

for many years, and slightly to this day, I hesitate in naming Dearborn and Randolph Streets. Of course, any one living upon either of these streets would soon overcome such confusion through one name appearing oftener than the other in use.

The knowledge of this disposition has enabled me sometimes to recover the proper word by taking other words with the same "pivotal" letter, or sound, regardless of their sequence in spelling the word sought.

S. V. CLEVINGER.

Supt. Ill. East. Hospital for Insane.

#### Singing of Birds.

IN reply to a query by E. B. Titchener (*Science*, April 7) with regard to the expression of emotions in the singing of birds, I have a few notes. A song-sparrow, *Melospiza melodia*, with a broken leg past mending, was kept in our house in a cage about a year and a half, fed, bathed, otherwise cared for and occasionally allowed the freedom of a room. A happier, merrier fellow, I never saw. He sang early and late, nearly the year round, moped a few days and died. The taxidermist said he was much wasted in flesh, and had lived as long as he could. He was kept as comfortable as possible, and his song seemed purely an expression of happiness.

MARY B. MOODY.

Fair Haven Heights, New Haven, Conn., May 2.

#### Photographs of Botanists.

YOUR botanical subscribers and readers most likely will be interested in the collection of photographs of about 150 American botanists and a small number of foreign botanists, that Michigan State Agricultural College is displaying in the Departments of Liberal Arts at the Columbian Exposition.

I hope still others of the "fraternity" will be willing to add a cabinet-sized picture of themselves to a supplementary list, to gratify their friends.

W. J. BEAL.

Agricultural College P. O., Mich., May 3.

#### CALENDAR OF SOCIETIES.

**New Mexico Society for the Advancement of Science, Las Cruces, N.M.**

April 6.—F. C. Barker, The English Form of Government; C. H. Tyler Townsend, Life Zones of the Organ Mountains in Southern New Mexico.

**Anthropological Society, Washington.**

May 2.—Henry Gannett, Estimates of Wealth; Wm. T. Harris, The Great Benefit to the Public of the Estimates of Wealth; Anita Newcomb McGee, Transmission of Congenital Deformity; J. D. McGuire, The Evolution of Stone Working.

May 9.—J. N. B. Hewitt, Common Errors in Regard to Indian Language; H. E. Warner, Primitive Belief in a Future State: a Comparative Study; F. A. Seely, The Pivot Point in Modern History; Andrew Palaeologue at Barcelona; Thomas Wilson, Fourth Centenary of the Discovery of America, at Madrid, 1892.

**Geological Society, Washington.**

May 10.—Walter H. Weed, The Post-Laramie Beds of Montana; J. S. Diller, The Tertiary Revolution in the Topography of the Pacific Slope.

**Philosophical Society, Washington.**

May 18.—E. D. Preston, Remarks on the Method of Reducing the Waikiki Observations for Changes of Latitude—Results; F. H. Cushing, Ancient Pueblo Arches; Cleve-

land Abbe, The Formation of Rain; G. K. Gilbert, The Average Temperature of the Earth.

### THE AMERICAN RACE.

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### FOSSIL RESINS.

This book is the result of an attempt to collect the scattered notices of fossil resins, exclusive of those on amber. The work is of interest also on account of descriptions given of the insects found embedded in these long-preserved exudations from early vegetation.

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#### BOOK-REVIEWS.

*Coal-Pits and Pitmen: A Short History of the Coal Trade and the Legislation Affecting It.* By R. NELSON BOYD. London, Whittaker & Co., 1892. 256 p. 12°.

IN this volume, which is an enlarged edition of a paper published under the title of "Coal-Mine Inspection: Its History and Results," the author has gathered a great number of facts relative to the subject. In one chapter he gives an account of the condition of the colliery population during the last century, which is not a pleasing one. The harsh methods of treatment led to many strikes and great destruction of property. The men were at first practically slaves, but an act of Parliament passed in 1775 and another in 1799 did away with the system of bondage, although with little benefit to the men at first. Subsequent acts have mitigated the rigors of their condition and protected them from the rapacity of mine owners and overseers.

The history of the coal trade is treated of in considerable detail, and mention is made of early explosions and means of ascertaining the presence of fire-damp. The early machinery, of a very primitive character compared with modern appliances, is also described. The investigations of one of the various Parliamentary committees show the condition of the colliery operatives in 1833. In referring to this subject, Mr. Boyd states that, "The children were frequently beaten by the men for whom they worked; so much so, that 'they seldom slept with a whole skin.' Besides this, their backs were cut with knocking against the roof and sides of the roadway, and their feet and legs covered with sores and gatherings, owing to the water. The children, boys and girls, earned their wages by drawing the coals in tubs along the galleries by means of a belt and a chain passing between the legs. Many girls were thus employed, and after a time became crooked and deformed. From the nature of the work they soon became as rough and uncouth as the men and boys, fighting and swearing like them."

Considerable attention is given to colliery explosions, and the


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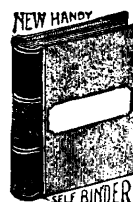
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