pound denoted by the expression of its composition by the smallest possible whole numbers of combining weights of the elements which form it.' The atomic theory is first mentioned on page 341, Avogadro's law on page 352. Considerable prominence is given to energy changes accompanying chemical changes. Many references to and quotations from the writings of Dalton, Davy and others impart an historical flavor to the book. An appendix of fourteen pages treats of the general characters of the eight groups of elements.

The author has certainly been successful in not producing 'a catalogue of chemical odds and ends.' Whether the method of treatment is an improvement upon the more common methods is a question that must be decided by trial in the lecture room.

Noyes's Organic Chemistry.—The author states in his preface that "an attempt is here made to present the fundamental principles of organic chemistry for the use of those beginning the subject. The most radical departure from the method of treatment adopted in other books treating of the same subject consists in the dropping of the division into 'fatty' and 'aromatic' compounds and in the adoption of what appears to the author a more fundamental and logical classification."

The subject-matter is divided into twenty-five chapters. Of these, chapters I. and II. deal with purification and analysis of compounds, the determination of molecular weights and formulas and a general discussion of the physical properties of organic compounds. Chapters III. to VIII., inclusive, treat of the hydrocarbons. In chapter IX. is given the classification of the derivatives of the hydrocarbons. The remaining chapters are devoted to a discussion of these derivatives.

The most striking feature of the book undoubtedly lies in the fact that the time-honored classification of the compounds into the so-called 'fatty' and 'aromatic' classes is set aside and the corresponding members of each class discussed together. While this is a very radical departure, there is no question but that the method chosen is a logical one and at least well worth a trial in the lecture room. The book bears unmistakable evidence that its author has been an enthusiastic worker in the field of organic chemistry and that he has given to the student, in so far as the space would permit, a clear and comprehensive discussion of the science as it exists to-day. It is a question whether some of the general reactions discussed might not have been illustrated by simpler examples. As the author states in his preface, however, 'no two authors would make the same selection, and that here given is doubtless open to just criticism at some points.'

To write an elementary text in a science which includes a study of over 100,000 compounds besides a number of growing theories is not an easy task, and the person who does this successfully is certainly deserving the commendation of the teachers of the science. Noyes's text must be regarded along with Remsen's as the best of modern elementary texts of organic chemistry.

Smith's Praktische is the German translation of his well-known 'Laboratory Outline of General Chemistry,' which is undoubtedly one of the best of the 'laboratory outlines' for mature students.

Smith and Keller's Experiments has deservedly reached its fifth edition. The experiments are well chosen to illustrate the principles of chemistry. A number of quantitative experiments are included.

WILLIAM MCPHERSON.

SCIENTIFIC JOURNALS AND ARTICLES.

The Journal of Experimental Zoology for November, 1905. T. H. Morgan ('Polarity' considered as a phenomenon of gradation of material) discusses in the light of some new experiments with the hydroid Tubularia the so-called 'polarity' of organisms, as seen especially in the phenomenon of regeneration. The author advances the hypothesis that organic 'polarity' is an expression of the gradation of the organ-forming substances present in the adult. These substances are traceable to the egg, which owes its development in part to their localization. The phenomena of development and of regeneration are thus brought under a common point of view. H. S.

Jennings, in a paper entitled 'Modifiability in Behavior. I. Behavior of Sea Anemones,' shows that the course of the internal physiological processes, the past experience of the organism, and various other internal factors, partly determine the behavior of sea anemones and modify fundamentally their reactions to external stimuli. In a second paper entitled 'The Method of Regulation in Behavior and in other Fields,' the same author gives a general outline of the method of regulation shown in the behavior of the lower organisms. E. B. Wilson's 'Studies on Chromosomes,' No. II., deals with some of the specific classes of chromosomes in the *Hemiptera*, and their history in the maturation phenomena, and is intended to clear the ground for a study of the sexual relations of the chromosome groups. An appendix records facts, determined by later observations, that give complete confirmation of the theoretic expectations regarding the sexual relations, stated in the general discussion. (See issue of SCIENCE for October 20, 1905.) Chas. W. Hargitt (Variations among Scyphomedusæ), gives a detailed study of the variations found in *Aurelia flavidula*, with a view to determine their relations to the problems of adaptation and natural selection. Lorande Loss Woodruff (An Experimental Study of the Life-History of *Hyptrichous Infusoria*), describes five cultures, all of which passed through cycles of greater and less general vitality as measured by the rate of division. Recovery from a period of extreme depression was effected by extract of beef. Minor fluctuations occurred which are termed 'rhythms' and are to be clearly distinguished from cycles. A description is given of the cytoplasmic and nuclear changes during the life-cycle, as well as of a series of experiments on the effect of salts on the division rate.

SOCIETIES AND ACADEMIES.

THE CONVOCATION WEEK MEETINGS OF SCIENTIFIC SOCIETIES.

There will meet at New Orleans:

The American Association for the Advancement of Science.—The week beginning on December 28. Retiring president, Professor W. G. Farlow, Harvard University; president-elect, Professor C. M. Woodward, Washington University, St. Louis, Mo.; permanent secretary, Dr. L. O. Howard, Cosmos Club, Washington, D. C.; general secretary, Professor C. A. Waldo, Purdue University, Lafayette, Ind.; secretary of the council, Dr. John F. Hayford, U. S. Coast and Geodetic Survey, Washington, D. C.

Local Executive Committee.—Honorary president, President E. B. Craighead, Tulane University; executive president, Professor George E. Beyer, Tulane University; secretary, Henry M. Mayo, The New Orleans Progressive League; treasurer, Mr. Clarence F. Low, of the Liverpool, London and Globe Insurance Company.

Section A, Mathematics and Astronomy.—Vice-president, Dr. W. S. Eichelberger, U. S. Naval Observatory, Washington, D. C.; secretary, Professor L. G. Weld, University of Iowa, Iowa City, Iowa.

Section B, Physics.—Vice-president, Professor Henry Crew, Northwestern University, Evanston, Ill.; secretary, Professor Dayton C. Miller, Case School of Applied Science, Cleveland, Ohio.

Section C, Chemistry.—Vice-president, Professor Charles F. Mabery, Case School of Applied Science, Cleveland, Ohio; secretary, Professor Charles L. Parsons, New Hampshire College of Agriculture, Durham, N. H.

Section D, Mechanical Science and Engineering.—Vice-president, Professor F. W. McNair, Houghton, Mich.; secretary, Professor Wm. T. Magruder, Ohio State University, Columbus, Ohio.

Section E, Geology and Geography.—Vice-president, Professor Wm. North Rice, Wesleyan University, Middletown, Conn.; secretary, Dr. Edmund O. Hovey, American Museum of Natural History, New York, N. Y.

Section F, Zoology.—Vice-president, Professor Henry B. Ward, University of Nebraska, Lincoln, Nebr.; secretary, Professor C. Judson Herrick, Denison University, Granville, Ohio.

Section G, Botany.—Vice-president, Dr. Erwin F. Smith, U. S. Department of Agriculture, Washington, D. C.; secretary, Professor F. E. Lloyd, Teachers College, Columbia University, New York, N. Y.

Section H, Anthropology.—Vice-president, Dr. George Grant MacCurdy, Yale University, New Haven, Conn.; secretary, George H. Pepper, American Museum of Natural History.

Section I, Social and Economic Science.—Professor Irving Fisher, Yale University, New Haven, Conn.; secretary, Dr. J. F. Crowell, Bureau of Statistics, Washington, D. C.

Section K, Physiology and Experimental Medicine.—Vice-president, Professor Wm. T. Sedg-