**Advice to the deaf. The present state of aural surgery; with new modes of curing diseases of the ear, and remarks on the causes and prevention of deafness and on ear trumpets, cornets, etc / [John Harrison Curtis].**




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# ADVICE

TO

# THE DEAF,

WITH REMARKS ON

## THE PRESENT STATE OF

# AURAL SURGERY.

"Die Natur behauptet mit Nachdruck ihre Recht."—Schiller.

"Nature emphatically asserts her rights."

BY

JOHN HARRISON CURTIS, Esq.

LONDON:

WHITTAKER & CO., AVE MARIA LANE;
PARIS: GALIGNANI & CO.

1845.

ADVICE TO THE DEAF.



THE

# PRESENT STATE

OF

# AURAL SURGERY;

WITH NEW MODES OF CURING

## DISEASES OF THE EAR;

AND REMARKS ON THE

CAUSES AND PREVENTION OF DEAFNESS,

AND ON EAR TRUMPETS, CORNETS, &c.

BEING THE

SUBSTANCE OF A LECTURE

DELIVERED AT THE

**Royal Dispensary for Diseases of the Ear.**


By JOHN HARRISON CURTIS, Esq.

AURIST AND OCULIST,

DIRECTOR AND SURGEON TO THE INSTITUTION,

AUTHOR OF VARIOUS WORKS ON THE DISEASES OF THE EAR, EYE, &c.

*FIFTH EDITION.*

London:

WHITTAKER & CO., AVE MARIA LANE.

PARIS: GALIGNANI & CO.

1845.

HOC SONITU (PLANETARUM) OPPLETÆ AURES HOMINUM OBSURDUERUNT:
NEC EST ULLUS HEBETIOR SENSUS IN VOBIS.

CIC. *de Repub:* vi. 18.

LONDON:
Printed by ALFRED DOD (late MITCHELL & Co.),
Rupert Street, Haymarket.

# CRITICAL NOTICES

OF

# FORMER EDITIONS.

" The work contains practical rules for the preservation of hearing, and on this account alone is well deserving of attention from all classes—all classes being liable to the loss or impairment of the faculty of hearing. A part of the book is devoted to the consideration of the deaf and dumb; against the present mode of treating whom Mr. Curtis raises his voice, declaring it to be one which consigns to hopeless privation many who, under a better system, would certainly be restored to the full enjoyment of their senses. This section of the work we earnestly recommend to the perusal of the deaf, and of the friends of the deaf, containing, as it does, many neglected truths of the greatest importance to them all. The book altogether will prove interesting to the profession and to sufferers of the class of whose diseases it treats."—*Literary Gazette.*

" In treating upon the various and serious disorders which affect the ear, the author, who has devoted many years to this especial organ, both on the Continent and at home, and appears well versed in its diseases, takes, in the first instance, a comprehensive survey of the numerous causes which, acting upon the system generally, may develope a predisposition to affections of the ear, or actually serve as exciting means. The connection which the author shews to exist between the general nervous system and the auditory nerve, explains how causes apparently widely separated from any immediate influence upon the organs of hearing may still act as morbific stimuli to that organ of sense. One of the most important, and, at the same time, serious and distressing of diseases of the ear, is inflammation of the tympanum, or otorrhœa. The account which Mr. Curtis has given of this affection is deserving of attention. In the treatment of otorrhœa the author recommends several remedies which are new to English Practitioners, the use of which he became acquainted with on the Continent. In concluding our notice of Mr. Curtis's Lecture, we must congratulate the author upon the advances which are being daily made in this branch of medicine—advances which have been in no small degree contributed to by the success of the important institution to which he is attached; and we trust that the exertion which he has already given to the cause of aural surgery will act as a powerful stimulus to the continuance of his labours in the same useful and honourable field."—*Lancet.*

" The lecturer has long upheld the advantages of an exclusive attention to one department of the profession, and in his own person he gives a prominent example of these advantages, for few men are more persevering in the pursuit of them. For this he deserves credit; and as practice makes perfect, according to an old saying, Mr. Curtis is entitled to lay just claims to the more perfect knowledge which his steady devotion to his favourite subject has necessarily imparted."—*Medical Times.*

" This pamphlet contains a sketch of 'the most important information relative to diseases of the ear,' which Mr. Curtis was enabled to collect during a recent visit to the medical establishments of Germany. This important

department of medicine has been too long neglected in this country, and we hail with pleasure any attempt to attract the attention of the profession to the advances that have been made in aural medicine by our continental brethren. We are glad to find that Mr. Curtis denounces the quackeries which have lately been broached respecting catheterism of the Eustachian tube, and that most egregious of humbugs, the alleged cure of throat-deafness by excision of the tonsils and uvula."—*Dublin Medical Press.*

" This work is a brief compendium of all the information at present in the possession of the members of the medical profession respecting aural surgery. Mr. Curtis has introduced several new remedies which bear the stamp of experience in the German schools, and which he has successfully employed in his practice and at the Dispensary. His acquaintance with acoustics is displayed in the improvements and discoveries he has made in instruments intended to relieve and improve the hearing of those who would be otherwise incurably deaf. Mr. Curtis has done more for the cure of diseases of the ear than any other man living."—*Monthly Magazine.*

" Indefatigable Mr. Curtis appears once more before the public in the above work, which, like all his other publications, combines the *utile* with the *dulce* in well-chosen proportions, so as to be equally well adapted to inform the prefessional, and to amuse, while it instructs, the unprofessional reader. It is by no means confined to the ear, but takes a wide view of the causes of disease generally. In discussing the debateable points of aural surgery, Mr. Curtis displays much temper and sound judgment. We think the book calculated to be of great service, and to render valuable assistance to all with reference to defective hearing."—*Court Journal.*

" It contains accounts of many remedies and modes of treatment new in this country, but which have been subjected to the test of extensive application abroad, and have thus obtained high reputation. Mr. Curtis has employed them at the Royal Dispensary and in his practice, and states that they have fully sustained their character as valuable and reliable remedies."—*Observer.*

" The valuable information which it contains, the results of much research and very extensive practice, must render it highly acceptable to every medical practitioner who desires to keep pace with the constantly accumulating knowledge of his profession; and from the popular manner in which its information is conveyed, it can prove scarcely less acceptable to the reading public in general. Indeed, for those afflicted with deafness, it contains much that ought to be known, and to all such parties we sincerely recommend it." *Argus.*

" This work possesses the same distinctive features as all Mr. Curtis's other works—perspicuity, usefulness, and philanthropic feeling."—*Liverpool Chronicle.*

" We must say one word in commendation of Mr. Curtis for communicating his plans of treatment to the profession, instead of keeping them a secret. His conduct in this particular merits their thanks. His book is deserving of an attentive perusal."—*Manchester Times.*

" In the pamphlet before us, Mr. Curtis enters, with his usual perspicuity, into the all-important subject of the diseases of the ear, and gives advice for avoiding them; while the language need not deter any one from perusing it, as, being free from technicalities, it is easy to be understood."—*Cheltenham Chronicle.*

" Mr. Curtis, in the treatment of the important branch of pathology which he discusses, has the advantage of having devoted for a long time his exclusive attention to the subject. We recommend the pamphlet to the attention of those afflicted with deafness, as well as to the medical faculty."—*Edinburgh Weekly Journal.*

TO THE

# PRESIDENT, VICE-PRESIDENTS, AND GOVERNORS

OF THE

# ROYAL DISPENSARY FOR DISEASES OF THE EAR.

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My Lords, Ladies, and Gentlemen,

*I cannot more appropriately dedicate the following pages than to you, by whose kind and generous support the Institution, in the service of which I have learned the principal part of its contents, has been maintained during a period of nearly Thirty Years, and has thus acquired a degree of stability which will enable it, I trust, to continue its career of benevolence and usefulness until the progress of improvement in our sanatory condition shall happily render such institutions needless.*

*Till that time comes, however, it behoves every friend of humanity to do his utmost to alleviate the*

civility from the principal members of the profession, and had the pleasure of meeting with several of my old friends; among others, with Deleau, who, in a conversation I had with him, expressed his perfect agreement with me as to the curability of the deaf and dumb, he having succeeded in several such cases. I likewise saw and conversed with Professor Pappenheim, whose work on the nerves is referred to in page 32. My conversation with him has led me, since my return, to examine the nerves of the ear more attentively, by means of microscopic observations, which I repeated in my last lecture at the Dispensary: on which occasion I exhibited those nerves, with their minute ramifications, with Cary's double achromatic microscope; and the membrane of the tympanum, with the various small bones of the ear, also the vestibule, semicircular canals, cochlea, &c., with Ross's new large achromatic microscope. Observations of this kind seem destined to effect great changes and improvements in medical science generally; and aural surgery will, it is hoped, gain something from the same source.

Although the operation for removing obstructions of the eustachian tubes is abandoned by many practitioners, I still not unfrequently have cases come before me in which injury has been done by it. There has not for some time been any pretended new operation upon the Ear, but I suppose it will not be long before some such *discovery* will be made. Let us hope it will not be perforation of the mastoid cells, which, as related in the following pages, was once tried and occasioned death.

There is one point to which I would especially call the attention of my readers, and that is the necessity for attending to diseases of the ear in their *incipient* stages: they may then generally be combatted with success, but if suffered to become inveterate they too often defy all the curative means at our disposal. However, the rapid progress of science, which is continually placing new agents in our hands, and extending our power over all the forms of disease, justifies us in the expectation that incurable diseases will rapidly diminish in number, and that at length the only cause of death will be the gradual and painless wearing out of the whole system.

It is a source of solid satisfaction to me, that I have succeeded in establishing the Royal Dispensary, and have thus provided a means, previously wanting in the Metropolis, for the cure of the suffering poor, and for studying the diseases of the Ear on a more extensive scale than was

formerly possible. The system adopted at this Charity has been attended with results so undeniably beneficial as have secured for it, in spite of both open and concealed hostility on the part of interested persons, the highest patronage and support, both from individuals and public bodies*. It has been instrumental to the cure and relief of upwards of 13,250 poor persons afflicted with deafness and other diseases of the Ear; and that its sphere of usefulness is by no means contracting, is shewn by the fact, that as many as 180 patients frequently attend for advice and assistance in a single day†.

Next to the consciousness of having contributed to the alleviation of so much human suffering, my chief gratification arises from the confidence which has ever been and still is reposed in me by the Governors of the Dispensary, and by the public; the former of whom have, on two occasions, honoured me with marks of their approbation for my services to the Charity: the first at an Anniversary Festival, when a Gold Medal was presented to me by the Chairman, the late Earl of Harewood; and the second at the Annual General Meeting, held June 3, 1842, when the Chairman, His Royal Highness the Duke of Cambridge, presented to me a splendid piece of plate, subscribed for by the Governors and friends of the Charity.

The publication of my various works on the Ear, which have received the approval of the principal medical and scientific journals, has spread a knowledge of the subject not only in this country, but in America, and on the Continent, several of them having been translated into various foreign languages; and I have had the pleasure of seeing them in the principal medical libraries of France and Germany.

Looking back, then, with satisfaction at what I have effected within the last thirty years, I, at the same time, look forward with hopeful anticipation to what I may be enabled to accomplish hereafter. As long as I am able, I intend to strive for the completion of my original plan

* I may here refer to the facts that Her Majesty the Queen and His Royal Highness Prince Albert, and his Majesty the King of the French, have lately been pleased to honour the Dispensary with their patronage; and that the Ratcliffe Trustees have given to its funds the sum of £.100, and the Trustees of the Cholmondeley Charity £.50.

† The Dispensary is open to persons from all parts of the country, without distinction of age, sex, or class: poverty and disease being the only passports required. Where from neglect, deafness has become inveterate, the patients are gratuitously supplied with suitable acoustic instruments.

he possess powers of the highest order, it is not possible that he should be able to pursue original inquiries, or to subject to a very rigid examination the doctrines of his teachers, whether oral or literal. Accordingly, opinions in former times descended from one generation of medical men to another with little alteration or improvement, and scarcely any progress was made in this all-important science.

Since the beginning of the present century, the tendency of the medical art in this country has been to sub-division, occasioned, perhaps, chiefly by the vast diversity of diseases occurring in the immense populations of our crowded cities, and by the circumstance that, even of those diseases which, comparatively speaking, are very rare, the cases that occur among so many human beings as are congregated together, are sufficiently numerous to furnish abundant employment to distinct classes of practitioners. However this may be, it cannot be doubted that the results already brought about by this division of medical labour are most beneficial. It can hardly be denied, that undivided attention exerted upon large numbers of cases must render the practitioner infinitely more expert than he could become by means of the instances, few and far between, that he might meet with in general practice. In the latter, he has no opportunity of comparing one case with another, and thus of rectifying or confirming his judgment. The facts of one case are forgotten before another presents itself, so that he is ever *beginning* to gain experience, and yet never actually possesses it—never gets beyond the alphabet of the disease, and is compelled ever to grope among these "beggarly *elements*" of knowledge. The dentist, the oculist, and, lastly, the aurist, have accomplished more in their particular departments, during the last thirty years, than the whole medical profession had effected in them for three hundred years previously: and there is no limit to be assigned to the benefits they may confer upon mankind.

In ancient times, Alcmeon, a celebrated philosopher of Crotona, was among the first to investigate the structure and functions of the ear,—a subject that was afterwards taken up by Aristotle, who treats it with his usual acuteness and knowledge of anatomy, and seems to have observed the passage that is called, after its modern discoverer, the Eustachian tube*. And here I may men-

* Barthelemius Eustachius is supposed to have discovered these tubes. He died at Rome, 1574.

tion, that it is only by daily practice and observation, joined with a knowledge of the *anatomy* of the ear, that its diseases can ever be understood. Coming nearer to our own times, Julius Caperius, a Paduan, published one of, if not the earliest printed book on the ear, entitled "De Vocis Auditusque Organis Historia," which contains nearly all that is known, even now, of the anatomy of the ear. Duverney was the first French author who treated the organ scientifically, and his writings have considerable merit. But however accurate may have been the knowledge of the ancients respecting anatomy, their notions of medicine were too burdened with puerile superstition, and they were too prone to refer natural phenomena to supernatural causes, to allow much practical good to be effected by them. Of this we have a striking instance in the work of Soranus, who accounts for the healing effects of honey upon the aphthæ of children, by the circumstance, that the honey had been hived near the tomb of Hippocrates. Much more recently, the planets were supposed to exercise a mysterious influence on the animal economy—each of the heavenly bodies presiding over some important organ or function. The elixir of the alchemist is quite as gross an instance of absurd credulity; nor are there wanting, at the present day, equally melancholy proofs of that disposition to dupe and be duped which seems to characterise the human race in every state of society. Secrecy as to the nature of the supposed remedy was, and is still, an indispensable condition of success in such cases, for, doubtless, were this wanting, even the most credulous and confiding would seldom indeed be imposed upon.

The condition of the Deaf and Dumb appears to have been the first branch of aural science to attract much attention in recent times. This led to the prosecution of inquiries into the diseases of the ear generally; the result of which, it is, perhaps, not expecting too much to say, will eventually be to banish the fearful deprivation in question from the catalogue of "ills which flesh is heir to."

When I commenced practice in town, the only aurists in London were, Mr. Maule, Mr. Stevenson, the oculist, and Mrs. Martha Serle, who practised for many years. Seeing the need of some charity for the relief of those afflicted with diseases of the ear, who, I soon learned, were very numerous in the metropolis, I exerted myself for this purpose; and having received the cordial co-operation of the leading men in the profession,—Mr. Cline

my late teacher, Dr. Baillie, Dr. Babington, Sir W. Farquhar, Dr. Sims (who became the consulting physician),—I at length succeeded in my object, and undertook the duties of Surgeon and Director of the Dispensary, which has since met with the support of Sir H. Halford, Sir M. Tierney, the late Sir A. Cooper, and many other medical men. Having thus been placed in a more favourable situation for extensive and daily experience in diseases of the ear than has fallen to the lot of any other practitioner in this country (not fewer than 30,000 cases, from the highest to the lowest, having come under my care since 1811; and, I may add, that there is scarcely a large town in the kingdom, to one or more inhabitants of which I have not rendered assistance), I endeavoured in good earnest to avail myself of these opportunities, for the purpose of diffusing a knowledge of the subject among the profession, which, at that time, was confessedly very little acquainted with or interested in it. I accordingly began the series of works on the ear, which have been the means of awakening general attention to the subject. I received a most gratifying reward for these labours, in being appointed aurist to the then Prince Regent, and afterwards to his late Majesty William IV., and also to their Royal Highnesses the Duke and Duchess of Kent, and the Duke and Duchess of Gloucester.

Since I entered this line of practice, I have been followed by many others, not only in this country, but also on the continent; some of whom, possessing little knowledge, and less experience of the subject, have endeavoured to push their way into notoriety by sweeping vituperation of their predecessors and contemporaries, seeming to think that the public cannot fail to infer that men who are thus bold in condemning others, must be possessed of knowledge and skill unknown to those they attack:—unfortunately this is, indeed, mere matter of inference, for neither in their publications nor practice do they give any evidence of these superior attainments. And here I cannot help remarking, that a great hinderance to the progress of medical science is the jealousy and rivalry of some of its members, which prevents many men of talents from entering the profession.

In consequence of the wide diffusion of my Treatises, Map of the Anatomy of the Ear, and Chart of its Diseases, with the modes of treatment, medical practitioners, more especially in the country, have become acquainted with this subject; and as most of them are now well-educated men, and, having no one but

themselves to rely upon in difficult cases, are in the habit of judging independently, and thus becoming skilful and clever; I should recommend my country readers to consult them in case of any morbid affections of the ear, in preference to those travelling charlatans who, having no reputation to lose, and no conscience to restrain them, care as little as possible about the injury they may inflict upon their patients.

The sense of hearing consists in the reception of impressions from undulations of the particles of matter, whether propagated by the elastic medium of the air, or by denser substances. In the words of a celebrated French physiologist, hearing may be defined as the function intended to acquaint us with the vibratory motions of bodies—sound being to the ear what light is to the eye. It appears probable, that no special organisation is necessary for low degrees of this sensibility—hearing being, in reality, only a refinement of the sense of touch. But in the higher classes of animals, whose necessities require more refinement and extent of sensation, the organs appropriated to the reception of sound are exceedingly complicated and delicate; and comparative anatomy shows that, generally speaking, the higher the animal in the scale of creation, the more elaborate is the structure devoted to this purpose.

All the diversities of structure observable in the organs of hearing, have, doubtless, a direct relation to the circumstances, habits, and wants of the animals in which they are found. For example, hares, and other animals exposed to danger, and liable to be attacked by more powerful creatures, have large external ears, generally directed backwards, as if to catch the sounds made by those in pursuit of them; while their eyes, being full and prominent, warn them of any danger in front. Rapacious animals, on the contrary, whose destiny it is to pursue, seldom to be pursued, have their ears placed directly forwards, as is observable in the lion, the tiger, the cat, and others. Where the nature of animals is such as to require that they should distinctly hear sounds from below, as, for instance, slow hounds, they will be found to have either large pendent, or else flexible ears, since they move their heads less easily than man*.

