From Continental Journals.

HYPERTROPHY OF THE TONGUE.—Dr. G. Maas reports that five cases of hypertrophy of the tongue have occurred during the past year in the surgical clinique at Breslau. The enlargement was in each case congenital, sometimes involving the entire organ, at others being limited to a lateral half. The part affected was in each case removed by means of the galvano-caustic ligature. The microscopical examination of the removed part showed that in one instance (that of a child two months old), the enlargement was the result of simple hyperplasia of all the textures of the tongue. In three other cases there was found to be a new formation of connective tissue and bloodvessels, so that the tongue was enveloped in a spongy, cavernous mass. This formation of new texture had attained the greatest magnitude in the case of a patient twenty-one years old, and was the least marked in the case of a child three years old. The writer concludes, that hypertrophy of the tongue begins always with simple hyperplasia, to which is afterwards added, as a secondary lesion, an increased development of the connective tissue and bloodvessels, this abnormal growth being stimulated by the pressure the enlarged organ receives from the surrounding parts, the pressure being so great in some instances as to force it from the mouth.

[*Note.* Hypertrophy was the term formerly employed to indicate any abnormal enlargement of the body. The distinction indicated by the term *hyperplasia* was first made by Virchow, to represent any abnormal enlargement arising from an increase in the number of the original elements. "Hypertrophy" was then limited to that form of enlargement depending upon the increase in the size of the primary elements, such, for instance, as is seen in the pregnant uterus.]

ANCHYLOSIS OF THE LOWER JAW; RECOVERY THROUGH THE FORMATION OF A FALSE JOINT ON BOTH SIDES.—This case occurred in the same clinique as the preceding. The patient was twenty-seven years old, and was affected with complete anchylosis of the jaw, the result of an inflammation following scarlet fever. The growth of both upper and lower jaw was appreciably retarded, in consequence of continued disuse. Perfect relief was afforded by an operation, which consisted in removing a wedge-shaped portion of the lower jaw, the base of which pointed downwards. At the time of the report, four months after the operation, the motion of the jaw was completely restored. (*Arch. f. Klin. Chirurgie*, xiii. *B.* 3 *H.*)

THE RELATION OF THE CHORDA TYMPANI TO THE AUDITORY NERVES.—It is well known that when the electric current is applied to the tympanum of the ear, a peculiar sensation is experienced along the border of the tongue, and if the irritation is increased, it may be felt as far as the extremity of that organ. A similar effect may be produced by the application of very warm or very cold liquids to the tympanum, or by irritating a certain portion of that organ in any way. In other instances, the irritation of the tympanum produces a taste in the mouth like that of copper. M. Duchesne, and later M. Philipeaux, of Lyons, have called attention to this phenomenon, as being an important physiological sign, which would enable the aurist to determine in cases of deafness the degree of sensibility of the nerves of hearing. M. Bonnafort, at a meeting of the *Academie de Medicine*, held July 16th, 1872 (*Le Mouvement Medical*, Aug. 10, 1872), demonstrated that this phenomenon possesses really no clinical value whatever, and cannot, therefore, be employed, like the tuning fork or watch, in determining the degree of sensibility of the auditory nerves. This will be understood by referring to the anatomical relations of the several organs. He showed that the sensation experienced in the tongue is the result of the irritation applied to the chorda tympani, which is thence transmitted to the hypoglossus by means of the anastomosis which unites those two nerves, whereas, no communication has yet been discovered between the auditory nerves and the chorda tympani. The chorda tympani may be completely destroyed, and the tongue absolutely insensible to any application of the electric current, and yet the sensibility of the auditory nerves is not diminished, and, vice versâ, the auditory nerves may be completely paralyzed without interfering with the sensation in the tongue transmitted in the above manner from the tympanum. There is no reason to suppose, then, that the irritation of the chorda tympani can produce any appreciable effect upon the auditory nerves.

