

throw Light on the Problem of its Constitution'; Section IV., 'Cellulose Groups, including Hemicelluloses and Tissue Constituents of Fungi'; Section V., 'Furfuroids, *i. e.*, Pentosanes and Furfural-yielding Constituents Generally'; Section VI., 'The Lignocelluloses'; Section VII., 'Pectic Group'; Section VIII., 'Industrial and Technical; General Review'; Index of authors; Index of subjects.

The authors should be highly commended for their appreciation and treatment of the practical industrial problems connected with cellulose. Pure science is not lowered in the estimation of most men because it may have practical bearings, and it is almost needless to say that some of the greatest advancements in scientific knowledge have been brought about by men who had an eye for the practical as well as the scientific side of investigations. The subject is developing rapidly at the present time from both the scientific and the practical side, and it certainly offers an inviting field for students of chemistry who wish to make their work count for something in the commercial as well as the scientific world.

A. F. Woods.

#### SCIENTIFIC JOURNALS AND ARTICLES.

THE *Journal of Comparative Neurology* for June contains the following articles: (1) 'Number and Size of the Spinal Ganglion Cells and Dorsal Root Fibers in the White Rat at Different Ages,' by S. Hatai. The number of spinal ganglion cells does not change with age, though some small cells become large cells and the number of dorsal root fibers increases. (2) 'Observations on the Medulla Spinalis of the Elephant with some Comparative Studies of the Intumescencia Cervicalis and the Neurones of the Columna Anterior,' by I. Hardesty. In addition to the histological examination of the elephant, there is a similar study of the spinal cords of a series of twelve mammals of diminishing body weights, with statistics of the ratios to body weights of the dimensions of the spinal cord and ventral horn cells. (3) 'Observations on the Post-mortem Absorption of Water by the Spinal Cord of the Frog,' by H. H. Donaldson and Daniel M. Schoe-

maker. There is a post-mortem absorption of water by the spinal cord of *Rana virescens* amounting sometimes in 24 hours to 25 per cent. of the normal weight of the cord. The conditions under which this absorption takes place were experimentally studied. (4) 'Observations on the Developing Neurones of the Cerebral Cortex of Foetal Cats,' by S. Hatai. Confirms Paton's observation that the dendrites develop before the neurites or axones. The usual literary notices complete the number.

THE contents of the *American Journal of Mathematics* for July, 1902, are as follows:

'Die Typen der linearen Complexe elliptischer Curven im  $R_n$ ,' von S. Kantor; 'Generalization of the Differentiation Process,' by Robert E. Moritz; 'Simple Pairs of Parallel W-Surfaces,' by Henry Dallas Thompson.

#### SOCIETIES AND ACADEMIES.

##### THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

WE have received preliminary lists of the papers to be presented before three sections of the Pittsburg meeting of the American Association for the Advancement of Science, as follows:

##### SECTION C AND THE AMERICAN CHEMICAL SOCIETY.

*Tuesday, July 1, 1902.*

'Valence': IRA REMSEN.

'The Ozone from Potassium Chlorate': EDWARD HART.

'Electric Combustion': EDWARD HART.

'The Chlorides of Ruthenium': JAS. LEWIS HOWE.

'Electrolytic Deoxidation of Potassium Chlorate': WILDER D. BANCROFT.

'The Solid Phases in Certain Alloys': WILDER D. BANCROFT.

'An Improved Grinder for Analysis of Motherbeets': DAVID L. DAVOLL, Jr.

'The Electrical Conductivity and Freezing Points of Aqueous Solutions of Certain Metallic Salts of Tartaric, Malic and Succinic Acids': O. F. TOWER.

'Recent Progress in the Fireproofing Treatment of Wood': SAM'L. P. SADTLER.

'Ionic Velocities in Liquid Ammonia Solutions': E. C. FRANKLIN.