* For an account of the structure of the ear in beasts, birds, fishes, and insects, see the author's Lecture on the Ear, delivered before the president and members of the Royal Institution of Great Britain, May 30th, 1828. Longman and Co.

Before I proceed to consider the diseases of the ear, I shall make some remarks on the best means of *preventing* them, and of preserving the ear in health and vigour to old age. In the early ages of society, man enjoyed long life; his manner of living was simple, his food, habitation, and pursuits were all calculated to fortify the body, and no anxious cares disturbed his mind. Even now, there are prudent persons who never have a day's illness, though imprudent ones have hardly a day's health.

It must be remembered, that the essential part of the acoustic organ is the auditory nerve, which is in intimate connection with the brain and nervous system at large. Hence, whatever tends to affect that system, either directly, or through any other part of the animal economy, must, more or less powerfully, act upon the ear. It is impossible, then, for hearing to be perfect unless the general health be good—whatever injures *that* can hardly fail to impair the sense of hearing; and, accordingly, the list of the causes of deafness, and other diseases of the ear, includes nearly all those agencies which give rise to other maladies. There is scarcely any disease but what, under some circumstances, may occasion affections of the ear. Among the most prevalent predisposing causes are, want of free ventilation, exposure to damp, or to sudden atmospherical changes—three of the most fatal agents with which the poor in our crowded cities have to contend. There are not a few persons, however, who voluntarily expose themselves to some of these evils, and who suffer accordingly. Constant play-goers, for example, are liable to the last of the above-mentioned evils, and they commonly become deaf, of which I have lately had several cases in my private practice—sudden exposure to the chill night-winds, after leaving the over-heated atmosphere of theatres, which are never properly ventilated, being the immediate cause of the attack. The same circumstance is noticeable in regard to bakers, a class of men who are peculiarly obnoxious to this evil, and of whom there are numerous patients constantly at the Dispensary.

There are not a few practices adopted towards children that have a most injurious effect upon the ear. Washing infants with cold water is sometimes practised, with a view to making them hardy, as it is called; whether it ever has this effect may be doubted, but it certainly is very efficacious in producing severe colds, and consequent deafness. The heads of newly-born infants are commonly bound up in flannel caps, tightly tied on, by which

the ears are flattened close to the head, their natural position being somewhat prominent; and by the same means they are prevented from receiving such distinct and vivid impressions as they otherwise would, and are, consequently, less powerfully exercised and developed. Every facility should be afforded for calling the powers of the ear into moderate and duly regulated exercise; but constant exposure to very loud sounds, by over-exciting the organ, tends to enfeeble and injure it.

Whatever acts too powerfully on the susceptible nervous system of the young weakens the ear; hence, sudden frights, however produced, not unfrequently give rise to morbid affections of that organ. For the same reason, blows on the head are sometimes attended with similar effects.

Setting children on damp grass, or on cold seats in the open air, &c., gives rise to dangerous colds, and frequently takes away the sense of hearing altogether.

The following may be briefly enumerated as exciting causes of diseases of the ear:—Wet feet, thin shoes, cold currents and draughts of air, keeping on wet clothes, sleeping in damp rooms and unaired beds, want of out-door exercise, living in a vitiated atmosphere, neglect of cleanliness, the use of adulterated food or that of a stimulating kind, intemperance, excesses of any sort, mental anxiety, and constipation of the bowels.

These are a few of the more prominent points, due precaution in regard to which would diminish to a considerable extent the number of those afflicted with diseases of the ear; but so long as the public at large are inattentive to sanatory measures, it is in vain to hope that any very great improvements will take place in this matter; for it cannot be too often insisted upon, that most diseases may be traced to the folly, vice, and imprudence of mankind*.

At a recent meeting of the governors of the Royal Dispensary for Diseases of the Ear, I stated that a large proportion of the poor residing in the low, damp, and confined districts of Westminster, Whitechapel, and Bethnal-green, have very imperfect audition; a fact doubtless referable to the unhealthy nature of

* In several of my works, and more particularly in the "Observations on the Preservation of Health," I have endeavoured to shew the intimate connexion of every part of the animal economy. Of this work, as well as of those on hearing and sight, Messrs. Darton and Clark, of Holborn Hill, have published brief synopses on cards for general circulation and information.

their places of abode, and to their general inattention to the laws of health. Now, so long as these causes of disease are suffered to remain, spreading misery and death all around them, the medical art is capable of little more than palliating evils which are inevitable; but once let vigorous measures for securing the public health be adopted, and we should soon find, in the diminished applications to hospitals and dispensaries, and, still more decisively, by the decreasing mortality, cheering proofs of an improved condition of the more numerous classes. Such is the importance of the subject, that I need not apologise for entering somewhat into detail respecting the more prominent of these measures.

That an abundant supply of pure air is indispenable to the enjoyment of health, is a truth universally admitted in words, but, like many other truths, this is wofully disregarded in practice. To how large a proportion of the inhabitants of London, for instance, is this necessary of life denied! Hemmed in closely on all sides by brick walls, they scarcely ever feel the breeze blowing freely on their cheeks; and the atmosphere is impregnated with and vitiated by a thousand different exhalations and fumes, which render it more capable of still further corrupting the blood than of conducing to its purification. It is nearly two hundred years ago since a similar complaint was made by the well-known John Evelyn, at a time when the evil cannot have been at all comparable in magnitude to what it now is. He tells us that, in spite of the admirable situation of the metropolis in respect of health, there were numerous artificial agencies at work which deprived it of these natural advantages, and actually rendered its atmosphere unwholesome and productive of disease. These he enumerates as being the various factories and establishments which consumed large quantities of fuel, and sent forth "that dismal cloud of sea-coal which is perpetually imminent over her head, and is universally mixed with the otherwise wholesome and excellent air." As a remedy for these evils, he proposes a legislative measure for compelling the removal of all such establishments to some distance from town. It is much to be regretted that this proposal was neglected, for the evil has so grown upon us, that its remedy seems almost impossible, at least, by the measure which he suggested. The advance of science, however, has put other and more simple means within our power for removing or abating the nuisance in ques-

tion: all that is necessary, is an Act compelling all factories, breweries, gas-works, *et hoc genus omne*, to consume the smoke which they generate, and not to pollute the vital element with their refuse.

This measure I conceive to be of the utmost importance, and essential to the success of any other plans for improving the public health. Parks and other places of public resort and amusement derive the chief part of their utility from furnishing opportunities and inducements for exercise in the open air, but if that air be tainted and rendered unwholesome, this becomes an evil rather than a good.

Next, perhaps, in importance to the purity of the air is that of the water employed for domestic purposes; and this is a point which has at various times employed the thoughts and pens of men of much talent and ability, and has excited great attention on the part of the public; but unfortunately the object has not yet been attained. A very large part of the water consumed in London is of a very impure kind, and is sometimes altogether unfit for use; and the mode in which it is received and kept in houses is often highly objectionable. The remedy for this evil is perhaps easier than for that already mentioned. London is built on a soil which abounds in springs of the purest water. In the words of Mr. Farr, "pure water is abundant, and would flow under almost every street;" and yet it is justly considered quite a luxury to be able to get a draught of good spring water, the number of pumps in London being very small in comparison to its extent. This is especially the case in the more modern parts of the town; in the city, pumps are comparatively numerous, while in the outskirts and suburbs they are "few and far between." This is a state of things that should be remedied; and a beginning might be made by erecting a line of pumps from one extremity of London to the other, commencing at the western end of Piccadilly and Oxford Street, and thence to the east end of the town. At all events, it should be made incumbent on the projectors of all new streets and squares to erect pumps in them; and in proper situations, fountains might also be provided; and, by boring to a sufficient depth, a spring might often be found which would cause the fountain to play day and night, without the aid of machinery—no uncommon thing on the Continent: what has recently been effected in this way at Paris and Vienna affords every encouragement for similar attempts

here. All over Germany I observed that pumps and fountains are numerous in the towns. In Berlin alone there are upwards of 2000 public pumps.

It must be added that the purest water, if conveyed by *lead* pipes, or received into *lead* cisterns, cannot possibly be wholesome ; and, in fact, the purer the water the greater is the danger*. Filtering does not purify water, as it can only remove the impurities which are mechanically suspended in it, and not such as are in a state of solution. When water comes fresh into cisterns only two or three times a week, as is the case with the New River water, filtering cannot much improve it, nor be successful in depriving it of its deleterious properties : we might as well attempt to remove the poison from a solution of arsenic by filtering. To prevent any injurious effects from its use internally, a *chemical process* would be necessary.

The vast extent of London, rendering it almost impossible to escape from its interminable streets into any open space, is another circumstance highly injurious to the healthiness of its inhabitants, the majority of whom are engaged in sedentary occupations ; to counteract the ill effects of which, they ought habitually to take considerable exercise in the open air. But what inducement is there for the weary tradesman to wander up and down streets, the fac-similes of those in which he has all day been toiling ? And yet to escape from them he must walk perhaps several miles. There has for some years been a growing sense of the necessity for providing a remedy for this evil, and, at length, something is on the point of being done to procure open places for public resort and amusement. Were the gardens of all squares opened to the public even for a short time daily, an important step would be taken towards this object ; and if Casinos were erected in all the parks, where visitors could be furnished with breakfast or tea in the open air, in fine weather, the novelty of the thing would attract many, and thus induce some to leave their beds an hour or two before the usual time, and inhale the fresh morning air before it is impregnated with smoke†.

* *Vide* Mr. Phillips' Evidence before the Committee of the House of Commons.

† At the lodges to the parks, milk, and curds and whey, can be procured ; and there appears to be no reason why something more substantial should not be provided, for those who desire it, in the parks themselves.

I have lately laid a plan for a Casino in the Regent's Park before the Commissioners of Woods and Forests; and the question has been taken up by several public journals, which admit the desirableness of such erections, so that it is probable something will be done before long.

When in Belgium last autumn, during the Queen's visit, I was much pleased with a concert in the open air, in the park at Brussels, given by the Harmonic Society, and will briefly describe the arrangements, which seem to me to be well worthy of imitation here. The performers were stationed in an elegant building called a Kiosk, resembling a temple or pavilion, which shelters the musicians and yet presents no obstruction to the sound. This Kiosk is frequently occupied by a military band, which performs for the amusement of the visitors to the park, and is no doubt a powerful attraction. Now, were Kiosks erected in the three parks of London, and the bands of the regiments stationed in the metropolis directed to perform in them at stated times during fine weather, far greater numbers of persons would resort to the parks, which would thus become more extensively useful and health promoting.

I am glad to find that my plans are being adopted in provincial towns as well as in the metropolis. Thus, the laying out of a park at Liverpool has been begun under the superintendence of Mr Paxton, who is similarly engaged on a park of 180 acres at Birkenhead, Cheshire, opposite to Liverpool. The Liverpool Park is the property of Richard Vaughan Yates, Esq.

In reference to this subject, I have much pleasure in quoting the following sensible remarks from a recent number of the *Medical Gazette*:—

"The advantages of parks and open spaces are by no means confined to their affording facilities for exercise and recreation; they have a more constant and wide-spreading influence upon the purification of the whole slowly-changing volumes of air. There are hundreds of places in this metropolis into which the *wind* never finds admission, in which the air is never perceptibly moved, and in which the only change it undergoes is by the gradual mixing of its impure gases with those of adjacent spaces, and of the upper strata of the atmosphere. Nay, even among the wider streets, there are many through which a free current is very rarely blown; and Londoners, or at least the majority of them, shrink before a breeze that one from the provinces or the

coast would hardly notice. It is probable, therefore, that by far the greater proportion of the change of the air which is effected in the metropolis is the result of the mixture of the gases composing it. But how slow a process this is, one may easily judge by the perceptible (we had almost said the palpable) difference between the air of an alley and that of the wide street or other space into which it opens. A part of the gases generated on the ground, and near it are indeed, by the greater heat there, soon carried to some distance above it; but that which is thus disposed of is but a small part of what is rendered impure; nor are the heavy and most noxious of the gases thus most rapidly carried off. Indeed, it is probable that by this process the change of air is, as far as it concerns the health of those who breathe it, and who constantly render it more and more impure, almost unimportant. The only effectual natural process for its purification, in the absence of the wind, is the gradual mixture of the gases, in accordance with Dalton's law, that the interspaces of one are as vacua to the particles of another."

It cannot be denied that a very large proportion of the diseases of the inhabitants of towns, including those of the ear and eye, are produced by their long sedentary occupations; and unless some abridgment can be effected in the hours of business, so as to leave time for healthful recreation, the opening of parks and squares will be attended with but little advantage to the adult population. It is custom and prejudice only which prevent some change of this sort; for, by beginning business an hour or two earlier, quite as much work would be got through as at present, even though all places of business should be closed at six o'clock in the evening. When in Dublin, I was informed that all the banks leave off at three in the afternoon, and no complaint is made of this arrangement; nor is it easy to see how any harm can result from it.

I may take this opportunity to mention, that I have lately made personal exertions to bring about this desirable improvement, having had interviews with many of the principal bankers and linen drapers; and from the attention with which I have met, and the evident readiness to do whatever is practicable on the part of nearly all those gentlemen, I have little doubt of the general adoption of this plan ultimately, although it may be delayed for a time by the prejudices, or the supposed interests, of a few. To no class would such a boon be more beneficial than

to the milliners, dressmakers, and all females engaged in shops or in needlework—a fearfully large proportion of whom fall victims to diseases induced by their sedentary occupations in close rooms and a tainted atmosphere; and to the same circumstances is doubtless attributable the frequency of affections of the eye and ear among those classes. By universal consent the law has interfered to protect factory girls from excessive labour; and it would be hard to shew why the classes above referred to should not enjoy the same protection.

The question of shortening the hours of business and labour continues to be agitated, and a gradual change in public opinion respecting it is being brought about; and if the parties chiefly affected continue their efforts in the same spirit as they have hitherto manifested, there can be no doubt they will eventually accomplish their object, which must commend itself to every mind the more it is reflected on. An association has been formed for the promotion of this cause, which deserves the support of all who take an interest in the happiness of their fellow-creatures: its motto should be "*omnia perseverantia vincit.*"

And here, although it is perhaps going somewhat out of my way, I cannot refrain from remarking that the employers themselves, as a body, have no shadow of interest in resisting the change required; for it is perfectly evident that the total amount of business transacted would be the same whether the hour for closing places of business was six or ten o'clock: purchasers do not purchase because shops are open at a certain hour, but because they need the commodities they buy—and this need is altogether independent of the time for opening or shutting shops.

Another prominent point in reference to the public health that requires immediate attention and correction, is the adulteration of food, which is carried on to a greater extent at this time than at any former period, more particularly in bread, beer, spirits, and wine*. Bread is adulterated chiefly with alum, which tends to induce indigestion. Beer is much more variously and in-

* Although it must be allowed that London is more healthy now than it has been for many years, no one can read the public papers without being struck with the vast number of sudden deaths. In the table of the mortality of the metropolis, it will be seen that, in the week ending May 6, 1843, there were 124 deaths from diseases of the brain, nerves, and senses.

juriously adulterated—deleterious drugs, of many kinds, are used*. Gin is adulterated by the mineral acids, and is frequently quite poisonous. Now, the mode in which these practices tend to injure health may be briefly shewn. The stomach has been truly called the sovereign of the body, ruling over all the other functions of the economy with despotic sway, and making its slightest affections felt in every part of the system.

It is highly necessary, therefore, that some measure should be adopted to diminish, as much as possible, the adulteration of food; and perhaps the establishment of a medical police, whose duty should be the prevention of every thing detrimental to the public health, would be one of the most efficacious. It is strange that England should be the only country in Europe where such an institution is unknown, and where, consequently, we are exposed to constant danger from the adulteration of food, the vending of unwholesome meat, the sale of quack medicines, &c.—evils which our continental neighbours in a great measure guard against.

In corroboration of my opinion, that a very large amount of the disease and mortality among us is attributable to causes of an artificial kind, which it is in our power either wholly to get rid of, or materially to diminish, I may mention, that out of upwards of a hundred and forty patients whom I prescribed for at the Royal Dispensary, for Diseases of the Ear, a few days since, I found, on inquiry, that their affections could, in the majority of cases, be distinctly traced to their own imprudence or ignorance of the laws of health, or to that of their parents. Indeed, if sanatory measures were universally adopted, diseases of the ear and eye would be of rare occurrence, disease generally would be less prevalent, the use of medicine would be superseded to a large

* When at Munich and Ratisbon, I was much pleased with the excellence of the Bavarian beer, which appeared to be perfectly genuine. When going down the Danube to Vienna in the steam-boat, I noticed that the Austrian nobility on board drank nothing but this beer; and Dr. Verity, physician to Lord Granville, who was on board at the same time in charge of the Princess ———, on her journey from Paris to Vienna, recommended the beer to me in preference to the wine of the country. In fact, I should never desire wine, except in illness, could such beer be procured in this country; and I cannot but think that a company for the brewing of it would meet with great success here, since there is no doubt our countrymen are very partial to malt liquors, and with reason, for they are, when genuine, among the most wholesome of beverages.

extent, and the happiness of the people greatly increased. The last report of the Registrar-General, as well as several documents published under the authority of the Poor-Law Commissioners, prove conclusively, that the general adoption throughout the country of the sanatory measures which are in actual but partial operation, would probably reduce the annual number of deaths in England and Wales by 30,000, and diminish the numbers constantly disabled by sickness in the same proportion.

It gives me great pleasure to observe, that many of the suggestions relative to the improvement of the metropolis, made in all the editions of my work on the Preservation of Health, have from time to time been adopted—such as the opening of the Regent's Park;—the erection of a bridge over the ornamental water;—the sweeping of the streets;—the consumption of smoke;—the erection of additional pumps, &c., &c. I am thus encouraged to propose further improvements, and look forward with pleasure to the time when London will still more emphatically deserve to be called the healthiest city in the world. Some of my friends tell me that I am attempting too much;—my reply is, that it may be so; but that in order to accomplish any thing we must attempt much: although few travellers reach the summit of Mont Blanc, there are hundreds who set out with the intention of doing so, and who thus enjoy scenes of such an extent and beauty as they could never have beheld had they been deterred from making the effort by too critical an examination of the difficulties and dangers to be encountered. A dramatic writer has called London the *fons delectabilis;* but I should like to see it deserve the appellation of *fons salutaris* also; and it is gratifying to know, that every change which adds to its external attractions contributes to its healthiness at the same time. It has been said, "See Paris, and die," as if the sight of that city were the supremest enjoyment in which man could participate; but I would much rather have it said, "See London, and live," and live happily and joyously too. Napoleon called us a nation of shopkeepers, meaning to reproach us with a sordid devotion to mere commerce, and with incapacity for comprehending the loftier pleasures derivable from the triumphs of art: but I doubt not yet to see the time when this reproach shall be utterly inapplicable to England: already we have made great progress in a better state of things, and no limit can be set to our progression.

