant disease.
He has been treated with tonics, stimulants and narcotics, with sedatives when the pains were very severe. He was discharged at his own request May 6th, 1863. Incurable.

Remarks.

This case is one of some interest, as showing the appearances of the vocal cords, when the function of the recurrent laryngeal nerves is interfered with. The patient had an extreme objection to remain any longer in the hospital, fearing lest if he should die there, his body would be cremated and so he left without allowing any one to know his future whereabouts. Although the nature of the disease in the lungs was not verified by ocular demonstration, yet no one who saw this patient, had any doubt respecting its composition. The reason that a strong robust temperate young man of 27 years, without any hereditary predisposition to malignant disease, should have his lungs affected with such a fatal disease is inexplicable.

Pulmonary cancer is generally secondary and follows as the result of the traces of cancer cells, derived from some other part affected, in the capillaries of the lung, this stoppage being due to the large size of the cells.
as compared with that of blood corpuscles. Books say that sarcoephalia cancer is the most common variety which occurs in the lung, and that primary cancer chooses the right lung in preference to the left, scarcely ever involving both organs. We had not the opportunity of coming to a positive conclusion regarding the variety of cancer present in our case, but the disease, contrary to the rule, originated in the left lung, which it almost completely invaded, and then incroached on the upper part of right pulmonary organ. The anterior mediastium was not also involved in this disease. The enlarged veins are pointed to some great obstruction to the return of venous blood to the right side of the heart, and the fulness with the throbbing about the head was doubtless due to the same cause. The dyspnoea, from which this man suffered so much, was probably due to 3 causes: 1. The gradual diminution in the amount of respiratory surface occasioned by the increase of the cancerous infiltration. 2. To morted alteration of the blood constituting what Dr. Walshe calls "Hemic dyspnea." 3. To irritation of vagus. The shortness of breath, during his stay in the hospital, was
very scanty, consisting almost entirely of necros.
No cancerous matter could be discovered by an ex-
amination with the microscope.
The hemoptysis was a striking and characteristic
symptom in this case. D. Walsh in his work on
Lungez, states, that "100 cases of primary cancer
of the lung will be attended nearly as often with
hemoptysis of all amounts, and much oftener with
hemoptysis of more than 37 mm. amount at a time,
than 100 cases of Phthisis."

Comments on 2 preceding cases.
There is a great similarity between these cases;
the nature of the disease was different, but the
cause of the laryngeal symptoms was the same, and
the effects in the two cases presented a certain
resemblance.
Neither of the vocal cords, in J.H. were paralyzed
and immovable, as might a priori have been
expected. They no doubt, however, acted imperfectly
and spasmodically, thus producing the laryngeal
symptoms. In the case of T.T. there was almost
complete paralysis of the vocal cords which lay
widely separated and lax.
No atrophy or desiccation of the laryngeal muscles
was observed in either of these cases.
The dysphagia in case 174, only related to the kind of food, she took, owing in all probability to its dry nature. In case of 77 there was not the slightest difficulty in swallowing. It is rather surprising, that in neither case were those distressing paroxysms of dyspnoea present, which are so common in similar cases.
Dr. Louw of Berlin states, that hypertrophied lung will produce paralysis of the vocal cords, and from a case recorded in Med. Times & Gazette Jan. 11/62, it seems, that the same effect may be produced as a result of impaired nutrition of the body, the absence of imperfect innervation.
Some very interesting cases, illustrating the effects of the irritation of the vagus nerve and its branches in connective masses. Tumours and Morbid Growth, were communicated to the Roy. Med. & Chirurg. Soc. by Dr. Habershon on January 26/64. The author of the paper, summed up his remarks by stating, that pressure on the recurrent laryngeal nerve by tumours in the chest, led 1. To paroxysmal and spasmodic contraction of the muscles of larynx.
2. To diminished muscular power of these muscles.
3. To paralysis and wasting of the laryngeal muscles.

Dr. Mackenzie gives the following mode of diagnosing between functional aphonia, and that due to pressure on the vagus or its branches.

1. True functional aphonia
   1. The vocal cords are always both equally affected.
   2. Cough is almost invariably natural i.e. it sounds perfectly.
   3. Voice is generally completely suppressed and patient can only whisper.

Aphonia due to pressure on vagus or its branches
   1. The paralysis is almost invariably unilateral.
   2. Cough has a peculiar ringing sound.
   3. In unilateral paralysis, voice is seldom suppressed, but patient speaks in a shrill painful voice.

