

time the leech was observed to give out bubbles of air ; and the water of the vessel, when tested by lime-water, indicated the presence of carbonic acid.—The paper is accompanied by drawings of the structures described.

3. “On the Comparative Osteological Forms in the Adult European Male and Female of the Human Species.” By Walter Adam, M.D., Fellow of the College of Physicians of Edinburgh.

With a view to the future investigation of the osteological development of the human race, the author gives, in the present paper, the results of a great number of measurements, which he has very carefully made, of the dimensions of the different bones composing the adult human skeleton. The male bones examined were those in the collection of Dr. Monro ; the female bones were furnished by Dr. Hamilton. The author was anxious to fix on some one dimension in the skeleton which might be taken as the standard of all the measurements : and finding that no bone of the trunk or limbs possessed the requisite characters for that purpose, he sought for it in the cranium ; and the result of an extensive series of observations led him to adopt as the standard of measure the distance between the prolongations of the zygomatic ridges, immediately over the meatus auditorius externus, as being that dimension which was less liable to variation than any other of the human cranium. This line he denominates the *auricular transverse* ; and, adopting a scale of which the unit is the 14th part of this line, being generally about the third of an inch, he states at length, in multiples of this unit, the dimensions, in different directions, of almost every bone in the skeleton ; noting more especially the differences that occur in those of the two sexes. Of these measurements, which are given in much detail, and in many instances arranged in a tabular form, it is impossible to give any abridgement. The conclusion he deduces from his inquiry is, that every bone in the body exhibits certain modifications, according to the sex of the individual.

4. “Some Experiments and Observations on the Combinations of Carbonic Acid and Ammonia.” By John Davy, M.D., F.R.S.

The author was led to the investigations of which he gives an account in the present paper, by finding in the note-books of his brother, the late Sir H. Davy, some memoranda of experiments which he had made on the salts of ammonia, and more especially on the carbonates. The first part of the paper relates to the direct combination of carbonic acid and ammonia, by which a salt is formed possessing singularly alkaline properties. The second is on the sesquicarbonate of ammonia ; a term which Mr. Richard Phillips has applied to that salt of ammonia which is commonly called the subcarbonate, and which is obtained by the mutual decomposition of carbonate of lime and sal-ammoniac, by means of heat. This the author concludes, from his experiments, to be composed of one proportion ammonia, one and a half of carbonic acid, and one of water. He then enters into a comparative review of the analyses of this salt by other chemists, and

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