This progression would be much accelerated by the establish-

ment of a Sanatory Society, having for its object the protection of the public health, by promoting every species of improvement, and by endeavouring to remove all ascertained noxious influences. Such a society I am now endeavouring to establish: it is intended to consist of noblemen, gentlemen, members of Parliament, scientific and professional persons, and generally of all who are alive to the importance of adopting such measures. The principal object of the society will be to diffuse knowledge upon these vital subjects throughout the country, and to recommend to the Legislature and the public the adoption of measures for purifying the atmosphere of our towns; for providing an abundant supply of pure water; for preventing the adulteration of food; for improved sewerage, and cleanliness in our streets; for the establishment of public baths; for providing more numerous and attractive places of resort and amusement in the open air; for diminishing the hours of in-door employment, for both males and females; and generally for whatever is advocated in this work as tending to increase the health and comfort of our densely populated cities and towns.

Such measures, however evidently useful and requisite, will, it is to be feared, be adopted only very slowly, unless supported by some powerful association like that now contemplated. As secondary measures, it is intended that the Society should, in all their proceedings, manifest a strict regard for the sanatory principles it is designed to promote, so that their precepts may be confirmed by their practice—without which it may be doubted whether much good could be effected. For instance, the building occupied by the Society would be in an elevated and open situation; the strictest attention would be paid to the ventilation and warming of the rooms, so that at the weekly soirées (to which ladies and scientific foreigners are to be admitted, as at the British and Foreign Institute,) no inconvenience from want of pure air, so commonly experienced at such assemblies, may be felt. Lectures on the subject of sanatory regulations will be delivered at stated intervals by gentlemen thoroughly conversant with the principles of Hygiène.

Before I proceed to make a few general remarks on the diseases to which the ear is liable, I cannot refrain from referring to the prejudice once all but universal, and still far from being entirely exploded, that diseases of the ear are, in their very nature, incurable. It is a pure assumption that there are *any* diseases of such a kind. It may console man for his ignorance to allege this

as a fact; but, after all, our inability to cure any and every malady arises solely, it may with far greater probability be assumed, from our want of acquaintance with the human constitution, and with the agents that operate upon it—a species of ignorance which every year is diminishing, thus rendering what was once incurable, easily and safely curable—a fact of which numerous instances might be adduced*. Nothing has more impeded the progress of medicine than the prejudice in question, as it has even extended its influence to the profession itself, and has often served as a barrier and stumbling-block to free and independent inquiry. The following remarks will, I trust, satisfactorily shew that a very large number of those diseases of the ear which, until I set myself to the task of inquiring into them, and established the Royal Dispensary, were considered hopeless, are capable of complete and speedy cure.

Those diseases or imperfections which impair or destroy the sense of hearing may be classed according to the different parts of the organ in which they are seated, and may thus be divided into diseases of the auricle or external ear, of the tympanum or intermediate ear, and of the labyrinth or internal ear. In this place I can only specify those of most frequent occurrence or dangerous tendency, and refer my readers for more complete information to the Sixth Edition of my Treatise on the Physiology and Pathology of the Ear.

Perhaps the most painful affection to which the ear is liable, is otalgia, or acute otitis, which consists in inflammation of various parts of the organ, and is popularly known as earache. Children frequently suffer from this disease, but most commonly it attacks persons who heat themselves by violent exercise in the open air. Like other inflammations, it may be either acute or chronic, and is susceptible of those applications and modes of treatment which are employed under analogous circumstances. The acute form may be readily removed by reducing the local inflammation, and increasing the action of the primæ viæ; in the chronic form the cure will, of course, be comparatively tedious, though even in these cases the disease will yield to appropriate constitutional treatment. A strong fomentation of poppy-heads, marshmallows, hemlock, or camomile, will gene-

* No better examples of the increased power of man over diseases could be mentioned than the cures daily performed by the aid of opium, bark, mercury, antimony, sulphur, and many of the modern medicines.

rally afford relief; but should the disease be caused by a carious tooth, as is often the case, the tooth ought to be removed. The continental physicians sometimes introduce into the meatus a few grains of camphor, enclosed in a piece of cambric. No stimulating substances, such as brandy, eau-de-cologne, or opium, ought to be put into the ear, as serious evil may be produced by them. A warm bread-and-milk poultice frequently affords considerable relief. In chronic otitis the general health is often deranged, and requires attention in order to a cure.

Another affection of the external ear, very common among children, is an inflammatory eruption called herpes. This disease attacks the eyes likewise, and even the whole head. It causes a thickening of the skin, and sometimes a discharge from the external meatus; the thickening occasionally closes the passage, and brings on temporary deafness. The treatment I generally pursue in this disease, is the thorough cleansing out of the ear, and the employment of an alterative injection, combined with such medicines as the state of the general health, which is usually disordered, requires. In slight cases of erysipelatous inflammation of the auricle, I have found no better application than hair-powder or flour.

In the more serious cases of herpetic eruptions, when attended with considerable pain, an ointment composed of anthracokali has been lately much used in the Parisian hospitals with advantage; and I have myself employed it with similar results.

The most frequent cause of deafness, connected with the state of the external ear, is that arising from collected cerumen, or wax. A due secretion of the passage is necessary to keep it in a healthy condition, as well as to preserve it from external injury; but a defective, or too profuse secretion, is equally the cause of deafness; and the cerumen frequently becomes indurated and inspissated to such a degree as to cause obstinate dulness of hearing. Cases of this kind, though in reality of the most simple description, are often confounded with obstructions of the Eustachian tube, nervous deafness, and other serious affections of the ear, and thus occasion great alarm. An inspection of the ear, by means of Dr. Gruber's speculum and lamp, described in a subsequent page, at once discovers the true cause of the inconvenience, and then relief may be easily afforded, and hearing at once restored. For want of such precaution people not unfrequently labour under deafness for many years, with the idea that they are the subjects

of an incurable infirmity, never imagining that an evil so serious depends upon so trifling a cause*. The hardened cerumen should be dissolved by proper applications, and afterwards completely removed by the careful use of the syringe. The importance of great care in the selection of the syringe cannot be sufficiently insisted upon: those generally employed are much too large, by which there is danger of rupturing the membrane of the tympanum.

Before employing the syringe in any case, the ear should be inspected, to ascertain whether the membrane of the tympanum is in a sound state; as otherwise the fluid would be injected into the tympanic cavity, and might occasion considerable mischief.

As above remarked, deafness is sometimes accompanied by deficient secretion of cerumen. The ear of old persons who have been long deaf has (on *post-mortem* examination) generally been found dry and destitute of the secretion. In cases of this description, the proper course is to apply gentle stimulants, which excite the glands to the performance of their function, and thus supply the deficiency.

Of diseases of the intermediate ear, by far the most frequent is otorrhœa, which consists in severe inflammation of the tympanum, accompanied with purulent discharges, generally from the external meatus, rarely from the Eustachian tube. It may be divided into three distinct stages; the first is merely a discharge from the ear, unattended with any symptoms of an alarming kind; in the second form the discharge is combined with fungus or polypus; in the third stage the bones are involved, and, becoming carious, the disease often terminates fatally, or with total loss of hearing.

In the first instance, otorrhœa is generally brought on by exposure to cold, and is not unfrequently the consequence of an attack of fever. If at once properly attended to, it is very easily curable. I must add, that the successful treatment of this disease, as of most others, greatly depends on instituting a strict inquiry into its causes, and the period of its duration. None, perhaps, require to be traced more attentively through their different stages, or stand in need of more varied treatment during each.

* Such cases come under my observation almost daily; and not unfrequently I have patients who have gone nearly the round of the profession without having their ears syringed at all, or so imperfectly as to be of no use.

No one remedy can be trusted; the circumstances of each individual case should be studied before any particular method is adopted.

If neglected, the simple puriform discharge is apt to degenerate into a chronic affection, accompanied with polypus. In this stage, the extraction of the fungus is to be attempted. After the polypous excrescence has been removed, the application of mild and cautious means has generally been found, in my experience, to be sufficient for its complete cure. But the third stage is truly formidable, and when the disease has reached it, little indeed can be done to arrest its progress. It is of the utmost importance, therefore, to take active measures as soon as the disease shews itself in the mildest form.

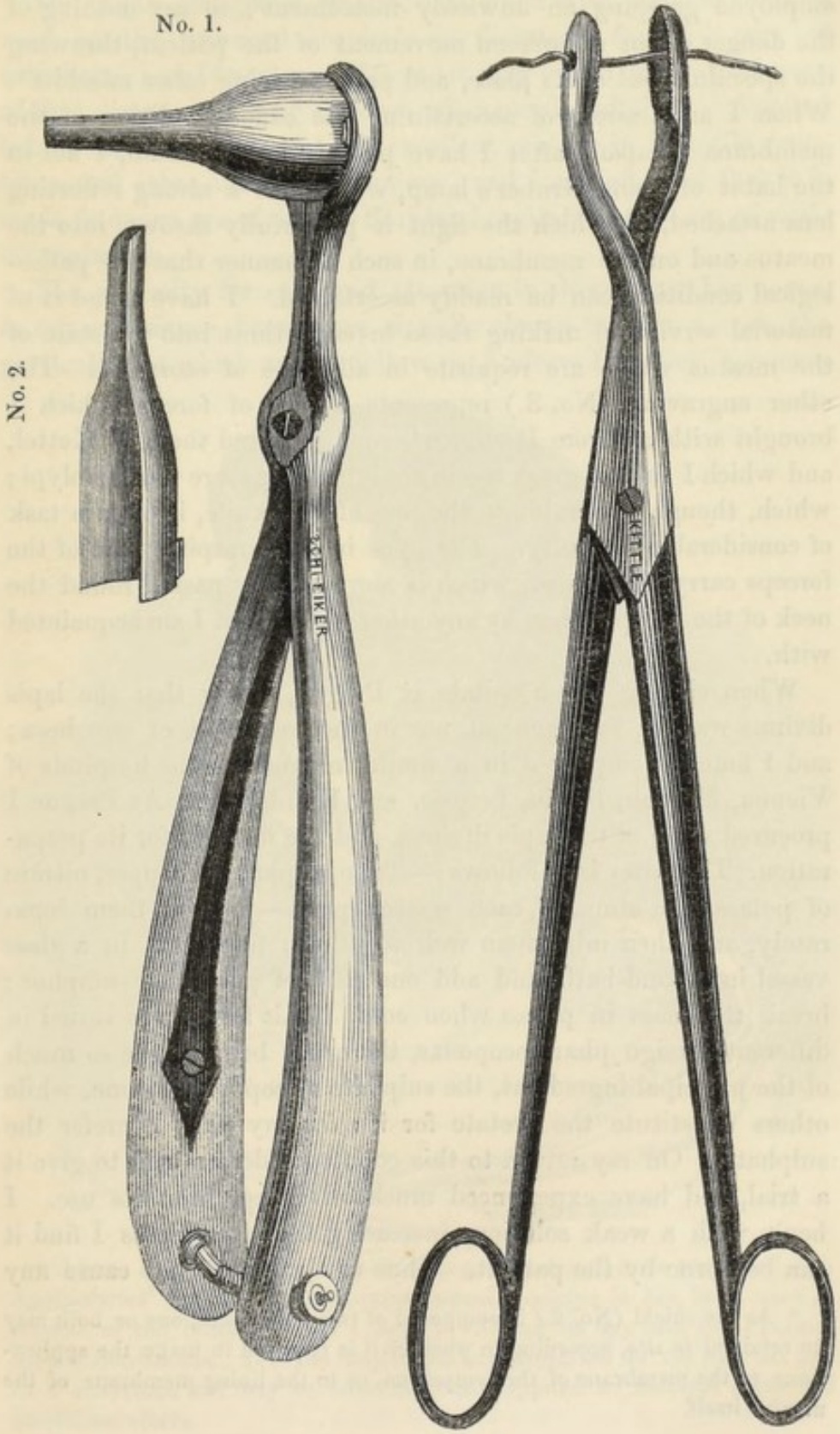
When at Vienna, and in consultation with Dr. Schreibers, Privy Councillor to the Emperor of Austria, and Dr. Gruber, I saw, for the first time, a speculum, invented by the latter gentleman, for assisting in the examination of the external meatus; an engraving of which (No. 1,) is subjoined opposite. It differs from the so-called Kramer's speculum*, and from that of Itard, inasmuch as the shield does not form one solid piece with the remaining portion of the instrument, but can be detached from it, and left behind in the meatus, to protect its parietes, while caustic or other applications are made to the diseased parts. By means of an adapting screw connecting the handles, they may be kept more or less apart, at the will of the operator, and according to the exigencies of the case: I consider both these differences to be marked improvements, and have no doubt they will be found such in practice. The surgeon is better enabled to attend to the case, and to do whatever is requisite, when both his hands

* This instrument was really invented by Schleiker, of Vienna, from whom I procured Gruber's speculum; but Kramer, with characteristic modesty and honesty, has arrogated to himself the credit of the invention, and given it his own name. In this person's work on the ear, which consists, for the most part, of violent attacks on all who have gone before him in aural surgery, he quotes and criticises the *First* Edition of my Treatise on the Ear, published in 1817, although, at the time he wrote, the *Sixth* Edition of it had made its appearance; and not content with this, he misrepresents my opinions, and ascribes to me modes of treatment which I never employed. This unfair criticism has lately been reprinted in a work, entitled "Contributions to Aural Surgery;" the author of which should establish his own reputation before he attempts to undermine that of others. I had the satisfaction to find, however, when on the continent, that Kramer was comparatively unknown even in his own country, where my works are found in almost every medical library and hospital.

No. 1.

No. 2.

No. 3.



are at liberty, as they are when the shield can be detached from the handles and left in the meatus, than if one of the hands were employed grasping an unwieldy instrument; to say nothing of the danger of an unforeseen movement of the patient, throwing the speculum out of its place, and perhaps doing other mischief*. When I am desirous of ascertaining the exact condition of the membrana tympani, after I have passed the speculum, I am in the habit of using Gruber's lamp, which has a strong reflecting lens attached, by which the light is powerfully thrown into the meatus and on the membrane, in such a manner that its pathological condition can be readily ascertained. I have found it of material service in making those investigations into the state of the meatus which are requisite in all cases of otorrhœa. The other engraving (No. 3.) represents a pair of forceps which I brought with me from Berlin, where I procured them of Kettel, and which I find of great use in applying a ligature round polypi; which, though preferable to the use of the knife, is often a task of considerable difficulty. The eyes in the grasping part of the forceps carry the thread, which is more readily passed round the neck of the polypus than by any other instrument I am acquainted with.

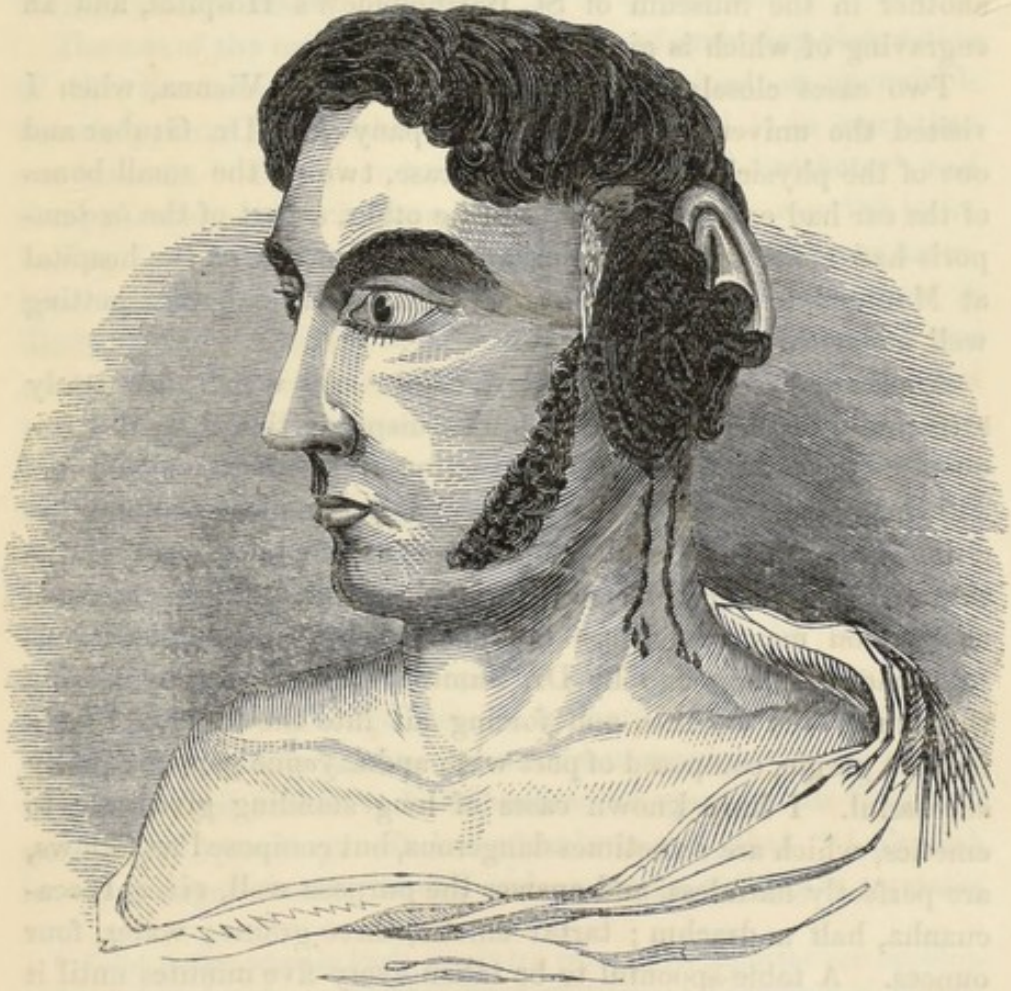
When visiting the hospitals at Prague, I saw that the lapis divinus was in very general use in the treatment of otorrhœa; and I found it employed in a similar manner at the hospitals of Vienna, Munich, Berlin, Leipsic, and Hamburgh. At Prague I procured some of the lapis divinus, and the formula for its preparation. The latter is as follows:—Take sulphate of copper, nitrate of potass, and alum, of each sixteen parts—powder them separately, and then mix them well together; fuse them in a glass vessel in a sand-bath, and add one part of powdered camphor; break the mass in pieces when cold. This formula is varied in different foreign pharmacopœias, there not being quite so much of the principal ingredient, the sulphate of copper, in some, while others substitute the acetate for it: for my part, I prefer the sulphate. On my return to this country I determined to give it a trial, and have experienced much advantage from its use. I begin with a weak solution, increasing the strength as I find it can be borne by the patient. Thus used, it does not cause any

* As the shield (No. 2.) is composed of two half pieces, one or both may be retained *in situ*, according to whether it is required to make the applications to the membrane of the tympanum, or to the lining membrane of the meatus itself.

pain ; it acts as a mild stimulant and astringent, and gradually produces a cessation of the discharge*.

