

SCIENCE

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CONTENTS:

<i>Chemistry in the United States:</i>	F. W. CLARKE.....	117
<i>The American Physiological Society:</i>	FREDERIC S. LEE.....	129
<i>Electrification of Air by Röntgen Rays:</i>	LORD KELVIN, J. G. BEATTIE, M. SMOLUCHOWSKI DE SMOLAN.....	139
<i>Current Notes on Anthropology:—</i>		
<i>Origin of Rock Paintings; The Meaning of Mourning; Primitive Travel and Transportation:</i>	D. G. BRINTON.....	141
<i>Scientific Notes and News:—</i>		
<i>Modern Army Rifles; General</i>	142
<i>University and Educational News</i>	146
<i>Discussion and Correspondence:—</i>		
<i>A National Department of Science: WASHINGTONIAN. The Jurassic Wealden (Tithonian) of England: JULES MARCOU. Compliment or Plagiarism: GEORGE BRUCE HALSTED. A Meteorological Conference at Paris: A. LAWRENCE ROTCH. The Study of Fear: WESLEY MILLS. Glossophaga truci: HARRISON ALLEN.....</i>		147
<i>Scientific Literature:—</i>		
<i>Duvelshauvers-Dery's Étude de Huit Essais de Machine à Vapeur: R. H. THURSTON. Hutchinson on Prehistoric Man and Beast: D. G. BRINTON. Hart's Chemistry for Beginners. JAS. LEWIS HOWE. Lassar Cohn on Die Chemie im Täglichen Leben: W. R. O.....</i>		153
<i>Scientific Journals:—</i>		
<i>The American Chemical Journal: J. ELLIOTT GILPIN.....</i>		157
<i>Societies and Academies:—</i>		
<i>Nebraska Academy of Sciences: G. D. SWEZEY. Biological Society of Washington: F. A. LUCAS. The Academy of Science of St. Louis: WILLIAM TRELEASE. Northwestern University Science Club: A. R. CROOK. University of Wisconsin Science Club: WM. S. MARSHALL.....</i>		158

CHEMISTRY IN THE UNITED STATES.*

IN the history of science, from whatever point of view we may consider it, the several branches develop according to a natural order. The more obvious things attract attention first; the less obvious are recognized later. Plants, animals, stones and stars are studied even by savages; but the hidden forces of nature, governed by laws which can be utilized for man's benefit, escape discovery until civilization is far advanced, and even then are revealed but slowly. At first each department of knowledge is purely empirical, a mass of facts without philosophical connection; but sooner or later speculation begins, the scattered evidence is generalized, and an organized science is born. The study of concrete facts, the recognition of our surroundings, precedes the study of relations.

Among the sciences, chemistry is one of the youngest. As an organized branch of systematic knowledge it has little more than completed its first century. Before the time of Robert Boyle it was hardly better than empiricism. At first a few scattered facts were recognized, involving transformations of matter. Some of these were applied in the arts, as in metallurgy and in medicine; and their generalization led simply and naturally into alchemy, with its search for the philosopher's stone, the uni-

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