Lefferts (Geo. M.)

THE

DIAGNOSIS AND TREATMENT

OF

CHRONIC NASAL CATARRH.

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THREE CLINICAL LECTURES

DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK,

BY

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CHRONIC NASAL CATARRH.

LECTURE I.

EXAMINATION.

GENTLEMEN: Accurate diagnosis being the corner-stone of all successful treatment, my first lecture to you of this series must necessarily deal with the methods of making a direct anterior and posterior examination of the nasal passages — in other words, the performance of anterior rhinoscopy and of posterior rhinoscopy, or, more properly, pharyngo-rhinoscopy. The importance of such an examination, as a preliminary step to all attempts at treatment, will be alluded to more than once in the following lectures.

I have been sometimes reminded that there is an idea in the minds of very many of our profession that these methods of physical examination, procedures which necessarily involve the use of special instruments, such as the rhinoscope, specula, etc., and require some practice to make perfect, demand such a high degree of skill on the part of the physician, such an amount of toleration on the part of the patient, and the use of such costly apparatus, that they are of necessity confined to the hands of a few, who have by special training learned dexterity in manipulation, and by opportunity and special study acquired the right to denominate themselves *Specialists*.

But, gentlemen, this is hardly true, for I know that by the exercise of a moderate amount of diligent practice — in other words, learning practically where and why he fails in examinations, and not relying upon his books alone for his knowledge, by perseverance in the use of the necessary instruments, directed by an intelligent appreciation of

the why and wherefore of their application — the general practitioner may overcome such difficulties as stand in the way of their successful employment, and this with the simplest aids in the way of apparatus. If he will do this — and I hope to show you how he can most easily accomplish it — I assure him that the results which will be afforded, their importance and interest, and his satisfaction at having mastered the use of an invaluable diagnostic means and therapeutic aid, which to-day are beginning to be considered a very necessary part of medical practice, will most richly repay him for the time and labor which he has expended.

Certain instruments are essential for the practice of rhinoscopy, but they are few, simple, and not necessarily of great cost. They are: 1, a good artificial illumination; 2, a concave forehead reflector, and, in addition, for anterior rhinoscopy; 3, a nasal speculum, and for posterior rhinoscopy; 4, tongue spatula; and, 5, a rhinoscopic mirror. For ordinary purposes there is no better nor more convenient light than that which is furnished by the argand gas burner, mounted upon a drop light, which permits of the flame being lowered or elevated at will. Such a light is certainly easily procurable, and at a slight cost, if gas is obtainable; if not, as in the country, then the ordinary student lamp, which burns petroleum or oil, forms a very efficient substitute. To either of these lamps it is no difficult matter to attach a single plano convex lens two and one-half inches in diameter, which fits into the metallic chimney or tube known as Mackenzie's, if you deem it desirable to intensify their illuminating powers. Such an apparatus is shown in both of the accompanying illustrations (figs. 1 and 7).

Our next essential is the forehead mirror or reflector (fig. 2). This is a slightly concave mirror, either three and one-half or four inches in diameter, with a focal distance of about twelve inches. The glass may be perforated at its center, or simply left unsilvered at that point, both plans having their advocates; the latter, I think, you will find most satisfactory, and the only objection that I have ever heard urged against it — the liability of a coating of dust gathering upon the uncovered portion and obscuring the view through it — is one that is certainly very easily obviated. How this mirror shall be worn, and how it shall be attached to the operator's head, are also points upon which there is some difference of opinion. Bruns, for instance, says that it should

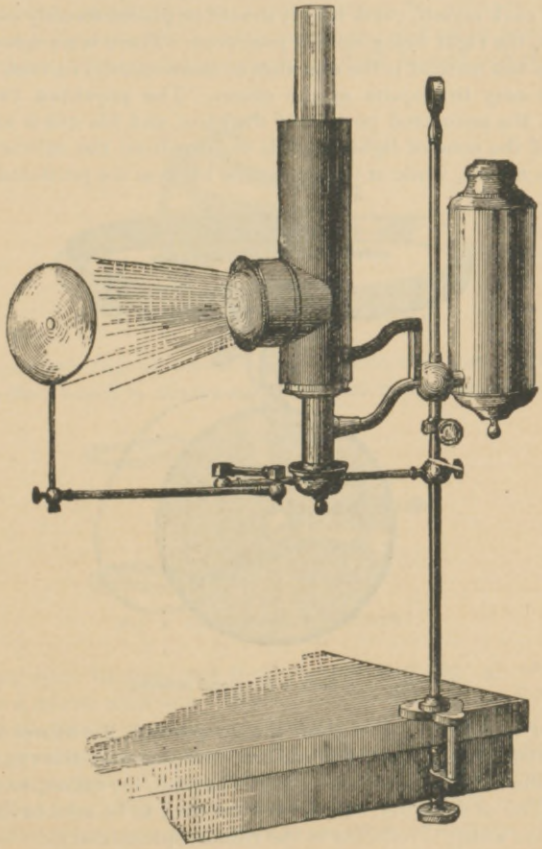

Fig. 1. Lamp for illuminating purposes.

be worn in front of the nose and mouth. Johnson prefers to have it over the forehead, while Czermack, Mackenzie, and others, among whom I rank myself, think that it should be placed directly over one of the eyes, the right being usually preferred. There is no question but that this last method is the one that is, theoretically, correct, and it is fully as easy to acquire as the others. The physician then looks through the uncovered portion of the glass, and his eye is within the center of the cone of light which is thrown from the mirror into the patient's mouth, while at the same time his eyes are protected from its

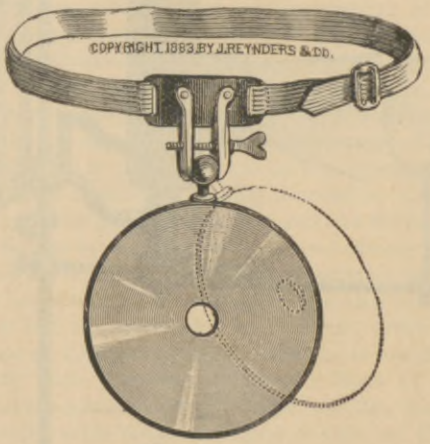

Fig. 2. Concave forehead reflector.

glare, for the rays of light from the lamp reach the mirror in an oblique direction, and do not, therefore, strike against the eye which is behind the reflector, while the other is beyond, or, rather, to one side, of their line of direction. Both eyes are then to be used in looking at the picture which is reflected in the rhinoscopic mirror.

For attaching the mirror to the head the band shown in the cut may be employed, or, still better, and as I prefer, the head-band known as Kramer's. A suitable dilator for the alæ of the nostril is usually nec-

essary, and is certainly advisable, although a fair examination of the parts may be made without it by simply elevating the tip of the nose with the thumb and dilating the nasal openings by pressure upon it. Of these nasal specula there are many kinds, and some prefer one, some another. The two best, perhaps, are those known as Robert and

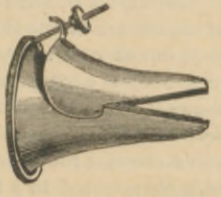

Fig. 3. Robert and Collin's nasal speculum.

Collin's speculum (fig. 3), a double-bladed affair, with a broad, trumpet-shaped orifice, which is dilated and held open by means of a screw ar-

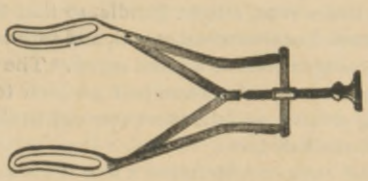

Fig. 4. Frankel's nasal speculum.

rangement upon its side, and the wire speculum (fig. 4), somewhat similar to a dilator used by oculists for separating the lids. Both these are good; the first is a favorite one with me, but I not unfrequently use an ordinary ear speculum, especially with small children, and find it answers a good purpose. Thudicum's speculum is useful for operations in the anterior nares. With these simple means alone, then — viz., those thus far alluded to — you will be able to see all of the anterior nares that there is to be seen, without the use of further instrumental assistance, although many other aids have been devised, which will be found in practice more of a hindrance than a help.

For viewing the posterior nares two additional instruments, as has been said, are necessary: First—The tongue spatula (fig. 5), which should always be used. You will find that it facilitates the operation greatly. That made on the model of Turk's fulfills two indications—its handle and shank are at one side of the mouth, out of your way, out of your light, while the blade, curved downward and corrugated, rests on the tongue and draws it forward, and is therefore to be preferred. Second—A rhinoscopic mirror (fig. 6). This consists of a circular bit of good glass, backed with amalgam, and mounted in a frame of German silver. To this frame is attached, at nearly a right angle, a shank four inches in length, that is made of some metal which, while it allows of any necessary bending, is firm; this terminates in, or sometimes slides into, a light handle, so that it may be lengthened or shortened at will, and into which it is fastened by means of a small screw. The diameter of the mirrors varies from half an inch to an inch on their reflecting surface, and the most convenient size is, for ordinary purposes, that of one-half inch.

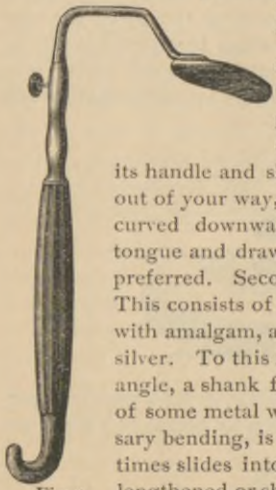

Fig. 5. Turk's tongue spatula.

Fig. 6. Rhinoscopic mirror.

I now present for your consideration a few hints as to the best manner of examining the cavities which occupy our attention. I allude to the anterior and posterior nares and the upper pharyngeal space, the two latter by the aid of the rhinoscopic mirror. The inspection of the former—that is, the anterior nares—is easy of accomplishment; but that of the latter, the most important as far as diagnostic results go, is often difficult. This method of examination, then, is by no means as generally applicable as laryngoscopy, and is sometimes, but rarely, absolutely impossible of accomplishment. I mention this that you may not be disappointed when you fail, and in order that you may commence your attempts with a fund of patience that will last. Let this statement, however, not discourage you; much can be accomplished by steady and persevering effort, even in the worst cases. For an inspec-

tion of the nasal passages from the front, we only need a good light — and here the illuminating apparatus and the forehead reflector will be found to render the best service — and a suitable dilator for the alæ of the nose.