The aqua amygdalæ amaræ, combined with zinci sulphas, is used at the principal hospitals in Germany for the cure of otorrhœa ; and I have myself found it very useful in the treatment of that disease in young children when employed alone. Applied behind the ears, it is also an excellent remedy in infantile eruptions, and other cuticular affections ; and I am informed that it is made frequent use of in the Parisian hospitals in the cure of similar maladies.

The necessity for care and attention in this disease has never, in my experience, been more signally shewn than in a case, the particulars of which are as follow :—Andrew Donelley, a person



* I have had some of the lapis divinus prepared, and have presented it to Apothecaries' Hall and the Pharmaceutical Society ; it has been tried at several of the hospitals, and I hope it will find its way into the Pharmacopœia Londinenis. It is not only useful as an injection for the ear, but also as a collyrium, and may be advantageously applied to indolent sores and scrofulous ulcers.

residing in York Street, Marylebone, applied, and was admitted a patient at the Dispensary, having injured the ear while imprudently cleansing it of cerumen with the head of a pin; but he was exceedingly negligent in his attendance, and finally left altogether. Twelve months afterwards he became a patient at St. Bartholomew's Hospital, under Mr. Lawrence, affected with excruciating pain, and a profuse discharge from the ear. Here he remained only four days, and died eventually about two years from the commencement of the disease.

I cite this case as perhaps the most extraordinary and horrible example of the effects of long-continued neglect on record. A model in wax of these effects was made nine days previous to his death by Mr. Miller, a copy from which is in my possession, and another in the museum of St. Bartholomew's Hospital, and an engraving of which is given above.

Two cases closely resembling this I saw at Vienna, when I visited the universal hospital in company with Dr. Gruber and one of the physicians. In the first case, two of the small bones of the ear had exfoliated; and, in the other, a part of the os temporis had come away. A similar case I also saw at the hospital at Mannheim. These cases arose from fever, and were getting well under the usual treatment.

Another disease of the intermediate ear, which has lately attracted a degree of attention quite disproportioned to the frequency of its occurrence, is obstruction of the Eustachian tube. This may arise from various causes; but the most common exciting cause among adults, is some conspicuous disease of the throat, occasioning tumefaction or ulceration. Slight cases of obstruction may sometimes be removed by the simple means recommended long ago by Dr. James Sims, namely, by closing the mouth and nostrils, and forcing air into the tubes. I have found a gargle, composed of port wine and cayenne pepper equally successful. I have known cases of long standing give way to emetics, which are sometimes dangerous, but composed as follows, are perfectly harmless, and answer the purpose well, *viz.:* Ipecacuanha, half a drachm; tartar emetic, three grains; water, four ounces. A table-spoonful to be taken every five minutes until it operates, by which plan no more will be used than is necessary. During the operation, the patient may drink plentifully of warm camomile-flower tea. Some forms of this disease may be cured by injecting air into the tubes, for which purpose, as long ago as 1820, I had an instrument constructed. But where the passage

is not merely obstructed, but *obliterated*, as it sometimes is by ossification, or where the impediment arises from cynanche maligna or syphilitic ulcerated sore throat, it is manifest no such remedy can be applied, nor have we any means of curing it. Trucy, of Marseilles, thus expresses himself—" Injecting into the Eustachian tube is quite an illusion, and no success can reasonably be expected from the plan." Puncturing the membrana tympani was formerly an operation in great vogue, but it is now almost universally condemned. Dr. John Tustin Berger, physician to the King of Denmark, also attempted to cure his own deafness, by perforating the mastoid cells, but the operation terminated his existence; thus affording a striking warning to all who might afterwards be tempted to follow so rash an example, either upon themselves or others.

The use of the catheter, for the purpose of removing obstruction of the Eustachian tubes, has latterly obtained an unenviable notoriety, from the fatal effects which followed it in more than one instance. Though not unacquainted with the catheter*, and its application in such cases, I have but seldom resorted to it, having long been persuaded that it is neither simple nor harmless; and that, even in the most experienced hands, it is quite as likely to prove injurious as beneficial. Such being the case, I was not greatly surprised at what took place not long since, when persons of little skill or experience ventured to make use of so powerful an agent. We may just as well expect to cure all diseases of the ear by making a perforation of the occiput, as by the use of catheterism: so inapplicable is the latter to the majority of cases to which it has been, and is still, attempted to be applied. But the love of novelty unfortunately influences the public even on matters affecting life and health; and, hence, whatever has the air of originality (though there is in most of these specifics very little of that quality), is sure to attract numerous persons, willing to submit their health to be experimented upon for the benefit of quacks and quackery. It has often been said, that " fools rush in where angels fear to tread;" and assuredly nothing is a greater

* I did, in fact, when in Paris, nearly ten years since, enjoy the best opportunities of observing the use of this instrument, from the kindness of M. Deleau, who is perhaps the most experienced in its employment; and I noticed that he seldom used the large air-pump, but preferred a small pair of ivory bellows, which was inserted into the catheter, and worked with one hand. Both these instruments I procured of Charrière, and have sometimes employed.

mark of ignorance than presumption. Bold operations are often undertaken by men least qualified to conduct them with success, by way of speculation as it were, hoping if, in spite of their incapacity, the matter should terminate well, to gain credit, practice, and wealth, by means of their good fortune*.

The public having begun to entertain correct opinions as to the real merits of catheterism, those who had profited by the vogue in which that operation was held, finding themselves under the necessity of providing a substitute for this fast-failing source of revenue, set up a great cry about the prevalence of throat-deafness, and about some totally *new*, and of course completely *successful*, operation for its cure, consisting of cutting away the uvula and tonsils; and it appears from the statement of one of these gentlemen, that a considerable number of persons were hopeful enough to submit to this operation, which had not even the merit of novelty; for, as the *Lancet* truly observed, "the removal of enlarged tonsils, which by their bulk seclude the openings of the Eustachian tubes, in order to relieve deafness, is as old as the hills, and a daily operation of very trifling moment in the hands of every surgeon. To snip off the uvula is still more insignificant." Both catheterism, and removing the tonsils and uvula†, may occasionally be necessary; and I have myself sometimes, though rarely, thought it useful to excise them; yet we must not hence conclude that these are operations required in every day's practice: we might as well think it essential for the cure of toothache, that the nerve of the great toe should be divided, as is done in tetanus. Owing to the vigorous exposure made by the before-mentioned journal, of the futility of this piece of *originality*, I believe it has not very extensively imposed upon the public; and, therefore, as this, like most other supposed new remedies, is susceptible of an infinite number of applications, it was suddenly discovered to be an unfailing cure for stammering; but, unfortunately for the gentleman referred to, the *Lancet* took this matter up also, and

* In the Author's Essay on the Deaf and Dumb, published in 1829, will be found a view of the Eustachian tubes, with the base of the cranium; likewise full details respecting their obstruction, with remarks on the use of the catheter, by Wathen, Saissy, Lentin, Guyot, Herholdt, Morgagni, Stenon, Haller, Sabatier, Heister, Douglas, Sauvage, Leschevin, Trucy, Valsalva, the Author, &c.; shewing that that operation for removing obstructions of the tubes is any thing but new.

† When the uvula is much relaxed, a strong gargle of alum and oak-bark, used three times a day, is a very simple means of corrugating it.

most satisfactorily demonstrated that its efficacy is no greater in stammering than in deafness.

Before proceeding to give a brief account of the nervous affections of the Ear, it will be useful to lay before the reader a drawing of the brain, shewing the origin of the nerves of sense, with a short description, for which I am chiefly indebted to Mr. Swan's work on the Nerves of the Human Body; and then to point out the paramount influence of the nervous system upon the health of the whole body, which will enable the reader to understand more completely the special connection between the condition of the nervous system and that of the functions of hearing and sight. And here I may remark, that nothing has more contributed to the rapid progress of medical science, within the present century, than the greatly increased attention bestowed upon the anatomy of the nervous system, the diffusion of a knowledge of which, in this country, has been promoted by no works more than by those of my friend, the late Sir C. Bell*, and of Mr. Swan, whose profound researches have conferred so much credit upon the British school of anatomists and physiologists.

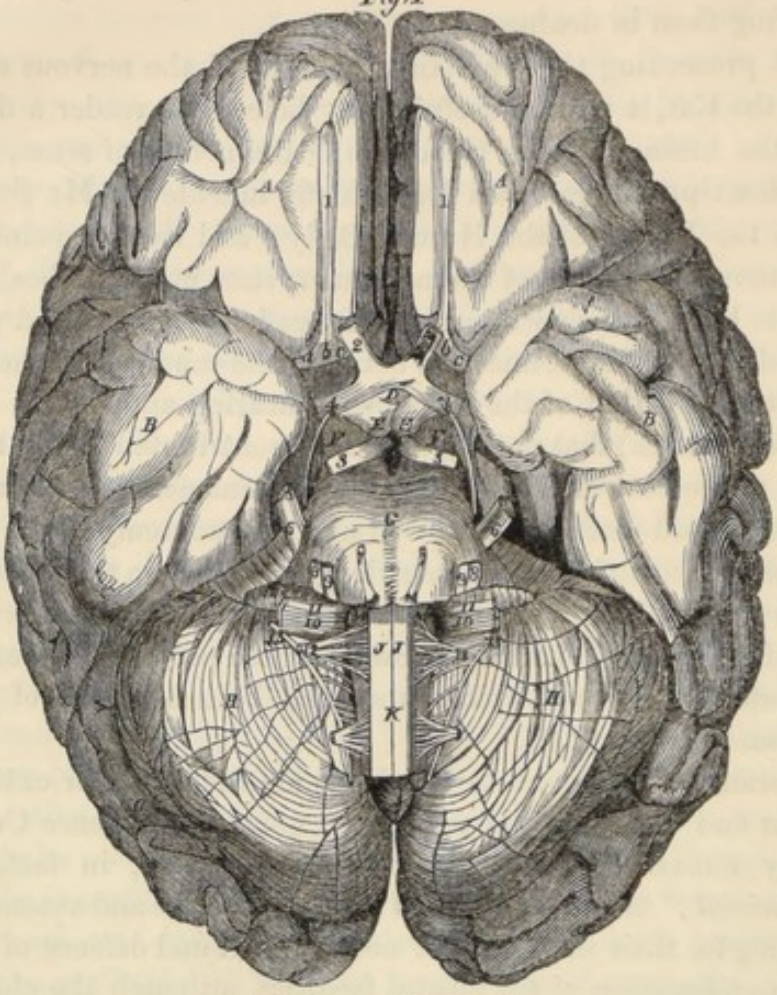
The brain is the organ to which we are indebted for external sensation and the power of voluntary movement; hence Cuvier has truly remarked, that "the nervous system is, in fact, the whole *animal;*" the other systems being vegetative and automatic, and having for their final end the nourishment and defence of this.

The manifestation of the mental faculties, although the chief is not the only function of the brain; that organ presides over, and when in a healthy state, regulates all the organic processes which take place within the body; and, consequently, when it is labouring under abnormal affections, every other function is more or less deranged.

Nervous influence appears to be indispensable to the performance of every function, whether animal or organic; hence the nerves, the channels by which it is conveyed from the central nervous masses, are diffused as extensively over the body as the

* My acquaintance with this distinguished anatomist commenced when I was at Haslar, on the occasion of his paying the hospital a visit, for the purpose of observing the operations performed when the troops returned from Corunna, in 1811, when he condescended to dine at the mess of the Junior Medical Officers, many of whom had been his pupils. Owing to the attentions which I was happy to have it in my power to pay to Sir Charles when at Haslar, he was kind enough to support me when I came to town to commence practice in Soho-square.

*Fig. 1*



A. Anterior lobes of the brain.
B. Middle lobes of the brain.
C. Posterior lobes of the brain.
D. Infundibulum.
E. Mammillary bodies.
F. Crura of the brain.
G. Annular tubercle.
H. Cerebellum.
I. Anterior piramidal bodies.
K. Commencement of the spinal chord.

1. Olfactory, or first pair of nerves. *a*, external; *b*, middle; *c*, internal root.
2. Optic, or second pair of nerves.
3. Oculo-muscular, or third pair of nerves.
4. Superior oblique oculo-muscular, or fourth pair of nerves.
5. Anterior portion of the three-fold, or fifth pair of nerves.
6. Posterior portion of the three-fold.
7. Abducent oculo-muscular, or sixth pair of nerves.
8. Proper auditory, or soft portion of the seventh pair of nerves.
9. Facial, or hard portion of the seventh pair of nerves.
10. Par vagum, pneumo-gastric, or eighth pair of nerves.
11. Glosso-pharyngeal, or associate of the eighth pair of nerves.
12. Myo-glossal, hypo-glossal, or ninth pair of nerves.
13. Accessory nerves.

vessels which distribute to every organ that not less necessary fluid—the blood, between which and the nervous influence there is this further analogy, that they are both variable in quantity and quality; variations which materially affect the condition of the system.

It is true, that very little is known of the nature of the nervous fluid—being imperceptible, its existence is discoverable only by its effects. That, however, it does exist, and is essential to the carrying on of function, is nevertheless conclusively demonstrated. If the main trunk of a nerve be divided, and the cut ends held more than a certain distance apart, the organ which it supplies becomes powerless, and is no longer affected by the appropriate stimuli. Take, for example, the pneumo-gastric nerve, which goes to the muscular coat of the stomach; if this nerve be severed in the way mentioned, the contractions of the stomach cease, and the process of digestion is stopped, as has been proved by actual experiments on dogs and other animals. But if the cut ends of a nerve be left nearly in contact with each other, the flow of the nervous fluid goes on without interruption. It appears, also, that if a nerve be tied tightly, the effect is the same as if it were divided.

These facts clearly prove that the nerves are not the sources, but merely the conductors of the nervous fluid, which proceeds from the spinal column and the brain; with the last of which, as being far largest in bulk, and as performing functions of a more diversified and important kind than the other, we have principally to do. When any part of the body is actively exercised, an increased flow of blood and of nervous energy is occasioned to that part. Powerful action is indeed impossible without a large supply of nervous influence; the quantity of which sent to those organs placed under our immediate control being determined by the will.

"But," to use the words of the distinguished Bichât, "it is a fundamental law of the distribution of vital powers" (of which the nervous energy is one), "that when they are increased in one part, they are diminished in all the rest of the living economy: that the sum is never augmented, but that they are necessarily transported from one organ to another; and, therefore, to increase the powers of one organ, it is absolutely necessary they should be diminished in others." For example, while an individual is engaged in active muscular exercise, the blood and nervous fluid are withdrawn from the internal organs, and poured into those of

locomotion: if, while in this state, he attempts to think intently, he will find it next to impossible to do so; or if, immediately after his exertion is over, he sits down, and eats a hearty meal, the stomach will not be able to digest it readily, because it is destitute of its proper share of blood and nervous influence; but when the increased action of the vessels and nerves of the muscles has subsided, and the balance of distribution has been restored, then the stomach will be equal to its duties. When the mental faculties are much exercised, the nervous influence is concentrated in the brain, and consequently withdrawn, to the same extent, from the rest of the body.

The connection between the brain and the stomach is of the most intimate kind; hence the latter organ is sure to be implicated in any disturbance of the functions of the former. Mr. Abernethy, in his Lectures on Anatomy, Surgery, and Pathology, says, "There is no hurt of the head that does not affect the digestive organs." A severe blow on the head is generally followed by vomiting and sickness; and a sudden mental shock at once takes away the appetite and weakens the stomach. It is not surprising, therefore, that dyspepsia (frequently bringing on deafness and blindness) should be one of the most common forms of disease occasioned by undue excitement of the mind; nor that some persons should be inclined to refer to the brain as the primary seat of most gastric complaints, and to ascribe but little comparative importance to diet.

Another most important part of the nervous system, is the sympathetic nerve, semilunar ganglion, and solar plexus, the chief function of which is to connect the animal and organic functions. They are situated near the stomach, and have been shewn by the discoveries of those distinguished continental physiologists, Majendie and Manec, to exert a very powerful influence on all the organs of sense, but more particularly on the ear and eye. I have myself also had the satisfaction of tracing the intimate connection of these nerves, while, for that purpose principally, dividing the semilunar ganglion, and solar plexus in the dissecting-room of King's College, in the presence of Mr. Partridge, the able and scientific professor of anatomy at that institution*.

* In the last Edition of my Treatise on the Ear, I have, by means of engravings, shewn the organs of sensation, with the distribution of their nerves, from their origin to their termination; and also the great sympathetic nerve, exhibiting the semilunar ganglion, and solar plexus, and their connection with the organs of hearing and sight.

Diseases of the internal ear may be generally described as belonging to the nervous system. In the majority of cases the affection of the acoustic nerves depends on some widely operating cause, and is rather to be regarded as a symptom of a more deeply-seated malady than as an independent disease. In nervous deafness there is no room for surgical operations. The parts affected are beyond our reach, and can only be acted upon indirectly, through the medium of general and constitutional treatment.

Nervous deafness is a disease that attacks all classes, but is especially prevalent among females. As it is generally slow and gradual in its progress, it but rarely happens that means are taken to check its advance: it is only after years, perhaps, of impaired hearing that the deficiency of sensibility to sound becomes so great as to alarm the individual, or to attract any notice from him*. To this circumstance, more than to any inherent obstinacy in the disease itself, must be attributed the little success that generally attends even the most skilful treatment of nervous deafness. The acoustic nerve, for want of use and stimulus, becomes so inert and torpid, that nothing suffices to rouse it into energetic and healthful action; and, for the most part, before persons thus affected apply for advice, they are hopelessly dull of hearing, with the prospect of yearly becoming worse. Such being the case, and nervous deafness being in reality, if attended to in time, and properly managed, by no means difficult of cure, it may be worth while to mention a very simple means of enabling any one to ascertain whether his hearing is still good and vigorous. If a watch cannot be distinctly heard to tick when held at arm's length, it may safely be assumed that all is not right, and that it is full time to pay attention to the condition of the ear.

