Mr. L. O. Howard, consulting engineer of Salt Lake City, has been appointed dean of the School of Mines of the State College of Washington at Pullman.

At the Stevens Institute of Technology, L. A. Hazeltine has succeeded the late Professor Ganz as acting professor of electrical engineering in charge of the department.

James H. Ellis, research associate in physical chemistry at Throop College of Technology, Pasadena, Cal., has become a member of the physics department of the college as instructor in electrical measurements.

Mr. I. L. Miller, of Indiana University, has been appointed professor of mathematics in Carthage College.

Professor A. S. Leyton has resigned the chair of pathology and bacteriology of the University of Leeds.

DISCUSSION AND CORRESPONDENCE

SOCIEDAD CIENTÍFICA ANTONIO ALZATE

For those who have been led by a perusal of the daily papers to suppose that Mexico was in a progressive state of disorganization, the recent issues of the "Memorias" of the "Sociedad Científica Antonio Alzate," of Mexico City, will afford good proof that their hasty judgment had been erroneous.

The thirty-sixth volume of the Memorias of this Society, which has just appeared, and comprises 740 pages of text with 82 plates, is entirely devoted to a monograph on the State of Puebla by Señor Enrique Juan Palacios.[1] His study falls into three main sections, the first of which regards the ethnology, geology and climatology of the state, the second, its flora and fauna, its industries, its mineral resources, and its commerce and means of communication; the third section treats of the political divisions of the state, and of its history, embracing a description of its principal communities, chief among which is of course the city of Puebla, consisting of about 100,000 inhabitants.

The area of the state is given by the writer as 33,653 square kilometers, or about 14,000 square miles, and its population as nearly 1,100,000, showing a density of nearly 80 to the square mile. In population it ranks third among the Mexican states. The white race numbers 86,000, the population of mixed race 826,000 (three quarters of the whole), and the Indians, nearly 200,000. Within its territory is the highest peak in North America, with the exception of Mount McKinley. This is the mountain bearing the Indian name Citlaltépal, or "Smoking Mountain," though often called Orizaba. It rises to a height of 5,675 meters, or 18,614 feet, and is an extinct, or at least an inactive volcano.

The fossil remains found in the state of Puebla are of considerable importance. Among them are bones of *Elephas Columbi* Falconer, found at San Jeronimo, in the district of Tehuacán, and also in the region about the city of Puebla. Within the limits of its municipality, at Molino de Santa Barbara, fossil elephant tusks have been unearthed; mastodon tusks have also been discovered in the state, as well as teeth of *Elephas primigenius* (pp. 54, 55).

Ample space has been devoted to the mineral resources of Puebla and to their exploitation. While the principal interests of the state are agricultural and industrial, there were, according to the statistical report of 1907, as many as 29 mines then in operation (copper, iron, gold, silver and lead), the number of persons employed being 1,068; the production was valued at 1,168,428 Mexican dollars. Most of these mines must have been small undertakings, since Southworth in his Mining Directory for 1908 only notes three mines as in active operation, that of San Lucas (gold and silver) in the district of Tehuacan; that of Tetala, an English company organized in 1904, with a capital of £100,000, and the mine "La Aurora" of Tezuitlan, an enterprise dating from 1905,

[1] "Memorias y Rivista de la Sociedad Científica Antonio Alzate," published under the direction of the perpetual secretary, Rafael Aguilar y Santillan, Tomo 36, 2 parts, Mexico, June, 1917. 740 pp., 82 plts., 8°, "Puebla, su territorio y sus habitantes," by Enrique Juan Palacios.

and having resources put at 10,000,000 Mexican dollars.

Of what might be called precious-stone material there is very little signalized; some opal is found at Tecali and Tlatlauqui, and azurite occurs in Acatlan. The so-called "Mexican Onyx" (an aragonite) of the district of Tecali in the state of Puebla is well known, and was already used by the Aztecs for ornamental purposes.

In the State College in Puebla, where courses of law, medicine and engineering are given, besides the customary preparatory studies, there are excellent collections illustrating physics, chemistry, bacteriology and histology, and also radiographic and radioscopic installations, as well as apparatus for wireless telegraphy. There is also a well-furnished natural history collection and an important museum.

The few items presented here may give a little idea of the quality of this monograph, though insufficient to indicate the wide field it so ably covers. It certainly merits to be consulted by all who are seeking information regarding one of the principal states of the Mexican Federation.

GEORGE F. KUNZ
NEW YORK CITY

THE TALKING MACHINE AND THE PHONOGRAPH

TO THE EDITOR OF SCIENCE: Professor Peckham's interesting account of the talking machine, as distinguished from the phonograph, in SCIENCE of November 9, closes with this statement:

> It is not probable that any one had thought of a phonograph in the sense in which we use the term as early as 1772. Knowledge of electricity was not sufficiently advanced at that time.

This, I presume, is a mere slip of the pen, the writer thinking perhaps of the telephone while writing of the talking machine and the phonograph. Otherwise some of us who are engaged in other fields of science, and hence can lay claim to no special knowledge of physics, would like to have pointed out to us the connection between electricity and the ubiquitous phonograph.

J. VOLNEY LEWIS

SCIENTIFIC BOOKS

Mental Adjustments. By FREDERICK LYMAN WELLS, Ph.D. New York & London: D. Appleton & Co., 1917.

F. L. Wells wrote his book with a rather unusual background. Trained in the experimental school of Cattell and Woodworth, Wells took up his work at the McLean Hospital in 1907, where he returned after one year's work with Dr. August Hoch on Ward's Island and with considerable contact with Dr. Charles Macfie Campbell, to whom the book is dedicated. Coming from a school which might be frankly dynamic and objective, if it had the necessary philosophical courage combined with a desire for consistency, Wells found most valuable opportunities at the McLean Hospital owing to the excellent tradition established there by Dr. Hoch in the study of an uncommonly interesting type of patients; and even before he went to Ward's Island he had been concerned with association experiments and with problems which were bound to bring him into touch with the sphere of ideas of Freud and Jung. His studies of the last few years have shown a growing mastery of the psychopathological problems and the present book gives ample evidence of earnest and able collaboration along lines very characteristic of modern American psychopathology.

Eight chapters constitute this book of 331 pages. In "Mental Adaptation" he gives illustrations of types and problems of adaptation and in a way a forecast of the book. The discussion of "Use and waste in thought and conduct" leads the reader, in one of the best organized chapters of the book, to a very direct understanding of fundamental adaptive trends and their adjustments and supplements, many times crossing the boundary between the "motor" and "mental" varieties of behavior, "granting, indeed, that such a boundary exists." He gives a very good picture of the rôle of fancy and autistic thinking (*i. e.*, primitive fancy unconcerned about reality) and especially of the rôle of word-plays and of rationalization. He sums up the discussion by saying that "realistic thinking contributes mainly to making it possible to exist, and