old methods and adopt new ones. The English journals are referred to almost entirely throughout the book and one gets the impression that the continental periodicals have been neglected. The table of contents now contains a list of the tables throughout the book. This will be found useful and will save time. On the whole this book is certainly the best of its kind in the English language and it will always occupy an important place on the table of the working chemist. F. L.

A Text-book of Quantitative Chemical Analysis. By J. C. OLSEN, A.M., Ph.D., Professor of Analytical Chemistry in the Polytechnic Institute of Brooklyn, formerly Fellow of the Johns Hopkins University. Pp. xix + 513. New York, D. Van Nostrand & Co.

As stated in the preface, Professor Olsen has not attempted to produce a reference book for experienced analysts, but rather a book for college students. Accordingly he has devoted considerable space to theory and the explanation of the various steps in an analysis and has followed the sequence in which he presents the subject to his classes. The first chapters treat of 'General Operations and the Determination of Water,' then follow chapters on 'Gravimetric Analysis of Metals, Acids, Alloys and Minerals,' 'Electrolytic Methods,' 'Volumetric Analysis,' with special chapters on 'Oxidation and Reduction' and 'Precipitation Methods,' 'Technical, Water, Oil, Fat and Gas Analysis' and finally 'Stoichiometry,' and tables. There is not such a mass of facts as in Fresenius and yet enough methods are given for the teacher to choose good and interesting work for everybody. The last few chapters are particularly important, introducing as they do technical methods into the ordinary course. It is to be regretted that the author has not given in the first chapters a fuller discussion of the application of the ionic theory. Though apparently less essential, it is as necessary to the correct understanding of ordinary gravimetric methods as to those that are purely electrolytic. Perhaps the author assumes that no student is now allowed to take up quantitative analysis until he understands the ionic theory, but a review will do no harm. The directions are clearly given throughout and the student is made to feel that there is a reason for every step. The author tries to do away with the ridiculous practise of calculating results far beyond any significant figure but goes to the other extreme when he tells the student: "If an analysis is carried out by a process or for a purpose in which an error of one per cent. may be present no pains need be taken to secure greater accuracy than this in any step of the process." If this were logically carried out and there were ten steps in the process a loss of one per cent. in each step would certainly not give a result within one per cent. The student can be taught to work with all possible care and accuracy without attributing too small an error to his results. A chapter on stoichiometry should not be necessary in a work of this kind. Students with a proper understanding of the atomic theory and the simplest mathematics should be able to make all necessary calculations. It has evidently been the experience of the author, as of all teachers of the subject, that a majority of students need special training in stoichiometry. There is a fundamental fault somewhere in the student's course either in chemistry or in mathematics. Would it not be well for the teacher to force the student to work out all these problems by himself without any aid but the atomic theory and the rule of three? The reviewer hopes that Professor Olsen will omit the chapter on stoichiometry from the next edition of his book and he feels that there will soon be a second edition of so good a work.

F. L.

SCIENTIFIC JOURNALS AND ARTICLES.

THE leading article in the *Journal of Nervous and Mental Disease* for January is a study by Dr. H. C. Gordinier of two unusual brain tumors, one a multiple cylindroma of the base of the brain, the other a neuro-epithelioma of the choroid plexus of the fourth ventricle. This is followed by Dr. Onuf, of Craig Colony, with a study of a number of cases of epilepsy presenting partly muscular atrophies, partly defective muscular action

with clearly demonstrable atrophy, with definite distribution of these disturbances. The paper is clearly illustrated from photographs of the patients. Dr. Morton Prince contributes a short paper on a case of multiform tic including automatic speech and purposive movements which was presented by him at the meeting of the Boston Society of Psychiatry and Neurology, March 16, 1905. This issue includes reports of the New York Neurological Society for October 3, 1905, and of the Boston Society of Psychiatry and Neurology for October 19, 1905.

SOCIETIES AND ACADEMIES.

THE AMERICAN MYCOLOGICAL SOCIETY.

THE society held its third annual meeting in connection with the American Association for the Advancement of Science at New Orleans, January 1, 1906.

In the absence of the president, Professor Charles H. Peck, the vice-president, Professor F. S. Earle, presided.

The new constitution recommended by the committees of the Botanical Society of America, the Society for Plant Morphology and Physiology and the American Mycological Society, as a basis for the union of the three societies, was adopted and the present officers continued as a committee with power to cooperate in the completion of the details of reorganization.

The following papers were presented at the meeting:

J. C. ARTHUR: 'Some Reasons for Desiring a Better Classification of the Uredinales.'

S. M. TRACY: 'Uredineæ of the Gulf States.'

W. G. FARLOW: 'Some Peculiar Fungi New to America.'

F. S. EARLE: 'North American Gill Fungi.'

BRUCE FINK: 'Lichens and Recent Conceptions of Species.' (Read by title.)

E. M. FREEMAN: 'The Affinities of the Fungus of *Lolium temulentum*.'

C. L. SHEAR: '*Peridermium cerebrum* Peck, and *Cronartium Quercuum* (Berkeley).'

C. L. SHEAR: '*Ramularia:* An Illustration of the Present Practise in Mycological Nomenclature.'

P. H. ROLFS: 'Notes on Cultures of *Colletotrichum* and *Glœosporium*.'

PERLEY SPAULDING: 'The Occurrence of *Fusoma parasiticum* Tubeuf in this Country.'

P. H. ROLFS: 'Notes on *Pachyma cocos*.'

P. H. ROLFS: '*Penicillium glaucum* on Pineapple Fruit.'

C. L. SHEAR,
Secretary-Treasurer.

THE BIOLOGICAL SOCIETY OF WASHINGTON.

THE 26th annual and 408th regular meeting was held on December 23, 1905, and the following officers were elected for the ensuing year:

President—F. H. Knowlton.

Vice-Presidents—T. S. Palmer, W. P. Hay, E. L. Greene and E. W. Nelson.

Recording Secretary—M. C. Marsh.

Corresponding Secretary—W. H. Osgood.

Treasurer—David White.

Councilors—A. D. Hopkins, J. N. Rose, A. K. Fisher, L. Stejneger and A. B. Baker.

President Knowlton was nominated for vice-president of the Washington Academy of Sciences.

THE 409th regular meeting was held on January 6, 1906.

Mr. J. W. Titcomb exhibited a mud nest weighing thirteen pounds, of the red ovenbird or hornero (*Furnarius rufus*) from Argentina, South America.

Dr. L. O. Howard gave an account of the symposium on 'Yellow Fever and Other Insect-borne Diseases' held under the auspices of the section on physiology and experimental medicine at the recent New Orleans meeting of the American Association for the Advancement of Science.

Mr. Henry Van Deman exhibited two fine specimens of winter apples from the Hood River Valley, Oregon. These represent two eastern varieties, the Newtown and Esopus, which have gained markedly in excellence by transplantation to the Pacific slope.

The paper of the evening was presented by Mr. Alvin Seale, 'Notes on the Natural History of the South Pacific Islands.' He gave an account of the general features of several groups of islands visited, with descriptions of the characteristics of the native populations. His remarks were well illustrated by a series of lantern slides.

M. C. MARSH,
Recording Secretary.