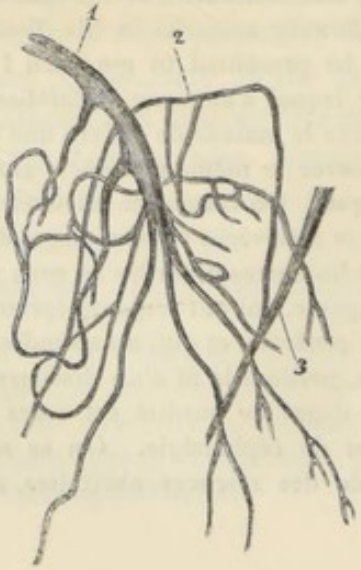
* With regard to the commencement of nervous deafness, M. Schmalz, of Dresden, makes the following remarks in his *Traité de la Conservation de l'Ouïe*, a copy of which he presented to me when I was at Dresden. "Le premier symptôme par lequel s'annonce *l'affaiblissement* du sens de l'ouïe, est la difficulté qu'éprouve le malade de suivre une conversation générale et animée, ou d'entendre, avec le même netteté, le chant et l'accompagnement d'un morceau de musique. On rencontre en effet beaucoup de personnes, dont l'ouïe n'a jamais pas s'élevée à ce haut degré de perfection: aussi sont elles plus disposées que les autres à perdre ce sens de bonne heure. Ceux-là y sont encore plus exposés, qui ont toujours éprouvé une sorte de fatigue à suivre une conversation générale, et qui, au moindre bruit, ou par le mélange de quelques autres voix, perdent le fil d'un discours qui captivait toute leur attention. Ce premier degré de surdité est assez souvent accompagné de buissement d'oreille, ou de céphalalgie. On se sent la tête moins libre, moins disposée à l'étude des sciences abstraites, et la mémoire s'affaiblit avant l'âge."

The difficulty almost invariably experienced in treating nervous deafness is, no doubt, chiefly owing to our comparative ignorance of the functions and arrangement of the nerves of the internal ear. Dr. Carus recommended to my notice a work on the nerves, by Professor S. Pappenheim, of Breslau, from which I have derived considerable advantage; and, as this book is but little known in England, the following extract may be interesting to some readers:

"The nerves of the internal ear are—the nervus acousticus, the portio intermedia Wrisbergii, the anastomosing branch of the facialis and acousticus; the branches of the acousticus, viz., nervi cochleæ and vestibuli, ampularis, saccularis, &c., which last forms, according to Scarpa, a small ganglionic swelling, from which three bundles spring, that, according to their situation, are divided into a superior, middle, and inferior. The nervus acousticus is cerebro-spinal in man and the domestic mammalia only. The anastomosing branch of the facialis and the acousticus is provided with a ganglion in the ox (which was known to Scarpa,) and consists of many ganglionic globuli. This branch may be traced backwards, and isolated as a small stem in the sheath of the acoustic nerve. It springs from the acousticus, and passes to the facialis, where it is enlarged by additional fibres. The nervus cochleæ is totally covered on its upper surface by a broad reddish-grey stratum, which consists of ganglionic globuli. The nervus vestibuli has, particularly on its posterior and outer surface, a reddish ganglionic substance. The nervus modioli contains ganglia in the human subject."

I subjoin a plate from Pappenheim's work, of the nerves of the ox, to which the following are the references:—

Nerves of the dura mater of the ox.—1. Arteria meningea media.—2. Branch of the trigeminus.—3. Plexus, the origin of which the Author has not yet discovered.



I have already observed, that nervous deafness may be regarded as a modification of a general constitutional disorder; and hence it is frequently found in connection with amaurosis. Dr. Carus, of Dresden, physician to the King of Saxony*, and Dr. Böhm, of Berlin, informed me that they had often met with such cases. In two cases of deafness which I attended at Vienna, and one at Berlin, amaurosis also was present†; and I have repeatedly cured the latter disease by the remedies employed for nervous deafness.

One of the most remarkable of these was the case of a gentleman, who, owing to an attack of apoplexy, had become both blind and deaf. Being called in to him for the latter affection, I commenced by moistening the hardened secretion, previously to syringing the ears, and by ordering leeches to be applied behind them; and on calling the next day I found that a discharge from the ears had taken place, and that the sight, as well as the hearing, was much improved: the gentleman was restored to perfect health in a short time by means of the treatment pursued.

There is a case related by Sir Charles Bell, in the Philosophical Transactions, communicated by Mr. Crampton of Dublin, which shews the connection on which I am now insisting—the eye becoming insensible to the touch a few days after a discharge from the ear had ceased.

Two cases are related by Mr. Mackenzie in his "Practical Treatise on Diseases of the Eye," in both of which affections of the eye were attended with the loss of hearing. In one of them, that of a muscular person, of a sanguineous temperament, the sight of the left eye and the hearing of the left ear were lost, but were afterwards recovered.

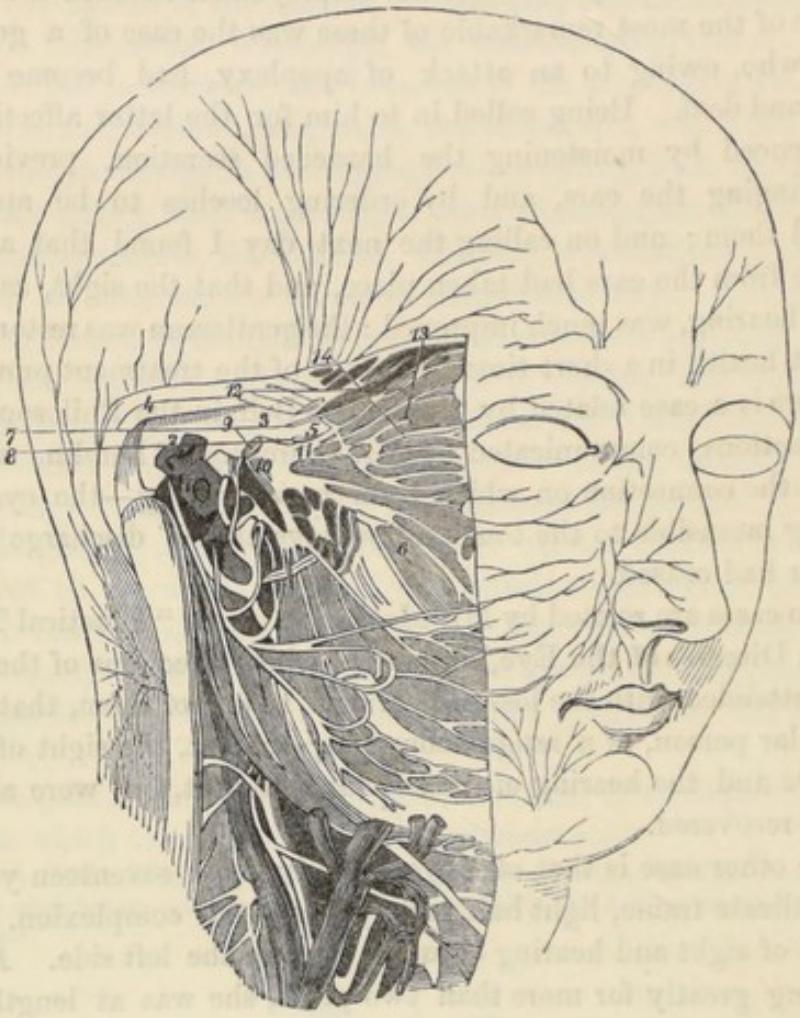
The other case is that of a young lady, aged seventeen years, of a delicate frame, light hair and eyes, and fair complexion. The failure of sight and hearing occurred first on the left side. After suffering greatly for more than two years, she was at length relieved by death; and, on examining her head, the thalami ner-

* This gentleman, whose work on comparative anatomy is well known to the profession, communicated to me much information on the ear, and kindly shewed me his private museum. Dr. Schiller, who presented me with his work, obligingly conducted me over the library and splendid anatomical museum at Dresden.

† When at Vienna, I saw Professor Dieffenbach, who was there on a professional visit, perform three operations on the eye, in the presence of Dr. Hassinger, Dr. Zink, and Dr. Fisher; and he informed me that he frequently met with deafness connected with affections of the eyes.

vorum opticorum were found somewhat enlarged, and entirely converted into a fungous substance, of the nature of fungus hœmatodes. Spiculae of bone, projecting inwards, were attached to the cranium.

These facts will appear the less strange when the remarkably close connection between the nerves of the ear and eye, as shewn in the accompanying plate, is understood.



1. External auditory canal.——2. Semicircular canals.——3. Third pair of nerves within the cranium.——4. Its superior branch.——5. Its inferior branch.——6. Branch of communication with the ophthalmic ganglion.——7. The pathetic nerve.——8. Sixth pair of nerves.——9. Trunk of the trifacial nerve.——10. Its ganglionic part.——11. Ophthalmic branch.——12. Frontal branch.——13. Lachrymal branch.——14. Ophthalmic ganglion, with the ciliary nerves.

To remove the constitutional derangement should, therefore, be the principal object kept in view in treating nervous deafness; and the state of the digestive organs I have found to be a prominent point for consideration and management. The functions of the

great sympathetic nerve and ganglionic plexus which, as before stated, are intimately connected with the stomach, as well as with the organs of sense, satisfactorily account for the influence of the organs of digestion upon hearing and sight and demonstrate the necessity of adopting constitutional means as well as those of a topical description. As a proof of this I may mention that I have frequently recommended patients, after having undergone medical treatment, to finish the cure by taking a trip to some watering-place; and have generally had the satisfaction to find that the change of air, scene and occupation operated so beneficially on the nervous system, that they returned not only improved in general health but completely restored to hearing. Dr. Pitschaft, who presented me with his work, as well as Dr. Hutton, the English physician, informed me that the baths at Baden Baden are efficacious for deafness: but I consider that great care is required to prevent catching cold on leaving the bath. The ancient physicians duly appreciated the influence of such agents: their temples, like our watering-places, were the resort of those whom medicine could not cure; and we are expressly told by Plutarch that these temples, especially that of Esculapius, were erected in elevated spots with the most congenial aspects; points which appear to have been attended to at Aix-la-Chapelle in the construction of the Lousberg, which I particularly noticed when there last autumn as being admirably situated on an eminence commanding a fine and extensive prospect. Such a building on the top of Primrose Hill would be a vast improvement to that beautiful spot, and induce many to undertake the most healthful exertion of ascending to its summit.

The different forms of nervous deafness spring from such a variety of causes, that the proper course of treatment cannot be determined until *minute* inquiry has been made into the particulars of each individual case. Fixed modes of proceeding are here out of the question. The aurist must be guided by those general principles, a knowledge of which is only to be obtained by a regular and systematic study of the sciences of physiology and medicine; ignorance of which, on the part of many who venture to call themselves, and to act as aurists, is the chief cause of the fatal effects with which their practice has not unfrequently been attended.

When nervous deafness proceeds from general debility or nervous excitability, it is usual in the hospitals on the continent to admi-

nister arnica montana, imperatorium ostruthium, or cerasi nigri, also quinine; and this treatment is generally found to produce a beneficial effect; but great caution is required in employing the arnica, as unpleasant results sometimes follow its use. It is given in powder, from five to ten grains, combined with valerian and bark; though I generally commence with three grains.

When at Weisbaden, and visiting the principal warm springs, in company with Baron Von Weigel and Professor Otto, I saw an apparatus for steaming the ears, which was much in vogue; but Dr. Peez, the principal physician there, with whom I visited some other baths, was of opinion that it is not of much use except in cases of deafness from hardened cerumen. Such was also the opinion of Dr. Richter and Dr. Bischof respecting the baths at Teplitz, which I visited, and which are certainly the finest in Europe.

Nervous deafness may proceed, among other causes*, from atony of the acoustic nerve, from apoplexy, from convulsions, and from certain fevers. In not a few instances, deafness is occasioned by a species of lethargic indolence, which renders persons incapable of so much exertion as attentive listening when spoken to; and who, for want of sufficient exercise of the faculty of acute hearing, at length lose it altogether.

Of all the causes of deafness, that which proceeds from an organic affection of the brain is, of course, the most dangerous. In apoplectic cases with faltering of speech and blindness deafness also is produced by the general affection of the head. But worst of all are those instances in which a tumor of the brain compresses the origin of the nerves; for here the deafness is complete, and no impression can be conveyed through the ear to the mind.

The last disease I shall at present enumerate is tinnitus aurium, or singing in the ears; one of the most annoying affections of the organ, and frequently exceedingly obstinate. It is often indicative of apoplexy, or some other morbid affection of the brain, and therefore is always a symptom of the greatest importance.

Tinnitus aurium is generally symptomatic of a disordered and

* Deafness is occasioned by early neglect of slight affections of the ear; by inflammation of the tympanic cavity, fever, measles, small-pox, influenza, scrofula, scurvy, suppressed evacuations, mental affections sympathising with the stomach and bowels, indigestion, confinement, exposure to cold or to impure air, obstruction of the Eustachian tubes, syphilis or cynanche maligna, &c.

weakened state of the whole nervous system, more especially of the ganglionic apparatus, when the auditory nerve suffers in common with other parts of the body. Under such circumstances, the disordered appetite, the irregularity of the circulation, as evidenced by the state of the pulse and palpitations of the heart, the impairment of the other sensorial functions, as vision, smell, &c., the generally imperfect performance of the secreting processes, and the manifest derangement of the whole nervous system, will sufficiently indicate to the careful observer the proximate cause of the symptom I allude to. The predisposing causes are—intemperance, irregularity of living, profuse discharges, depressing passions, and, in short, whatever weakens the frame and greatly diminishes or exhausts the nervous power. Whatever tends to improve the general health, to impart energy to the nervous system and tone to the frame, will be of service in removing this variety of tinnitus. With this view I have prescribed a combination of the arnica montana root with valerian and cinchona, administered twice a day. I commence with three grains of the arnica, and gradually increase the dose to seven. The quantity of valerian and cinchona will, of course, be regulated by the symptoms. An infusion of the arnica, as well as the tincture and extract, I have employed with equal advantage. Under its use the general health has improved; the appetite has become better and more regular; the patient has acquired strength; and the distressing nervous sensations, including the tinnitus, have gradually disappeared. The arnica, both in root and flower, is a remedy which has been admitted and expelled, and re-admitted and re-expelled the Pharmacopœia; chiefly, I believe, because its utility was not sufficiently known. It was formerly called *Doronicum Germanicum*. It has been used in fevers, particularly of the intermittent kind, and in gangrene, in which cases it is said to have been as efficacious as cinchona. A remedy of such importance should not be allowed to fall into oblivion*. The neglect with which it has been

* One instance of its good effects in a case which I have recently had under treatment I may here give. John Baptist, a man of colour, the cymbalist to the band of the Fusileer Guards, a post he has held for the last twenty-five years, has been deaf these nine years and affected with tinnitus the greater part of the time. The affection of the hearing having been cured by the usual remedies, and deeming him a fit subject for the arnica, I gave him a full dose twice a-day: the second dose completely removed the singing in the ears. Several other cases in which I have employed the arnica with success are reported in the *Lancet* for September the 4th, 1841.

treated has probably arisen from the fact, that its use is not attended in many instances with any sensible effect, although it occasionally causes vomiting, diaphoresis, or diuresis. Haller says that even gutta serena has yielded to the powers of this medicine. I have also occasionally combined the imperatoria ostruthium with the arnica in these cases*, and have found it very serviceable. The imperatoria was thought so highly of formerly, that it was designated *divinum remedium*. The lactate and citrate of iron have likewise sometimes been prescribed by me in these cases; and I have had reason to be much pleased with the results. I prefer these preparations of iron to those in ordinary use, as they are less liable to affect the brain.

Dr. Linke, of Leipsic, is of opinion that tinnitus aurium affecting the left ear only, is connected with a diseased condition of the liver; and he told me that the results of the *post-mortem* examinations he had instituted confirmed him in this opinion. He had not been able to trace a similar connection between tinnitus of the right ear and that viscus. My own opinion is that tinnitus is dependent on a disordered state of the ganglionic or trisplanchnic system of nerves, and is to be removed by attention to the general health, improving the secretions and restoring the tone of the system generally. In this opinion I am happy to say I am supported by Dr. Carus and by Dr. Böhn, physician to the principal hospital at Berlin.

In cases of nervous deafness, it is very desirable to know whether there be also an obstruction of the Eustachian tube. A very simple way of ascertaining that fact is, to let the patient inflate the tympanic cavity, by endeavouring to expel the breath, the mouth and nostrils being firmly closed, and by applying an instrument which I have lately had constructed for that purpose, resembling the stethescope, only having an ivory oval concavity. By applying it to the ear, the normal and abnormal sounds may be heard. I was induced to have this instrument made from observing M. Deleau listen at the side of the heads of his patients. I have given it the name of *Cephaloscope*.

Having by long experience ascertained that there are many affections of the ear and eye, especially those in which the nerves are implicated, over which the ordinarily employed remedies have

* ℞ Pulv. rad. imperatoriæ gr. xx.
— rad. arnicæ gr. iij.
— cort. cinnamoni gr. v. M. fiat pulvis; bis die sumend.

unfortunately scarcely, if any, power, I have long been anxious to give a fair trial to whatever method of treatment has been recommended by competent persons as likely to prove of service, and have thus made several valuable additions to the stock of remedial agents. Accordingly my interest was greatly excited when, some time ago, being on the continent, I heard that the mineral magnet had been successfully applied in nervous diseases of the ear; and caused to be sent over to me from Belgium a powerful instrument, in order that I might try its efficacy. But although I received this magnet early in the spring of this year, I found that I was unable to make any good use of it, as I was in want of information as to the mode of its application, which I did not procure until the autumn, when, being at Ghent, on my return from Germany, I ascertained the needed particulars and saw it applied with success.

Since that time I have applied the mineral magnet in several cases, and in many of them it has afforded considerable relief, allaying pain and diminishing the violence of the other symptoms. I can only give here a brief account of two or three of these cases.

1*st.*—Henry Wyatt, aged 16, came to me labouring under acute otitis, which he had had for some days. The first application of the magnet at once entirely removed the pain.

2*nd.*—Miss Ware, aged 22, had been deaf, more or less, for twelve years, accompanied with tinnitus aurium. The magnet was applied twelve times; the tinnitus was completely cured, and the deafness considerably relieved.

3*rd.*—Mr. Brown, aged 48, inspector of police, a person of robust frame, affected with tinnitus accompanied with depression of spirits, and a source of great annoyance to him. He experienced considerable relief from the use of the magnet.

4*th.*—Mrs. Gibbs had been suffering greatly from tinnitus attended with deafness, and experienced much benefit from the magnet.

It may be proper to add a few particulars relative to the use of the magnet in former times, and by other persons, in order to shew that it is a remedial agent which deserves to be fairly tried, and that its use, though lately revived, is by no means new.

And, first, I will give a brief account, abridged from the Encyclopædia Britannica, of the principal facts relative to the medical use of the magnet by the ancients and moderns.

It is not surprising that a substance manifesting such singular physical properties as those which the magnet possesses should, by

analogy, have been conceived capable of exerting some special influence upon the human economy; and, accordingly, we find that various remarkable, but at the same time, very opposite properties, were ascribed to it by the old authors. Hippocrates, in his Essay on Internal Diseases, recommends the use of the magnesian or loadstone as a purgative; and Dioscorides and Galen inform us that the natural magnet was, in their time, employed in a pulverized state as an evacuant, particularly in cases of melancholy and dropsy. By more modern authors, and especially by Rattray, Reuss, Zwinger, and other physicians of the fifteenth and sixteenth centuries, the internal use of the powdered loadstone was extended to the treatment of a number of other diseases, among which were nervous affections and various diseases of the eye. Aetius appears to have been the first Greek author who mentions the use in medicine of the magnet in its natural or unpulverized state. He says that when held in the hand of the patient it had been reported to prove beneficial in curing convulsions. The employment of the magnet in this form and for nearly the same purposes is alluded to by other Greek and by some Arabian physicians; but the author who first brought the virtues of the entire magnet most prominently into repute, was the celebrated Paracelsus.