The position of your patient and the light during your manipulations are about the same as those which I have described to you as being the correct ones for laryngoscopy, excepting, of course, that the patient's mouth is held closed* — that is, your patient must be seated directly in front of you, upon a chair which has been so arranged, in reference to the illuminating lamp, as to be convenient (you have arranged this light so that it will be upon a level with the mouth or ear of the patient whom you are about to examine, and upon his right side), with his head thrown slightly backwards, but still on a line with the axis of his body, and neither inclined to the right nor to the left — as a rule, a position which will place the lower border of the upper incisor teeth upon a plane which is horizontal with the base of the soft palate will be found a favorable one. A head-rest is unnecessary. The examiner now seats himself in front of the patient, takes the knees of the latter between his separated legs, and accommodates himself to his patient's height, so that he looks directly at his nose, and is at a distance from it which corresponds to the requirements of the focal distance of the concave forehead reflector which he has fastened upon his head, and by means of which he proposes to throw an image of the gas flame used — that is, "the optic expression of the union of all the rays of light which it reflects" — into the cavity which he is about to examine. If your speculum is now carefully introduced, and the membrano-cartilaginous part of the nose widely dilated (be careful not to pass the speculum too high up into the narrow space between the cartilaginous septum and outer bony edge of the nostril, to cause pain), while at the same time a strong light is thrown into the cavity from your reflector, you will see, more or less distinctly, the anterior and parts of the inferior surfaces of the three turbinated bones, the side of the septum, and into the inferior meatus, your view of the two latter, in respect to the depth to which your eye reaches, depending entirely upon the natural formation of the parts, for it is exceedingly common to find a deflection of the septum to one side, usually the left, which narrows more or

* The details are practically illustrated in the person of a patient during the lecture.

Fig. 7. Method of performing anterior rhinoscopy.

less the respective nares, occasionally occludes it, and prevents all view of the parts beyond; on the other hand, cases are met with in whom a very wide and roomy meatus permits you to look directly through it into the pharynx, and see the pharyngeal orifice of the Eustachian tube.

A careful inspection by this method, which should always precede or

follow a posterior rhinoscopic examination, if a correct diagnosis of the condition of the nares is to be made, will instruct you as to the condition and color, pathological or otherwise, of the lining mucous membrane — any changes from the healthy condition being readily appreciated, after frequent examinations of the normal parts have been made, and familiarized you with the normal appearances — to the presence of hypertrophies, common in the hypertrophic form of rhinitis; to exostoses and cartilaginous tumors of the septum, not unfrequently met with; to the presence of ulcerations or abnormalities of secretion; and, finally, to changes from the natural formation of the passages — deviations of the septum and the like.

For the performance of the posterior examination, to illuminate and convey to the eye the picture of the upper pharyngeal space, the posterior nares, and more or less of the posterior portions of the nasal passages themselves, we shall need, as I have said: First, a tongue spatula; second, a small mirror, bent at more or less of a right angle with its shaft; and, third, a good and sufficient source of light, to be used with the forehead reflector, and under the same conditions as I alluded to above. All these instruments we are supposed to have, and we now proceed to use them (fig. 8). The position of the patient, the position of his head, your position, and the direction and method of reflecting the light, are the same for posterior rhinoscopy as I have described them to you to be for anterior rhinoscopy, with two exceptions: First, that the focal point of the light is to be thrown into the pharynx; and, second, that the patient, with widely opened mouth, allows his tongue to lie quietly behind the incisor teeth and depresses it well down upon the floor of the mouth with the spatula. The procedure of throwing the reflected light from the forehead mirror into the patient's mouth, and then keeping it steadily in one position, you will find, as beginners, the most difficult part of the manipulation — at least I have found it so with my students. The latter has so many things to remember — the position of his patient, of the mirror, the picture of the various parts as he sees it, perhaps for the first time — that he is not to be blamed if his light does wander, and he suddenly, by some movement of his head, leaves the mouth in darkness. Practice will soon teach, however, that when the light has once been reflected into the mouth, and its brightest point lies, as it should, just below the base of the uvula, it

Fig. 8. Method of performing posterior rhinoscopy.

can be steadily kept at that point, and the exact focus caused to lie accurately, by slight movements, backwards or forwards, as the case may be, of his head. To catch the rays of light on his mirror in the first instance often gives him some difficulty; but a simple rule will make it an easy matter. Let him first place the mirror directly over his

forehead, in the median line, then turn it, keeping its plane parallel with that of the face, so that it comes over the right eye, and its axis, before vertical, becomes horizontal; he should now be able to look directly forwards with both eyes, the right through the perforation in his mirror, and then turning its face slowly towards the left — or, in other words, towards the lamp, which stands, as you remember, on the right side of the patient's head — he will invariably catch the rays of light from it, and find that the illuminated point will be thrown in the mirror's course, directly upon the patient's mouth.

If this has been satisfactorily accomplished, the rhinoscopic mirror, held in the right hand and well warmed, is now to be carefully introduced from the corner of the mouth, with its reflecting surface upwards, carried over the tongue and under the velum, which must hang motionless, at one side or the other of the uvula, until it stands midway between the former and the posterior pharyngeal wall, touching neither, and at an angle of about 130°. In this position it will be impossible to get the whole picture of the parts at once, and the face of the mirror must therefore be turned from side to side to view the lateral pharyngeal walls, upwards to view the vault of the pharynx, and at more or less different angles and inclinations to see completely the parts embraced in the posterior opening of the nares; indeed, it may have to be introduced upon one side of the uvula, especially if this be large, then withdrawn and re-introduced upon the other, if a perfect view of all the parts be desired.

Such, then, is the method of posterior rhinoscopy in an easy case, but three difficulties often present themselves which prevent its accomplishment; one is insuperable — a long, hard palate, which approaches so nearly to the posterior pharyngeal wall that there is no practicable degree of space left through which an examination may be effected, but this is very rare. A second is very common, and will require an additional instrumental procedure. This condition is one where a long, broad, soft palate, a long uvula, and a short distance between them and the posterior pharyngeal wall coexist, and an examination can only be made when the former are drawn away from the latter. This is best accomplished in certain cases by means of the palate hook, a hook of metal, broad and well curved where it passes under the velum, and covered by bougie material, which is introduced by the left

hand gently under the palate, and the latter drawn towards the operator with moderate force — that is, away from the posterior pharyngeal wall. I have never known this procedure to succeed perfectly at the first trial, but successive and persevering attempts will generally succeed in overcoming the spasmodic contraction of the palatine muscles which follows any attempt at first drawing the velum forwards. As a rule, however, you will find that the same time that is devoted to training a patient to tolerate this hook, or any of the other forms of instrument which the inventive ingenuity of specialists has devised for the purpose — and they are many — will be all-sufficient to train him to breathe quietly through the nose and cause the palate to hang immovable in the mouth, and in a manner much more comfortable to him and less tiresome to you. The third and last difficulty to which I have alluded is met with in nearly all cases, but may fortunately be overcome by simple measures. This is the drawing up of the velum and uvula tightly against the pharyngeal wall, which occurs as soon as the patient opens the mouth widely, or as soon as your instruments are introduced within it, and when you remember that the position that we wish it to assume — the one that it must assume before your examination can be made — is precisely that which it takes when all muscular movement is in abeyance, and that the patient can not assist you by carrying out any movements or phonating sounds, as he does in laryngoscopy, you will see the difficulty that presents itself. Quiet respiration carried on through the nose will overcome it, however, and this, which at first trial the patient will declare impossible to do, will after a few attempts be done, and the velum will be found not only to hang free from the pharyngeal wall, but to remain nearly motionless. A free space is thus afforded, through which your examination may then be made with celerity, accuracy, and completeness.

The picture that you see (fig. 9) is probably new and strange to you. You are looking at parts that are but rarely dissected, seldom thoroughly considered in our text-books, rarely correctly represented in drawings, and seldom, if ever, examined in the dead-house. To recognize all the various details, then, of the nares as seen from behind forwards will require special care and study, and all the more so as a complete view of all at once is rarely attainable. Your picture is made up of sections, as it were, obtained perhaps with difficulty, and

seen in a small mirror. The drawing which I show here will perhaps assist you in appreciating their appearance, and render their future recognition, after what I shall say about them, I trust, comparatively easy.

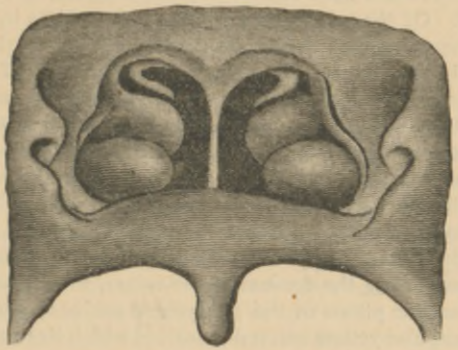

Fig. 9. Normal rhinoscopic image.

The first object which attracts your attention, as the rhinoscopic mirror is passed into position, is the posterior surface of the uvula, and, next, the posterior surface of the velum — a broad reddish expanse which arches upwards so as to cut off from view more or less of the inferior portions of the nares proper, and thus hides the greater part, in most cases, of the posterior extremities of the inferior turbinated bones. The septum nasi now comes into view, and as it is the most easily recognizable of all the parts, it serves as a landmark or guide for the rhinoscopic picture, as the vocal cords do for that of the larynx. It is a thin, sharp ridge, whitish in color, and its sides are readily seen; above it widens, becomes of a deeper color, and merges into the parts which go to make up the vault of the pharynx; to either side of it are seen dark, ovoid openings, the posterior nares, and you will observe that they are more or less occupied by the three turbinated bones, bulbous bodies of a gray or ashy-red color, and that of them we see the middle one with part of the middle meatus of the nose most distinctly; parts only of the superior and inferior bones are visible, the former appearing simply as a narrow projection from the outer wall of

the nares, extending downwards, inwards, and backwards to lose itself behind the middle turbinated bone; the inferior, which overlaps the middle one, and the upper portions of which alone are usually visible, appears as a rounded, hard tumor, with an irregular and grayish-colored surface. Of the meatuses of the nose the middle is, I have said, by far the most distinct; the upper appears only as a dark line, while the inferior is only occasionally seen. About the level of the inferior turbinated bones — further towards the sides of the picture, and upon a different plane — we see on either side a rounded, smooth projection of a bright-red color, and between it and the outer limit of the posterior nares on the corresponding side a smooth yellowish expanse, over which a small vessel can sometimes be seen to course. This projection is continuous below, with two sharp elevated ridges, the anterior containing the fibres of the levator palati muscle, which pass downwards and inwards to the dorsum of the velum, where they are finally lost. They are the pillars of the pharyngeal orifice of the Eustachian tube, the triangular yellow colored mouth of which lies between them, at the point where they leave the rounded projection above mentioned. If we follow this backwards, we shall see that it defines a deep groove running upwards and outwards, and which lies between this lateral projection and the posterior wall of the pharynx — in short, the fossa of Rosenmüller.

