BOOKS RECEIVED.

METHODS AND RESULTS.—Description of an improved Vertical Clamp for the Telescopes of the Theodolites and Meridian Instruments—United States Coast and Geodetic Survey—Appendix No. 13—Report for 1877—Washington Government Printing Office, 1880:

The advantages of this improvement, which has been devised by Mr. George Davidson, an assistant of the United States Coast Survey, may be briefly stated as follows:

I. The telescope is clamped with sufficient firmness to admit of its being moved in altitude in the vertical plane by the slow-motion screw.

II. The clamp may be made to hold the transit-axis so gently that a very delicate tap on the telescope will bring the latter to the desired elevation.

III. The top of the clamp is open, so that it permits the telescope to be lifted out for reversal and readily replaced in the Y's without carrying the clamp with it.

IV. The jaws of the open clamp remain during reversal in the same position as when unclamped before the reversal of the telescope.

V. There is no tendency to lift the vertical plate through eccentricity of the slow-motion screw, and consequently no resultant movement of the transit axis in azimuth.

We advise those who would like to know more of this improved clamp to address directly to Mr. Davidson, whose address is United States Coast and Geodetic Survey, San Francisco, Cal.

MANUAL OF THE VERTEBRATES OF THE NORTHERN UNITED STATES. By DAVID STARR JORDAN, Ph. D., M. D., Professor of Natural History in Indiana University, 3d Edition. Revised and Enlarged. Jansen, McClurg & Company, Chicago, 1880.

This book, which was originally written to afford collectors and students who were not specialists, a ready guide for identifying the families, genera and species of our vertebrate animals, is now again presented to the public in a third edition, which would appear to indicate that the work meets a demand made by Naturalists, and has been received with approval.

This is a purely technical work, the author confining himself strictly to details necessary to be understood for scientific classifications, while signs and abbreviations are freely used to reduce the matter to its lowest limits.

The author has been assisted by such eminent naturalists as Dr. Elliott Coues, Professor E. D. Cope, Dr. Theodore Gill, Professor H. E. Copeland, Mr. E. W. Nelson, Mr. B. H. Van Vleck, Mr. C. H. Gilbert and Dr. A. W. Brayton, and efforts have been made to include in this edition the results of recent investigations in this department of scientific research.

The ground covered by this work includes the district east of the Mississippi river, and north of Carolina and Tennessee, exclusive of marine species.

The work concludes with a good glossary of the principal technical terms used in the book, a glossary of specific names, and also an index to names of genera and higher groups with their derivations.

This manual of the vertebrates will prove valuable, not only to students, but to the large class of amateurs who desire to classify the forms included in this work.

THE ELECTRIC LARYNGOSCOPE, by A. WELLINGTON ADAMS, M.D. [Reprint from the Archives of Laryngology, Sept. 1880.]

We are once more reminded, by this little pamphlet, of the manifold applications of the electric light in the practical departments of medicine and surgery. Dr. Adams claims for the instrument he has devised, the following advantages: 1. The application of what is the nearest approach to sunlight—the electric light—in such a way as to bring it under perfect subjection and be readily manipulated. 2. The establishment of a permanent relationship between the source of light and the throat mirror. 3. The use of a light which emits neither gas nor heat, and is of such concentration and intensity as to illuminate the respiratory tract down to a point nearly an inch below the "bifurcation," so that every detail in the larynx and trachea down to that point is sharply defined in the throat mirror, and if the latter be large and slightly concaved, any particular detail requiring special structural examination may thus be greatly magnified.

THE VARIATIONS OF THE FIXED POINTS OF MERCURIAL THERMOMETERS, AND THE MEANS OF RECOGNIZING THEM IN THE DETERMINATION OF TEMPERATURES.—J. Pernet agrees with M. Crafts that the part played by pressure in the permanent elevation of the zero-point is very trifling, if it exist at all.

BORO-DECI-TUNGSTIC ACID AND ITS SODIUM SALTS.—According to D. Klein, if tungstic acid in excess is dissolved in a boiling solution of borax with twice its molecular weight of boric acid (crystalline), the ebullition kept up for some hours, the undissolved tungstic hydrate filtered off the resulting solution deposits crystals of boric acid and sodium polyborates. The mother-liquor, if concentrated and placed in a vacuum, deposits first borax and then the exceedingly soluble sodium salt of the new acid, containing 2 mols. of constitutional water.

APPEARANCE OF OZONE ON THE EVAPORATION OF VARIOUS LIQUIDS AS A LECTURE EXPERIMENT.—R. Böttger recommends to moisten a piece of paper uniformly with starch containing cadmium iodide, to let fall upon it a few drops of alcohol or ether, and to set the latter liquid on fire. After its evaporation the paper is found turned decidedly blue in consequence of the formation of ozone.—*Pol. Notizblatt*, 35, 95.

SINGULAR BEHAVIOR OF STANNOUS CHLORIDE WITH POTASSIUM CHLORATE.—R. Böttger states that if 2 parts of stannous chloride and 1 part potassium chlorate, both previously pulverized, are rubbed together in a porcelain mortar, the mixture becomes very hot, chlorous acid and watery vapor are evolved, and there remains a yellowish white mass, which, if dissolved in boiling water, deposits potassium perchlorate in micaceous crystals. The mother-liquor contains tin oxychloride.

HYPOCHLORINE AND THE CONDITIONS OF ITS ORIGIN IN PLANTS.—M. Pringsheim has demonstrated the existence of a body in the green cells of plants, which he named hypochlorine on account of its relation to chlorophyll. He has quite recently described, in a paper, its occurrence and its microchemical characters.

CHLORIDES OF CAMPHOR.—The products which arise on the action of phosphorus pentachloride upon camphor are affected by the quantity of the phosphorus chloride present and by the temperature. If every increase of temperature is prevented no hydrochloric acid appears, and there is formed a homogeneous camphor dichloride in theoretical quantities. Pfaundler's dichloride, and the body melting at 60° and described as monochloride, are probably merely mixtures. F. V. SPITZER—*Wien. Anzeiger*, 1880, 71.

DECOMPOSITION OF SIMPLE ORGANIC COMPOUNDS BY ZINC-DUST.—The higher alcohols from ethylic alcohol upwards, on distillation over zinc-powder which was heated to 330°, to 350°, were decomposed into the corresponding olefine and hydrogen. Under the same circumstances methylic alcohol is resolved into carbonic oxide and hydrogen. HANS JAHN.—*Wiener Anzeiger*, 1880, 73-74.

NEW SYNTHESIS OF DIMETHYL-ACRYLIC ACID.—This compound is formed along with ethylisoxy-valerianic acid when brom-iso-valerianic ether is brought in contact with sodium ethylate in absolute alcohol. E. DUVILLIER.—*Ann. Chim. Phys.*, 19, 429.