Case of Laryngeal Phthisis

C.T., aged 57, a temperate low writer, admission April 25th.

History. Mother died of phthisis. Employment occupies him 12 and often 16 hours daily. 18 months ago took a severe cold and voice became husky. Huskiness continued for 12 months, at the operation of which time, he caught another cold, since which voice has been gradually becoming lower and more indistinct.
This aphonia was also accompanied by some dysphagia. Has been able to sleep occasional nights for a long time past, but it has only been continuous and troublesome during the last 6 weeks. No sweats by night or diarrhea. Sputa have been scant of late. No hemoptysis has occurred. Had syphilis 5 years ago.

On admission - thin and pale. Nails clubbed. On laryngoscopy, Epiglottis was found swollen, with ulceration of false cords and interior of larynx. True and false cords have a peculiar appearance from superficial ulceration, especially at their posterior extremities. Voice a husky whisper.

Lungs - dulness at apex of right lung with feeble breathing. Laryngeal sounds preclude a satisfactory examination. Cough very troublesome. Expectorates a small amount of purulent mucus.

Appetite good, but the dysphagia prevents him from satisfying it. Complains of thirst, constipation and hemorrhoids. Urine contains excess of uric acid, SP Gr. 1.035. Treatment - general. At first, Potass. Iodide and Hyd. Bichloride. Afterwards he was placed on coal liver oil, Quinine and Chloric Ether.

Local Larynx was touched at intervals by a weak solution of Nitrate of Silver, Steary and Crospote.
Inhalations. Beeches occasionally applied to throat to relieve pain and dysphagia.

The deposition of tubercle increased and spuits became wholly purulent, and immunization is becoming more impaired. Dysphagia is great. Attacks of vomiting are very severe. Hiccup superimposed.

June 3rd, 1863.

P.M. Examination.

Lungs adhesion and crammed with tubercles. Cavity as large as an orange at apex of left lung which was filled with pus. Upper part of this lung riddled with tubercle. A cavity existed at the apex of right lung, about the size of a walnut. True and false cords had a thickened and granular appearance from superficial ulceration. Epiglottis and trachea had a somewhat similar granular aspect. A small polypus about the size of a very small pea, having a fibrous appearance on a section being made, was found situated in the space between the right true and false cords. Other organs of body healthy.
Remarks

On the admission of this young man, there were some
reasons for thinking that the affection of the larynx
was of a syphilitic character, and for that reason,
Potass; Iodid; and Hyd. Bichloric were administered.
Dr Johnson, afterwards, changed his opinion, and came
to the conclusion, that the disease was tubercular;
and a different treatment was then adopted.
The patient was placed in circumstances very
favourable to the production of phthisis pulmonalis,
and was moreover, born of one who died of that
disease. A sedentary occupation in an ill-ventilated
office, where from 18 to 16 hours are daily spent
leaning over a desk, is one which should be
avoided by the most healthy, but it is suicidal
for a man having an hereditary tendency to tuber-
cular disease, more to engage himself. Destruction
must inevitably follow in a longer or shorter space
of time. The loss of substance, produced by ulceration,
tendered the vibrations necessary for the production
of the voice impossible. The noises in the larynx
prevented a satisfactory examination of the thorax
from being made, and the extensive amount of
disease, displayed at the post-mortem examination, astonished.
ale who attended him during life.
The polyphus, also, discovered after death showed
that the laryngoscope, like all the other scopes
occasionally fails. No doubt, the reason of its
failure is to be found in the fact of the humble
size of the growth and its situation, for it was
hidden between the true and false cords.
The cresote inhalations caused such dryness of
the throat, that he could not continue them.
He found the steam afford him some relief.
The cresote was administered in the form of a
fine vapour or spray by means of Weiss' and
Pfizenmayer's representant his P96. An objection to
the instrument, is, that the spray finds its way
out into the apartment, and thus becomes a
nuisance, when some drugs such as cresote are
employed. Bromide of Potassium was used as a
spray in this case, to lessen the reflex sensitivity
of the throat, which at first somewhat interfered
with a satisfactory laryngoscopic examination.
This salt however, had no apparent beneficial
effect.
Case of Laryngeal Phthisis

At 32, a domestic housekeeper, was admitted on June 17/13.

History. Good health up to Dec 62, when she was seized with a cough which has never entirely left her. 3 weeks ago she took cold and has had more or less hoarseness ever since. 8 days before admission she completely lost her voice. Had been unable to take solid food for a week previously on account of dysphagia. Never had hemorrhages.