If the face of the mirror be now turned upwards, the vault of the pharynx will be seen, its mucous membrane of a bright-red color, and its surface covered with irregular ridges and depressions, due to the amount of adenoid tissue here present; below these shade off into the smooth posterior pharyngeal wall.

These points, then, having been seen, our examination is completed as far as the normal appearances go. The abnormalities of the parts, due to pathological processes, which may be detected by the rhinoscope, I have already briefly alluded to when speaking of anterior rhinoscopy, and need not recapitulate them — they will also be described in detail, as far as they concern the catarrhal processes, hereafter. If the process of examination has been conducted carefully and intelligently, we are certainly in a position to diagnosticate the conditions that are now to be considered, accurately, and to treat them successfully — no slight advantages in any case, as I am sure you will acknowledge

LECTURE II.

DIAGNOSIS.

GENTLEMEN: Having taught you how to use the instruments for diagnosis, I propose commencing to-day the consideration of a subject which I know will be of more than passing interest to you. The patients that you see before you will illustrate its various phases; they will be demonstrated in a few moments. My subject is "Nasal Catarrh"—one about which much is written to-day by the profession, much more said by the laity. It is an extensive one, and I can not hope to treat it exhaustively in the time at my disposal in this course; perhaps it is just as well that I should not attempt to do so. What you most need, as general practitioners, is condensed and reliable information concerning diagnosis, and practical advice in regard to treatment.

I have said that the subject will be of interest to you. We all hear a great deal about "chronic catarrh of the nose," and you will see a good deal of it. Patients who suffer from it, and patients who have not got it, but imagine that they have, will come to you in numbers. You certainly, then, ought to be able to recognize it when present, to exclude it when absent, and, above all, be competent to treat it scientifically and successfully. Let me ask just here: Do general practitioners always recognize it? Do they always examine for it? Are they not too apt, in too many cases, to accept the statement of the patient, make no examination, prescribe a nasal douche and some wash, and allow the patient to disappear, perhaps to excite, in time, a catarrh where none existed before? Patients will make their own diagnosis—it is common for them to do so—and often come to you for the treatment of that which, perhaps, does not exist; often they will treat themselves, without any advice. The country is flooded with advertisements, pamphlets, and books on the subject of nasal catarrh. The field is a rich one for the quack; "sure cures" multiply rapidly; new remedies are eagerly sought for by the credulous; "catarrh snuffs" crowd the counters of every drug store, and "nasal douches" are manufactured and

sold by the thousand. The quack does not spare the feelings of the patient; he pictures the disease in its most disagreeable aspects; he dwells upon the worst symptoms; he confounds other diseases — syphilis, for instance — with simple catarrh; in short, he frightens.

Your patients, then, well posted in literature of this class, come to you, dreading that the nasal trouble that they have, or, perhaps, have not got, will develop into the worst form of catarrh that they have read about — above all, that it will develop a disagreeable odor. A symptom that they also often dwell upon, regarding it as a sign of the dread disease, is "a constant dropping of mucus in the throat" — an ever-present desire to clear it. Some little mucus they do bring away; often not. Let me warn you here that, in a good percentage of these cases, all this has nothing to do with "nasal catarrh." The patient is probably suffering from a simple relaxed throat or a chronic pharyngitis in one of its forms — perhaps, and most commonly, a relaxed or elongated uvula — and that these, especially the latter, are the matters at fault, *not* the nose. All this you must prevent, they cry to their doctor; they demand treatment at your hands. Now, much of this nonsense you, as sensible medical men, can prevent. But, first, you must yourself know what "nasal catarrh" really is, what forms it appears under, and how to recognize the varieties by their intra-nasal appearances. The day has gone by when all nasal affections can be recklessly and ignorantly classed under the generic name "catarrh," and so treated. What a multitude of sins that word has covered!

The one symptom that patients most fear, and justly so, I have alluded to — the foul smell from the nose; but it is in reality a rare one; it only occurs in the fetid or atrophic form of nasal catarrh, which is by no means so common as the other varieties, and in ozæna, but ozæna has nothing to do with nasal catarrh. Do not forget this: It only occurs in patients who are the victims of syphilis or struma — patients who have syphilitic necrosis of the nasal bones, with a stinking, purulent discharge, a discharge due to the presence of dead bone. The same thing sometimes happens in scrofulous subjects. Under these circumstances, then, you may have the fetid, stinking disease, ozæna, but only under these circumstances. Do not call cases of nasal catarrh, even the fetid form, ozæna; they have pathologically nothing in common. Remember, also, that fetid or atrophic catarrh

is, as I have said, unusual, and thus you are able at once to reassure your patient in regard to the most dreaded symptom.

I have said this much in order to prove to you the necessity of your learning to recognize the varieties of nasal catarrhal disease; for not alone diagnosis, but, what is equally important, your correct views regarding the questions of prognosis and treatment, will depend upon your acquirement of this knowledge. Some forms of nasal catarrh are curable, others are not. Is there, then, more than one form of "nasal catarrh?" Most certainly; and you will learn to differentiate them. First, acknowledge the fact that they do exist. You will meet with three varieties: 1. Simple chronic rhinitis (and let me say here that I prefer this term rhinitis to the one, "catarrh," which is so commonly used); 2, Hypertrophic rhinitis; and, 3, Atrophic or Fetid rhinitis.

Simple chronic rhinitis is, as the name implies, a chronic inflammation of the nasal mucous membrane unattended by structural changes of any moment. Its only symptom is an increased discharge of mucus, or, if it has lasted some time, muco-pus. This discharge is thin and easily removable, there is no interference with the sense of smell, and no obstruction to respiration. The anterior rhinoscopic examination will show you simply congestion of the mucous membrane, the latter flecked here and there by soft, easily removable, slightly yellowish mucus. As far as the amount of free space is concerned, it is normal; there is no thickening or hypertrophy of the membrane. Posteriorly the rhinoscopic mirror will exhibit about the same appearances, except at the vault of the pharynx, where the glandular tissue is large in amount. Swelling of these glands gives a turgid aspect to the parts, and the secretion which covers them in, in part, is thicker and more tenacious — chronic pharyngitis may or may not coexist. Such patients do not, as a rule, consult you; the trouble is too slight, and unless they are morbidly sensitive or easily frightened, they allow the pathological process, through ignorance of possible results, to continue without treatment. Thus week by week, month by month, it continues, until the simple form of rhinitis develops into the second variety, which we term hypertrophic nasal catarrh, or rhinitis. We now have marked structural changes — a proliferation of all the normal elements of the mucous membrane, a true hypertrophy. The whole

mucous membrane of the nasal passages, but specially that over the lower turbinated bones, is markedly thickened and relaxed; the plexus of blood vessels, a true erectile tissue, which underlies the membrane in the latter locality, becomes enlarged; the glands at the vault of the pharynx participate in the pathological process and likewise hypertrophy. Secretion is excessive, thick, and tenacious, showing that the glandular elements of the mucous membrane have not escaped. Such a hypertrophy of tissue, of course, occludes more or less, perhaps permanently and completely, but more commonly intermittingly and partially, the nasal passages; the patient breathes with difficulty, his voice becomes nasal in character, he experiences much discomfort, and decides, for the first time, to consult a physician.

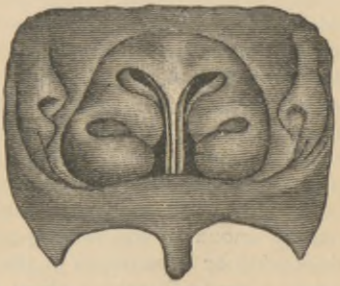

Fig. 10. Simple hypertrophic rhinitis.

Hypertrophic rhinitis, then (fig. 10), will be the form of catarrhal disease of the nose that you will oftenest be called upon to treat. Fortunately, you can give your patient great relief—but of this in one moment. Make now your anterior rhinoscopic inspection. You will see at once that the anterior extremity of the inferior turbinated bone on one, perhaps on both sides of the nose projects far out into the free space of the nasal passage — indeed, may lie against the nasal septum, and thus close the passage — that the mucous membrane covering it is thickened and congested, and hidden more or less by thick, muco-purulent discharge. The thickened membrane over the lower turbinated bone

hangs downwards, thus encroaching upon the inferior meatus of the nose. If you touch it with a probe, it indents deeply and recovers itself slowly. The membrane covering the middle turbinated bone and the side of the septum are affected to a less extent, perhaps not at all. Posteriorly observe carefully in the rhinoscopic mirror the posterior extremities of both middle and inferior turbinated bones, but specially the latter. The mucous membrane is not only markedly hypertrophied, but has a peculiar rugged appearance; it is thrown into fissures and irregularities, and has a whitish appearance. A veritable tumor is thus formed, characteristic in its appearance and marked in its results, for it closes, by its bulk, more or less of the posterior nasal opening. This closure is also assisted by the thickening that will often be seen in the form of an irregular ovoid tumor upon the side of the septum (fig. 11).

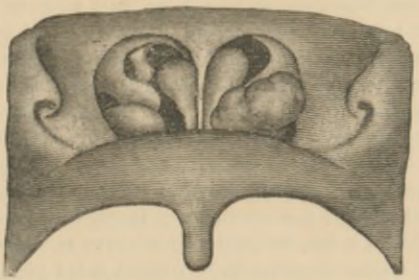

Fig. 11. Ovoid thickening on both sides of the nasal septum. Hypertrophy of the tissues covering the posterior extremity of left inferior turbinated bone.

