SCIENCE

Vol. LXVII JANUARY 13, 1928 No. 1724

CONTENTS

American Association for the Advancement of
Science:
Geology and the World at Large: Professor
George H. Ashley 21
Purposive Action: PROFESSOR MARGARET FLOY
WASHBURN
The Collecting of Folk Songs by Phonophotography:
DR. MILTON METFESSEL
Scientific Events:
New Laboratories for the Faculty of Medicine at
Paris; Proposed Transfer of the Geodetic Work
of the U.S. Coast and Geodetic Survey; Annual
Meeting of the Northwest Scientific Association;
Resolutions on the Death of Dr. Francis W. Pea-
body; The Ninth International Congress of Psy-
chology
Scientific Notes and News
University and Educational Notes
Discussion and Correspondence:
On the Mechanism of Orientation of Atoms in Magnetic and Electric Fields: THOMAS H. JOHN-
son. The Identity of the Clear Creek Skull:
HARVEY S. THATCHER. Bibliography of Color- imetry: Dr. IRWIN G. PRIEST, No Meteorite:
5
R. W. STONE. Consider the User of Bulletins: Dr. L. O. HOWARD
Scientific Books: Eddington on Stars and Atoms: Dr. H. T.
•
STETSON 41
The Correlation Between Intelligence and Speed
in Conduction of the Nerve Impulse: Dr. LEE
Edward Travis. A Comparison of Growth Curves
of Man and Other Animals: Dr. SAMUEL BRODY.
Progenies from X-rayed Sex Cells of Tobacco:
а: эт
x

SCIENCE: A Weekly Journal devoted to the Advancement of Science, edited by J. McKeen Cattell and published every Friday by

THE SCIENCE PRESS

New York City: Grand Central Terminal.

Lancaster, Pa. Garrison, N. Y Annual Subscription, \$6.00. Single Copies, 15 Cts.

SCIENCE is the official organ of the American Association for the Advancement of Science. Information regarding membership in the Association may be secured from the office of the permanent secretary, in the Smithsonian Institution Building, Washington, D. C.

Entered as second-class matter July 18, 1923, at the Post Office at Lancaster, Pa., under the Act of March 8, 1879.

GEOLOGY AND THE WORLD AT LARGE¹

I HAVE no new discovery to announce nor shall I follow the precedent of reviewing the history of geology in part or in whole. Rather I shall ask you to step out of the procession and with me watch it go by. In brief, we shall try to see ourselves as others see us. Frankly, the picture is not flattering. To the world at large geology has taken a back seat. She has lost prestige as compared with other subjects of human thought, and is serving neither herself nor the world as she can and ought. I believe the situation is a challenge to geologists to take stock of where they stand and to again get into the procession in a place commensurate with the large human interest of the subject they represent.

For the past eight years my associations have been mainly and very close with men outside the profession—bankers, merchants, lawyers, judges, manufacturers, bakers, butchers and candlestick-makers. Hundreds of these men call me by my first name and have told me how much they don't know about geology and why.

I live in a town where most of the leading men of all professions are conservative, in theology and otherwise. I do not think that they differ greatly from the leading business and professional men of other towns, and I feel that these men would be vastly enriched in their thinking by a clear knowledge of the larger findings of science in general and of geology in particular.

How many members of your home chamber of commerce or your Rotary or Kiwanis or other service clubs, for example, have any clear idea of geologic time, a conception in which years and centuries sink into insignificance that puts human history in its proper setting, or of the vast geologic changes the earth's surface has undergone or of the story of life's marvelous unfolding up the geologic ages as read in the rocks? My own conclusion is that not one in ten of the big men of my town, the men who own the big stores or manufacturing plants, who dominate its politics, who in a large measure have built and made the town what it is, have more than the vaguest idea

¹Address of the vice-president and chairman of Section G—Geology, American Association for the Advancement of Science, Nashville, December, 1927.



JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE

The School of Medicine is an Integral Part of the University and is in the Closest Affiliation with the Johns Hopkins Hospital.

