SCIENCE

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MSS. intended for publication and books, etc., intended or review should be sent to the responsible editor, Professor J. McKeen Cattell, Garrison-on-Hudson, N. Y.

THE AMERICAN SOCIETY OF BACTERIOLOGISTS.

THE American Society of Bacteriologists held its second annual meeting at Baltimore, at the end of December under the presidency of Professor Wm. T. Sedgwick, whose address has already been published in SCIENCE. The following papers were presented:

Distribution of Bacillus œrogenes capsulatus: W. H. WELCH.

Dr. William H. Welch presented the results of investigations of Mr. L. K. Hirshberg in the Pathological Laboratory of the Johns Hopkins University. There can be no question but that the bacillus discovered by Welch in 1891 and fully described by Welch and Nuttall in the following year is identical with Fraenkel's *B. phlegmones emphysematosœ*, with Veillon and Zuber's *B. perfringens*, and with Schattenfroh and Grassberger's *Granulobacillus saccharobutyricus immobiles liquefaciens* described in 1900. It is possible that Klein had in his cultures *B. œrogenes capsulatus*, but his description of his *B. enteritidis sporogenes* can not be reconciled with the properties of the former bacillus, especially his statements as to motility and peptonization of milk. It has already been demonstrated by Welch, by Howard, and by Hitschmann and Lindenthal that *B. œrogenes capsulatus* is a widely distributed organism, its natural habitats being especially the intestinal canals of man, animals

In Chapter VI., on the analysis of gaseous mixtures, especially by combustion, no directions or precautions are given necessary for a successful result, nor is the treatment of the analysis of illuminating gas at all satisfactory.

Chapter VII., on gas analytical apparatus, describes in a general way a number of the important forms of apparatus.

Chapter VIII., on the calorific power of gases, is especially disappointing, the only methods given being that of Mahler—by the bomb, and by calculation, no mention being made of the excellent apparatus of Junkers.

In conclusion, the work, so far from being 'essentiellement pratique,' as reviewed in the *Comptes Rendus*, appears to be superficial, better adapted to give a general idea of the subject than for a laboratory manual.

Augustus H. Gill.

SCIENTIFIC JOURNALS AND ARTICLES.

The American Naturalist for January begins with a list of 'Plants used by the Indians of Eastern North America,' by Lucia B. Chamberlain. The plants are arranged in alphabetic order under the name of each of the tribes considered and the uses of the plants are noted. R. W. Shufeldt has an article 'On the Systematic Position of the Sand Grouse (*Pterocletes; Syrrhaptes*),' concluding that they belong where they are usually placed, between the Galli and Columbæ. G. H. Parker discusses 'Correlated Abnormalites in the Scutes and Bony Plates of the Carapace of the Sculptured Tortoise,' concluding that there is a more intimate relation between the plates and scutes than has been generally admitted. Roswell H. Johnson describes, with outline and skiagraph illustrations 'Three Polymelous Frogs' and C. H. Eigenmann and Ulysses O. Cox consider 'Some Cases of Saltatory Variation.' James Perrin Smith treats of 'The Larval Coil of Baculites' and deduces that Baculites probably originated from *Lytoceras*, and some 'Variation Notes' are given, taken from the *Bulletin of the Société d'Anthropologie*. The Editor announces that the 'News' department will be discontinued as the same field is covered by Science more promptly, but that the record of appointments, retirements and deaths will be continued and that there will be added notices of gifts to educational institutions, all to be published quarterly.

SOCIETIES AND ACADEMIES.

SECTION OF ASTRONOMY, PHYSICS AND CHEMISTRY OF THE NEW YORK ACADEMY OF SCIENCES.

A regular meeting of the Section was held at 12 West 31st Street, New York, on February 4, 1901. Professor George E. Hale, director of the Yerkes Observatory, gave a lecture on 'Astronomical Photography with a Visual Telescope.' The following is an abstract:

Photography was discovered in 1837, and the first astronomical photograph was taken in 1840 by Dr. Draper of New York. It was a photograph of the moon made on a daguerreotype plate, and gave great promise of future work. Bond in 1850 made the first photograph of the stars. Rutherfurd of New York, in 1858, made some remarkable photographs of the moon, and later some star photographs.

Photography has now become so valuable in astronomy that it is applied in every department. It is not true, however, that it will displace the eye. There are certain fields where the eye will be superior to the photographic plate, but in many other fields photography has led to results that never could have been obtained by visual observation. I shall speak tonight of work done at the Yerkes Observatory with a telescope designed for visual observation. It is fortunate that this telescope was not designed for photography alone, for by the use of methods recently devised it has been possible to use it for photography and the results are not at all inferior to what they might have been on a telescope designed for photography alone.

The forty inch telescope of the Yerkes Observatory can be considered as a long camera with a focal length of about sixty-four feet. Its field of view embraces a circle in the sky of only about five minutes of arc in diameter. In photographing groups and clusters of stars this long focal length makes it possible to separate stars which would have been run together into one mass with an instrument of shorter focal length. A means of counteracting the uncor-