At the vault of the pharynx both mucous membrane and glandular tissue are involved, the latter to the greater extent. Thus we see an irregular nodular tumor, traversed by seams and fissures, presenting a variety of aspects, according to the degree and kind of development, but always occupying and obliterating the normal, rounded, concave cavity of the vault. Chronic pharyngitis, frequently the follicular form, will also be present, and, occasionally, chronic laryngitis.

As a result of this process of intra-nasal hypertrophy, in certain cases following it, when it has lasted some time, or, more rarely, occurring

early in the disease, before hypertrophy is far advanced, the third form of nasal catarrh develops. This we call atrophic or fetid rhinitis. I have told you that it is by no means as common as the preceding varieties. It means this: Remember that in the hypertrophic form we had in the deeper layers of the tissues a deposition of newly developed connective and elastic tissue. This may cause two results: First, by its mere presence and amount, it may press upon, cause atrophy of, and destruction of function in, the glands and follicles which stud the mucous membrane. It crowds them to death, so to speak. This may occur, as I have said, early in the disease; if later, as it commonly does, the process of atrophy of the mucous membrane, and especially of the glands, has a different explanation; it is now due to the contraction that takes place in the connective and elastic tissue that has been developed in the hypertrophic form of the disease. The more and more firmly this becomes organized, as time goes on, the more and more completely does it compress and destroy the function of the secreting glands and follicles, and with them the mucous membrane in which they lie and the submucous structures — atrophy. Even more, if the process be long continued, the effect of this continued pressure, aided by the pressure of inspissated secretions or crusts, is exerted upon the turbinated bones themselves. Atrophy, interstitial absorption, is set up in them; they become smaller than normal, and the result is shown in the abnormally large, wide, roomy nasal passages, covered by a tense, dry, shining mucous membrane, often with hard crusts of mucus covering it. In these cases you can often look directly through the nasal passage back into the pharynx, so wide is it.

The symptoms that these pathological changes occasion are not as marked as in the hypertrophic form. There is plenty of room through the nose for the respiratory current to pass, hence there is no obstruction to breathing experienced by the patient. The discharge, instead of being profuse, is scanty, and dries into crusts and scales. There is no interference with the timbre of the voice. The only symptoms, then, are interference with the sense of smell, as a rule, the atrophic process having extended upwards to the olfactory region, and affected the terminal fibres of the olfactory nerve, and general uneasy sensations, sometimes amounting to pain, with excessive irritability and

sensitiveness to atmospheric changes. The rhinoscopic appearances, both anterior and posterior, are sufficiently indicated in my description of the disease; I will not, therefore, dwell upon them. The posterior wall of the pharynx will be dry and shining, and without any enlargement of its follicles.

So much for the atrophic form, but I have coupled with this term the one fetid. The latter condition follows the former closely — indeed, is part of it if it has lasted any time — and I see no need, clinically, to make a distinction between the two. Fetor is the direct result of the atrophy, in this way: The secretions are scanty and tenacious, as I have told you, and become more and more so as atrophy of successive follicles and glands takes place. The explanation of this is simple: The atrophic process has affected first and chiefly the *serous glands*, which are numerous in the nasal mucous membrane; their function is, by their secretion, to render the nasal mucus thin and watery, but this function being abolished by their destruction, the mucus secreted by the mucous glands, large numbers of which still remain intact, is viscid and tenacious; it adheres to the mucous surfaces, and rapidly desiccates in the respiratory current of air. Large crusts and scabs thus form readily and cling closely in the nasal passages and at the vault of the pharynx. Impacted in the narrowed parts of the canals, pent up beneath the turbinated bones, constantly growing in size by the addition of the secretions poured out beneath them and prevented from escaping, is it any wonder that putrefactive changes set in; that the matter thus imprisoned decomposes; that fetor is established; and not only this, but the irritation of the mucous membrane, caused by the presence of these pent-up purulent discharges — for from muco-purulent to purulent they rapidly change — reinfects itself, so to speak, by its discharge, excites further discharges, and thus constantly aggravates the disease.

So passes the atrophic form of rhinitis into the fetid — not always, though, fortunately for the patients, and not very rapidly in any case. The symptom of the condition now established may be given in one word: fetor — stinking truly in every sense, disgusting to the patient, disgusting to his friends, disheartening to the physician, who must acknowledge his inability to do more than relieve his patient — cure the condition which gives rise to it he cannot. The only difference,

rhinoscopically, which is perceptible between the atrophic and fetid stages of the disease is the increased amount of crusts and yellowish or greenish scabs, and, perhaps, the increased degree of space, due to the atrophy of all the parts upon which they lodge, which is seen in the latter variety.

Let me now recapitulate. We see, clinically, three forms of chronic rhinitis: 1, Simple, uncomplicated, chronic rhinitis; 2, Hypertrophic rhinitis; 3, Atrophic or Fetid rhinitis. Certainly these names and forms must be easy to remember. How important for your success in their treatment and views as to prognosis the remembrance of them and of their different pathological nature is, I have tried to impress upon you. Be sure, then (by means of the direct anterior and posterior rhinoscopic examination of the parts which I told you, early in the course, how to make), that you know just where your patient stands in the pathological scale.

I turn, now, to a part of my subject which will have, perhaps, a more active interest for you — namely, the *treatment* of chronic rhinitis in its various forms. Here, again, I must limit my remarks. The medical journals teem with advice as to the proper methods of treatment. Everybody has something to say about the way to manage chronic catarrh of the nose. Much that you read will not commend itself to your good judgment, to put it mildly. Some advice is reliable. I shall try to remember, in what I am about to say, that I am speaking to those who are, or who are about to become, general practitioners, and therefore will not have at their command the elaborate apparatus, the many instruments, and the varied means of treatment possessed, perhaps, by the specialist, and while I am obliged, in order to make my lecture complete, to allude to all recognized methods, surgical as well as medical, I intend to give you simple rules, by means of which any one of you can treat his cases. You will, of course, understand that I refer to uncomplicated instances of chronic rhinitis. If there coexist in given cases such complications as deflected septum, multiple hypertrophies, nasal polypi, exostoses, and cartilaginous thickenings of the septum, large hypertrophies, veritable tumors of the adenoid tissue at the vault of the pharynx, it is, perhaps, best that you should entrust them to the more skilled hands of those whose special studies and experience fit them to undertake the task.

First of all, let your patient clearly understand whether or no he really has "nasal catarrh;" you may, perhaps, give him much comfort in this way. If he has, make up your mind as to the particular form; upon this depends what you tell him in the way of prognosis, and what you ought to do in the way of treatment. In any event, let him clearly appreciate the fact that you cannot cure his disease in as many days as he has had it months or years — perhaps that you cannot cure it at all (in the atrophic or fetid form) — but that you can give him much relief from his most urgent symptoms. Honesty is here the best policy. Inform him that he will require some patience, you some regularity in his visits (as a rule, the domestic treatment of chronic disease of the nose is unsuccessful), that there is here no royal road to success, but that, with patience and persistence, much good can be done — that success often, much oftener than is commonly believed, can be attained, and by success I mean complete, permanent cure.

Now, what are you going to do for your patient? First, you are to determine carefully whether any indications exist in the given case for general constitutional treatment, apart from local measures, and they not only often do, but are too often overlooked. If what we term a catarrhal diathesis be present, if scrofula or herpetism can be proven to exist — in short, if the nasal catarrhal disease depend upon a diathetic condition — general treatment has primary importance. Cod-liver oil, iron, and the iodides, with other remedies that will suggest themselves in particular cases, should be given for long periods. Prophylaxis, likewise, should not be forgotten; the careful attention to all habits which proceed from due consideration of wise hygienic laws will often constitute an important part of the advice that you give to your patient. Bathing, clothing, and temperature, friction and shampooing, will, in many instances, be a duty upon which you will insist. The question here arises whether any of the special agents of the pharmacopœia that have been from time to time recommended as having a useful therapeutic effect upon the mucous membrane of the respiratory passages in a diseased condition are in reality of great value. I believe that this is questionable. I have made use of many and have never been able to convince myself that any one possessed a decided specific effect. Cubebs, ammoniacum, muriate of ammonium, and perhaps sulphur, have given the best temporary and sometimes permanent results. In

each case, however, their use has been associated with that of local and direct treatment of the mucous membrane. In many cases, on the other hand, the affection will appear as a purely local one, and can be met and conquered by local treatment alone. This is of unquestionable value; the means we will consider in our next lecture.

LECTURE III.

TREATMENT.

GENTLEMEN: A very essential principle in the local treatment of catarrhal affections of the nasal passages is thorough cleanliness; it underlies all others. There certainly can be little remedial value in the application of a medicated spray or powder that only reaches parts covered and protected by a layer of thick, tenacious mucus, or, still less, those encased in an armor of hard, inspissated crusts. On the other hand, I am convinced that this matter of cleanliness, if the latter be understood to mean frequent, daily, even several times a day, syringing of the nose, is overdone, and that it does much harm. The comfort, fancied or real, that a patient experiences after the use of his "nasal douche," even though this relief be only temporary, as it always is, leads him to repeat the process with constantly increasing frequency. Instances are not unknown where patients will use a quart of a strong saline solution, under high pressure, through the nose several times daily. Physicians are not entirely guiltless in the matter, for it is not infrequently that the patient is misled by their belief that the cure of a nasal catarrh lies in the use of a "douche." Such practices, I repeat, are productive of no good, but much harm. Even apparent temporary good effects ultimately fail. The use of strong saline solutions in large quantity, passed through the nares under high pressure, is not infrequently an efficient factor in the propagation, if not in the causation, as I believe that I have many times seen it, of a chronic inflammation of the delicate nasal mucous membrane, with its usual result of permanent infiltration of the mucous and submucous structures. All this rather than a means for its relief.