SEA BATHING.—Dr. F. W. Beneke, of Marburg, has contributed a series of articles to the *Berliner Klin. Wochenschrift*,

enumerating the advantages to be derived from a visit to some of the principal seashore resorts of England and the North sea. He gives his own experience at these places, and furnishes some useful hints upon the influence of sea air and sea bathing. These effects, it is shown, differ very essentially, according to the locality of the shore, and the season of the year. For patients suffering from general debility, whether inherited or acquired, he recommends the invigorating autumn air of southern England. The beneficial influence of this atmosphere shows its effects in most patients by the marked increase of appetite and bodily weight, and the enjoyment of a natural, refreshing sleep. These resorts are likewise recommended for scrofulous children; for those having a disposition to tubercular affections; for women reduced by repeated child-bearing and long continued nursing, as well as for those debilitated by overwork. The desired improvement must not be expected, however, within a fortnight or three weeks. The more deeply seated the constitutional affection, by so much longer must the sojourn at the seashore be extended, so that many should remain there months, where they now limit their stay to weeks. If sea bathing is also resorted to, it must be borne in mind that this is a much more powerful therapeutic agent, and should therefore be indulged in by invalids only under certain limitations, and with the sanction of a competent adviser. Many would derive greater benefit if they would content themselves with trusting to the sea air alone, without venturing into the water. Others neutralize the effect of sea air and bathing, by subjecting themselves to the additional fatigue of a long daily walk, and go away weaker, perhaps, than when they arrived. Where the invalid expects to add to his stock of physical strength, he cannot afford to make an injudicious use of the power which is still left him. Those alone can hope to derive benefit from the bath, whose nervous system is still strong enough to react after the vigorous shock which accompanies immersion. It is also important that the digestive apparatus should be in such a condition as to enable the patient to respond with safety to the increased demands of his appetite. Finally, those alone should indulge in the sea bath, whose sleep is rendered thereby deep and natural, and not made short and broken. The propriety of continuing the daily bath for any length of time in any individual case, depends upon the physical condition of the invalid, to be determined by a careful observation of the effect of the first one or two baths. Of course regard must be also paid to the temperature of the water, as well as that of the surrounding air, which may vary materially upon successive days. In cases where open sea bathing is for any reason not to be advised, a milder tonic effect of sea water upon the skin may still be derived from in-door baths, followed by friction with brush or towel.

It has been shown by physiological experiments, that the effect of the sea air, and in a less degree that of the sea bath, tends to accelerate the elimination of the nitrogenous elements of the body, while that of phosphoric acid is diminished.

Electricity a Means of Detecting Death.—Dr Rosenthal, of Vienna, reports a number of cases, and also a series of experiments upon animals, which illustrate the important aid afforded by electricity in furnishing a tolerably certain test for determining death. This sign is the contractility of the muscles in response to the application of the electric stimulus. By the aid of this test, it is affirmed that the diagnosis is rendered easy in cases of suspended animation, arising from apoplexy, suffocation, drowning, &c. It will be found also of practical utility, it is thought, upon the battle field, and in time of extensive epidemics, when the danger of infection necessitates the speedy burial of the dead. Among the cases quoted is that of a hysterical young woman, aged twenty-four, who had lain for thirty-two hours, evincing during this time most of the ordinary signs of death. Some suspicions having been aroused, however, as to her actual condition, to settle all doubts, it was decided to summon Dr. Rosenthal. He found, upon his arrival, that the face as well as the entire surface of the body, exhibited the marble pallor peculiar to the corpse, while the skin was everywhere cool to the touch. Upon raising the eyelids, both the pupils were found to be equally contracted, and showed no appreciable reaction to the influence of light. The upper and lower extremities were relaxed, and when raised, fell like any dead weight. No pulsation of the heart was perceptible to the touch, nor of the radial arteries at the wrist. Upon applying the stethoscope to the heart, however, the room being perfectly quiet, he was able to make out a suppressed, intermittent beat. The thorax, when uncovered, was found to be motionless, but upon watching carefully the abdomen, an exceedingly weak and slow

