

Number 245.

| | Page |
|---|------|
| ART. XLI.—Relationship of the Pleistocene to the Pre-pleistocene of the Mississippi Basin, south of the glaciation limit; by T. C. CHAMBERLIN and R. D. SALISBURY | 359 |
| XLII.—Measures of the Intensity of Solar Radiation; by W. M. FERREL | 378 |
| XLIII.—Age of the Saganaga Syenite; by H. V. WINCHELL | 386 |
| XLIV.—Self-feeding Sprengel Pump; by H. L. WELLS | 390 |
| XLV.—Contributions to Mineralogy, No. 50; by F. A. GENTH; with Crystallographic Notes by S. L. PENFIELD and L. V. PIRSSON | 394 |
| XLVI.—Contributions to Mineralogy, No. 51; by F. A. GENTH | 401 |
| XLVII.—Columbite of the Black Hills; by W. P. BLAKE | 403 |
| XLVIII.—The Raised Reefs of Fernando de Noronha; by H. N. RIDLEY | 406 |
| XLIX.—Cause of Active Compressive Stress in Rocks and Recent Rock Flexures; by T. M. READE | 409 |
| L.—Phosphates from the Black Hills; by W. P. HADDEN | 415 |
| LI.—Certain Peculiarities in the Behavior of a Galvanometer when used with the Thermopile; by E. MERRITT | 417 |
| LII.—Supplementary Notice on the Polycrase of North and South Carolina; by W. E. HIDDEN and J. B. MACKINTOSH | 423 |

SCIENTIFIC INTELLIGENCE.

Chemistry and Physics.—Speed of Chemical Reactions in Jelly, REFORMATSKY, 425.—Direct-reading of Volumes in Vapor-density Determinations, LUNGE and NEUBERG, 426.—Hydrazoic Acid, CURTIUS and RADENHAUSEN: Production of Arabinoose from Wheat bran, STEIGER and SCHULZE: Distinguishing Arsenic from Antimony, DENIGÈS, 427.—Priestley's Eudiometric method, WANKLYN: Crystalline Liquids, LEHMANN: Refractive indices of Water, BRÜHL, 428.—Genesis of the Elements, W. CROOKES, 429.—Geschichte der Photographie, C. SCHIENDL, 430.—Die Elektrischen Verbrauchsmesser E. DE FODOR: Das Totalreflectometer, etc., PULFRICH: Appleton's School Physics, 431.—Handwörterbuch der Chemiker, C. SCHAEGLER: Bibliotheca Polytechnica, 432.

Geology and Natural History.—Rock-fracture at the Combined Locks Mill, Appleton, Wisconsin, F. CRAMER, 432.—Bulletin of the Geological Society of America, Vol. II, 434.—Cambrian fossils in the Stockbridge limestone of Vermont, J. E. WOLFF: Geological Survey of Kentucky: Geological Survey of Missouri, S. A. MILLER: Geological Survey of Arkansas, J. C. BRANNER, 435.—Geological Survey of Texas: Geological Survey of Alabama: Bibliography of Palæozoic Crustacea from 1698 to 1889, A. W. VOGDES, 436.—Organization of the Fossil Plants of the Coal-Measures, W. C. WILLIAMSON, 437.—Catalogue of the Fossil Cephalopoda in the British Museum, Part II, A. H. FOORD: Mineralogical notes, W. E. HIDDEN and J. B. MACKINTOSH, 438.—Mineralogical notes, W. E. HIDDEN, 439.—Teuth Annual Report of the State Mineralogist of California, 440.—Allgemeine Chemische Mineralogie, DOELFER: Index der Krystallformen der Mineralien, GOLDSCHMIDT: Gray's Manual of Botany, WATSON and COULTER, 441.—Hypertrophie des lenticelles chez la pomme de terre, etc., DEVAUX: The Nursery-Book, Guide to the Multiplication and Pollination of Plants, BAILEY, 442.—Turbellaria Accela, L. von GRAFF, 443.

Miscellaneous Scientific Intelligence.—Recent eruption of Kilauea, E. P. BAKER: Depths of 3000 fathoms in the Indian Ocean, 443.—Catalogue of the Crawford Library: Dr. Goodale in New Zealand: Missouri Geological Survey, 444.

Obituary.—JAMES B. MACKINTOSH, 444.