

CONTENTS.

NUMBER CI.

	Page
ART. XLI.—Experiments in Cross-Breeding Plants of the same variety; by W. J. BEAL, .....	343
XLII.—Force of Effective Molecular Action; by W. A. NORTON, .....	346
XLIII.—Mineral Locality in Fairfield County, with the description of two additional new species; by GEORGE J. BRUSH and EDWARD S. DANA. Second paper, .....	359
XLIV.—Fox Hills Group of Colorado; by J. J. STEVENSON, .....	369
XLV.—Spectrum of Brorsen's Comet; by C. A. YOUNG, ...	373
XLVI.—Hudson River Age of the Taconic Schists, and on the Dependent Relations of the Dutchess County and Western Connecticut Limestone belts; by J. D. DANA, ..	375
XLVII.—Explorations in the Wappinger Valley Limestone of Dutchess County, New York; by W. B. DWIGHT, ...	389
XLVIII.—Observations on the Planet discovered March 21st; by C. H. F. PETERS, .....	393
XLIX.—Stratigraphy of the Huronian Series of Northern Wisconsin; by R. D. IRVING, .....	393
L.—Composition of the Cymatolite from Goshen, Mass.; by A. A. JULIEN, .....	398
LI.—Relations of the Volumes of Solutions of Hydrated Salts to their Water of Composition; by R. J. SOUTHWORTH, ..	399
LII.—Analysis of the Tetrahedrite from Huallanca, Peru; by W. J. COMSTOCK, .....	401

SCIENTIFIC INTELLIGENCE.

*Chemistry and Physics.*—Determination of Fusing Points, TERREIL: Chromium, Manganese, Iron, Nickel and Cobalt Amalgams, MOISSAN, 402.—Chromates and Dichromates, SCHULERND: Purification of Mercury, BRÜHL, 403.—Eikosylene, a hydrocarbon from the Paraffin of Brown coal, LIPPMANN and HAWLICZEK: Transformation of Starch into Dextrose in the Cold, RIBAN, 404.—Structure-formulas of Aromatic Compounds, WROBLEVSKY: Phthalein of Orthocresol, FRAUDE, 405.—Baryta and Strontia, 406.—Illumination of gases by Electric discharges, WIEDEMANN: New current interrupter, F. NIEMOLLER: Dimensions of Molecules, R. RUHLMANN, 407.—American Chemical Journal, 409.

*Geology and Natural History.*—Fossil Forests of the Volcanic Tertiary Formations of the Yellowstone National Park, W. H. HOLMES: Fruit-bearing branch of Cordaites from Cannelton, Pennsylvania, 409.—Woodland Caribou or Reindeer from the Loess of Iowa, LEIDY: Annual Report of the Wisconsin Geological Survey, for the year 1878, T. C. CHAMBERLIN: Amber and Asphaltum from Vincenttown, New Jersey, E. GOLDSMITH: Guides for Science-Teaching, 410.—Function of the Sterile Filament of Pentstemon, LEO ERRERA, 411.—Revue Mycologique: Meehan's Native Flowers and Ferns of the U. States, 412.—Observations on Several Forms of Saprolegniæ, F. B. HINE: Popular California Flora, or Manual of Botany for Beginners, V. RATTAN: Halosphæra, eine neue Gattung grüner Algen aus dem Mittelmeer, SCHMITZ, 413.—Dr. W. G. Farlow, 414.

*Miscellaneous Scientific Intelligence.*—Intra-Mercurial Planet: Geological Society of London, 414.—Geological Survey of the Territories of the United States: Gold Medal of the Astronomical Society: Paris Academy of Sciences: Memoirs of the Museum of Comparative Zoology: Report of the Observations of the total Solar Eclipse, July 29th, 1878, made at Fort Worth, Texas, L. WALDO, 415.

*Obituary.*—Frank Howe Bradley, 415: Dove: W. K. Clifford, 416.