The medicinal virtues of the loadstone in its entire state continued occasionally to engage the attention of medical men up to the middle of the eighteenth century, when, in consequence of the great improvements that had been made in forming artificial magnets possessing stronger attractive powers than the natural loadstone, the former were substituted for it. A report on the use of them was in 1777 presented to the Royal Society of Medicine of Paris by two of its members, Messrs. Audry and Thouret, who state that they were fully convinced, by the trials which they themselves had made, that the magnet is capable of producing a great variety of salutary effects upon the human economy in different states of disease. The diseases in which they employed the magnet were different kinds of painful affections, as nervous pains of the head, rheumatic pains, tic douloureux, &c. &c.

Since this period several French writers have admitted the value of the magnet. Professor Alibert, in his work on Therapeutics, speaks of its action on the human economy as incontestible. M. Laennec states that he had employed with marked

success magnetised steel plates, which were worn constantly by the patients about their persons*; and several distinguished Parisian physicians of the present day have observed facts corroborative of those mentioned by M. M. Audry and Thouret.

An interesting case is reported in the Lancet of June 1st, 1833, which shews the power of the magnet in so remarkable a way, that I cannot refrain from quoting the substance of it.

A man had been for some time in St. Thomas's Hospital for neuralgia of the finger upon which Dr. Elliotson had exhausted his store of remedial agents without developing a shade of improvement. He was discharged totally unrelieved, but afterwards re-admitted, when he was treated with colchicum autumnale without any benefit, and then with the lobelia inflata, the latter was followed by great amelioration of the affection, which however was far from being perfectly or permanently cured. I now quote the words of the Lancet:—

"A short time since, however, a new remedial agent presented itself, in the form of the magnet. The hospital was visited by (we believe) Dr. Kyle first, and subsequently by a physician of the name of Blundell, a friend of the former gentleman, who followed up the application begun by Dr. Kyle. The lobelia inflata was allowed by Dr. Elliotson to be suspended, and the effect of the magnet tried. That effect was, we learn, a very decided one: the pain was, on every application of the instrument, removed, and continued absent for several hours. The distance, however, at which the operator resided from the hospital, prevented, and still prevents, the daily use of the instrument, or the impression on the patient's mind is, that it would perform a cure.

"On Tuesday last, the Dr. Blundell already mentioned, reattended the hospital at the hour of Dr. Elliotson's visit, when, in the presence of the pupils and our reporter, he drew forth the magnet, and commenced its application to the patient's finger.

"The instrument is of the horse-shoe form, about ten inches in its long axis, and five in its short, composed of five layers of metal, the central being the longest, and the whole bound with stout riband. The patient was at the time apparently suffering considerable pain, and unable to use his hand. The *north* pole of

* Many persons at the present day subject to cramp, rheumatism, and some nervous affections, carry in their pockets small magnets, which they say exert a very beneficial influence.

the magnet was gently passed five or six times down the sides and back of the middle finger, and then rested on the central joint. The result was such a cessation of suffering, that he could gnash his fingers into the palm of his hand with ease and comfort, and he declared himself to be entirely relieved. The power of the instrument, however, did not cease here. Dr. Blundell showed that it possessed the means of reproducing the pain in the most intense form. The *south* pole of the magnet was directed along the finger. At the third pass the patient began to bite his lip and close his eyes with an expression of pain. At a few passes more his chin was involuntarily buried in his breast, and his wrinkled features evinced the acutest suffering. This was allowed to continue for a few seconds, when the *north* pole was again presented to the finger, and the agony speedily subsided. The spectators then left the man with a countenance perfectly tranquil."

In the same article the following two cases are also given :—

" At the extremity of the ward lay an elderly lady, a martyr to *tic-douloureux* in the lower jaw, extending to the ear, and affecting a large portion of the head. The disease, she stated, was of more than nine years' duration, and had never ceased to afflict her for a day during that period up to her entrance into the hospital. Her appearance was proportionably miserable. The magnet had also been applied in her case, and with similar advantage, as she stated. On the present occasion, it was found, on approaching her bed, that she was that morning free from pain, and the aid of the magnet was not needed. ' But cannot you show its power by producing the pain ?' inquired a by-stander. The suggestion was acted on. The *south* pole of the magnet was passed from the centre of the chin, along the lower jaw-bone, up to the ear. At the third pass the poor woman indicated that the *tic* was commencing, and, in a few seconds more, the affection was experienced intensely. The process was then stopped, as the experiment was carried far enough to satisfy all present of its consummation ; and, after a brief space, the presentation of the *north* pole wholly freed the sufferer from pain. The operator subsequently stated, that, by continuing the passes, he could have carried the pain on to the production of delirium.

" There is a female patient in another ward, who had suffered intense tooth-ache for three months, when, a fortnight since, according to her own evidence, which we have no reason to doubt, it was instantly cured by one application of the magnet,

through the medium of a key, and had not returned in the slightest degree up to the period of the visit on Tuesday last."

An Hungarian physician, of the name of Ghotieur, many years ago used to employ mineral magnetism in affections of the ear and eye and in other nervous diseases, and, I am informed, with success; but previously to applying it he used to administer cathartics and enemas.

The following are the remarks of Dr. Hufeland, in introducing to the readers of his Medical Journal for September, 1834, a paper on the use of the magnet by Dr. Schmidt:—

"We communicate the following essay, written not so much for the medical practitioner as for the public at large, in order to attract the attention of the profession more strongly to this new and important remedy, and its application. Here, in Berlin, it has become celebrated by its extraordinary effects in amblyopia and amaurosis; and in the latter disease especially—where, as is well known, irritating local remedies are rather injurious than beneficial, and where our remedial means are so very limited—it seems that magnetism deserves the highest place, as that power in nature which is nearest allied to the nervous influence; and, above all, it possesses the great advantage of operating directly on the nervous system, and not apt, like other exciting remedies, to irritate the blood, or cause heat and congestion."

Dr. Schmidt, who was in this country about ten years since, and devoted great attention to the subject of the medical use of the magnet, and was the inventor of magnets of great power, in an article in the Medical and Surgical Journal for 1835, quotes Dr. Richter's work on Therapeutics, to the effect that he was surprised that so efficacious a remedy had been so rarely employed, and then only when other anti-spasmodics had failed, and that so few persons knew or used the magnet; Dr. Schmidt affirms that, "in deafness and weakness of the eyes, the sanatory influence of magnetism is established, though not much employed;" and he points out that "one great objection to the extension of the practice of magnetism originated in the opinion that the cures effected by the magnet are not lasting, an opinion partly justified, because the magnet has never been applied systematically, and never combined as it ought to be, with other means of cure. No harm can ever arise from its application, as any unpleasant effect can be immediately destroyed by the removal of the instrument, or by some touches applied in a contrary

direction. The apparatus can be always ready, and the application itself requires but little time or practical dexterity."

I may observe on this point, that some cases have occurred in Belgium, in which the application of mineral magnetism was followed by fatal effects; but whether this was caused by the treatment is far from certain, as it appears that a tendency to apoplexy, or a disease of the heart, had previously existed, in which case the application of the magnet may have been injudicious.

It appears that Schmidt recommends in the treatment of deafness, that the patient be seated between two magnets, or that the poles exactly fit on the small plates of two little instruments, which are introduced into the organs. These instruments consist of an oval disc, an inch long and half an inch broad, made of soft iron, in the centre of which is fixed a blunt pin, one inch long and one line thick. These serve to conduct the magnetic fluid deeper into the ear. The operation may last from five to fifteen minutes, after which the magnet is then passed over both sides of the head downwards, ending about the clavicle. A French physician, I understand, advises that the electro-magnetic spark should be sent through the head, a proceeding which I regard as highly dangerous, and one I would be very unwilling to adopt, as I believe it likely to destroy life in the same way that lightning does. If I were desirous of killing a horse, I might have recourse to such an operation, but should certainly not do it on a patient, as I have never yet done any mischief to a person who trusted himself to my care. And as for bold and severe operations, I have seen so many of them, and so little good resulting therefrom, that I have always been extremely averse to them except as dernier ressorts; and my late friend, Mr. George Vance, who served with me at Haslar, one of the most skilful operators in Europe, and who performed a greater number of operations than any other surgeon, when he came to practise in London, invariably acted upon the same system.

When at Ghent last summer, I saw Dr. Dumont, the able physician of that city, where the use of the magnet has excited an extraordinary degree of attention, as well as in Belgium generally. From that gentleman, who employs the instrument in nervous affections, I received much kindness and information, and learned from him that it is chiefly useful in the chronic state of nervous diseases, as when imprudently applied during the inflammatory stage, it may, although affording immediate relief,

give rise to dangerous metastases, and consequently, that the magnet ought not to be applied by any but scientific persons.

I may add, that I have found the magnet of considerable service also in cases of dimness of sight, occasioned by over-working the eyes by candle-light, and in incipient amaurosis arising from the same cause, from confinement in impure air and want of exercise, &c., in short from the same causes as give rise to nervous deafness; and that, from what I have already seen, I consider it will be found a useful adjunct to medical treatment. I must distinctly state, that I do not look upon the magnet as applicable alone, but that it must be judiciously combined with other means. And further, that various kinds of magnets are required by various diseases. I myself use three or four kinds, varying in strength and quality. I may add, that the manner of charging and applying them has a marked influence on their effects.

This is not the place to enter into a long discussion as to the modus operandi of the magnet, but I may suggest that it is as an exciting and stimulating agent that it operates; hence it is said to be of use in cases of tumours pressing upon nerves, by promoting the rapid absorption of the tumours. Should this view turn out to be well-founded, we may expect that the magnet will supply a great desideratum in our means of cure; for many diseases, such as amaurosis and others connected with deeply-seated nerves, which can now be affected only indirectly and through the medium of action on the system generally, would thus be subjected to direct and immediate treatment.

But as I intend to devote some attention to the subject, I will lay before the profession the results of my observations on this, and on all the other points connected with mineral magnetism, which some of my unprofessional readers may need to be told, is quite distinct from *animal* magnetism.

Before I proceed to the subject of the deaf and dumb, I would call the attention of parents to some causes of deafness to which children are especially liable, and which are too often neglected and allowed to produce the worst results.

First of these may be mentioned intestinal worms—the principal symptoms of which are, starting in the sleep, picking the nose, offensive breath, hard and swelled abdomen, grinding of the teeth, strange sounds in the head, with murmuring and ringing in the ears. The treatment I adopt is, an infusion of the folia spigelia or Indian pink leaf, with small doses of sulphate of iron;

this medicine cannot prove injurious, as, should there be no worms, it will merely act as an aperient: should this treatment not be sufficiently powerful, I occasionally employ rhubarb with potassae sulphas, as it is indispensably necessary that these parasitic animals should be expelled. Large doses of calomel are often given to children for this purpose, but improperly, as that medicine is apt to induce disease in after life.

Another evil to which children are peculiarly exposed, is that which arises from fright, from blows upon the head, or from the intrusion of foreign bodies into the ear.

Many cases have been seen by me, in which children, while at play, have had pins, cherry-stones, slate-pencil, and other extraneous substances, introduced into the passage: insects also sometimes get into the ear, though, from the acridity of the cerumen, not so often (at least as regards their penetration into the inner passage) as might be imagined; and as they are unable to extricate themselves when once involved in the exterior meatus, they occasion great inconvenience and uneasiness. In all these cases a forcible extraction of the intruding body ought to be avoided; in lieu of which I would recommend merely dropping a little sweet oil into the ear, which will instantly destroy the insects, and afterwards syringing the ear with lukewarm water will generally dislodge them. Accidents of this kind are almost weekly brought to the Dispensary; but if the intruding body be difficult to extract and do not occasion pain, my invariable practice is, not to interfere with it; and in no instance have I ever heard of any unpleasant consequences resulting from so doing. When, however, I see occasion to undertake the operation of extraction, I make use of Kettle's ear-forceps, which I have found to be the best in use.

Some years ago a young lady was brought to my house, early one morning, by her mother and sister, who stated that a glass bead had accidentally been forced into one of her ears. On examination I found the parts very much lacerated and covered with blood, and was told that two surgeons had attempted to remove the bead without success. I also endeavoured to extract it, but as it was impacted at the bottom of the passage in consequence of the efforts that had been made to dislodge it, I did not succeed. As the young lady cried much, and her mother and sister were greatly alarmed, I proposed going to Mr. Cline, which we accordingly did. I expected that he would renew the

attempt to get out the bead, but was surprised to hear him say that as there was no pain, he should advise its being left alone. His advice was followed, and in a few days it came out of itself. Since that time I have uniformly adopted the same course, well knowing that serious consequences often ensue from violent attempts being made to extract intruding substances.

In such cases as this I have found Gruber's speculum and lamp, described on page 22, of great service, as it enables me to ascertain at once whether there really is anything in the ear, and if so, its exact position. The necessity for being sure of the presence of a foreign body before attempting to extract it, is strikingly shewn in a case which occurred some years ago at St. Bartholomew's Hospital, to which a boy, named Thomas Brady, aged 7 years, was brought, supposed to have the head of a nail in his ear. Attempts were made on two several days to extract the nail-head, but nothing but portions of bone were removed; and in consequence of these operations the boy died in a few days. I give the account of the post-mortem examination from one of the public journals:—

"*Post-mortem Examination four hours after death.*

"*Head.*—About four ounces of serum were found between the dura mater and arachnoid membrane. There was softening of the entire extent of the base, and of the anterior part of the hemispheres. The vessels on the surface were very much distended, but the substance of the brain was very pale. The ventricles were examined, but nothing particular was discovered in them.

"*Ear.*—The temporal bone being removed from the skull and the soft parts stripped off, the cavity of the tympanum was immediately brought into view, without anything else being done. Not a vestige of the bony portion of the meatus auditorius externus remained, the whole having been removed in the operation, and the floor of the tympanum was also wanting. The remaining portion of the tympanum was covered with pus, which being washed off, the surface of the bone beneath appeared highly inflamed. The nail not being in the tympanum, sections were made through the cochlea, vestibule, semicircular canals, and mastoid cells,—but there was no nail to be found* !"

* Sir B. C. Brodie, in a recent lecture delivered at St. George's Hospital, strongly urged his pupils, in cases of foreign bodies in the ear, if they could not easily extract it, to leave it alone, as by rough usage the membrane of the tympanum may be ruptured, the extraneous substance driven into its cavity,

The majority of those who are in the melancholy condition of being deprived of hearing, are either deaf at birth, or become so during the period of infancy, and hence they are necessarily without the faculty of speech. The helplessness occasioned by the want of the power of oral communication did not, for many centuries, gain them that degree of attention and commiseration which it seems so powerfully to demand. Among some nations in ancient times these unfortunate beings were the objects of a species of proscription, being supposed to labour under the curse of Heaven. By the laws of Justinian, those who were deaf and dumb from their birth, were incapacitated from making a will, or from emancipating a slave, and were subject to other civil disabilities.

For the striking change that has taken place in the conduct of the world towards the deaf and dumb since the period here referred to, the Abbé de l'Épée is principally to be thanked. It was he who first succeeded in making known to the world at large the numbers of the deaf and dumb, and their capacity for improvement, and thus overthrew those unfeeling prejudices which condemned to the thick gloom of hopeless ignorance, and treated as less than human, those whose condition called for the most lively sympathy and careful education. To the present day, however, there is much ignorance and misconception respecting the subject, even among those who feel an interest in, and have devoted considerable attention to it, for some of which L'Épée and his successors are partly accountable. Their object was to provide a substitute for speech; they set out with the assumption, about which they appear never to have had the smallest doubt, that the deaf and dumb were without the remotest chance of being restored to the faculty of hearing and speech; and, up to the present time, such is still the prevalent and almost exclusive opinion entertained on the subject. That such is not my opinion is well known. It is now upwards of twenty-five years since I first made public my views on this point, and every succeeding year has only confirmed my conviction, that in the

and serious mischief result. In illustration of these remarks, he narrated the case of a little boy who was brought into the hospital labouring under symptoms of inflammation of the brain, following the operations of a surgeon, who had fruitlessly endeavoured to extract a pea from the ear. The child died, and when the head and ear were examined, the membrane of the tympanum was found to be ruptured, the pea in the cavity, and great injury had been perpetrated. Suppuration had taken place between the membrane of the brain and the bone.

greater number of cases of deafness and dumbness in early life, nothing is wanting to restore the sense of hearing, save timely and judicious treatment. Cases of malformation of the ear are very rare; and, generally speaking, deafness in infants is caused, not, as is too frequently supposed, by *structural deficiency*, but by some defective condition of the *functions* of hearing. Were children, as soon as they were suspected of deafness, submitted to inspection by competent medical persons, instead of being allowed to remain deaf until nine or ten years old, by which time the disease becomes inveterate, and then admitted into asylums and treated as incurably deaf, the result would be very different, and many be rendered useful members of society, who, under the present system, remain helpless objects of commiseration as long as they live*.

* According to M. Itard, absolute deafness is very rare; he admits not more than one-fifth to be so. And, in a late number of the *Medical Gazette*, August 6, 1841, will be found the following:—

"Of the 192 deaf and dumb in Meiningen, 174 were so from birth, and 18 had contracted the disease at a subsequent period. M. Schmalz gives the following table:—

| COUNTRIES. | Deaf and Dumb. | From Birth. | From a later period. |
|---|---|---|---|
| Saxony | 151 | 77 | 74 |
| Altenburg | 103 | 82 | 21 |
| Bavaria | 135 | 79 | 56 |
| Baden | 533 | 240 | 293 |
| Bohemia | 165 | 77 | 88 |
| Hamburgh | 11 | 5 | 6 |
| Rhine, Prussia | 29 | 16 | 13 |
| Belgium | 1891 | 1484 | 407 |
| France | 238 | 171 | 67 |
| Denmark | 88 | 54 | 34 |
| Sardinia | 48 | 27 | 21 |
| England | 590 | 498 | 92 |
| United States | 1443 | 855 | 588 |
| | 5425 | 3665 | 1760 |

"M. Jahn has also confirmed, from the cases in his own country, the facts, that the majority of the deaf and dumb occur in poor families; that it is only very rarely that we see children become deaf and dumb after their seventh year; and that this never happens after the tenth."—*Gazette Médicale, Mai* 20, 1841; and "*Haeser's Archiv für die gesämmte Medicin.*"

According to the preceding table, it is plain that a large proportion of the cases of deaf and dumb are *not* congenital, but arise after birth, from various

The soundness of my views has more than once received most cheering proof in the success that has attended my plan of treatment in several cases of deaf and dumb, in which I persevered, although, at first, they were such as almost to induce me to despair*. I never fail, therefore, in every case, to urge, in the strongest manner, the propriety of making a trial. The great point to be kept in view is, the excitement or development of the auditory organ, which is the proper business of the surgeon, rather than of the schoolmaster, to whom the incurable may be consigned after the former has done his best in vain.