In admission. Thin and anemic. Complains of pain and soreness on right side of the throat just opposite the great cornu of the hyoid bone, which extended towards ear. Dysphagia is troublesome.

Laryngoscopy. Epiglottis very thick and more curved than usual with a white ulcer on its right side. Muons membrane over arytenoid cartilages and vocal cords is thickened and pinnular. False cords somewhat swollen with an ulcer of small size on the right one.

Lungs. Doubtful dulness over apex of right lung, which expands less than the left during inspiration. Muscles of chest heard above and below right clavicle. No effusion noticed. Troublesome cough.
Treatment was continued and of morning July 1st voice was somewhat improved since adhesion.
A solution of the citrate of silver is occasionally instilled into larynx, which seems to afford her much relief.

10th: Epiglottis is less red and thick; white ulcer on its edge has healed.

Discharged July 13th, 1863.

Remarks.
In this 2nd case of laryngeal phthises, we notice that the patient complained of pain over the first vertebra of the hyoid bone on the right side; that one ulcer was situated on the right edge of the epiglottis and the other on the right false cord. This is an example of the fact, that pain or tenderness is sometimes so circumscribed, that it becomes possible to diagnose the seat of a lesion in the larynx and epiglottis by noting their situation. It will be remembered that the epiglottis was somewhat curved in this case and that an ulcer existed on its edge. Dr. Green, in his "Lesions of the Epiglottic Cartilage," describes an ulceration affecting the follicles which constitute the epiglottic lamina. This form of ulceration, he states, produces an
Fig. 19.

Epiphysis

on axis

on departure.
Incurvature of the epiphysis. That this doubling up may be occasioned by the presence of ulcers in the immediate neighborhood of the epiphysis, is probable from the following case which occurred about 2 months ago, at King's College Hospital.

The patient was an hysterical servant girl, 21, with a syphilitic history, and she was admitted with sore throat, hoarseness, incomplete aphonia, much dysphagia, and some dysphagia on swallowing. Laryngoscopy showed the epiphysis to be doubled up, leaving only a chink behind; also ulcers on the pharyngeal glands, sores. Vocal cords not visible. Potass iodid internally and Potass Chlor as a purgative. After a few days colonie fumigations were used, and Argente nitrosus was applied to ulcers. She remained 19 days in the hospital and during her stay, the epiphysis was observed gradually to unfold itself; the ulcers to heal, and her voice returned. Vide Fig. 10, a, b.

Suggesting that the incurvature of the epiphysis in this girl was produced by the mechanical interference with the proper action of the pharyngeal glands, in consequence of the presence of the ulcers. The advantages derived from injecting a solution
of Ulcer of the Larynx, or Laryngeal ulcers, are illustrated by this case of A Z. The solution that was employed was about 10 parts to 3 parts water. It was injected by that admirable instrument called Gibb's Laryngeal Fluid Pulvigator Vide P. 94. Although the application always excited a violent attack of anything, she would occasionally ask to have it done, if perchance it had been delayed. One of the ulcers healed, and her voice improved to a certain extent; but in consequence of an increase in the tubercular deposit at the apex of the right lung, it was thought impracticable for her to remain in the Hospital.

Comments on 2 preceding cases.

Lows states that the larynx is ulcerated in somewhat less than 3/4 and the epiglottis in 4/3 of those who suffer from laryngeal ulcers; and that laryngeal ulcerations are much more common in men than in women.

The huskiness and hoarseness in these two cases were no doubt produced by the swelling of the false cords, which by diminishing the capacity of the ventricles prevented the normal vibration of the cords. A peculiar condition of the structures...
composing the larynx and trachea is said to be diagnostic of tubercular disease.

The laryngeal symptoms may obtrude themselves upon the patient, whilst the disease in lung is very slight, as in case of A & B; or the voice may remain unaffected whilst pulmonary disease is present in the lung, even up to death, e.g. two distinguished singers at Her Majesty's Theatre, the one a contralto, and the other a soprano, continued to follow their profession, whilst their lungs were gradually softening and breaking up from the presence of tubercle.

