

SCIENCE

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MSS. intended for publication and books, etc., intended for review should be sent to the Editor of SCIENCE, Garri-son-on-Hudson, N. Y.

THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE. SECTION A, MATHEMATICS AND ASTRONOMY.

Vice-President—Otto H. Tittmann, Superin-tendent U. S. Coast and Geodetic Survey, Wash-ington, D. C.

Secretary—Professor Laenas G. Weld, Univer-sity of Iowa, Iowa City, Iowa.

Member of Council—Professor Ormond Stone.

Sectional Committee—Dr. G. B. Halsted, Vice-President, 1903; President C. S. Howe, Secretary, 1903; Superintendent O. H. Tittmann, Vice-Presi-dent, 1904; Professor L. G. Weld, Secretary, 1904–1908; Professor W. W. Beman, one year; Dr. J. A. Brashear, two years; Professor J. R. Eastman, three years; Professor Ormond Stone, four years; Professor E. B. Frost, five years.

General Committee—Mr. Philip Fox.

Professor Alexander Ziwet, of the Uni-versity of Michigan, was elected vice-presi-dent for the next meeting.

The Chicago Section of the American Mathematical Society and the Astronom-ical and Astrophysical Society of America met in affiliation with Section A. The pa-pers presented before these affiliated socie-ties will be noticed elsewhere. Those read before Section A were as follows:

A New Treatment of Volume: Professor GEORGE BRUCE HALSTED, Kenyon Col-lege, Gambier, Ohio.

In September, 1902, Poincaré wrote in his review of Hilbert's 'Grundlagen der Geometrie': "The fourth book treats of the measurements of plane areas. If this measurement can be easily established without the aid of the principle of Archi-medes, it is because two equivalent poly-gons can either be decomposed into trian-gles in such a way that the component tri-

SCIENTIFIC JOURNALS AND ARTICLES.

The Journal of Infectious Diseases, Volume I., No. 1.

FREDERICK G. NOVY and WARD J. McNEAL: 'On the Cultivation of *Trypanosoma Brucei*.'

LOUIS B. WILSON and WILLIAM M. CHOWNING: "Studies in *Pyroplasmosis Hominis* ('Spotted Fever' or 'Tick Fever' of the Rocky Mountains)."

JOHN R. McDILL and WILLIAM B. WHERRY: 'A Report on Two Cases of a Peculiar Form of Hand Infection due to an Organism Resembling the Koch-Weeks Bacillus.'

H. GIDEON WELLS and LEE O. SCOTT: "The Pathological Anatomy of 'Paratyphoid Fever.'"

GEORGE H. WEAVER: 'Agglutination of Streptococci, Especially Those Cultivated from Cases of Scarlatina, by Human Sera.'

GUSTAV F. RUEDIGER: 'The Effects on Streptococci of Sera of Cold-blooded Animals.'

WILFRED H. MANWARING: 'The Action of Certain Salts on the Complement in Immune Serum.'

MILTON M. PORTIS: 'Experimental Study of Thyrotoxic Serum.'

ALFRED SCOTT WARTHIN and DAVID MURRAY COWIE: 'A Contribution to the Casuistry of Placental and Congenital Tuberculosis.'

C.-E. A. WINSLOW and D. M. BELCHER: 'Changes in the Bacterial Flora of Sewage During Storage.'

S. C. PRESCOTT and S. K. BAKER: 'On Some Cultural Relations and Antagonisms of *Bacillus Coli* and Houston's Sewage Streptococci; with a Method for the Detection and Separation of These Microorganisms in Polluted Waters.'

THE opening (January) number of volume 5 of the *Transactions of the American Mathematical Society* contains the following papers:

L. E. DICKSON: 'The Subgroups of Order a Power of 2 of the Simple Quinary Orthogonal Group in the Galois Field of order $p^n \equiv 8l \pm 3$.'

J. G. HUN: 'On Certain Invariants of two Triangles.'

EDWARD KASNER: 'Isothermal Systems of Geodesics.'

A. LOEWY: 'Zur Gruppentheorie mit Anwendungen auf die Theorie der linearen homogenen Differentialgleichungen.'

J. W. YOUNG: 'On the Group of the Sign (0, 3; 2, 4, ∞) and the Functions belonging to it.'

SAUL EPSTEIN: 'On the Definition of Reducible Hypercomplex Number Systems.'