While, then, cleanliness is essential, mechanical means for attaining it are to be used with great discretion. There is nothing curative in their employment — bear that in mind. They are by no means as generally necessary as was formerly supposed. I believe that in my practice I have discontinued their use in more than fifty per cent of cases, and the latter not only do just as well, but better, being relieved of an

element of irritation. All instruments, then, for cleansing purposes, and I include here the "nasal douche" with its many modifications, anterior and posterior nasal syringes, and the like — I even add cleansing sprays — are only necessary and are only to be used in exceptional cases of aggravated catarrhal inflammation, with accumulation of pent up or hardened secretions, and in cases attended by the formation and firm impaction in the passages of hard, dense crusts, as in atrophic or fetid catarrh and in ozæna. In simple chronic rhinitis, and in some — perhaps one-half — of the cases of hypertrophic rhinitis, their use is not required as a rule. The patient can readily remove the soft, semi-fluid secretions by simply blowing the nose; if he cannot, or if the secretions collect at the vault of the pharynx, one jet of spray containing some alkali or some "Listerine," thrown by you behind the velum or into the anterior nares, just prior to the use of the medicated spray or powder, of which I shall speak in a moment, will be amply sufficient to loosen and remove them.

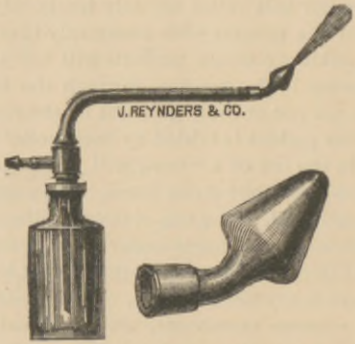

Fig. 12. Nasal spray apparatus.

Let us suppose, however, that you are called upon to treat a case such as I have described, where the use of some instrument is a necessity in order that the pent up or hardened secretions may be removed before you make your application of the remedial agent. What form of instrument shall you use? Which method prefer? Never use a "nasal douche;" it is an inefficient instrument for the purpose for which it

was designed, insomuch as it does not thoroughly wash or cleanse the nasal cavities, even when carefully used. I prefer, and I strongly advise you to employ, the instrument that I show you here (fig. 12), and which I devised some years ago. It is simply an apparatus arranged to throw a *very coarse spray* in the right direction into the anterior nares. The conical tip, you see, closes one nostril completely; the fluid then enters one nasal passage and passes out by the other. Power is obtained by means of a double hand-ball tube. We call it the "nasal spray apparatus." This apparatus is also manufactured by the Davidson Rubber Company. Their device of lining the orifice of the nozzle with platinum is a useful one, and tends to preserve the working qualities of the instrument. The nozzle is fitted to the No. 61 continuous spray tube. With it the nasal passages and upper pharynx may, except in rare instances, be thoroughly cleansed of secretions and crusts by the use of less than one ounce of the medicated fluid contained in its bottle or reservoir. Here, at once, is an immense advantage gained over the pint or even quart of fluid used commonly in the "douche." Being a *coarse spray*, it washes up, loosens, and dislodges the secretions (unless they are firmly impacted in extreme cases) by the constant commotion of the fluid in the nasal passages, and this very readily and quickly. Explicit directions are to be given in every case to the patient for its use. I have had them printed, and now distribute them to you; they also accompany each box in which the instrument is sold. They are as follows:

1. Warm the medicated fluid in the bottle before using by holding the filled bottle for a few moments in hot water.

2. Hold the body erect and incline the head very slightly forward over the toilet basin.

3. Introduce the conical nozzle of the apparatus into the nostril (first on the side most occluded) far enough to close it perfectly, holding at the same time the horizontal tube of the apparatus directly outwards from the face; do not turn it from side to side or downwards, and make a trial of the spray by compressing the hand-ball once, to prove that the opening in the nozzle is not occluded in the nostril; then

4. Open the mouth widely and breathe gently but quickly through it in a snoring manner; avoid carefully all attempts at speaking, swallowing, or coughing (at the moment that the fluid passes into the upper part of the throat from the nostril being operated upon, a desire to swallow will be experienced; resist it, and the next second the fluid passes forwards through the opposite nostril).

5. Hold the end ball of the apparatus firmly in the right hand (the left holds the

bottle) and *operate it briskly*, until the spray of medicated fluid, which should be felt at once to enter the nasal passage, has passed around it and appears at the opposite nostril; at this moment stop.

6. Remove the nozzle from the nostril, allow the surplus fluid to run out of the latter; then blow the nose gently — *never vigorously*.

7. Repeat the operation upon the opposite nostril.

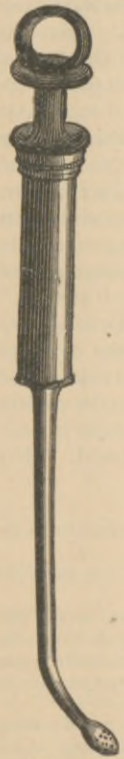

Fig. 13. Posterior nasal syringe.

In the severer forms of nasal disease — those attended by the formation and impaction of hard, dense crusts and masses in the nasal passages and upper pharynx — the use of this "nasal spray apparatus" will not be sufficient to dislodge them in the first instance, and a more powerful means (short of direct instrumental removal) must be employed. This result is best obtained by the "posterior nasal syringe" (fig. 13), of hard rubber or metal, with a long, curved nozzle, which is used to cleanse the parts posteriorly (by way of the upper pharynx and posterior nares). This procedure is always disagreeable, sometimes painful, to the patient, and care must always be taken not to bruise the parts during the introduction of the nozzle of the syringe. Toleration will be established after a time. For cleansing purposes through the anterior nares — an easier matter — the large, hard rubber syringe of the aurist answers the purpose well (fig. 14).

Fig. 14. Anterior nasal syringe.

Various cleansing and disinfecting solutions may be used by means of these instruments. I use with the "nasal spray apparatus" either one of the following:

℞—Acidi Carbolici*.....ʒj
Sodii Boratis.....ʒj
Sodii Bicarbonatis.....ʒj
Glycerini.....ʒj
Aquæ Rosæ.....ʒj
Aquæ ad.....Oj

Or, still better:

℞—Sodii Bicarbonatis.....ʒss
Sodii Boratis.....ʒss
Listerine.....ʒj
Aquæ, ad.....ʒiv

The "Listerine" in the latter formula may not be familiar to you. It is a preparation that has been introduced by Lambert & Co., of St. Louis, containing the essential antiseptic constituent of thyme, eucalyptus, baptisia, gaultheria, and mentha arvensis in combination. Each fluid-drachm also contains two grains of refined and purified benzoboracic acid. Thus it may be used in this or in any of the other solutions of alteratives, astringents, and resolvents of which I shall have to speak (usually in combination with some proportion of water—from two to ten parts water to one part "Listerine," according to the indications) as a menstruum, and will be found to serve a useful and pleasant purpose where an antiseptic is desirable. The thyme and eucalyptus, besides being disinfectants, act also as stimulants to the mucous membrane.

Where a much larger quantity of a cleansing solution is necessarily used, as with the anterior or posterior nasal syringe, simple warm water, with the addition of borax—ten grains to each ounce—or "Listerine"—in the proportion of one part to from two to ten of warm water—will answer the purpose. I sometimes—when the disagreeable odor is strong—use, after a thorough syringing with an alkaline solution, a *spray* of equal parts of "Listerine" and water; it destroys fetor very quickly, and substitutes for it the pleasant odor of the thyme.

Let me say here—what you have probably noticed—that I use no sodium chloride in any of these cleansing solutions; I believe that it does more harm than good; that the saline solution favors endosmosis

*This quantity is necessarily often varied to suit the susceptibility of different mucous membranes.

as it passes over the nasal mucous membrane, and therefore increases, rather than diminishes, intra-nasal swelling.

Having shown you now how the parts may be cleansed, if this be necessary, I turn to the question of the direct *medication* of the disease which affects them. If I exclude for the moment the use of caustics and of surgical measures in the management of catarrhal conditions of the nares, the treatment is based practically either upon the employment of various *medicated fluids*, used in spray by means of some form of atomizer, or upon the use of *medicated powders*, applied with the anterior or posterior nasal powder-insufflator in one of its various forms. Both methods have their warm advocates. My own experience prejudices me strongly in favor of the *spray*. I believe that with a proper spray-tube, and a pressure of compressed air of about forty pounds to the square inch, no more perfect application can be made to the parts. This should always, if possible, be through the posterior nares. The patient depressing his tongue by means of a spatula, the velum palati must be drawn forwards — that is, away from the posterior pharyngeal wall — by means of a suitable metal hook covered by bougie material, which may be bought at the instrument maker's under the name "Palate-Hook." This procedure can be readily accomplished in *all* cases after a little practice, and is one that I regard as *absolutely essential* to the thorough success of the application, as it is the only way in which a practicable degree of space can be gained through which to throw the spray upwards and forwards through the nasal passages. To attempt an application with the velum drawn upwards and backwards, closely approximated to the pharyngeal wall, is nonsense. In this position it will be found the moment that you introduce your spray-tube into the patient's mouth, in nine cases out of ten. The palate-hook is held in the operator's left hand, his right holds and controls the spray-tube, and the spray is thus thrown upwards into the vault of the pharynx and forwards through both nasal passages, so that it appears at both nostrils in a fine cloud. Such an application is thorough and complete, not painful, nor even very disagreeable, to the patient. That the results obtained by a series of such far exceed those obtained by any other method, ample experience has shown me.

I prefer the high pressure of compressed air to the lower power so often recommended. I have never done harm to the mucous mem-

brane with it, and the increased power of propulsion in the cloud of spray renders it possible to reach all of the many irregularities and recesses abounding in the naso-pharyngeal passages. I say nothing here except in condemnation of the practice of *forcing* a probe or cotton-holder, charged with a solution of nitrate of silver, up behind the velum in spite of the violent muscular contraction of the parts, or of the use of small brushes, called "post-nasal," used in the same way, which, from their very size, form, and length, render it a physical impossibility to reach the vault of the pharynx, still less the posterior nares, or to enter the latter; medication by such means amounts to little.

