uncertain figures can be recognized by the type?

3. Shall the International Atomic Weight Commission have the current table of atomic weights edited on this basis?

In comment it may be mentioned that not all teachers are troubled by using O = 16 as a standard, and that there is a very large body of chemists outside the ranks of teachers, to whom this standard offers the decided advantage, that with this a large share of the more commonly used atomic weights approximate very closely to whole numbers. J. L. H.

## *PLANT EMBRYO-SACS.*

SOME recent studies by the writer on the young ovules of the lily-of-the-valley, pond-weed (Potamogeton), and the garden canna have shown a number of interesting features in connection with the development of the embryo-sac. The first division of the nucleus in the hypodermal cell is heterotypic, while the next two represent the 'reducing division'; hence in these plants this cell strongly suggests the pollen-mother-cell of the anther. Apparent reduction takes place as usual just previous to the heterotypic division. The reduced number of chromosomes in the lily-of-the-valley was eighteen, in pond-weed about eight, while in canna it was only three, one of the smallest yet recorded for plants. In the lily-of-the-valley and pond-weed only the heterotypic division is followed by a cell wall, thus resulting in an 'axial row' of two binucleated cells; in canna all three divisions produce transverse walls and the axial row is therefore four celled. In the first named plant both cells enter into the formation of the embryo-sac, in pond-weed the lower only, while in canna only the lowermost of the row of four. Therefore in lily-of-the-valley the embryo-sac contains all four nuclear elements from the mother cell as in *Lilium*, in pond-weed only two, and in canna only one. Can the embryo-sacs in these cases be homologous structures, and should a macrospore contain more than one of these nuclear elements? In pond-weed a membraneous pouch formed around the egg-apparatus at a very early period seems to preclude entirely the fusion of polar nuclei to form the endosperm mother nucleus. In this plant also the chromatin is aggregated into a central ball during the resting stage as in some animal tissue. Those interested in the details of the work may find a fuller account in the *Botanical Gazette* for July of this year.

K. M. WIEGAND.

## *SCIENTIFIC NOTES AND NEWS.*

THE monument of Lavoisier, erected by international subscription, was unveiled at Paris on July 27th. There were present the members of the fourth International Congress of Chemistry and a large number of scientific and public men. M. Berthelot who was to have presided was unable to be present on account of ill health, and his address was read by M. Darboux. The monument was presented to the city of Paris by M. Moissan, to whom M. Leygues, the minister of public instruction, responded.

FAIRMAN ROGERS, formerly professor of civil engineering in the University of Pennsylvania and one of the original members of the National Academy of Sciences, died in Vienna on August 21st. He was born in Philadelphia in 1833, graduated from the University of Pennsylvania and was professor of civil engineering in that institution from 1855 to 1870. From 1853 to 1865 he was also lecturer on mechanics in the Franklin Institute. On retiring from the professorship in the University of Pennsylvania he became a trustee, and gave later to the institution his valuable collection of works on engineering. Mr. Rogers served as an engineering officer in the civil war and was connected with the Coast and Geodetic Survey. He was the auther of 'The Magnetism of Iron Vessels' and of numerous papers on scientific and engineering topics. Mr. Rogers was formerly prominent in Philadelphia and New York society, but has latterly lived abroad.

THE Paris 'Conference Scientia' has given a banquet to Lord Lister and will later entertain in a similar manner Lord Kelvin.

M. DUHEM has been elected a correspondent of the Paris Academy for the section of mechanics.

DR. AUGUST LEPPLA has been appointed State geologist and Dr. Oskar Zeise district geologist in the Geological Institute at Berlin.