That phthisis pulmonale may occur at any period of life is I suppose now generally admitted. The oldest patient I have ever seen suffering from this disease was 81 years of age, and the disease had commenced about a year previously. I have just stumbled on a case in the Dublin Med. Journal Vol. 25. 1844, where a large irregu-}

lar, tubercular cavity existed in one of the lungs of a child only 9 months old. It died from the effects of profuse vomiting of blood, in consequence of the rupture of a branch of pulmonary artery which traverses the trachea.
Death by hemoptysis is a rare termination of phthisis pulmonalis. Of 300 cases of this disease recorded by Louis, death occurred in this way only twice. Walke considers it rather more common. Of 131 cases noted by him, two terminated in this manner, one immediately by asphyxia, and the other in a few days from asphyxia. Louis had one opportunity of seeing phthisis thus end up the patient's sufferings. A man about 58 yrs who had a large cormia in his right lung, was suddenly seized with profuse hemoptysis, and died almost immediately from asphyxia. But soon wandering so "Redond à nos montons" as our neighbors across the Channel would say. The topical application of medicinal substances to the larynx in laryngeal phthisis, consists either in the suffusion of a powder into that organ, or in the inhalation of a vapor or spray, or in the application of solutions by brushes, syringes &c.

Dr. Edward Tournié of Paris believes that the dust of charcoal, starch, flour &c penetrates into the bronchi, and has made this fact available in the treatment of disease by causing the inspiration of crystallized iodine, starch, alum, tannin, thyme, acetar and nitrate of silver in bronchitis and phthisis.
Vide L'Union Medicale February 5th, 1863.

Trussars, and Belloc have recommended for insufflation the most common salts of Mercury, Zinc, Copper, Lead, Alum, Bismuth, and Silver, mixed with very finely powdered Sugar.

In regard to the inhalation of various substances in the form of a fine spray by means of a "pulverizer of Throat," Creo, to which Tannin is most frequently employed. The first was tried in case of C.H., but discontinued on account of dryness of the throat produced. The Tannin was used in the form in case of I.S., where it seemed to do much for a short time. The application of medicinal substances in the form of solutions by means of brushes and syringes, is perhaps the most generally useful. These palliative measures in laryngeal affections are often attended with the most excellent results. The variety of substances employed is great. Dr. Scott claims the application of oil. Vide his "Medication of Larynx and Trachea." Bromide of Ammonia dissolved in Glycerine 3½ of the former to 3⅛ of the latter is the favourite remedy of Dr. Gibbs in this disease. The most useful of all applications is a solution of Nitrate of Silver applied to the ulcerations.

Mr. Hilton considers that the manner in which the
In the case of C. H. no advantage seemed to be derived from the application of a solution of nitrate of silver, which was probably owing to the presence of tubercle beneath the mucus membrane in these ulcerations. In the woman named A. E., pain relief was afforded, and one of the ulcers healed during her stay in the hospital. In both cases dysphonia was present, and to a most distressing extent in case of C. H. where so much ulceration existed.

The pain in swallowing is generally great where there is ulceration of the epithelium or sides of throat; also where there is ulceration and effusion of the amyloid cartilages, the pain is sometimes increasing. In these cases where the pain prevents sleep, interferes with digestion, and exhausts the patient, I would suggest the application of an aetheral solution of belladonna to the painful ulcerations. The wonderful and instantaneous effect
Aiding pain, that immediately follows the extraction

...
The two following cases are introduced for the purpose of illustrating one of the occasional so-called "failures" of the Laryngoscope. These cases, however, where the "musical box" is closed against us, cannot be set down as instances showing any fault in the instrument, but merely indicating a restriction to its use.

Case of Laryngeal Phthisis

III. At 22, servant, admission June 27th, 1863.

History. Family healthy. Flesh and strength have diminished of late. 6 months ago took cold, since which period a slight cough has been present. For some length of time voice has been affected, sometimes hoarse at others very feeble. No dysphonia. Never spat blood. On admission voice feeble and harsh.

Laryngoscopy. Larynx not visible on account of an almost horizontal epiglottis.

Right lateral curvature of spine. Ribs on right side more curved than those of left. Resonance on the opposite sides is unequal, the left being of clearer tone.

Derepitation at the apices of both lungs. Dulness and harsh breathing at right apex. Sputa mucopurulent, somewhat tinged with blood.

Tongue has on the centre a fissured ulcer.
Treatment. Pitt's Herb and Bark. Chlorate of Potash.

Jarful per month.

She had some hemoptyses during her stay in the Hospital, which she left at her own request on July 13th, 1863 unrelieved.

Remarks.

This case affords another example of that terrible disease - phthisis pulmonalis - in which there was, in all probability, some tubercular deposit in some part of the organ. With regard to this latter point nothing is definite, in consequence of the eccentric position assumed by the effusions.

The resonance or percussion over the back on right side was not so clear as on left, in fact, there was a decided dulness, and this was owing to the flatter curvature of the ribs. A rib of normal curvature tends to a certain extent under the blow of the percussion. If, however, it is much arched, the blow is diffused more over the ribs, and a comparatively dull sound is elicited.

