

suit the locality in which they met, and he recommended that if this society adopt their code of ethics, it be with the understanding that they reject so much of it as conflicts with the constitution of this society.

Dr. Mason said he had been assured that no bill could pass Congress, granting them a charter, unless it gave the privilege to the female sex of studying and practising the science of medicine. After considerable discussion, it was finally decided to adopt that section of the constitution giving the right to females and colored persons. The fee for admission was fixed at \$5, and an annual assessment on each member not to exceed \$10, was agreed upon.

On the question of adopting a code of ethics used by the American Medical Society, Dr. Loomis moved to amend so that it might not conflict with the constitution of this society, which was discussed at considerable length, and afterwards rejected.

Dr. Stevenson moved that a committee of three be appointed on ethics, and that this subject be referred to it for consideration, and to report at the next meeting of the society; which was agreed to, and the chair appointed Doctors Newman, Johnson and Tucker the committee.

The constitution was discussed at some length, and after it had been considered section by section, it was agreed to refer it back to the committee to be engrossed after verbal corrections.

Dr. Southworth asked to be informed as to the mode of advertising, as some were under the impression that they could advertise as they pleased.

This matter was left for the management of the Committee on Credentials and Ethics.

The Society adjourned to meet on Tuesday evening, Dec. 28th.

Bibliographical Notices.

Percussion and Auscultation as Diagnostic Aids. A Manual for Students and Practitioners of Medicine. By Dr. CARL HOPPE, Assistant Physician to the Sixth Westphalian Regiment of Infantry. Translated by L. C. LANE, M.D. Philadelphia: J. B. Lippincott & Co. 1869. 12mo. Pp. 152.

In the preface of this little book the author says, "It cannot be denied that auscultation and percussion have long failed to serve their proper purpose." With this

most of our readers will readily agree. It is well known that comparatively few physicians in private practice have even a tolerably good knowledge of auscultation and percussion. This is, we think, not generally on account of "want of leisure to study comprehensive works on this subject," but is due to a want of system in the instruction given to the student, and to the same want of system in most text books. We recognize the phenomena obtained by auscultation and percussion in the same way as we recognize musical sounds, and they should be studied in the same way. We can by repeatedly playing a certain combination of notes so impress it upon the mind of a listener, that he will after a while remember it; or, in other words, know the tune. But if we give him the score, the intensity, pitch, quality and duration of each note, he will be able to reproduce it at any time with absolute certainty. In the same way we may ask a student to listen to a physical sign within the chest, *e. g.* bronchial respiration. He may remember its characters so as to be able to recognize it at a future time, but it will probably be necessary for him to listen many times before he would feel confidence in his ability to do so. But if in this case we direct his attention to the combination of pitch and quality in inspiration, with duration, pitch and quality in expiration, and tell him that these denote bronchial respiration, and never denote anything else, we give him a key which will always be available, and which he can apply with certainty years after he has heard the sign.

Auscultation and percussion have usually been acquired in the former way, *i. e.* by rote, but now they are beginning to be taught in the latter. Most of the sounds derivable from auscultation and percussion can be so analyzed with reference to their intensity, pitch, quality and duration, that so long as the student remembers the analysis he will not be in doubt with regard to the character of thoracic signs. A physician can, after much clinical experience (and most of our hospital physicians do so), learn by rote the thoracic signs. Physicians in private practice have not the "material" to enable them to do this. Fortunately our teachers are now beginning to appreciate that sound produced within the chest should be studied in exactly the same way as sound produced anywhere else, and the proficiency which students quickly attain by this method is proof of its worth. It is sometimes objected that such a system is not generally available, because those unacquainted with

music cannot appreciate variations in pitch, &c., but it is the experience of those who have given such instruction that with good attention almost any ear soon becomes sufficiently educated to use these tests.

In the book before us this method is applied particularly to percussion, and the book would have been more complete if it had been applied also to auscultatory sounds.

About forty pages are given to the subject of percussion. After speaking briefly of the manner of making percussion, the regions of the chest, and the different theories of the origin of sound produced by percussion, the author proceeds to speak of the *phenomena peculiar to the sound produced by percussion*. He says the sound may vary according to its (1) intensity, (2) highness or acuteness (*i. e.* pitch), (3) timbre or quality, (4) duration. He then considers the conditions which may influence sound in each of these particulars. A chapter each is given to intensity, pitch and quality, but he says so little difference in the duration of sound within the body is perceptible, that it is better not to take this property into consideration.