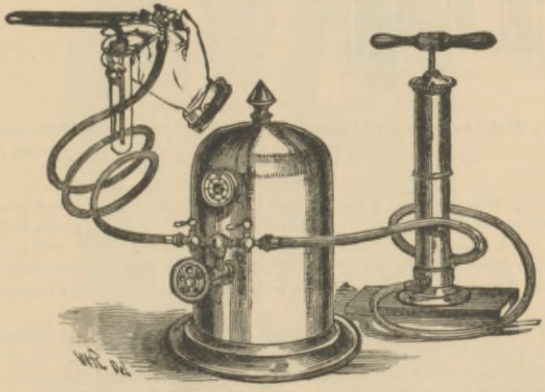

Fig. 15. Compressed-air receiver, pump, and spray-tube.

But it is hardly to be expected that the general practitioner will be able to command the use of a costly compressed-air apparatus with air-pump and spray-tubes, such as I show you here (figs. 15, 16, 17, A, B); then, in default of this apparatus, the ordinary "hard-rubber atomizers," which can be bought at a moderate price everywhere, and which are constructed upon the principle of either Richardson or

Bergson, must be used, and can be, with good effect (figs. 18, 19). A very good atomizer is manufactured by the Davidson Company, and

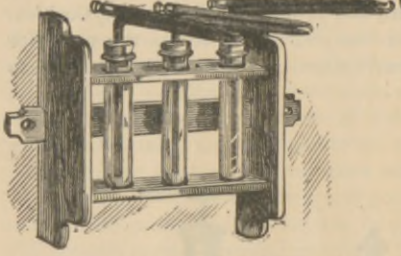

Fig. 16. Hard-rubber spray-tubes.*

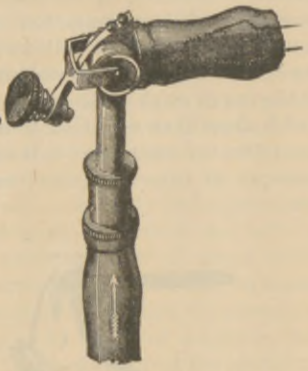

Fig. 17. Automatic cut-off for spray-tubes.†

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* The "spray-tubes" shown in the cut (fig. 16) are made of vulcanized rubber. The best and cheapest tubes, however, are probably those made of glass, but they are, of course, more fragile than the above or than those made of metal and nickel plated, which can, however, only be used with certain non-corrosive solutions. All of the above patterns (three constitute a set) can now be procured of the instrument maker.

† This pattern of "cut-off" is preferred by some operators. A cheaper and, I think, a better method is to attach the spray-tube to the connecting rubber tube coming from the air-receiver by means of a metal bayonet joint, and then control the air current through this tube by pressure of it with the thumb against the end of the spray-tube, or, if necessary — but it is less convenient — the connecting tube from the air-receiver may be simply slipped over the end of the spray-tube at the time the application is made to the throat with the latter, and the air current controlled by the thumb, as above described.

I am frequently asked what form of air-pump — for use in compressing air in the cylinder used with the spray apparatus — is best adapted for the service, and will give the best and quickest results. The pumps here figured have — one or the other — been in use in my office for the past eight years, and I can speak from experience, therefore, as regards their merits. They are, I believe, the most desirable forms of apparatus that are now made for the purpose. They were manufactured for me by Hermann Weindel, of Philadelphia.

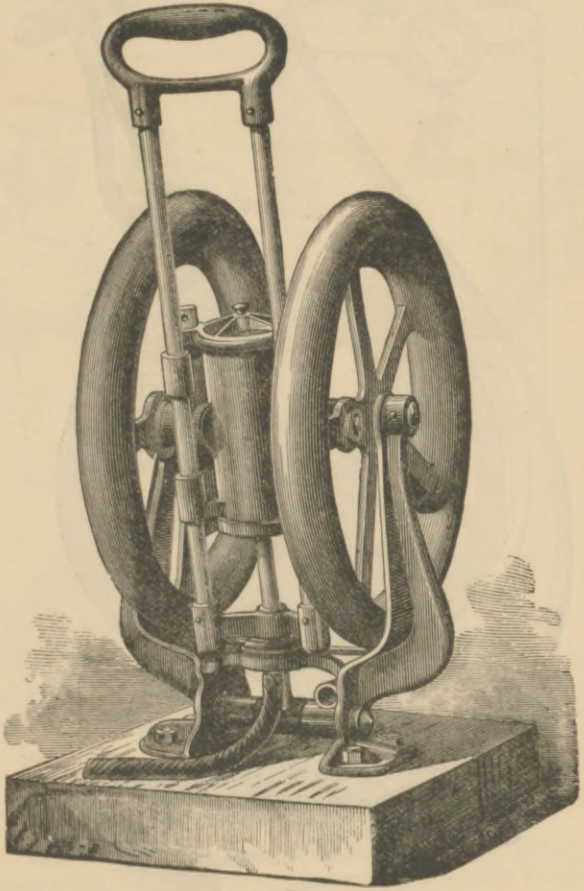

Fig. A. Double-acting air-compressor.

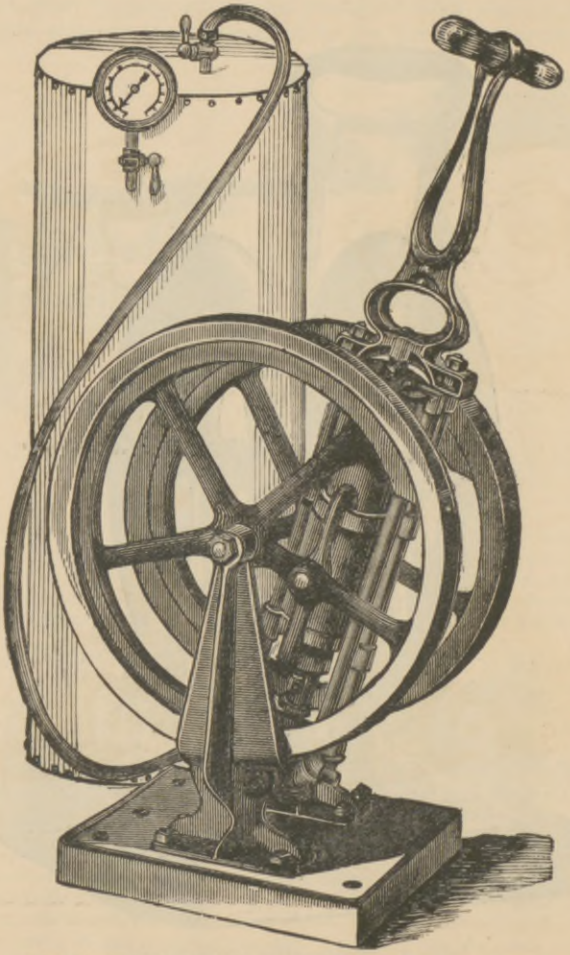

Fig. B. Double-acting air-compressor for high pressures.

called hard-rubber atomizer, continuous spray, No. 61. In all the propelling power is developed by the use of the hand air-bulbs; these should always be double. The hard-rubber tube of the instrument is provided with two separate tips, so that the spray may be thrown up-

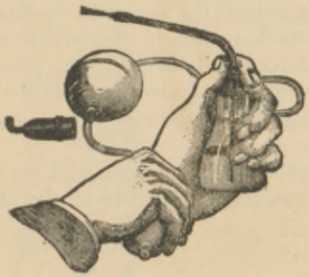

Fig. 18. Hard-rubber hand-ball atomizer—continuous spray.

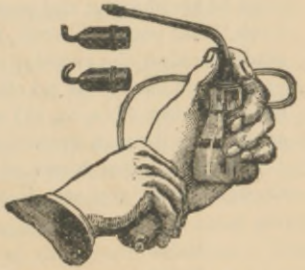

Fig. 19. Hard-rubber hand-ball atomizer—continuous spray.

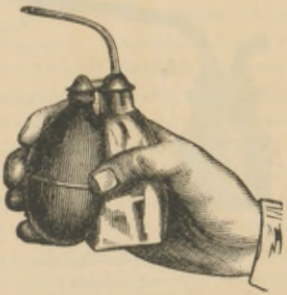

Fig. 20. Atomizer throwing a coarse spray.

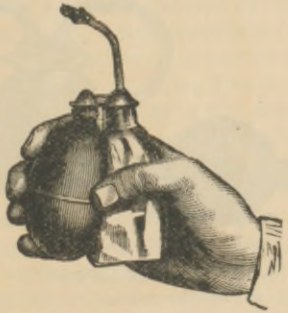

Fig. 21. Atomizer (with removable tip) throwing a coarse spray.

wards (naso-pharynx) or directly forwards (anterior nares). The disadvantages of this instrument, which make it inferior to the use of the compressed-air apparatus, are the length of time that it takes to develop the propelling power by means of hand-ball pressure, an im-

portant point when the instrument is in position in an irritable throat, and the fact that both the operator's hands are required to work it, and that, therefore, he can not use the "palate-hook" to draw the velum forwards. You will rarely find a patient with a throat tolerant enough to allow you to throw the spray, with this instrument, up into the vault of his pharynx and posterior nares without the use of the "palate-hook," and you had better, therefore, confine yourself to applications made through the anterior nares and forced well back into the pharynx, if you use it. If no other instrument can be procured, the ordinary atomizer (figs. 20, 21) will enable you to make a fairly efficient application through the anterior nares.

The most useful forms of powder-insufflator I show you here (figs. 22, 23). One, you see, is arranged to deliver, by means of the air

Fig. 22. Powder-insufflator for the anterior nares.

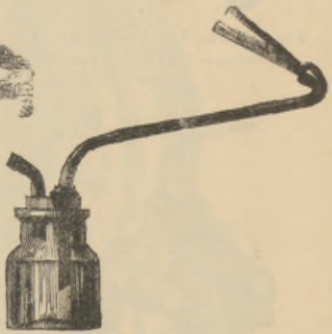

Fig. 23. Powder-insufflator for the posterior nares.

pressure developed by the hand-balls, a charge of the finely pulverized powder with which the bottle is charged into the anterior nares; the other, with a longer curved tube, performs the same operation in the posterior nares.

Personally, I place very little reliance on the various "pocket in-

halers," etc. (fig. 24), that are popularly recommended for the cure of "catarrh." Ammoniated and iodized preparations sometimes exercise a temporary benefit, but they can also readily do harm, if used to excess. Remembering this, if you choose to recommend them for the moral effect they exercise upon your patient, I have no objection.