When at Berlin, I was introduced to Dr. C. Kluge, physician to the King of Prussia, who shewed me much civility, kindly facilitated my inspection of the hospital over which he presides, and furnished me with the daily report, containing a list of the patients, their diseases, treatment, &c. I afterwards visited the general hospital, in company with Dr. Anglestein and Dr. Böhm, the physicians to the hospital. I then proceeded with the latter gentleman to the Deaf and Dumb Asylum, where I received every assistance in my inquiries from M. Saegert, the superintendent of the asylum. I was permitted to examine the chil-

causes. When at Dresden, in a conversation on the subject with Dr. Schmalz, he agreed with me as to the practicability of curing the infant deaf and dumb. Mothers have frequently observed, that children who could hear at the time of teething, afterwards became deaf, and consequently dumb.

* On this point I have much pleasure in quoting the following extracts, from two able reviews of my works:—

"Mr. Curtis is entitled to the best thanks of the public, from having drawn attention to the fact, that many cases of deaf and dumb, hitherto considered hopeless, admit of palliation and cure. Five cases are related at the close of the work, in which children born deaf and dumb, and in whom there existed no obvious cause of disease, acquired the power of hearing and speech. Two of these patients were seven years of age, and another was six."—*Lancet.*

"A careful perusal of the work before us will convince us, that the necessity of early professional treatment, in the case of deafness, has not been sufficiently considered, and that, in the first year of infancy, the auricular powers should be tested, and, if found defective, medical advice should be immediately sought. To insist upon the merits of Mr. Curtis here would be superfluous. His works on the ear and its diseases have become standard authorities, and, as such, have been translated into various foreign languages. The volume now before us is second to none that he has formerly published, in arrangement, scientific research, and elegance of composition; whilst it brings before us deafness in another light, by shewing us how to attack it in infancy, and thus destroy it ere it has engendered its attending train of evils."—*Metropolitan Magazine.*

dren, and I found that many of the most healthy could hear a little. Since that time, I have received letters from Dr. Böhm and M. Saegert, approving of my plan of treatment, and expressing their intention to make trial of it in their institution. In the asylums at Vienna, Hamburg, and Leipsic*, also, I found several children who could hear; and, I have no doubt, that there are many children in British asylums who can hear, and who might, by proper means, be restored to the full enjoyment of the sense of hearing and speech.

So long ago as 1817, I addressed a letter to the Committee and Governors of the Deaf and Dumb Asylum, proposing that an aurist by profession should be appointed to inspect all infants previous to their admission into that institution; and that where no structural defect was discovered, the appropriate measures for

* At the latter place I was permitted to examine the children, both boys and girls; and Mr. Reich has kindly forwarded to me the following particulars of their cases:—

"In der Taubstumen-Anstalt zu Leipzig befinden sich gegenwärtig 37 Zöglinge männlichen Geschlects, 19 weiblichen. Unter ihnen haben noch etwas *Sprachgehör*, 3 Knaben, 2 Mädchen; etwas *Schallgehör*, 7 Knaben, 4 Mädchen. Nicht taubgeboren waren 15 männliche Zöglinge, 7 weibliche. Die Zahl der Taubgebornen übertrift um einige wenige die Zahl der Taubgewordenen. Es sind aber noch 11 Kinder in der Anstalt, bei denen es ungewiss ist ob sie nicht auch mit Gehör geboren, aber in der *ersten* Entwickelungsperiode, in Folge vernachlässigter Pflege des Gehörs verlustig worden sind. Die Ursache der enstandenen Taubheit ist gröstentheils das Scharlachfieber.

"M. C. G. Reich, Dir. u. Ritter,
dem Herrn H. Curtis, Esquire,
sich hochachtungsvoll empfehlend."

*Leipzig, Sept.* 12, 1840.

TRANSLATION.

"In the Institution for the Deaf and Dumb at Leipzic, there are at present 56 pupils—37 boys, and 19 girls: of these, 3 boys and 2 girls can hear *words* a little; 7 boys and 4 girls hear something of *sounds*. Of the male pupils 15 were not born deaf, and of the female 7. The number of those born deaf a little exceeds that of those who became deaf. There are now in the Institution 11 children, respecting whom it is uncertain whether or not they were born with the faculty of hearing, and have lost it in the first stage of development in consequence of neglect. The most frequent cause of deafness is scarlet fever.*

"M. C. G. Reich, Director and Knight,
to J. H. Curtis, Esq., with best respect."

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* A variety of curious causes may be found in the works of French authors, and also in my Essay on the Deaf and Dumb.

developing the faculty of hearing should be immediately taken. That letter has not yet produced the effect desired; the erroneous plan therein referred to, of admitting children by *a majority of votes*, instead of, on a strict examination by competent medical authority, is still in vigorous operation*; but I have no hesitation in asserting, that the time will soon arrive when it will be found impossible any longer to resist the introduction of a plan founded on truer principles, and better calculated to benefit the human race, than that still persisted in and upheld, in spite alike of medical science and common sense.

I subjoin a table, taken from the third circular of the Royal Institute for deaf-mutes at Paris, shewing the proportion of deaf persons to the whole population of the chief civilised communities, for the purpose of letting my readers know the real numbers of their suffering fellow-creatures, which they are perhaps liable generally to underrate.

| Countries. | Number of Deaf and Dumb. | Proportion to Population. |
|---|---|---|
| France . . . | 20,189 | 1 in 1585 |
| Spain . . . | 7,255 | 1 „ 1585 |
| Italy . . . | 12,618 | 1 „ 1585 |
| Austria . . . | 16,684 | 1 „ 1585 |
| Prussia . . . | 8,223 | 1 „ 1548 |
| Belgium } Holland } . . . | 2,166 | 1 „ 2847 |
| Russia . . . | 27,834 | 1 „ 1585 |
| Great Britain . . | 12,394 | 1 „ 1622 |
| United States . . | 6,000 | 1 „ 2000 |

Before I close these remarks, it will not be improper in me, I think, to refer to the Royal Dispensary for Diseases of the Ear, in the service of which the greater part of my life has been spent, which I mainly contributed to establish, and have lived to see firmly take root, and become extensively useful, as well by affording relief to the destitute and afflicted, as by aiding in the advance of medical science.

The Dispensary was instituted in 1816, under the patronage of their late Majesties, George the Fourth and William the

* Thus, at the half-yearly meeting, held on the 12th July, 1841, there were seventy-eight candidates, of whom thirty-five were elected. Were these thirty-five candidates those whose cases most required, and were the best fitted to receive, relief from the mode pursued at the Asylum? or were they not merely those whose friends were the most powerful?

Fourth; their late Royal Highnesses the Dukes of York and Kent, and many individuals of the highest rank in the state and eminence as men of science.

In the last Report of this institution, it will be seen, that the object for which the Dispensary was founded, was the relief of the industrious poor, such as mechanics, domestic servants, soldiers, sailors, and foreigners, from a class of disease which generally incapacitates them from pursuing their avocations, and for whose relief scarcely any thing had previously been done. An institution of a similar kind had been set on foot by the late Mr. Saunders, but it failed to obtain public support; so that, at the time when the Royal Dispensary was established, it was the only charity of the kind in the metropolis. It has now stood the test of nearly thirty years' active operation; a period more than sufficient to prove the pretensions, the stability, and the efficiency of any institution of this nature. During that time it has been found of unquestionable utility, and has met with support fully answering to the demands made upon it; and I take this opportunity of expressing my gratitude to the members of the Royal Family, to the noblemen, ladies, and gentlemen, who have so generously supported the institution, and by whose continued exertions there is a prospect of being enabled to erect an hospital, so as to receive within its walls infant deaf and dumb, for the purpose of endeavouring their cure; and also to accommodate persons from the country, and others afflicted with diseases of the ear, who do not reside in the metropolis.

I have before alluded to the advantage derived by the public at large from such institutions as the Royal Dispensary, through their influence on medical science, in which respect they are similar to a division of medical labour, inasmuch as they compel their officers to pay undivided and unremitting attention to one class of diseases. It is not, I think, claiming too much for the Dispensary to say, that it has occasioned more improvement in aural surgery than any other single cause since its establishment. Much, however, remains to be done; but when once the public and the profession are thoroughly awakened to the full importance of the subject, many difficulties that now appear insuperable will vanish before the concentrated labours of competent persons, who will drive out of the field not a few whose sufferance as aurists is only to be accounted for by the ignorance of the world generally respecting aural science.

In reference to general hospitals, I may here state, that I am convinced we have not yet adopted the plan in reference to them which would be productive of the greatest amount of benefit. So small a part of the large revenues of the metropolitan hospitals are devoted to the remuneration of their medical officers, that they are necessarily engaged the greater part of their time in private practice, and are thus prevented from availing themselves of all the opportunities afforded to them for the improvement of the science. Besides, the sites of most of the London hospitals are objectionable, being situated in close and densely populated districts, instead of being where the air is perfectly pure and fresh,—a point of vast importance even to the healthy, much more so to the sick and feeble. On the continent great attention is paid to this matter; and nearly all the large hospitals I have visited in Germany are in the outskirts of the towns. The hospital of St. John, at Brussels, has lately been removed from its old situation to the suburbs, near the Botanical Gardens, a site which appeared to me to be admirably adapted for the purpose. I have no doubt that the admirable situation of the Queen's Hospital, at Haslar*, has contributed greatly to the success of the medical treatment pursued there, and which has always been such as to confer a distinguished reputation on that noble establishment, and to reflect the greatest credit on the commissioners and medical authorities.

From a report read at the last Annual General Meeting of the Dispensary, held on the 20th July, 1843, the Duke of Cleveland, V. P., in the chair, it appears that since the establishment of the Dispensary, upwards of 13,250 patients have been cured or relieved; and for a considerable time past the number attending and receiving advice and assistance in a single day has frequently exceeded one hundred and eighty†. Not only have applications for

* The author, after having obtained his qualifications as a surgeon from the Royal College of Surgeons, in London, had the honour to serve at this hospital for nearly six years during the hottest period of the late war, viz. after the battles of Trafalgar and Corunna, and during the expedition to Walcheren; where, at several times, the hospital contained nearly 2000 patients.

† Among all these cases, the most distressing, perhaps, was that of a boy eight years old, who was deaf and dumb, blind, and idiotic: he made a noise something like a dog, and was constantly in motion. His mother brought him to the Dispensary, and stated that she considered the imprudence of his father, who is since dead, was the cause of all the poor boy's maladies.

relief been received and attended to from all parts of the kingdom, but the attention of professional men has been drawn to the consideration of the nature and treatment of these maladies. The following is a tabular report of the number of patients, and of their respective diseases, attending in the course of one day, and affords a very fair average as to the proportions of the various diseases.

| DISEASES. | No. |
|---|---|
| Otorrhœa | 16 |
| Otitis | 7 |
| Tinnitus Aurium | 22 |
| Herpes | 5 |
| Erysipelatous Inflammation | 12 |
| Obstruction of the Eustachian Tube | 3 |
| Polypus | 5 |
| Nervous Deafness | 17 |
| Paracusis | 9 |
| Deafness from superabundant secretion of cerumen | 11 |
| Deafness from diseased secretion | 7 |
| Deafness attended with deficiency of secretion | 12 |
| Deaf and Dumb | 3 |
| Deafness from Scarlatina maligna | 7 |
| Deafness from Bathing | 2 |
| Deafness from Syphilis | 5 |
| Deafness from Accidents, &c. | 4 |
| | 147 |

One important fact has been conclusively settled by the experience of the Royal Dispensary; namely, that nothing is gained by bold surgical modes of treatment. It has been a principle strictly adhered to in its management, never to employ operations (unless in the comparatively few instances in which the urgency of the case precluded less speedy treatment), so long as general constitutional means afforded a reasonable prospect of success. This practice has been attended with at least an average result of good; while, out of all the thousands who have applied to it for assistance, not one, to my knowledge, has ever been rendered worse in any respect by the treatment to which he was there subjected. This is a proud, and, perhaps, unparalleled distinction. Nor do I remember a single case of incipient deafness that has come under my care, either at the Dispensary or in private practice, and in which the patient scrupulously adhered to the directions and treatment prescribed, that was not benefited.

The importance of attention to the ear is increasing rather than diminishing. The tendency of modern civilisation is such as to congregate men in immense masses, under circumstances which circumscribe the sphere of action of most of the senses. Hence the marked difference between the acuteness of hearing possessed by savage tribes, and the inertness which characterises the same sense in refined communities. In New Spain, we are told by Humboldt, that diseases of the ear are hardly known. The state of the atmosphere exercises great influence on the ear; and hence the poorer classes, who reside in damp and confined situations, such as crowded lanes and close alleys, are much exposed to deafness.

There are probably as many deaf persons, in proportion to the number of inhabitants, in this country, as in any other in Europe. In fact, there are but few who hear very acutely. How many for instance, can hear the insects in the hedges, or a watch tick at the distance of twelve yards, which all ought to be able to do?

Acoustic instruments, like surgical operations, should always be the last things resorted to. Hundreds have permanently lost their hearing through using instruments, who might, by proper treatment, adopted early, and adhered to, have been restored to the full possession of that important and valuable function. Ear-trumpets are intended for those who would otherwise be unable to hear at all; yet we often see persons using them, who, if they were to exert themselves a little, would be able to hear without them. Instruments give present assistance, and thus are apt to prevent any further trouble being taken; but, like spectacles, when once used, people are generally compelled gradually to increase them in power, and can no longer leave them off at pleasure. The constant use of any fixed acoustic instrument exhausts the energy of the auditory nerve, and will, sooner or later, lead to on irremediable deafness, which no instrument can assist. They ought not, therefore, to be employed without great caution. They should not be used in cases of incipient deafness, otorrhœa, or tinnitus.

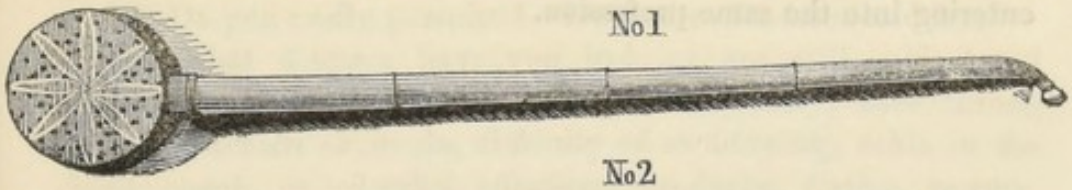
It is impossible to lay down rules which can be generally applicable for the choice of instruments in those cases in which their use is admissible. What will suit one person may prove worse than useless to another: those, therefore, who require an ear-trumpet should try several, selecting one which will enable them to hear with comfort, not causing pain, or any other unpleasant sensation. If it induce or increase noises in the ear, it

should be set aside at once as unsuitable. Those who wish to hear well, and who disregard the appearance of the trumpet (which, by the by, seems to be the *crux surdorum*), will find, as a general rule, that the *longer* the instrument is, the better,—its power being proportioned to its length. The cheapest, and even the most unsightly, trumpets are often the best; and a common tin one frequently collects more sound, and renders the hearing more acute, than the more expensive ones. It is sheer absurdity to suppose that one of the size of a seven-shilling piece can prove of much service. Large trumpets, however, are objected to, as well as large spectacles, because they are unsightly; but, surely, this is not a sufficient reason for incurring the evils resulting from small instruments. The fashionable small oval spectacles, for instance, frequently give rise to muscae volitantes.

Flexible tubes are as often, perhaps, employed for *speaking* through, as for the purpose for which they are designed; and it is a certain fact, that many persons, after having used one for half an hour, are quite deaf, from the action of the breath relaxing the membrana tympani. It may be looked upon as an axiom in mechanics, that the harder the metal the more sonorous it is; consequently, ear-trumpets should be made of silver, brass, or tin, for the better resonance of sound.

The two engravings subjoined represent instruments which I have found to answer better than any other at present in use*. The first is a hearing-trumpet lately invented by me, which is distinguished chiefly for its great length, a circumstance which gives it a high degree of power, and renders it much more serviceable than those of smaller dimensions. The other (No. 2,) is

No 1



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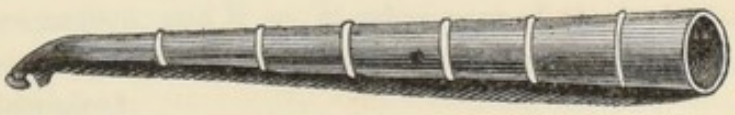

* These, as well as my original hearing-trumpets, keraphonites, or improved ear-cornets, voice-conductors, and other instruments, may be had of Messrs. Gifford and Linder, Chemists to the late King, 104, Strand; of whom may be obtained every description of acoustic instruments for the use of deaf persons, which are made in the best manner, and many of them of a novel construction.

a conical trumpet, which I invented nearly thirty years ago, and which being made to slide up into a small compass, is very convenient for carrying, as it will go easily into the pocket. Perhaps one of the most complete acoustic instruments ever made is my acoustic chair, a description of which has for some time been before the public, and which has been inspected by many distinguished foreigners and scientific persons. It possesses great power, and is well adapted for use in large establishments, or as a means of rapid communication between public offices, or wherever the speedy conveyance of sound to and from distant places is of importance. A model of this chair may be seen at the Polytechnic Institution.

To conclude: it is evident that, in aural surgery, as in every other department of human knowledge and exertion, the greatest advances and discoveries have been effected by those who have made it their only or chief study. The limited nature of man's powers precludes all but the wonderfully gifted few from attaining excellence and eminence in many diversified spheres of exertion; and in such a subject as aural surgery, no powers of mind whatever can enable us to dispense with daily, minute, and unremitting study. It is to this, rather than to any endowment of genius, that we must look for whatever improvement may be effected in the treatment of diseases of the ear. The interference of the Legislature is also required to prevent the intrusion of any not duly qualified persons into this branch of medical practice; as well on account of the serious evils their ignorance may occasion to those who come under their treatment, as of the discouragement which they present to competent persons from entering into the same profession.