The scientific way in which the subject is treated may be judged from the following example. "There are fewer conditions or qualifications in the height of the sound than in its intensity. (1) The smaller the vibrating mass that is the volume of the air-containing parenchyma, the higher is the sound; the greater the mass, the deeper the sound. * * * * (2) The degree of tension of the parenchyma of the lungs, or the walls containing the air. The greater this tension, the higher is the sound; the less the tension, the deeper is the sound. * * * * The lower parts [in pleuritic exudation] contain no air, the upper parts but little. In this condition the sound from below the clavicle of the affected side, which was at first loud, deep and tympanic, is rendered dull in a downward and lateral direction. The question arises, whence this depth of sound? On the affected side the volume and tension of the lung have decreased. Diminution of the volume increases the height of the sound, diminution of tension increases the depth of the sound. Since it is deeper now the diminution in tension must be the greater. The longer the sound wave the deeper the note produced. The longer the sound wave the less frequently are its vibrations repeated in a second, and consequently the smaller is the number of vibrations. The number of vibrations, or the height of the sound, is equal

to the tension divided by the volume, or $h = \frac{t}{v}$. If the diminution in volume is greater than the diminution in tension, the sound becomes higher. This finally occurs where the exudation increases. Then the sound underneath the clavicle of the affected side is higher."

This statement will be objected to by those who have been taught that tympanic resonance is always high in pitch, yet we believe that clinical experience will bear out the author. Objection will certainly be made to the statement that "in pneumothorax the sound on the affected side is *tympanic and deep*," on account of the length of the vibrating column of air, but we must remember that our cases of pneumothorax are usually complicated by a pleuritic effusion, which would of course affect the results of percussion. In the only case which we have ever seen of pneumothorax uncomplicated, throughout its course, by liquid effusion, we were particularly struck by the low pitch of the percussion note.

In Chapter III. the Timbre or Quality of Sound is discussed under two heads, the (A) Tympanic, and (B) Metallic; and at the end of this chapter is a section on the Relations of Percussion to the Normal Thorax, and one on Pectoral Fremitus. In speaking of the Tympanic Timbre the author says, "The difference between intensity and highness is most readily to be distinguished in this sound." We do not understand how there can ever be any possibility of confounding characteristics of sound totally different in their nature. The author dwells upon one fact in regard to tympanic sound which perhaps we do not sufficiently consider in practice, and that is that where there is very great distention of the walls of the cavity, whatever it may be, the tympanic sound is liable to be lost entirely. A clear distinction is not made between the Tympanic and Metallic Timbres, both being described as ringing sounds. In speaking of that variety of the tympanic known as the cracked metal sound, the author says, "For the production of this sound, it is also necessary that the thoracic wall be thin and yielding, the cavern *tolerably large*, and situated superficially, and in free communication with the bronchus. Of course these conditions are fulfilled in the case of the *smallest caverns*"; which is not very intelligible.

It is noticeable that in this chapter on Timbre nothing is said about that peculiar quality of resonance which we get by percussing over healthy lung tissue. This we consider a serious omission, for the quality

of vesicular resonance is very characteristic, and cannot be obtained except by percussing over lung vesicles.

The author makes a mistake, we think, in comparing for purposes of diagnosis two different regions on the same side of the chest, instead of the same regions on opposite sides. In the section on the Relations of Percussion to the Normal Thorax, after stating that in the infra-clavicular region the percussion sound is louder than anywhere else on the thorax, he says, immediately below, that if the sound in the fossa supra-clavicularis seems dull in comparison with that in the infra-clavicular region, the former must be considered in an abnormal state. This latter statement is certainly erroneous. In a large majority of healthy chests there is dullness in the region above, compared with that below the clavicle.

The chapter on Auscultation of the Respiratory Organs occupies only thirty-six pages. In the beginning is the following careless statement:—"The sounds perceived over these organs are divided into respiratory sounds, produced by the passage of the air along the walls of the respiratory organs, and rattling sounds, or rhonchi, which are produced by the meeting of air and water in the air passages." It is manifestly improper to call all the adventitious sounds *rattling* sounds, and certainly much more so to say that they are produced by the meeting of air and *water*. The subject is then considered under the following heads:—(A) Respiratory murmurs—(B) Rhonchi—(C) Auscultation of the Voice—(D) The Frictional Rhonchi—(E) Auscultation of Coughing. The respiratory murmurs are divided into the (a) vesicular, (b) bronchial or loud, (c) indefinite, (d) expiratory murmurs, (e) the interrupted respiratory murmur, and are despatched in a dozen pages. We here see important omissions which would not have occurred, had the author set out with the intention of considering the auscultatory signs in the same way as those of percussion—viz., with reference to their intensity, pitch, quality, and duration. No mention is made even of a difference in pitch or quality between the inspiratory and expiratory murmur of health. To speak of the bronchial or loud respiratory murmur will be readily admitted to be erroneous, for it is often so feeble as to be scarcely heard, and immediately after the author himself says "the sound appears loud or weak."

