

SCIENCE

VOL. LVII MARCH 2, 1923 No. 1470

GEOLOGY'S DEBT TO THE MINERAL INDUSTRY¹

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| <i>The American Association for the Advancement of Science:</i> | |
| <i>Geology's Debt to the Mineral Industry:</i> | |
| DR. WILLET G. MILLER..... | 247 |
| <i>The Schoolmaster and the Teacher:</i> PROFESSOR E. G. MAHIN..... | 252 |
| <i>Bernhard Eduard Fernow</i> | 255 |
| <i>George Lefevre:</i> PROFESSOR W. C. CURTIS..... | 256 |
| <i>Scientific Events:</i> | |
| <i>The New Element Hafnium; Geodetic and Tidal Surveys; Colloid Chemistry; Dr. Paul Wagner; Sigma Xi Lectures; Grants for Research Work made by the American Association for the Advancement of Science..</i> | 258 |
| <i>Scientific Notes and News</i> | 261 |
| <i>University and Educational Notes</i> | 267 |
| <i>Discussion and Correspondence:</i> | |
| <i>A New Magneto-optic Effect:</i> PROFESSOR R. W. WOOD and ALEXANDER ELLET. <i>Movement of Glaciers:</i> WM. C. ALDEN. <i>Sodium Iodide in Table Salt:</i> DR. INGO W. D. HACKH. <i>An Entomological Antique:</i> EDWARD P. VAN DUZEE. <i>Aymara Type of Head Deformation in the United States:</i> DR. ALEŠ HRDLÍČKA. <i>Science and Commercialized Athletics:</i> DR. W. E. ALLEN. <i>Methods of the Carnegie Institution:</i> PROFESSOR GRAHAM LUSK. <i>Tingitide:</i> DR. A. C. BAKER..... | 267 |
| <i>Scientific Books:</i> | |
| <i>Britton and Rose on the Cactaceæ:</i> DR. NORMAN TAYLOR..... | 272 |
| <i>Special Articles:</i> | |
| <i>The Cytology of Vegetable Crystals:</i> PROFESSOR FRANCIS E. LLOYD. <i>Bacterial Spot of Cow Pea:</i> DRS. MAX W. GARDNER AND JAMES B. KENDRICK. <i>A Revolution Recorder:</i> PROFESSOR J. R. SLONAKER..... | 273 |
| <i>The American Mathematical Society:</i> PROFESSOR ARNOLD DRESDEN..... | 276 |

SCIENCE: A Weekly Journal devoted to the Advancement of Science, publishing the official notices and proceedings of the American Association for the Advancement of Science, edited by J. McKeen Cattell and published every Friday by

THE SCIENCE PRESS

100 Liberty St., Utica, N. Y. Garrison, N. Y.

New York City: Grand Central Terminal

Annual Subscription, \$6.00. Single Copies, 15 Cts.

Entered as second-class matter January 21, 1922, at the Post Office at Utica, N. Y., Under the Act of March 3, 1879.

OF recent years it has come to be acknowledged more and more that the science of geology has done and is doing much to advance the mineral industry. On the other hand, it may be of interest to consider briefly what bearing the industry has had on the advancement of the science. In what state of development would geology now be were it not for the assistance it has received from the mineral industry?

In the earlier ages of man the chief interest taken in the components of the earth's crust, in most regions, was, doubtless, chiefly what may be called an economic one. Suitable specimens of flint and other rocks were sought for the manufacture of weapons and utensils. The soft oxides of iron and other paint materials would also early attract attention. In volcanic and earthquake regions other interests would be aroused. Gradually a knowledge of the use of metals would be developed and methods of extracting certain of them from the ores would be discovered by accident. In later ages the economic interest became subordinate to the philosophical. For many centuries little progress could be made in a proper knowledge of the earth's crust until restraining prejudices were gradually thrown aside. It was only at the close of the 18th century that the struggling science began to make real progress. Whatever may be thought of the relative merits of the so-called Neptunists and Plutonists of that time, it cannot but be admitted that Werner was largely responsible for creating a keener and more widespread interest in the proper study of the earth's crust than had existed prior to his day. And this interest was aroused chiefly through his showing that a knowledge of the structural relations of rocks could be applied to economic purposes. Thus, in what

¹ Address of the vice-president and chairman of Section E—Geology and Geography, American Association for the Advancement of Science, Boston, December, 1922.

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