# APPENDIX.

## QUESTIONS FOR PATIENTS.

*The following Series of Questions I have drawn up in accordance with the plan of my friend Dr. Schmalz of Dresden, for the guidance of my patients at a distance, in their correspondence with me; it being essentially necessary that I should possess a full and detailed history of their malady, as well as of their constitution and mode of life, in order that I may the more clearly understand the pathology of the case.*

1. What is your name?
2. Where do you reside?
3. How old are you?
4. What are your usual occupations?
5. Are you married or single?
6. Are you very nervous or low spirited? Are you subject to palpitations of the heart, nervous headaches, *tinnitus aurium*, or singing in the ears, occasional fainting, spasms, or cramps?
7. Is there any hereditary predisposition to deafness in any of your family? Do you suffer from fulness of blood, or determination to the head? Did any of your relatives, after suffering from noises in the head, or deafness, have a fit, become insane, or die of apoplexy?
8. Have you any abdominal disease? of what nature?—hæmorrhoids, pains in the back or loins, disease of the liver?
9. Are you troubled with indigestion or flatulence?
10. Are you subject to any eruptive disease?
11. Are you much exposed to the vicissitudes of the weather?
12. Do you easily perspire? Do you suffer from cold feet?
13. What diseases have you had, or are still subject to? scrofula, scarlet, typhus, or other fever, quinsy, sore throat, enlarged tonsils or uvula, difficulty of swallowing, colds in the head, cough, or catarrhal affections, headache, vertigo, worms; gout or rheumatism, and if so, in what part of the body?—state also whether subject to such complaints previously to your hearing becoming impaired.
14. Are you annoyed by any domestic affairs? suffering from mental anxiety? Is your appetite good, your bowels regular, and the motions healthy?
15. What is your ordinary diet? Can you take any kind of food or drink with impunity? Do you drink much beer, wine, spirits, coffee or tea, or other exciting liquors?

16. Do you take much exercise, or are your occupations sedentary? Are you always occupied, either mentally or bodily?

17. Are your habits temperate?

18. Is the place where you reside marshy, well-wooded, or exposed to the winds? Does your house stand in a healthy, airy, and elevated situation? or is it in a low, damp locality? or near the sea-side?

19. What is the state of your chest?

20. Have you any remark to make on your general health?

21. Has any long-continued or profuse discharge, or evacuation from any part, been hastily suppressed?

22. How long have you been deaf? Was your hearing perfect previously, or has it never been so? Are you considered deaf by your friends? Is the dulness of hearing occasioned by a habit of inattention? Are you accustomed to ask people who address you, to repeat what they have said?

23. Are you, or have you been, subject to occasional hardness of hearing, or to *otalgia* or ear-ache?

24. When the deafness commenced, were you suffering from any other complaint? and if so, of what nature?

25. Do you recollect how the deafness began? did it come on insensibly, and increase gradually, or was the attack sudden?

26. Has your hearing improved, or become worse since?

27. Do you know the cause? Was it from a blow or other accident? Did you suffer from pain in either ear, or in the head, when it commenced?

28. Had you any discharge from either ear? of what nature was it, and how long did it last?

29. Had you much itching or irritation in the auditory canal?

30. Was the deafness accompanied from the beginning with noises in the head, and of what nature were they? did they resemble the falling of water, the blowing of wind, the rustling of leaves, the tinkling of a bell, the strokes of a ponderous hammer, or the beatings of the pulse?

31. Are these noises always equally troublesome, or more so at one time than another, and under what circumstances have you noticed the difference?

32. Did they precede or follow the hardness of hearing, and has the severity of the deafness appeared to you to depend on the degree of tinnitus, or to be wholly independent thereof? Do they still continue?

33. At what distance from the ear (reckoning by inches) can

you hear the tick of a watch of moderate power? or can you only hear it when placed close to the ear? or can you not hear it at all?

34. Is the distance at which you can hear always the same, or under what circumstances does it vary?

35. Do you hear better at one time with one ear, and at another time with the other?

36. At what distance can you distinguish the voice of a person addressing you, who speaks distinctly?

37. How is your hearing in society? How in the morning? at noon? in the evening? How do you hear in a carriage?

38. Are there any sounds or voices which are particularly disagreeable to you?

39. Can you distinguish the weaker musical notes?

40. Is your hearing affected by the wind or the weather? Do you hear better in summer or in winter, in the open air or in a room?

41. How is your hearing when stooping, tired, annoyed, or ill; as, for instance, when suffering from a cold, cough, or headache? or after indulging in wine, spirits, or high-seasoned meats? or after a full meal?

42. Do you hear better when there is a great noise, or when silence prevails? for example, do you hear the voice of any one better (that person being at a certain distance) while a carriage is passing, a drum beating, a grand concert performing, or during any other loud noise?

43. Have you any unpleasant sensations in the external ear or in the auditory canal?

44. Are the ears ever or always swollen, or not?

45. Is there a due secretion of healthy cerumen?

46. Do small pieces of whitish membrane, or of bone, ever come away from the ear, or is there any discharge? if there is, is it constant or occasional, thick or fluid, abundant or scanty, yellowish or otherwise? is it offensive, or tinged with blood?

47. Is the hearing affected by the quantity of discharge? Does headache or other pain follow its cessation?

48 Do you experience any peculiar sensations when sneezing, yawning, swallowing, blowing your nose, or when troubled with hiccough?

49. When essaying to make a powerful expiration, the mouth and nose being firmly closed, do you experience a sensation in

the interior of either or of both ears, as if the air was endeavouring to escape through them? or do you hear a whistling in them? Does the attempt cause tinnitus, or increase that already existing?

50. Have you ever heard a sudden loud noise in the interior of the ear? was the hearing better after that noise? and how long did the improvement last?

51. What medical men have you consulted? and what was their opinion of your case?

52. Has the state of your ears ever been thoroughly examined? with or without instruments? by whom was it done? and what was the result?

53. Were they examined with the aid of the sun's rays, or of an illuminated auriscope?

54. Have your ears been *effectually* syringed by a regular surgeon? and how long since?

55. Has any surgical operation been performed on the ear or throat?

56. What is the nature of the treatment that has been adopted? and with what effect? Did you attend to the advice of your medical attendant? and how long did you pursue the plan recommended to you?

57. Has your hearing improved at all under medical treatment? Did tinnitus supervene in consequence, or was it previously in existence, and was it augmented by it? What have been the secondary effects of the treatment?

58. Who is your medical attendant?

59. Have you used any acoustic instruments? which? and with what effect?

60. Do you hear much better when you place the hollow of the hand behind either or both ears, or is the improvement but slight?

61. Has the deafness been increased by a too early or long-continued use of acoustic instrument?

Questions respecting the deaf and dumb would be useless, as they must submit to a personal examination: there are also many others which it is necessary to ask, but which cannot appear in print. They will, however, readily suggest themselves to the intelligent patient.

JOHN HARRISON CURTIS.

2, Soho Square.

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of Hanover, and their late Royal Highnesses the Dukes of York and Kent. Since its establishment, upwards of 13,250 patients, afflicted with deafness and other diseases of the Ear, have been cured or relieved, including several cases of deaf and dumb, as appears by the last Report. As a further proof of its utility, and of its claims on public support, it may be mentioned, that upwards of 180 poor patients have received advice and assistance at the Dispensary in a single day. From the great success which has crowned the exertions of the Institution, it is the intention of the Governors, as soon as the funds will admit, to enlarge the present, or erect a more commodious building, in order to receive deaf and dumb children into the establishment; for it is a fact of peculiar interest, that the infant deaf and dumb might often be cured, if subjected to an early examination and proper mode of treatment.

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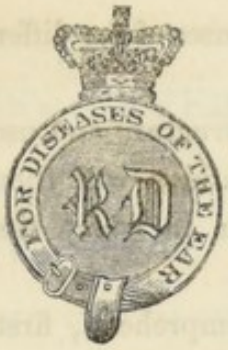
*** *The benevolent views of this Charity are not confined to the inhabitants of the Metropolis, but extend to every individual.*




# PLAN OF LECTURES

ON

## The Anatomy, Physiology, and Pathology

OF

# THE EAR,

By JOHN HARRISON CURTIS, Esq.

TO COMMENCE ON

MONDAY, JANUARY 8, 1844, AT SEVEN IN THE EVENING,

AT

## THE ROYAL DISPENSARY,

## FOR CURING DISEASES OF THE EAR,

DEAN STREET, SOHO.

### ARRANGEMENT OF THE COURSE.

In the introductory part will be considered the importance of the sense of Hearing as the medium of social intercourse; the various degrees of this sense in the several tribes of animals; with the different construction of the organ for that purpose.

The Anatomy of the Human Ear will be described, as divided into external, intermediate, and internal parts; and the description will be illustrated by anatomical preparations.

The Physiology, or uses of the different parts of the Ear, will be next examined.

On finishing the structure and uses of the Ear, the various diseases occasioning Deafness will then be considered, treating them in the same order in which the structure has been described.

This order will comprehend, first, the Affections of the Meatus Auditorius, or external Ear; secondly, those of the Tympanum, *viz.*, its puriform discharge, and the Obstruction of the Eustachian Tubes, with the operations; thirdly, the Diseases of the Labyrinth, whether constitutional,—as nervous, scrofulous, syphilitic, &c.—or local, as paralysis of the Auditory Nerve, defective organisation, &c.

The subject will conclude with general Remarks, applicable to this class of diseases, pointing out the intimate connexion existing between the organs of Hearing and Sight; to which will be added, Considerations on the best means of treating the Deaf and Dumb.

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A CLINICAL LECTURE will be given occasionally, on the most important Cases that occur at the Royal Dispensary.

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*For particulars apply to* MR. CURTIS, *at his own House, No. 2, Soho Square; or to* MR. HENRY S. SMYTH, *Secretary, at the Royal Dispensary, who is authorised to enter Pupils.*

The LECTURES will be continued regularly, the same as the preceding Seasons, until the latter end of *May*.

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OF

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# EAR, EYE, &c.

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## Contents:

Dedication. Introduction. Rise and Progress of Surgery; its separation from Medicine; its various branches, Oculists, Aurists, Dentists, &c.; Division of Medical Labour proved to be advantageous to the Public, from the skill and expertness acquired by daily operations on particular Organs; the Blind prefer Hearing to Sight; the Ear hitherto much neglected by the Profession; Prejudices entertained by persons unacquainted with the subject, as to the Impracticability of curing Deafness and other Diseases of the Ear; Majendie and Manec's Discoveries respecting the Ganglionic Plexus of Nerves, and their Influence on the Ear and Eye; Knowledge of the Ear possessed by the Ancients, Hippocrates, Alcmeon, Aristotle, Galen, &c.; Structure and Uses of the different parts of the Ear, in Man, Beasts, Birds, Fishes, and Insects; Anecdote of Dionysius, the Syracusan Tyrant; Form of the Human Ear; parts of the Ear essential to Hearing. Diseases of the External Ear; Necessity and Importance of early attention to; Otitis, or Ear-ache; Herpes; Morbid Septum of the Passage; Polypi; Inspissated Cerumen; Accidents, such as foreign bodies getting into the Ear, *viz.*, Insects, Pins, Beads, &c.; Congenital Inspissation of Cerumen; Affections of the Tympanum; Otorrhœa, Cautions against hastily suppressing it; three Stages of the Disease, 1. Simple Puriform Discharge from the Ear; 2. attended with Fungi and Polypi; 3. with Caries of the Bones.—Causes: Exposure to Cold, Scarlatina Maligna, Inflammation of the tympanic Cavity, Fever, Measles, Small-pox, Influenza; Obstruction of the Eustachian Tube; Operations for; Diseases of the Labyrinth, or Internal Ear—constitutional, as Epileptic, Apoplectic, attended with Faltering of Speech and Blindness, Nervous, Scrofulous, Syphilitic, &c.—local Palsy, as Paralysis of the Auditory Nerve, Paracusis, Melancholy, accompanied with Noises in the Head, Madness, defective Organisation, &c.; Deafness from early Neglect, Indolence, Inattention, Scrofula, Scurvy, Cancer, suppressed Evacuations, Mental Affections sympathising

with the Stomach and Bowels, Hysteria, Hypochondriasis, Neuralgia, Inflammation of the Brain or its Membrane, Convulsions, Delirium, Coma, Gastro-enteritis, Intemperance, &c., &c.; the Deaf and Dumb; Deafness concomitant with Dumbness; Infant Deaf and Dumb curable; Cautions to Parents; the Rev. W. Fletcher's Remarks; Number of Deaf and Dumb in Europe. Acoustics: Opinions of the ancient Philosophers respecting Sound; Notices of Pythagoras, Galileo, and Newton; Lord Brougham and Sir Charles Bell's Illustrations of Paley's Theology; Description of a new Acoustic Chair, its advantages and great capabilities; Sir E. Stracey's Ear-trumpet, with a Mouth-piece; Trumpets and artificial Ears described; various ingenious contrivances mentioned; occasional Observations by MM. Lallemand, Saissy, Robbi, Itard, Scarpa, Desmoulins, &c. Conclusion: Foundation of the Royal Dispensary for Diseases of the Ear, by the Author, in 1816; its objects; beneficial effects of its operation; since its establishment, has cured and relieved upwards of 12,750 patients. An account of the Symptoms and Treatment of many cases closes the work.

"It is certain that many cases of deafness are susceptible of relief by judicious treatment. Perhaps the disposition now prevalent, to seek for the cause of many local diseases in disorders of the remote part of the system, especially in the gastric organs, has led to the greatest improvement in the treatment of this, as well as many analogous affections. This indication is well followed by Mr. Curtis in all cases of deafness; excepting those of an organic nature, expressly local, his attention is directed to the constitution; and many cases of what is vaguely termed nervous deafness, of several years' standing, have been perfectly relieved. He has applied the principles above inculcated in an active and judicious manner, and the results of his experience appear to have been particularly favourable."—*London Medical and Physical Journal.*

"The number of editions through which Mr. Curtis's work has passed, is a sufficient proof of its value. We perceive he has enriched the present edition with those facts and observations connected with his subject which have recently been published in this country and on the Continent. The cases which illustrate the work are instructive."—*London Medical Repository.*

"No one, we think, will be disposed to deny Mr. Curtis the praise of perseverance, and, what is more, of *successful* perseverance. How commendable is that application which is so combined with judgment, that it surmounts every obstacle, and ultimately realises the full amount of its anticipations! Such is precisely the case with the author of this volume, who, notwithstanding the intricacy of his subject, and the apathy, and even opposition manifested, as regarded his attempts at first, has completely triumphed over them all, and shewn satisfactorily that diseases of the ear are, generally speaking, as curable as those of other organs; and that the only reason why they have ever been considered otherwise, has arisen solely from the neglect with which the ear had almost universally been treated, until Mr. Curtis set his mind unshrinkingly to the task. The result of his labours is briefly summed up in this volume, the sixth edition of his Treatise on the Ear. Altogether we can confidently recommend Mr. Curtis's work, as giving a fair view of what has been done, and what can be done, for the diseases of this intricate and invaluable organ."—*New Monthly Magazine.*

"Mr. Curtis, whose perseverance commands our applause, has published a new edition of his Treatise on the Physiology and Diseases of the Ear. It had been determined that diseases of the ear were incurable; but Mr. Curtis has published a series of cases sufficient to prove this erroneous; and we congratulate the public on his success, as no diseases are more afflicting than those of that important organ."—*Monthly Magazine.*

"The volume before us has been long before the public. Of the estimation in which it is held, no better proof could be sought than the words 'Sixth Edition' on the title-page. To those who unhappily labour under the calamity of deafness, it must be an invaluable work. It is undoubtedly the best which has yet appeared on the subject. The present edition is revised, and otherwise improved."—*Observer.*

"Having already spoken of this work on its first appearance, perhaps it would now be enough to say that it has reached its sixth edition; but we are in justice bound to add, that no book treating of diseases of the ear, has ever stood so high in the estimation of those who are most competent to give a correct judgment on the merits of a work of this description."—*Sunday Times.*

"This is, on the whole, a useful book. The mere fact that it has reached the sixth edition speaks very distinctly in its favour. If it does not treat profoundly the various topics that come under notice, still the author is evidently a man of extensive experience, with a good talent for observation, and a fair share of practical knowledge. The subject of which it treats is one of deep interest. The diseases of the ear are so frequent, coming on often from very slight causes, sometimes without any known cause, and are so apt to terminate in partial or total deafness, that any thing that is calculated to throw light on the subject cannot be regarded with indifference. It is well known, too, that when the function of hearing is impaired or destroyed, it is exceedingly difficult to restore it. It is therefore very desirable to understand those diseases that lead to its destruction; to learn, if possible, the means by which they can be arrested; and, at any rate, to be able to distinguish between those that produce only a temporary deafness, and those that cause a permanent loss of the function. It will be useful to all classes, by making them perceive the importance of early

attention to the first indications of impaired hearing; for this it very properly inculcates. Its plan is judicious. We are pleased to see the increased attention that is bestowed upon this subject, and are desirous that it should still more occupy the thoughts of scientific professional men. On this account we should be glad to have Mr. Curtis's book very generally circulated."—*North American Review.*

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"The condition of the Deaf and Dumb is a subject of great interest with every humane man. Milton has described want of vision as 'wisdom at one entrance quite shut out;' the same description forcibly applies to those unfortunate beings who are devoid of that grand inlet of knowledge—hearing; and who, as a natural consequence, are likewise destitute of one of the most useful attributes of man—speech. It is not sufficiently considered, that hearing is the grand incentive to speaking; for if sounds be not heard and discriminated, they cannot be imitated. The child, in his early attempts at speech, is guided by the ear, which leads him to the imitation of vocal sounds; it follows, therefore, that those who are born deaf, or who are affected with deafness before the power of articulation is attained, necessarily remain without the power of speech. Congenital deafness, and that which is observable soon after birth, the author believes to be frequently dependent upon casual circumstances only; and he insists upon the necessity of treatment in early infancy, before the disease has been confirmed by time and habit. At the London Deaf and Dumb Asylum, however, children are not eligible until nine years of age, and are received under eleven years and a half; the advanced age at which patients are admissible is of course unfavourable to medical treatment. Mr. Curtis is entitled to the best thanks of the public, for having drawn attention to the fact, that many cases of Deaf and Dumb, hitherto considered hopeless, admit of palliation and cure. Five cases are related at the close of the work, in which children born deaf and dumb, and in whom there existed no obvious cause of disease, acquired the power of hearing and speech. Two of these patients were seven years of age, and another was six.'—*Lancet.*

"The public and the profession are already much indebted to Mr. Curtis, for his persevering researches in this interesting department of medical science; and the work before us will be received as a valuable contribution to the knowledge we already possess of the physiology of those organs connected with hearing and speech, and the best means of remedying the calamities to which they are liable."—*Atlas.*

"A careful perusal of the work before us will convince us, that the necessity of early professional treatment in the case of deafness has not been sufficiently considered, and that in the first year of infancy the auricular powers should be tested, and if found defective, medical advice should be immediately sought. We need not here acquaint the reader, that deafness in infancy has its sure concomitant in dumbness. The great and prevailing error of parents now is, to let the disease take its course, and when the child is some seven or eight years old, to endeavour to get it into the Asylum for the Deaf and Dumb. To insist upon the merits of Mr. Curtis would here be superfluous. His works on the ear and its diseases have become standard authorities, and as such have been translated into various foreign languages. The volume now before us is second to none that he has formerly published, in arrangement, scientific research, and elegance of composition; whilst it brings before us deafness in another light, by shewing us how to attack it in infancy, and thus destroy it ere it has engendered its attending train of evils."—*Metropolitan Magazine.*

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