Division (c) includes every respiratory murmur not purely vesicular or bronchial.

It includes what we formerly knew as "harsh," more recently as broncho-vesicular, and also *one variety* of cavernous respiration. We like the term indefinite for those respiratory sounds whose character is indefinite, but we also like the term broncho-vesicular for that respiration where both the bronchial and vesicular qualities are so evident to the ear. There is no doubt in our own mind that a large cavity with flaccid walls does give us at times a respiration which we can properly call cavernous, and which is characteristic, viz., a hollow, blowing sound (not tubular) of low pitch, with an expiration lower in pitch than the inspiration. There is nothing vesicular and nothing tubular in the quality of this sound. Dr. Flint insists strongly upon these characteristics of cavernous respiration, but they are also recognized by Walsh, Barth and Roger, and Da Costa. Division (d) seems inappropriate, as the expiratory murmur cannot well be considered as a separate respiratory sign, but as one act of all the respiratory murmurs. In the section on râles is considerable bad nomenclature; e. g., sonorous râles are called *rattling*, and the term *vesicular crepitation* is applied to moist râles produced in cavities and bronchi, as well as in the air cells. At the top of page 69 nervous asthma is made synonymous with acute dry catarrh, a synonymy which probably few of our readers will be prepared to accept.

The explanation of the mechanism of the minute vesicular crepitation is accorded to Wintrich. This explanation (viz., by the sudden dilatation of air cells and small tubes, which had become agglutinated), was first given by the late Dr. Edson Carr, of Canandaigua, N. Y., who in 1842 made a communication to the *American Journal of Medical Sciences* on this subject. Wintrich himself gave Dr. Carr the priority.

Chapter II. treats of the Auscultation of the Organs of Circulation. The auscultatory phenomena are divided into Tones and Murmurs. In the first eight pages of this chapter, by the gross carelessness probably of translator, or proof-reader, the term *murmur* is employed seventeen times where *tone* should have been, which of course makes nonsense of the text. On p. 116, line 11, the sense is spoiled by the substitution of the word *tone* for *murmur*. The same thing occurs from the improper use of the word *murmur* in the third line of p. 125. The term sound is frequently substituted for *tone*, which, as a division of the auscultatory phenomena has been made into tones

and murmurs, and nothing has been said about sounds, is likely to confuse a young student.

In speaking of the tones it is said they are always loudest over the apex, implying that both are loudest here, when certainly the second tone is loudest over the base of the heart, and at the bottom of p. 94 it is so stated.

The author gives it as his opinion that the first sound is caused wholly by the closure of the auriculo-ventricular valves; why he calls these *venous* valves we cannot imagine. Such statements as the following are likely to mislead and confuse the mind of the student. "The sounds also frequently show deviations from their healthy condition, which, however, may not amount to abnormal murmurs." No deviation of a heart-sound ever amounts to a murmur. A murmur is a new sound altogether, not a modification of one there before, and the expression "*abnormal murmurs*" is bad, for there are no *normal* murmurs.

Farther on, also, we find two sections headed "*Diastolic Abnormal Murmurs*" and "*Systolic Abnormal Murmurs*." On p. 104 the author accounts for the weakening of the aortic second sound in cases of mitral insufficiency in the following manner:—"When the cusps of the mitral do not close, less blood passes into the left auricle; and hence during systole there is less blood thrown into the aorta." Such a statement is absurd. Less blood is sent into the aorta, because a part of what was in the left ventricle goes back into the left auricle, and the left auricle receives *more* blood than it was intended to contain; hence its dilatation is the first pathological sequence of mitral insufficiency.

Traube's method of dividing diastolic murmurs into two kinds is adopted. (1) "*The simple or pure diastolic murmur* is separated from the preceding and succeeding" systole by a distinct pause; "it is heard (a) in case of insufficiency of the aortic valves," &c. "(b) The pure diastolic abnormal murmur appears if there is perforation of the mitral valve, even when the blood flows with unimpeded current. In diastole the blood flows not merely through the left auriculo-ventricular opening, but also through the perforation into the left ventricle; from the latter current the murmur arises."

(2) "The modified diastolic abnormal murmur. This murmur blends with the succeeding systolic tone without interval, either oc-

cupying (a) the whole diastole, or (b) appearing only at the close of diastole. In the second case the diastolic murmur appears as if it were a premature stroke of the systolic tone. On this account many have denoted it as a presystolic tone." The pure diastolic murmur, as it is called, must occur very rarely at the mitral orifice. The current of blood from the auricle to the ventricle is not usually strong enough to create a murmur until auricular contraction takes place, which is at the end of diastole. The author seems to admit this (*i. e.* the infrequency of the pure diastolic mitral murmur), when a little further on he speaks of the importance of a diagnosis between aortic regurgitation and mitral obstruction, whose murmurs do not occur at the same time. He says nothing of the danger of confounding 1 (a) aortic regurgitation with 1 (b) perforation of the mitral valve, whose murmurs, according to the author, occur in exactly the same time.

