

caustic served to reduce the size more immediately, than would otherwise have taken place ; though it is probable, the administration of iodine would in time have reduced their size, without any other means.

The mere cutting of these bodies, does not change that condition of the system which *first* caused their enlargement, consequently it often proves an immediate relief only, but not a cure ; because they are often found to grow again. The dread parents feel, of having their children cut ; the danger of the operation, in consequence of the proximity of the internal carotid artery ; the restlessness of children, rendering it often impossible to perform the operation ; and the frequent failure of a permanent cure by an operation, *per se*, are sufficient to condemn the operation in *most* cases ; especially in patients of a scrofulous diathesis, which is almost universally the case.

Though this operation is comparatively trifling, yet there are others of greater magnitude, and of more consequence to the patient, which have been performed, when other means might have prevented the maiming of our fellow creatures, and as far as life was concerned, proved equally *conservatory*. The idea is indeed painful, that there have been multitudes of human beings, whose limbs have been sacrificed to the knife, which might have been saved by the use of more simple and less painful means.—*New York Medical and Surgical Reporter*.

A NEW PROCESS IN EUDIOMETRY.

By M. Lassaigne.

SINCE the discovery of the component parts of the air, many methods have been employed by chemists to discover the relative volume of the constituent parts of this elastic fluid. The processes generally resorted to in laboratories, are all founded on the absorption of oxygen by various simple and compound bodies, whether at the ordinary temperature of the air, or by exciting the action, by caloric or electricity. In this manner the solution of sulphuret of potassium was formerly used, and afterwards phosphorus, hydrogen, and the binoxide of nitrogen have been employed, and of late years the proto-sulphate of iron, decomposed by potassium, has been recommended.

Dumas and Boussingault, by submitting air to the action of copper in a state of division, and heated to a dull red heat, has latterly produced an important modification which enables us to estimate, by weight, the oxygen and nitrogen which exist in the air, instead of calculating the volume of each of these gases, as was the case in old eudiometrical experiments.

In performing experiments, latterly, with proto-sulphate of iron, according to the directions of M. Dupasquier, and repeating the process he pointed out and published, we were led to adopt a test well known to chemists, but which, so far as we know, has never been applied to the analysis of air.

This method is founded on the readiness with which copper divided

into thin tables becomes oxydized in contact with the air, in the presence of liquid ammonia, and on the formation of a blue ammoniuret of deutoxide of copper.

Many successive experiments having shown us that this test, acting in a limited volume of air, in a very short time completes the total absorption of the oxygen contained in it, leaving the nitrogen free, we were induced to think of the application of this property to the analysis of the air; and the result has been what we expected.

The application of this new method is extremely simple, and it requires the employment of no peculiar apparatus. A common graduated tube 14 to 15 centimetres in length, and 12 millimetres in diameter, and a small phial with a ground-glass stopper, containing 30 to 35 cubic centimetres, are the only vessels necessary.

The process consists in introducing into the phial from three to four grammes of copper turnings, then pouring in distilled water until the phial is half full, and afterwards filling it with a concentrated solution of ammonia. The bottle, thus completely filled, is closed with its glass stopper, and inverted in the water trough, taking care that the copper turnings do not rest on the orifice of the bottle. This first disposition being arranged, you measure a volume of air in the graduated tube filled with water, and by means of a small glass funnel it is passed into the bottle, which has been uncorked under water. This being done, the mouth of the bottle is immediately closed, and it is taken out of the pneumatic trough, and shaken incessantly for eight or ten minutes. In less than a minute or two the ammonia is seen to assume a bluish tinge, which becomes gradually darker, as the ammoniuret of deutoxide of copper is formed. This blue tint assumes its maximum of intensity when you operate on from 15 to 20 cubic centimetres of air, it then becomes gradually fainter, when all the oxygen of the volume of air on which you operate has been absorbed; this gradual loss of color, which points out the close of the operation, is due to the action of the copper, in excess, on the ammoniuret of the deutoxide, which is converted into colorless ammoniuret of protoxide.

When we have arrived at this point of the experiment, the gaseous residue is passed into the graduated tube for the purpose of measuring it, taking the precautions requisite in these kinds of operations. In the various experiments we have made, by employing the method we submit to the notice of chemists, the gaseous residue, after having been subjected to the action of copper and ammonia, contains no trace of oxygen; for if phosphorus be introduced to detect it, it gives out no phosphorescent light in darkness, nor does it produce any diminution of its volume.

The volume of the nitric gas determined by this process, has always been two or three tenths of a degree greater than that obtained by the action of phosphorus upon the air. The proportion has been 79 : 792.2. The later number deduced from our experiment, comes very near 79.17, which MM. Dumas and Boussingault have deduced from the most laborious analysis of the air.

When analyzing an artificial mixture, composed of 41.5 air, and 57.5

nitrogen, in which the proportion of nitrogen is necessarily increased to 90.2, the new method indicates 90 of nitric gas.

The simplicity of this operation, and the short time in which it can be performed, will enable us, without doubt, to employ it in various cases.—*Chemist, from Comptes Rendus.*

THE PERIODICAL PHENOMENA OF MAN.

[Communicated for the Boston Medical and Surgical Journal.]

THE Committee of the National Institute, to whom was referred the letter of M. Quetelet and the pamphlet of M. Schwaun, relative to the periodical phenomena of man, respectfully report:—That they have attentively read the articles, and consider the subject well worthy of the attention of the National Institute. Many facts relating to the periodical phenomena of nature may be gleaned from medical books, journals, and statistical tables, but a concentrated body of facts derived from an extensive and accurate observation, in different quarters of the globe, is a great desideratum, which these scientific gentlemen wish to supply, and in which learned societies and individuals should coöperate. Your committee have made a synopsis of the contents of M. Schwaun's pamphlet, which they herewith submit, and they respectfully recommend that it be laid before the "Committee appointed to write a Circular," with instructions that they call the attention of other societies, the managers of hospitals, and the friends of science generally, to the subject, and if possible induce them to institute the observations therein suggested. THE COMMITTEE.

Instructions for Observations on the Periodical Phenomena of Man.—

After speaking of the advantages of these observations, the author divides the subject into two parts :

1st. Periodical phenomena, that is, such as are repeated at absolute epochs, after a certain number of years, days, hours, &c. ; for instance, diseases which recur every winter.

2d. Phenomena, the manifestations of which are confined to a determinate epoch of life—as the age of puberty.

There are phenomena which belong to both classes. Death depends, without doubt, upon age, and it would seem that it should be arranged under the second class of phenomena. But, on the other hand, death depends, also, upon the seasons, as the number of deaths is not the same at all seasons ; in this point of view it should be comprised in the first class, &c. They are arranged in the 1st or 2d class according to their more or less manifest dependence upon an absolute or relative epoch.

1st. Periodical phenomena, which recur after absolute epochs, may be divided into those which have an annual and those which have a daily type. But, generally, their number is very limited.

The influence of seasons may be remarked in those where production depends principally upon the epoch of life ; for example, by a great number of deaths in a certain season.