This is an important practical point, which seems to be either forgotten or unknown by numbers of those who examine the lungs of a patient.
Case of Obstruct Laryngeal Affection

C. D. An 69, a Clerk. Admitted May 2nd, 1863.

Has been ill for 10 weeks. Occasional loud snooring noise during inspiration aggravated by speaking and during sleep. Slight dyspnea and dysphonia. No loss of voice but a dankiness is present.

Epiglottis is so plendent that the interior of the larynx could not be seen with the laryngoscope.

He is left handed. Scar on right side of neck from a razor cut, inflicted by himself many years ago. Was placed under the influence of chloroform, but the snooring laryngeal noise did not disappear.

Was discharged unrelieved

May 9th, 1863.

Remarks.

The reason of the brevity of these notes is that I could not obtain the full particulars of the case, so that the above are the jottings in my private notebook. They contain however, the chief or salient of the case, which was an extremely incomprehensible one. No cause could be discovered external to the larynx to account for the loud snooring laryngeal sound, and a sight of the interior of the vocal organ was denied us. I imagine that he had some...
chronic inflammation of the orifice of the pholus, not sufficient however to encroach on the ventricle of the larynx, and so produce much affection of voice. Under these circumstances the orifice of the pholus is generally sufficiently patent to enable the patient to carry on tranquil breathing without stridor, but when the patient is hurried or makes some exertion, or even if he draws a deep breath, inspiration becomes instantly noisy. This man during sleep was accustomed to make such loud stridorous noises, as to disturb all his neighbours in the ward, and was on this account so soon discharged. The increased noise was possibly owing to the obstructing effect of the swollen mucous membrane covering the muscular apparatus, which is relaxed during sleep. In this way the unsucceess of the chloroform inhalation may be accounted for.

A case similar to the above is mentioned in Russell's lectures on laryngeal Disease in the Times Gaz. 1863. It is also possible that an anaerobic tumour might have existed in the thorax, and produced the laryngeal symptoms through pressure on the recurrent laryngeal nerve. This point however was not investigated.
Case of Hysterical Laryngitis

Mrs. at 32, a hair-net maker, admission March 20, 1863.

History. Has usually enjoyed good health. Larynx and cartilages have been quiescent for many years past.

5 years ago her husband struck her on the thyroid cartilage with his fist. Her voice was immediately affected, with huskiness, there was dysphagia, and within a week complete aphonia. She was treated at St. Bartholomew's Hospital by polities, leeching etc., and partly regained her voice in about 3 weeks. It has remained husky and low however up to the present time, sometimes being worse than at others. Has had a slight aching pain in larynx ever since the reception of the blow. 3 weeks ago the dysphagia increased, the voice more husky, and the pain in larynx greater.

On admission. She is a stout woman, with very acute dysphagia. No dysphagia.

Heart and lungs sound normal. Pilo. slight cough. No expectoration.

Laryngoscopy. Vocal cords were rather close together, and almost immovable. Much congestion of the mucous membrane, that above and between the arytenoid cartilages was very red and swollen, and seems to
prevent the cartilages from approximating one another, sufficiently for vocalization.

Catarrh very profluse.

March 15th. Throat dry. Steam inhalations.

March 21st. Dysphonia less. Mist with Chloro 37 lds.

MARCH 25th. Vocal cords more movable, and congestion of the mucous membrane is less. Voice improving.

April 10th. Menstruating very profusely. Increase of pain in larynx. Breathes with努力.

Explains if a burning sensation immediately beneath the cricoid cartilage especially when swallowing anything warm. One gill of water was applied to thyroid cartilage, which gave relief apparently.

April 16th. The spray of tannic acid and water to be used occasionally, by means of Weiss fluid pulverizer.

27th. Voice is very much better. Acid inhalations have been employed 4 times. Considers herself almost well.

Discharged much relieved.

27th. Readmitted. Dysphonia has returned, although not so urgent as at first admission. Voice reduced to a husky whisper. Breathing quite stridulous. Considers that the return of these symptoms is due to a cold.

Laryngoscopy. When she inspires the cords come almost close together. There is some vascularity, but no
Morphine appeared to be discovered which would be sufficient to account for the stridor.

Glucon Hysterine was administered.

Gum ASAFOETIDA pr. + tds.

May 23rd. Voice has much improved and dyspnoea is less since readmission.