E. GOURSAT: 'A Simple Proof of a Theorem in the Calculus of Variations (Extract from a Letter to Mr. W. F. Osgood).'

The American Naturalist for November is a little belated. It contains the second of the papers on 'Adaptations to Aquatic, Arboreal, Fossorial and Cursorial Habits in Mammals,' this being by Louis I. Dublin on 'Arboreal Adaptations.' In a few instances it would seem that the writer may not have distinguished between physiological adaptation and morphological characters. D. T. MacDougal considers at some length 'Mutation in Plants,' some of his conclusions being that new types of specific rank have arisen in *Oenothera* by discontinuous variation, that natural selection is universally prevalent is certainly disproved and that nothing in the nature of living organisms demands that all species should have originated in the same manner. S. E. Meek presents a paper on the 'Distribution of the Fresh-Water Fishes of Mexico,' considering that four distinct fish faunas are present, and that their origin and number of species are as follows: From the Colorado River, 9; from the Rio Grande, 80; from the Lerma, 49; and from Central America, 246. The final paper, by Pehr Olsson-Seffer, is on the 'Examination of Organic Remains in Postglacial Deposits,' particularly in peat, and contains very good and full directions as to the methods and apparatus necessary.

The Popular Science Monthly for January has for a frontispiece a portrait of the late Herbert Spencer from a bust made when he was seventy-six. The first article is 'A Case of Automatic Drawing,' by William James, with numerous illustrations of the curious pictures made by the subject. In 'The College Course' John J. Stevenson makes a plea for a return to the college with a course of four years, mainly compulsory, and in 'The Functions of Museums' F. A. Bather suggests such a division of the material as would make it most available for the general student, the special student and the general visitor. T. A. Jaggar describes 'The Eruption of Pelé, July 9, 1902'; Allan McLaughlin discusses 'Immigration and the Public Health,' suggesting more carefully drawn laws on the subject, and Amanda Carolyn Northrop considers 'The Successful Women of America,'

being a study of those who appear in 'Who's Who in America.' Authors are in the great majority, and, save in science, those educated in private schools exceed in number those educated in public schools. D. D. Wallace presents the case of 'Southern Agriculture: Its Condition and Needs,' the latter being better trained labor, credit at reasonable rates and a more suitable education for his work. Wm. Scheppegegrell describes 'Voice, Song and Speech,' and there is a reprint of Herbert Spencer's 'What Knowledge is of Most Worth?' 'The Progress of Science' contains a criticism of what the Carnegie Institution has not accomplished.

SOCIETIES AND ACADEMIES.

THE ACADEMY OF SCIENCE AND ART OF PITTSBURG. SECTION OF BIOLOGY.

THE regular monthly meeting of the section was held on December 1, in the lecture hall of the Carnegie Institute. Doctor E. G. Matson, city bacteriologist of Pittsburg, discussed with the members, the germ theory and the zymotic theory of epidemic diseases; the discovery of bacteria, their form, structure and office in the economy of nature, evidence upon which rests the doctrine that they are the causes of diseases, the advantages of having the specific agents of these diseases for practical purposes, and at the same time the possibility of getting on without this knowledge; the individuality of contagion and the necessity of taking this into account in the attempt to prevent epidemics, such as smallpox, typhoid fever and yellow fever; how the bacteria make their attack; toxin, antitoxin and the immunity problem.

The malarial mosquito received some attention, and considerable valuable information was given regarding the epidemic of typhoid fever which has been raging for several weeks in Butler, Pa. There have been about 1,800 cases, with 84 deaths, representing a fatality of a little more than 10 per cent.

Many thousands of dollars have been generously contributed from various sources.

The infection of the water supply of the

city seems to have been responsible for the general spread of the disease, two cases being discovered not far from the city's reservoir.

FREDERIC S. WEBSTER,
Secretary-Treasurer.

WISCONSIN ACADEMY OF SCIENCES, ARTS AND LETTERS.

THE thirty-fourth annual meeting of the Wisconsin Academy of Sciences, Arts and Letters was held in the State Normal School Building in Milwaukee, Tuesday and Wednesday, December 29 and 30, 1903, President J. J. Davis in the chair. The program contained thirty-six titles, nearly every field of science being represented, although physical papers were entirely absent. Several excellent papers were presented upon philosophical, pedagogical and literary subjects. The program was notable in that so many sections of the state and so many different institutions were represented. The number of papers coming from the university, from the colleges and from the normal schools was nearly equal. Volume XIV., part 1, of the *Transactions* of the academy, containing fifteen papers, has just been published.

E. B. SKINNER,
Secretary.

NORTHEASTERN SECTION OF THE AMERICAN CHEMICAL SOCIETY.

THE 48th regular meeting of the section was held Friday, December 18, 1903, at 8 P.M., at the Tech Union, Boston, President W. H. Walker in the chair. Sixty members were present.

Dr. Carl Otto Weber, of Manchester, England, addressed the section on the 'Application of Scientific Data to Technical Problems in India Rubber Manufacture,' in which he discussed the various steps in the evolution of a scheme for rubber analysis, and the methods of applying the results to the theoretical and practical consideration of the chemistry of india rubber.

ARTHUR M. COMEY,
Secretary.