On p. 116 the author says:—"But if the current from the auricle into the ventricle is weak, then neither normal nor abnormal sound is to be heard." The passage of blood from the auricle to the ventricle normally produces no audible sound.

The meaning of the following, to be found on p. 125, is far from being clear. "In this case [stenosis of the left auriculo-ventricular opening] a diastolic murmur may be felt, extending from the apex of the heart to the nipple, arising from accompanying insufficiency of the mitral valve; in rare instances a systolic murmur results from the same cause."

The book closes with short sections on Arterial Sounds, Auscultatory Phenomena in Aneurisms and Veins, and Pericardial Murmurs. As an example of the positive manner in which the author makes statements entirely contrary to commonly received opinion without as much as hinting that there is any difference of opinion, we would call attention to p. 135, where it is stated that "the heart always occupies the lowest part of the pericardium distended by fluid."

There is also an Appendix of fourteen pages on the Apex Impulse. The rebounding theory of Gutbrod and Skoda is claimed to be "the only one which readily explains all the phenomena of the apex impulse."

We have commented on the book as it appears in English. Of course some of our remarks would not hold good for the original. In this dress we should not recommend it to those not well acquainted with

auscultation and percussion. There is always an objection to a translated text book, for it is often next to impossible for the best of translators to express the exact meaning of an author. Besides this there is in this book altogether too much theory for young students, who want rather clinical facts. For a text book it is not sufficiently systematic, nor is the space well divided among the different topics. Very important subjects are either altogether omitted or but lightly touched upon, while undue prominence and space are allotted to minor topics. An author should not allow himself to digress upon any subjects in which he may be particularly interested, when engaged upon a comprehensive work in which each topic should have space according to its practical importance. Moreover, in this edition careless statements, typographical errors and obscure passages abound.

It may perhaps serve a good purpose in calling the attention of physicians to the assiduous efforts of Skoda, Traube and others, to determine the manner of the production of the signs obtained by percussion and auscultation, according to established laws of physical science.

K.

Medical and Surgical Journal.

BOSTON: THURSDAY, JANUARY 6, 1870.

A NEW YEAR'S GREETING.

ACCORDING to the arrangement of the publishers of this JOURNAL, announced some months since, a new volume now for the first time begins on the opening week of January instead of February. We embrace the opportunity of wishing our readers a Happy New Year, while we thank them and our contributors for their indulgence during the past year. Though the many able pens of our medical brethren have not sufficiently often illustrated the correlation of forces, by converting the heat of thought into scriptorial motion, it is yet owing to what they have so kindly done for us that we have been enabled to increase the density of our issues. Subscribers have thus been doubly indemnified in quantity of type for the month nominally omitted from the volume which terminated with the year 1869.

It is with great satisfaction that we place

upon the title-page the name of H. H. A. BEACH, M.D., as Assistant Editor. Dr. Beach has in fact acted in that capacity for a number of months, and in a manner which has left nothing to be desired.

THE EMPLOYMENT OF ERGOT OF RYE IN PARTURITION.

As the old fable had it, the contest was as to the material of which the shield was made. The combatants were both right. Each bore truthful testimony to what he had seen. One had viewed the golden side; the other the silver surface. Neither had looked at both sides.

So it often is with medical observation. One meets with sixty or a hundred cases of a certain class, and from them as data deduces a certain result. Another has had sixty or a hundred cases of the same class, which present some different phenomena from the before mentioned, and reasons with equal logic to the opposite conclusion. The two sets of facts should be put together, and hundreds of others, perhaps added, and then an adequate basis for an opinion may probably be obtained. Thus it has been with the question of re-vaccination, and thus it is with that of the administration of ergot in labor. Relative to this latter topic we propose to get a glimpse of the two sides.

Some practitioners use the spurred rye with great freedom, certain of them being in the habit of anticipating the occasion for its use, and carrying the drug with them to their patients who are to be confined. Twenty grains are employed by one, thirty by another. All are presumed to select cases which are not unsuitable for its exhibition. These obstetricians find that it merely strengthens insufficient uterine contractions, without abolishing the intermittent character, and detect no accidents attributable to its action upon mother or fœtus. Great stress is sometimes laid on the importance of giving just enough and not too much.

Dr. Uvedale West, Vice President of the Obstetrical Society of London, was quoted in the *Lancet* of July 20th, 1861, as saying that in 1855 he had published the particulars and results of sixty-nine cases in which