8th. Voice much stronger and breathing Saecez. Can take a deep inspiration now without stridor.

Electricity applied externally to larynx daily.

11th. Showed bath every morning. Gummine from tds.

Discharged May 17th. 1863 almost well.

Remarks.

The attack that occurred 5 years before admission, as a result of the husband's blow, was no doubt one of Hysteric or of Acute Laryngitis. It is evident from the treatment adopted at St. Baratholomew's Hospital, that she was considered to be suffering from the latter affection. But knowing as we now do the course of her ailment since that time, and remembering that she has been suffering from some uterine derangement for many years, it seems to me very probable that the case was one of Hysteric Laryngitis. On the other hand, it may be argued that the absence of paroxysms...
and presence of pain in larynx, indicated acute laryngitis, which becoming chronic may have subsequently assumed an hysterical form. That acute laryngitis, and this form occurring in hysterical women, were before the introduction of the laryngoscope often confounded, admits of no doubt.

Dr. Watson mentions a case where there was stridor with the stridulous noise peculiar to inflammation of larynx. She had twice undergone the operation of tracheotomy for similar attacks. Dr. W. and Sir Charles Bell were satisfied that the difficult inspirations were spasmodic and hysterical, and she recovered under the influence of remedies which do good in hysteria.

Pyland mentions a case, in which the operation was commenced but before its completion all signs of obstructed respiration vanished.

On the admission of Mrs. into the hospital there was, as previously stated, some congestion and swelling of the mucous membrane of larynx interfering with the mobility of the vocal cords, which was in all probability the result of hysteria. That "perturbations of the nerves may interfere with the inflammatory mode of action"
is stated by Pajet, who illustrates this statement thus—"Whoever has worked much with microscopes
may have been conscious of some amount of inflammation of the conjunctiva, as consequence of overwork;
now the stimulus giving this inflammation has been directly applied to the retina alone, and I
have often had a slightly inflamed left conjunctiva
after long working with the right eye, while the
left eye has been all the time closed."

Some remarks of Dr. Copeland on Hystera also
point to the same fact.

On the admission of Mrs. into Kings' Hospital, the
same view was at first taken regarding the nature
of the affection, as had been entertained 5 years
before, by the Medical Men of St. Bartholomew's, and
accordingly leeches were ordered, which relieved her
immediately, as is often the case in hysterical
affections. A blister also was some time after ordered
to the wrist cartilage. Dr. Farre states, that as
serous infiltration of the neighbouring parts often
follows leech bites, and the effect of a blister in
producing serous effusion often extends beyond the
skin, eye, it is possible that adenæ of the skates
might be produced or augmented, in consequence,
of these topical remedies. I have never myself seen such a result from either cecels or blister to the throat, and doubt the frequency of their diffusion into neighbouring parts, as an effect of either application. Dr. Farrer recommends that blood should be removed from the back part of the neck, but I cannot believe that the local abstraction of blood from this region, would relieve a laryngeal inflammation in the praecursus of M. H. after 5 days absence the hysterical nature of the affection was unquestioned. The laryngeal symptoms although not so severe as on first admission were yet sufficiently to excite great alarm in the patient herself and among her relations. The laryngoscope showed that there was no swelling to account for the stridor and dyspnoe, and this negative evidence when combined with the other symptoms, such as Glosso-hysterecism, enabled the Physician to give a confident diagnosis, which was verified by the result. The presence or absence of infiltration offers some assistance in forming a diagnosis. In true chronic laryngitis there is always loss of flesh, due no doubt to defective secretion of the fluid. Our patient M. H. was fat and in very good condition. The amenorrhoea which formed
So conspicuous a symptom in her case, was due
in all probability to her absolute habits.
Chloroform might assist the diagnosis, for if the
case be hysterical, the dyspnea and stridor
would disappear.
The electricity seemed to do this woman much
good. She always considered her voice stronger &
clearer after each application. One handle of the
electro-magnetic machine was placed on each side
of the larynx. Electricity is now applied to the
vocal organs by means of M'clellan MacKenzie's
Laryngeal Galvanizer. Vide page 98. With this
instrument, the electric current is applied more
directly to affected vocal cords. It is said however,
that in the successful cases narrated by MacKenzie,
the benefit was probably derived more from the
powerful mental impression caused by the operation,
than from any special effect of the Galvanism
upon the vocal nerves or muscles.
In bringing this 3rd division of my subject to a
conclusion, I will allude to the great assistance
lately afforded by the Laryngoscope to a friend.
The late Dr. House Physician of King's College Hospital
after devouring some fish rather rapidly, found.
to his annoyance, that a stone was lodged in his throat, and although he coughed and spluttered away vigorously, his efforts were unavailing. His colleague the House Surgeon then examined him with the Laryngoscope, and having pierced the tonsil with one of the Kryptothoraxi, Jesu's, by the aid of this instrument soon removed the offending body.