motion could be detected in the lateral walls. The ordinary respiratory murmur was not heard. Dr. Rosenthal now applied his proposed test, and found that the various muscles responded readily to a feeble excitation, so that he was able to give the assurance that the case was one of suspended animation. In accordance with his directions, therefore, heat was applied to the body, and vigorous friction maintained, the result of which was, that at the end of forty-eight hours the woman gradually recovered the power of speech and motion. She stated, that during the first part of her lethargy, she was perfectly unconscious, but afterwards overheard distinctly the remarks of those about her, with regard to her death, without the power, however, of being able to make any motion, or emit the least sound. (*Wiener Med. Presse*, May 9 & 12, 1872.)

Cutaneous Absorption in the Bath.—The question of fact, whether the skin in a bath absorbs water and the mineral elements contained in it, has been brought up anew in the Academy of Sciences by M. Jamin (*Jour. de Med. et Chir. Pratiques*).

It would seem, if there is any real absorption, that its amount might be ascertained by increase in the weight of the body. This is not so easy, after all, for the exact weight is constantly varying, from hour to hour. The waste is incessant, while the repair is periodical.

MM. Jamin and De Laurès repeated, at Néris, the old experiments of Sanctorius.

To fully comprehend these experiments, it should be borne in mind that a man in good condition takes 4000 grammes (about one hundred and thirty ounces) of nourishment a day, of which he expels 1500 grammes (about fifty ounces) of refuse. The remaining 2500 grammes (or eighty ounces), after being assimilated, pass off by the lungs and the skin in the course of the twenty-four hours. This is a waste of about 100 grammes (rather more than thirty ounces) per hour.

But this loss is not uniform; it attains to 125 grammes after dinner, and diminishes gradually through the night to breakfast of next morning—becoming, according to MM. Jamin and De Laurès, about 80 grammes between six and seven o'clock in the morning. After breakfast the waste is increased—being lessened by rest and augmented by exercise—and may attain to 340 grammes during a midday's walk in the sun.

This loss is due to two causes, respiration and evaporation from the entire surface of the body. According to Lavoisier and Séguin, the proportionate rate of waste from these causes is as one for respiration to two by evaporation.

According to Durieu, every one preserves his weight without loss in a bath of moderate temperature; gaining by absorption if the temperature is reduced; losing, on the contrary, if the temperature is raised; and this loss increases very rapidly when the water is heated to 95° to 115° Fahr.

The experiments of MM. Jamin and De Laurès, at Néris, confirmed in all points the conclusions of Durieu. A subject whose loss from six to seven o'clock in the morning was found to have a mean of 79 grammes, then entered a bath of 95° and remained there till nine o'clock, two hours. His loss was at the rate of 700 to 800 grammes per hour. At ten o'clock, an hour after leaving the bath, he was again weighed, and the loss was found to be only 50·25 grammes. Although there had been no absorption in this case, it does not invalidate the therapeutic value of baths of mineral waters at a high temperature.

A new point on which M. Jamin insists is, that after a bath the loss is much less than before, often nothing, and, in one experiment, in four bathers he found a very slight increase of weight. In fact, it is noticeable that the weight remains almost stationary some time after a long immersion in hot water.

M. Jamin's explanation does not fully solve the question of cutaneous absorption. He takes too little account of external pressure, on which the amount of exhalation greatly depends, in the water as well as in the air.

Thus, the qualities of a bath reside, in a measure, in its own temperature and density; nevertheless it is necessary to keep in view its chemical composition, which may influence the quality of the perspiration, excite the skin and nervous system, and, in modifying the surrounding atmosphere, introduce mineral elements into the air tubes and the lungs.

The Inventor of Spectacles.—On a tombstone in Florence is this inscription:—"Here lies Salvino Armato d'Armati, of Florence, the inventor of spectacles. May God pardon his sins. The year 1318."