Fig. 24.
Pocket inhaler

I ask your attention now to the specific *remedial* treatment of the various forms of rhinitis. *Simple chronic rhinitis* requires, first, thorough preliminary cleansing of the passages. This may be accomplished usually by the patient using his handkerchief, unaided by any artificial form of apparatus. If the latter, in exceptional cases, be requisite, use the "nasal spray apparatus," with one of the given solutions. The post-nasal syringe is never required in this form of the disease. Following the cleansing process comes the remedial, which must be undertaken by physician or patient, with at first daily and then gradually diminishing frequency, until, at length, a time is reached (after several weeks) when the patient is told to present himself for treatment only when he develops, if he should, a recurrence of any old symptoms, or an attack of acute rhinitis. This consists in the application of the medicament, usually a mild alterative, resolvent, or astringent solution or powder. If the *spray* apparatus, with compressed air and some medicated solution, be chosen as the means, as I advise, some one of the following formulæ may be used, with preferably the *post-nasal* spray tube, but also with the anterior, or both. If the "hard-rubber atomizer" is the only instrument available, then the spray is thrown through the anterior nares. (1) Zinci Iodidi, gr. v–℥j; (2) Zinci Sulpho-carbolatis, gr. v–℥j; (3) Zinci Sulphatis, gr. v–℥j; (4) Ferri et Ammonii Sulphatis, gr. v–℥j; (5) Ferri Chloridi, gr. v–℥j; (6) Acidi Tannici, gr. v-xx–℥j; (7) Potassii Chloratis, ℈j–℥j, are the solutions that I most commonly use, given in the order of their preference. In any of these formulæ "Listerine" may be substituted, in part, for the water, in the proportion of one part of the former to three of the latter. I ordinarily do so. If the simple rhi-

nitis has advanced far towards the hypertrophic stage, then I commence at once with: Iodini Cryst., gr. iv; Potassii Iodidi, gr. x; Zinci Iodidi, ℈j; Zinci Sulpho-carbolatis, ℈j; "Listerine," ℥j; Aquæ, ad ℥iv, as a spray. These applications should always be selected with due deliberation, in view of the special indications presented by the case, care being exercised that the application is of such a strength as to cause *no irritation* of the nasal mucous membrane, one much more susceptible than that of the pharynx or larynx. A preliminary trial of the strength of the solution should always be made.

In case these spray-applications are not well borne, or perhaps in accordance with the special views of the physician, a medicated powder may be substituted. Powders are particularly adapted to the treatment of this form of the disease, where the secretions are readily removable, the parts soft and absorptive. In hypertrophic rhinitis they are, I believe, of little use, and in atrophic or fetid rhinitis, contra-indicated. One such powder as, for instance, the following, may be applied by means of the anterior, or, if possible, the posterior nasal powder-insufflator that I have shown you:

℞—Acidi Salicylici.....grs. x
Acidi Tannici.....℥i
Bismuthii Subcarbonatis.....℥i

or one of these:

℞—Ferri et Ammonii Sulphatis.....℈i
Pulv. Amyli.....℥i
M.

℞—Pulv. Iodoformi.....℥ij
Pulv. Gummi Camphoræ.....℥i
Pulv. Acidi Tannici.....grs. v
Pulv. Gummi Acaciæ, ad.....℥ ss
M.

℞—Pulv. Morphinæ Sulphatis.....grs. i
Pulv. Belladonnæ.....grs. x
Hydrargyri Chloridi mitis.....grs. xx
Sodii Bicarbonatis.....grs. xv
Pulv. Gummi Acaciæ, ad.....℥ ss
M.

Other combinations will suggest themselves.

Whatever be the plan of treatment instituted, not alone in this, but in the other forms of rhinitis as well, and its details may readily be

determined upon from what has and will be said. It is to be *steadily persevered in*, not necessarily in all cases under the direct manipulation of the physician himself, but certainly in all cases under his general supervision, and at suitable intervals, which will vary according to the grade of the disease, until the morbid conditions for which it was undertaken are alleviated. Daily applications at first, then three times weekly, then twice, and finally at increasing intervals, dependent upon the indications, until a period of at least eight to ten weeks has been covered, will be the rule. The necessity even now for the immediate treatment of any subsequent recurrence of old symptoms, which will quickly yield, and for any attacks of acute rhinitis, which may or may not occur, I have spoken of. All this is tedious to the patient, I know, but, gentlemen, there is no royal road to the successful treatment of nasal catarrh.

In speaking to you now of the treatment of the next form — *hypertrophic rhinitis* — all that I have just said is applicable to its earlier stage, except that instrumental cleansing will often be requisite; that occasional use of the post-nasal syringe is a necessity, and that I prefer to commence at once with the formula of iodine, iodide of potash, zinc, etc., that I have given you. If the disease is moderate in extent, and the hypertrophy of the tissues not excessive, complete resolution may be effected by these means. On the other hand, if the process be first seen, as it so often is, in its advanced stages, when a firmly organized neoplastic tissue exists in a large degree, and seriously encroaches upon, even occludes, the nasal cavities, associated with a chronic inflammation involving the greater part of the upper pharyngeal mucous membrane, and hypertrophy of the adenoid tissue at the vault of the pharynx, the above plan of treatment, as a curative means, is *useless;* some alleviation of the more prominent symptoms may be obtained, but more heroic measures will be required to cure, chiefly the use of some means by which the hypertrophied membrane and tissues can be destroyed. I am bound to admit that it is in the use of these means, mainly surgical, and in this form of rhinitis, that you will attain your most speedy, complete, and brilliant cures. The destructive agents that are at your command are fuming nitric acid, glacial acetic acid, chromic acid, the galvano or actual cautery, and nitrate of silver. These I have mentioned in the order in which I would select them for use in

any case. I now add the Jarvis ecraseur, and, for the adenoid growths of the pharynx, the post-nasal forceps.

The little operation that I am about to describe to you first is one that you will often find necessary; you can readily perform it, and I assure you that it will give most gratifying results.

Let us suppose a case of hypertrophic rhinitis in which you find the hypertrophied mucous membrane located mainly over the inferior turbinated bone, in one or both nasal passages; there is partial, intermittent, or permanent occlusion occasioned by its presence. Take a small probe (fig. 25), its end wrapped in absorbent cotton, and saturate this

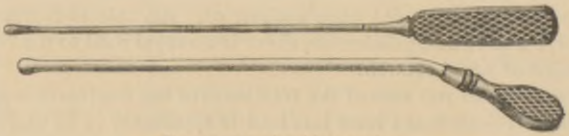

Fig. 25. Hard-rubber probes.

with *nitric acid*, press out the excess of acid, pass it then through a suitable nasal speculum into the naris to be operated upon, under the guidance of a good reflected light from your forehead mirror, and with a steady hand now draw it along, or press it firmly upon, the turbinated bone at its point of greatest convexity, contact being kept up for a few seconds. The pain quickly passes away, and on withdrawing the probe the parts are seen to have become well whitened or blanched; moderate inflammatory reaction with a slough of varying depth follows, while the consolidation of the submucous tissues by the hyperplastic results of the inflammatory process, and the contraction of the cicatricial tissue occupying the site of the destroyed parts, serve to reduce the hypertrophy and its resultant nasal obstruction in a most satisfactory manner. Frequently one application answers all purposes in freeing the nasal passage to the extent of allowing of uninterrupted respiration. The process, however, may require repetition.

The operation with *glacial acetic acid* is performed in the same manner; it is less painful, causes little secondary inflammation, and destroys less tissue. This agent, then, may be selected for the more moderate and more recent cases of hypertrophy.

Chromic acid is less painful in its use than nitric; its fumes, though, are distressing to the patient. It possesses no advantage, for our purpose, over the other two.

The *galvano or actual cautery*, either for the destruction of tissue in the nasal passages or at the vault of the pharynx, is, of course, a radical and efficient agent. I allude to the former; the latter is hardly ever used. Its action is rapid, complete, and not very painful, but as its use requires much skill, especially when employed in the naso-pharyngeal region, you will probably prefer to entrust such cases to the hands of the specialists. Instances where it will be required are not very many, for I believe that we may accomplish the same results with

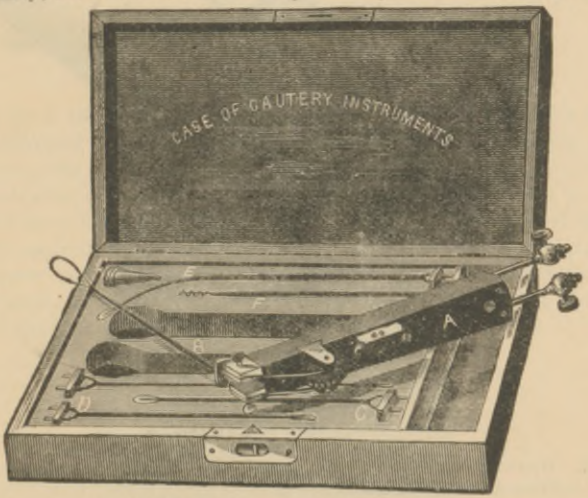

Fig. 26. Galvano-cautery instruments.

less heroic means. The instruments are shown here (fig. 26), and a description of the method of using them will be found in most works on diseases of the throat and nose; to these I refer those of you who care to pursue the subject.

Nitrate of silver, as a destructive agent, I mention but to condemn. It causes but a superficial slough, and the application is of necessity

frequently repeated in treating hypertrophied tissue of any extent; moreover, owing to its powerfully stimulating qualities, it excites cell proliferation, and causes structural changes that are not desirable.