Appendix

I happen to know a medical man who is annoyed by a violent cough, whenever he introduces a strong body into his left auditory canal for a short distance. I would venture to suggest the following explanation of this curious phenomenon.

1. It seems to me probable that Jacobson's nerve on the left side of this gentleman is distributed for a short distance along the auditory canal, instead of terminating in the tympanum, which anatomists say is its usual destination.

2. Supposing this prolonged distribution of the sense to exist, I imagine that an impression produced by irritation of the auditory canal may be conveyed along this tympanic branch (Jacobson's nerve) of the glossopharyngeal, either straight up to the brain,
or to the Vagus, by means of the branch, connecting these cranial nerves. If by the former route (that is up the Glossopharyngeal to the Medulla Oblongata), the change there excited by the stimulus, is doubtless communicated to the origin of the Vagus in such close proximity along which nerve the impression is reflected to Larynx. If we suppose that the stimulus would travel first to the Vagus and then upwards to the brain, the irritation would be probably referred to the Larynx, because the Medulla Oblongata is wont to receive impressions from that organ through the medium of this nerve. As a result the expiratory muscles necessary for coughing would be set in action to free the larynx of the supposed irritation. Vide Fig. 20.

There is a case recorded in the Med. Times & Gaz. January 9th 1864, of Dysphonia caused by spasm of the left true vocal cord with pain in the left ear. This spasm was considered to depend probably on pressure of the left Vagus, where the recurrent laryngeal is spun off, by an aneurysm wall tumor. None however could be detected. Notwithstanding many careful examinations. The patient complained bitterly of the pain and said that it "ran up"
Fig. 20.
Medulla Oblongata

Direction taken by impression produced by Tumour.
Course taken by impression produced by irritation of the Auditory Canal.

Glossopharyngeal nerve

Tympanic branch, auditory canal

Vagus nerve

Superior Larynx

Larynx

Supposed Tumour

Recurrent Larynx

Vagus nerve
from the left side of his chest to the ear. He also stated that it was “a piercing pain right inside,” and endeavoured to enforce this remark by sticking his finger in the meatus. The reporter of this case considers the pain in the ear an incomprehensible symptom. It is not however uncommon, for Dr. Gull has mentioned it as of occasional occurrence in cases of thoracic aneurysm. The explanation given on the preceding page of irritation of the auditory canal producing cough would explain the occurrence of pain in the ear which occurred in this case, if the stimuli from the irritating tumour be supposed to travel in an opposite direction.

Supposing that no thoracic tumour existed to produce the spasm of left vocal cord, that affection of the Cord might possibly have been produced by some source of irritation in the auditory canal on the left side, which does not seem to have been examined. Vide Fig. 20.

As examples instances of these “sympathetic sensations” may be mentioned—

1. The violent convulsive cough which accompanies enlarged bronchial glands, and is probably owing to irritation of the pulmonary branches of the Saphenous.
The pain over the brow, from ice or cold water in the stomach, may be referred to irritation of the gastric branches of the vayus, communicated in the medulla oblongata to the 5th nerve. That such a peculiarity, as that I have attempted to explain, may be present in many ignorant of the circumstance, is extremely probable. An individual may seek the advice of a physician relative to a cough, the cause of which cannot be discovered in his chest, larynx, throat nor indeed anywhere. Would not an examination of the ears in such a case be advisable to ascertain if any source of irritation existed in these canals? I can quite understand that an ulcer situated within the auditory canal of one, who is the subject of this peculiarity, would in all probability produce a violent cough. In such a case the larynx would afford valuable negative information, by showing a perfectly healthy larynx. Since writing the above, the following sentence has been pointed out to me in Dr. C. H. Williams' Principles of Medicine, who in his enumeration of reflected sympathetic sensations gives, "touching the left auditory meatus causes a tickling of the eye-lids."
Fig. 26.

a, The epiglottis. c e, The vocal cords, between which are seen the rings of the trachea and the bronchial tubes, b being on the left. The parts are reversed, as seen in the mirror.

The projection into the trachea is due to the pressure of an external tumour.
Concluding Remarks.