ADMISSION Candidates for admission must be graduates of ap-proved colleges or scientific schools with two years' instruction, including laboratory work, in chemistry, and one year each in physics and biology, together with evidence of a reading knowledge of French and Corumen

INSTRUCTION The academic year begins the Tuesday nearest Oc-tober 1, and closes the second Tuesday in June. The course of instruction occupies four years and es-pecial emphasis is laid upon practical work in the laboratories, in the wards of the Hospital and in the dispensery

TUITION The charge for tuition is \$400 per annum, payable in two installments. There are no extra fees except for certain expensive supplies, and laboratory

Executive Secretary of the School of Medicine, Johns Hopkins University, Washington and Monument Sts., Baltimore, Md.

Graduates in Medicine who satisfy the require-ments of the heads of the departments in which they desire to work are accepted as students for a period not less than three quarters. Tuition charge is \$50

NEW SCIENTIFIC BOOKS

The Oxford University Press, American Branch, New York

THE ELECTRONIC THEORY OF VALENCY. Nevil V. Sidg-

This book aims at giving a general account of the prin-ciples of valency and molecular constitution, founded on the Rutherford-Bohr atom.

QUALITATIVE ANALYSIS. W. F. F. Shearcroft. 71 pp.

Particular attention has been paid to the theory under-lying qualitative analysis, and the student is given a reason for every operation outlined.

Harper & Brothers, New York

THE SCIENCE OF HEALTH AND DISEASE. Howard W.

A physiological text-book, but it also extends over the whole field of modern medicine. The nature of health and the chief causes and processes of disease are described. For the student and the general reader.

The Draughtsman Publishing Company, London

AN OUTLINE OF STELLAR ASTRONOMY. Peter Doig.

The main features are outlined of the present state of knowledge of the constitution, dimensions, motions and dis-tribution in space of the stars and nebulae. Since books on astronomy quickly become out of date, the author has ap-pended bibliographical notes indicating where will be re-ported the results of future investigations.



A Tremendous Demand

has resulted from the introduction of these desks, for these reasons:

With the Kewaunee Lincoln Desk no lecture-room is required. All students face the instructor, while doing all the work in one place. The instructor may give demonstrations or hold class discussions in the same room with experimental work. The superiority, convenience and simplicity of this desk is apparent at a glance, and the economy is considerable, as it makes unnecessary a separate lecture-room—saving the cost of it in a new building or making it available for other uses in an existing building.

It will pay you to consult a Kewaunee Book before planning original installations or additions to present equipment. Sent postpaid when inquiry is made on letterhead of School or Institution. Engineering and Designing service and complete piping plans furnished without charge. Immediate shipment of all standard designs.

Address all inquiries to the factory at Kewaunee.

Important

The chemical-proof sinks of Lincoln Desks are placed in the central member, and to the side of the student. This is not only most convenient and economical, but removes the sink from the side member, which thus always presents a clean, dry writing surface. Size of sinks, $12'' \ge 16'' \ge 7''$ deep inside.

Kewannee J LABORATORY FURNITURE

C. G. CAMPBELL, Treas. and Gen. Mgr.

II5 Lincoln St., Kewaunee, Wis.Chicago Office:New25 E. Jackson Blvd.70 Fi1511 Kimball Bldg.,

New York Office: 70 Fifth Avenue

Offices in Principal Cities

THE CENCO ELECTROSTATIC VOLTMETER MEASURES 10000 VOLTS

A. C. or D. C.

Accuracy:

The Electrostatic Voltmeter depends for its scale accuracy on calibration by the individual operator under the condition of use. Dependable calibrations are possible in this instrument, because once calibrated it maintains the calibrations accurately, unlike previous designs of High Potential Voltmeters.



L ONG experience in using and testing the usual Braun type of electrostatic voltmeter has led us to develop a design in which all the undesirable features in the Braun type are eliminated and advantageous features not found in the Braun type are incorporated.

In the Cenco design of Electrostatic Voltmeter the horizontal pivots have been eliminated and vertical pivots substituted. These vertical pivots consist of hardened steel points, carefully ground under a microscope, which support the needle system on polished steel plates. The result is an elimination of friction to the point where it is no longer perceptible in the readings of the instrument.

]	Range	Price
No.	F2766A		2,500	\$95.00
No.	F2766B		5,000	\$95.00
No.	F2766C		10,000	\$95.00

CENTRAL SCIENTIFIC COMPANY LABORATORY MICE SUPPLIES Apparatus Chemicals 460 EObio St. Chicago U.SA