After the use of any form of *caustic* in the nasal passages, immediately upon the withdrawal of the probe, the parts should be flooded with an alkaline solution. The subsequent treatment of the case, at least until the slough has separated and the resultant ulcer healed, is based upon ordinary principles of cleanliness

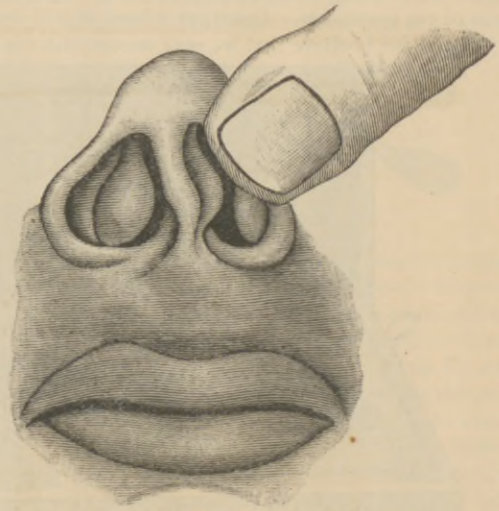

Fig. 27. Hypertrophy of the tissues covering the anterior extremity of the right inferior turbinated bone. Slight deviation of the cartilaginous septum to the left.

Now, there are two forms of hypertrophy of the tissues over the inferior turbinated bones that are occasionally met with clinically, and which can not be successfully treated by any methods of which I have thus far spoken. The operations for their relief need, then, a special description. You will be able to perform them readily when you have acquired a little skill in intra-nasal surgery. There is no reason why you should not attempt them. The *first* is where the hypertrophy is

excessive, and is mainly limited to the *anterior extremity* of the turbinated bone (fig. 27); to remove it, which you must do surgically, the procedure devised by Dr. Jarvis should be undertaken. The growths are usually sessile, but can be readily engaged in a loop of fine steel wire passed through a delicate *ecraseur*, devised by the same surgeon, if their base be first transfixed with a slightly curved needle (fig. 28), until the

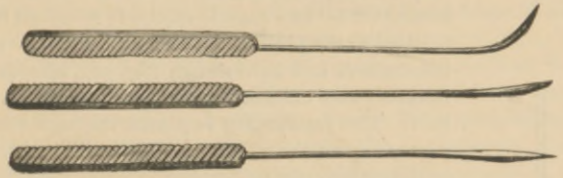

Fig. 28. "Jarvis'" set of transfixing needles.

point projects above the growth into the nasal cavity. The wire loop is then arranged in such a manner that the portion of the needle projecting from the nostril, as well as the needle's point, is encircled by it, very much after the manner of a hare-lip suture. The wire loop is thus prevented from slipping off, and a portion of the hypertrophied tissue is readily secured, and is removed by screwing down the milled nut of the *ecraseur* and drawing the wire home. This little operation is quickly done, and is not very painful or bloody; the relief that it affords is great.

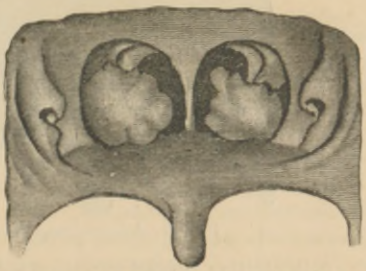

Fig. 29. Excessive hypertrophy of the tissues covering the posterior extremities of both inferior turbinated bones.

More common than the above is excessive localized hypertrophy of

the mucous membrane covering the *posterior extremities* of the inferior turbinated bones. It may be, as I told you in the second lecture, of such an extent that nearly the whole posterior naris is occluded by an irregular, grayish or whitish, sessile tumor, which projects outwards into the free space of the pharynx (fig. 29). Owing to its peculiar position it can not be safely reached and destroyed by any caustic method; removed it must be to cure the patient. The small *ecraseur* already mentioned, and here shown (fig. 30), affords a satisfactory and efficient means for its entire extirpation. The instrument is passed through the nasal passage upon the affected side, the size and location of the growth having first been carefully studied, and the form of the wire-loop arranged accordingly, and no great difficulty will be experienced in ensnaring it. Slight traction on the instrument and a few turns of the milled nut will now receive it firmly in the loop, and the mass is then *slowly* cut through by tightening the wire. This little operation alone, if judged by its results, constitutes one of the most marked advances of recent rhinoscopic surgery.

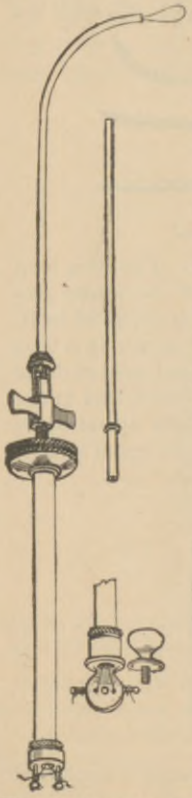

Fig. 30. Jarvis' ecraseur — straight and curved.

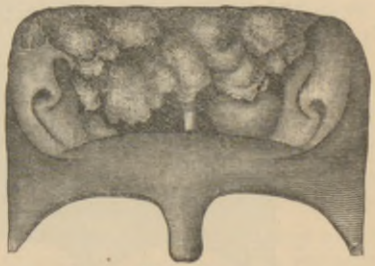

Fig. 31. Adenoid vegetations.

Still another special operation is required in cases in which the hypertrophy of the *glandular structures* at the vault of the pharynx is excessive, as is so often seen in young subjects, the victims of a

hypertrophic rhinitis. The tumor thus formed, which we term *adenoid tumor* or *adenoid vegetations*, varies, as I have said, greatly in size and configuration (fig. 31), but if it be large enough to interfere with nasal respiration, if it modify the voice and threaten danger to the middle ear by pressure upon the Eustacian orifices, if it give rise to excessive secretion and cause general discomfort to the patient, there is no question but that its removal is indicated. On the other hand, I would warn you against the too ready and indiscriminate extirpation of these tumors. A certain degree of thickening of the tissues at the vault of the pharynx is not an uncommon condition in young children who suffer from no symptoms of nasal catarrh. Again, this structure atrophies normally towards puberty. To interfere with it surgically, therefore, simply because it exists, seems to me to be a grave mistake.

Should you determine, however, after what I have said, that its removal in a given case is proper, resort at once to surgical measures, for medicated sprays are totally ineffectual, and caustics are of little use, as well as difficult of thorough application. A pair of long forceps, such as I show you here, suitably curved to be passed behind the velum, and furnished with cutting blades at their extremity (Woakes' forceps, modified by Semon), will be the best means. Another form

Fig. 32. Post-nasal forceps.

of forceps is shown in the cut (fig. 32). With either you may undertake the operation with confidence, even though you possess but limited experience. With care and some anatomical knowledge you can do no harm to contiguous parts; the operation, seemingly formidable, is, in reality, simple. Hemorrhage is slight, ceases spontaneously, and inflammatory reaction is never such as to excite any apprehension — at least such is my experience. When the hypertrophy of the tissues extends broadly, in the shape of small, slightly elevated nodular

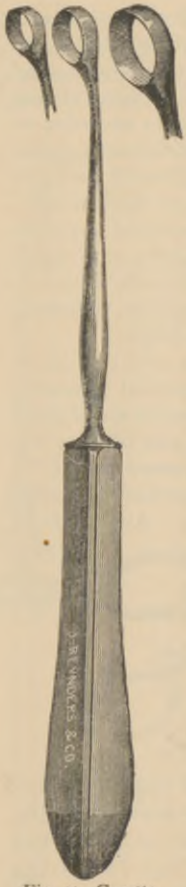

Fig. 33. Curette.

masses, over the entire pharyngeal vault, a sharp curette, such as is used in uterine operations (fig. 33), but suitably curved to pass behind the velum into the upper pharynx, will answer a better purpose in scraping away the vegetations than the forceps, which would here be difficult of exact application.

I need not detain you long in speaking, in conclusion, of the local treatment of *atrophic* or *fetid rhinitis*. Unfortunately, the disease is beyond our powers of cure. The best that we can promise the patient is to mitigate his urgent symptoms. I am well aware, in making this statement, that some profess to cure; I have not been so fortunate as to obtain this result. Our indications for treatment are twofold: First, to cleanse and disinfect, and then to keep clean and disinfected, the nasal passages of all decomposing crusts and secretions; and, second, to stimulate the atrophied mucous membrane, with a view to the regeneration of function and character of secretion in the muciparous follicles and serous glands, if this latter can be accomplished, a matter which my experience has led me strongly to doubt. The first indication is met by the daily use of the anterior or posterior nasal syringe, occasionally by the necessary direct removal of hard crusts by means of forceps, and thorough washing of the passages with an antiseptic and alkaline solution until all offending secretions are removed. I have given you some formulæ suitable for this purpose; others are: (1) Glyceriti Acidi Carbolici, ℥jss, Sodii Boratis, ℥j, Aquæ, Oj; (2) Liquoris Potassii Permanganatis, ℥jss, Sodii Boratis, ℥j, Aquæ, Oj; (3) Acidi Salicylici, gr. x, Sodii Bicarbonatis, ℥j, Aquæ, Oj. I, as well as my patients, prefer the solution with "Listerine," given above (Sodii Bicarbonatis and Sodii Boratis, *aa* ℥ss, "Listerine," ℥i, and Aquæ, ad ℥iv).

The second indication requires the use of such drugs as Sanguinaria (℥ii–℥ss), Galanga (℥ss–℥ss), Salicylic Acid (℈i–℥ss), Iodine (gr. i–ii–℥ss), Bromide of Potassium (℈i–℥ss), etc., which are recommended as efficient in the early stages of the disease. They are mentioned in the order of preference, and should be used in powder with gum acacia, by means of the insufflator. They probably act by giving rise to a local irritation of the mucous membrane, which in turn leads to a stimulation of the glandular structures, and an increased discharge of serum and mucus. Some advise, on the contrary, Nitrate of Silver in powder diluted with starch (gr. ii–x–℥ss), and say that it has given good results. As next in effectiveness, is recommended the use of a weak solution of the Sulphate of Iron and Ammonia (gr. ii–v–℥ss aquæ). My own experience with any of these means has been limited; such as I have used have been ineffectual in their results, and I can therefore only reiterate my belief that, in the present state of our knowledge, the disease is incurable.

This finishes, gentlemen, what I have to say to you upon this special subject of chronic catarrhal diseases of the nose. My remarks have, necessarily, been drawn out to some length, and have occupied some time; if, however, I have succeeded in convincing you that *all* is *not* simply "nasal catarrh" that comes to your net, if I have taught you to recognize, by my descriptions, the various forms of chronic rhinitis, and shown you how to treat each intelligently, according to its individual indications, the time will not have been misspent, and the purdose of these lectures has been accomplished.