With regard to the different works on the larynx which are happily not very numerous, I believe the oldest to be, by Hieronymus Fabricius of Padaea, a very curious old book published in 1613. Ryle and Porter on the Larynx and Trachea, are both standard old works on the subject. Professor Czermak's Treatise published by the Galenian Society is so well known as not to require notice. The best and most recent work is Dr Gibbs' "Diseases of the Throat and Windpipe as reflected by the Laryngoscope." The engravings are rather objectionable, for they convey to the reader's mind the impression that the various parts of the larynx and trachea can be seen with more distinctness than is possible in the great majority of cases. Vide a specimen, Fig. 81. Again, he introduces a number of outrageous words of his own coinage, such as Acantophonia, Contendiphonia, Diplophonics, for the explanation of which a Glossary is added, as if Medical Literature had not a sufficiency of "evil-sounding" words already. The engravings in Czermak's Treatise are far superior in truthfulness to those of Dr Gibbs. I would give the same advice relative to a perusal
of Dr. Tuerck's Clinical Researches on the Diseases of the Larynx, Trachea and Pharynx" as Punch says to young men with regard to Marriage, namely, "Don't." Dr. Tuerck's book is full of Germanisms, and is at times incomprehensible.

A work is required which will not only give the results of individual experience, but contain the immense amount of information already accumulated on this subject, which is scattered up and down throughout foreign as well as British Journals. In consequence of the very limited space of time at my disposal for this Thesis, I have been obliged to summarize the "enemy" as much as possible. This circumstance will account for the presence of extracts cut out of Papers which have been substituted for Drawings, for the brevity of Narrated Cases &c. The reader of the foregoing may possibly have perused some lectures in the Lancet delivered very recently by Dr. G. Johnson at the College of Physicians, London, and may think that some of the opinions therein expressed coincide closely with what has been here written. It is therefore necessary to state that this Paper was written before Dr. Johnson commenced his Lectures, and the similarity is due to the fact that
Aesthetics of art and society
all the preceding detailed cases occurred in his practice during the writer's clerkship.

In conclusion, I would observe that the great object of the physician is most undoubtedly to cure disease and if this is impossible to alleviate symptoms. This duty should be performed according to the motto of Asclepiades "Leto, tuto et praeclara." So far, doubts all are agreed. Strange to relate however there are numbers of men, who instead of investigating the "fons et origo mali", care little about diagnosis, but devote their attention exclusively to symptoms. In order that disease may be treated successfully, the seat and nature of the lesion should be discovered. The physical diagnosis of disease is the alphabet, the foundation stone, the first fundamental basis on which the superstructures such as treatment, prognosis etc., should be raised. Without a diagnosis, all treatment is uncertain, and vain. I have seen warty excrescences of the larynx simulate a nervous affection, paralysis of the vocal cords give symptoms of inflammation; urgent symptoms of acute laryngitis without a trace of inflammation. Morbid anatomy is linked by indissoluble bonds
with this physical diagnosis of disease, and they proceed together, the one confirming or nullifying the other.

The most distinguished clinical teacher in Europe (as a professor in the University of Edinburgh, has been named by a celebrated opponent in an English School of Medicine) most truly remarks, that it is only by the multiplication of such instruments as the ophthalmoscope, laryngoscope, &c., whereby disease can be seen by the eye, and determined with certainty, that Medicine can surely although perhaps slowly proceed to that advanced stage towards the ultimate goal of perfection which is already reached by many of the other sciences.
Books and other Publications referred to

Byland on Diseases of Larynx and Trachea.

Dr. Gibbons Diseases of Throat and Windpipe. 2nd Edition.

Porter on Surgical Pathology of Larynx and Trachea.

Casebooks on the Larynx (Sydenham Soc. Translation).

Tschirch's Clinical Researches on Diseases of Larynx and Trachea.

`Méthode de Pratique de Laryngoscopie.'


Anstalt's Pathological Anatomy. Journal de Propres.


Watson's Practice of Medicine. Gazettes des Hopitaux.

Walseon on Diseases of the Lungs. L'Union Medicale.


L.S. Williams' Principles of Medicine. Lancets.


Holmes Surgery (3rd Vol.).


Stokes and Suckling's Pathological Anatomy.

Dr. Scott Alexon on Medication of Larynx and Trachea.

Mr. Trouseau's & Belloc's Traité Pratique à la Pthèsee Larynx.
Dr. Moura-Bournillon's Polypi of Larynx.

"""" Course Complet de Laryngologie.

Dr. Green's Lesions of the Glossothoracic Cartilages.

etc. etc.