

# SCIENCE

EDITORIAL COMMITTEE: S. NEWCOMB, Mathematics; R. S. WOODWARD, Mechanics; E. C. PICKERING, Astronomy; T. C. MENDENHALL, Physics; R. H. THURSTON, Engineering; IRA REMSEN, Chemistry; J. LE CONTE, Geology; W. M. DAVIS, Physiography; O. C. MARSH, Paleontology; W. K. BROOKS, C. HART MERRIAM, Zoology; S. H. SCUDDER, Entomology; C. E. BESSEY, N. L. BRITTON, Botany; HENRY F. OSBOEN, General Biology; C. S. MINOT, Embryology, Histology; H. P. BOWDITCH, Physiology; J. S. BILLINGS, Hygiene; J. MCKEEN CATTELL, Psychology; DANIEL G. BRINTON, J. W. POWELL, Anthropology.

FRIDAY, SEPTEMBER 30, 1898.

## CONTENTS:

<i>The Electric Current in Organic Chemistry:</i> PROFESSOR EDGAR F. SMITH.....	413
<i>The Conception of Species as Affected by Recent Investigations on Fungi:</i> PROFESSOR W. G. FARLOW.....	423
<i>The British Association for the Advancement of Science.</i> .....	436
<i>Notes on Inorganic Chemistry:</i> J. L. H.....	439
<i>Current Notes on Anthropology:—</i>	
<i>The Trenton Ice Man; Ancient Mexican Migrations; The Color of the American Indian:</i> PROFESSOR D. G. BRINTON.....	440
<i>Scientific Notes and News</i> .....	441
<i>University and Educational News</i> .....	446
<i>Scientific Literature:—</i>	
<i>Nature Study in Elementary Schools:</i> WILBUR S. JACKMAN.....	446
<i>New Books</i> .....	448

MSS. intended for publication and books, etc., intended for review should be sent to the responsible editor, Professor J. McKeen Cattell, Garrison-on-Hudson, N. Y.

## THE ELECTRIC CURRENT IN ORGANIC CHEMISTRY.\*

It is now almost a century since Volta, the Italian physicist, wrote the following words:

"I have made experiments, showing the transmission of the electric fluid. \* \* \* I

\*Address of the Vice-President before Section C—Chemistry—of the American Association for the Advancement of Science, August, 1898.

have applied different metals to all sorts of animal bodies \* \* \* even to such substances as paper, leather, linen (well saturated with water), as well as to water itself. \* \* \* The metals are not only conductors of electricity, but they also excite it, and this is a grand discovery!"

Yes, it was, indeed, a 'grand discovery,' for it led to further investigation with the final demonstration that animal and metal electricity were identical. What is more, it unquestionably opened the way to the construction of the battery bearing the name of this honored investigator, who, however, little dreamed of the splendid achievements which were to follow the introduction into chemistry of the form of energy made so readily accessible by his battery and its numerous subsequent modifications. For history tells us that he failed to observe the decomposition which arose upon immersing the terminals of one of his cells into water. That was to remain for the keener vision of Nicholson and Carlisle. The chemical phenomena, exhibiting themselves constantly to Volta while experimenting with his battery, were to him absolutely devoid of interest, yet they continued to crowd to the front and eventually attracted the attention of a brilliant coterie of investigators, whose discoveries could never have come in their most shadowy forms to Volta in his wildest dreams! In evidence of this I need merely mention the