SCIENCE

JANUARY 2, 1925 VOL. LXI

CONTRIDUCTION

No 1566

CONTENIS	
The American Association for the Advancement of Science:	
Science and Service: Dr. CHARLES D. WALCOTT	1
The Foundation of the Theory of Algebraic Num-	
bers: Professor Harris Hancock	Ę
The Eclipse of January, 1925: PROFESSOR E. W. BROWN	1(
Scientific Events:	
Opening of the Ramsay Memorial Laboratory;	
Recommendations for Federal Administrative Re-	
form by American Engineers; Royal Institution	
Lectures; Work in Forestry	12
Scientific Notes and News	14
University and Educational Notes	12
Discussion and Correspondence:	
The Number of Brothers and Sisters of Selected	
Individuals: Professor C. H. DANFORTH. Energy	
Values of Feeds for Cattle: C. ROBERT MOULTON.	
The Teaching of Evolution: Professor R. C. Mul-	
LENIX. Perambulating Millipeds: PERCY VIOSCA,	
JR	1'
Scientific Books:	
McDonald on the Intellectual Worker: PROFESSOR	
WALTER P. TAYLOR	2
Special Articles:	
Promising Plant Insecticides: S. MARCOVITCH	2
Science News	:

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

THE SCIENCE PRESS

Lancaster, Pa. Garrison, N. Y. New York City: Grand Central Terminal.

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, 1928, at the Post Office at Lancaster, Pa., under the Act of March 8, 1879.

SCIENCE AND SERVICE¹

THE service of science to humanity was initiated when the early philosophers began to discover and record the more simple truths of nature. Then, as now, the "sciosophists," defined by David Starr Jordan as "apostles of systematized ignorance," rejected all evidence without attempting to prove or disprove, and condemned the exceptional mind that was compelled by an inner urge to attempt to penetrate into the mists that concealed the unknown.

Through many centuries human thought was confined largely to channels predetermined by the religious and political concepts of the more intelligent. To this privileged group freedom of expression by others was intolerable, and a seeker after truth other than that provided and established by authority was fair game to be hunted down and destroyed. Progress came as an undercurrent of truth that slowly gathered strength and volume, until, like the warm waters of tropical ocean currents penetrating the colder regions, it weakened the congealed crust of ignorance and prejudice, and, combining with the sunshine of scientific research, gradually dispersed systematic opposition to the growing appreciation of natural phenomena and laws.

The story of the onward march of scientific research in quest of truth is not unlike that of the white race in the conquest of America. A few fearless souls penetrated the wilderness and blazed the trails that others might follow; some fell martyrs to their zeal. but more came after; facts were determined, laws established, which in time contributed to the welfare of the race.

Science has made great progress, but its conquest of the unknown and of the unprogressive doctrines of the sciosophists is still far from complete. When we consider the many vital problems that are being discussed and the indifference and limited training of a large proportion of supposedly intelligent people, it seems only well under way. The search for truth and the interpretation of facts and their verification and application must continue, with ever-enlarging conceptions until the ultimate destiny of our race is fulfilled.

Millikan has well said: "The purpose of science is to develop without prejudice or preconception of any kind a knowledge of the facts, the laws and the processes of Nature." The search for truth based on this scientific method is one of the greatest inspirations and incentives to high and thorough endeavor. The

¹ Address of the retiring president of the American Association for the Advancement of Science, Washington, D. C., December 29, 1924.

School of Medicine Western Reserve University

of Cleveland Ohio

HIGH STANDARD OF ADMISSION* RESTRICTED CLASSES THOROUGH INSTRUCTION LARGE CLINICAL FACILITIES HIGH STANDARD OF SCHOLARSHIP

* Admission confined to students having academic degrees and to Seniors in Absentia.

For information address:

THE REGISTRAR 1353 E. 9th ST. **CLEVELAND, OHIO**

N.U. Northwestern University MEDICAL SCHOOL

Situated in Chicago in close proximity to important Hospitals with an abundance of clinical material.

- **ADMISSION REQUIREMENTS**—Two years of College credit, including a satisfactory course in Physics, Chem-istry, Biology or Zoology, and French or German.
- COURSE OF STUDY-leading to the degree of Doctor of Medicine-Four years in the Medical School and a fifth year either as Interne in an approved hospital or devoted to research in some branch of Medical Science.
- GRADUATE INSTRUCTION-in courses leading to the degree of Master of Arts or Doctor of Philosophy.
- RESEARCH FOUNDATION-The James A. Patten Endowment for Research affords unusual opportunities for ad-vanced students of Medical Science to pursue special investigations.
- RESEARCH FELLOWSHIPS—Four fellowships of the value of \$500 each are awarded annually to promote scholarly research.
- TUITION FEES-The tuition fee for undergraduate students is \$215.00 a year.

Next session begins October 2, 1925.

For information address

C. W. PATTERSON, Registrar 2421 South Dearborn St. Chicago, Illinois

Johns Hopkins University Medical School

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

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

together with evidence of a reading knowledge or French and German. Each class is limited to 75 students, men and women being admitted on the same terms. Except in unusual circumstances, applications for admission will not be considered after July 1st. If vacancies occur, students from other institu-tions desiring advanced standing may be admitted to the second or third year provided they fulfill our requirements and present exceptional qualifications. 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 dispensary dispensary.

TUITION The charge for tuition is \$300 per annum, payable in three installments. There are no extra fees ex-cept for rental of microscope, certain expensive sup-

plies, and laboratory breakage. The annual announcement and application blanks may be obtained by addressing the

Dean of the Johns Hopkins Medical School, Washington and Monument Sts., Baltimore, Md. Summer Work for Graduates in Medicine

Beginning Monday, June 1st, and ending Saturday, July 11th, a course in medical diagnosis, including laboratory exercises in clinical pathology and demon-strations in pathological anatomy, will be offered. The course will be limited to thirty students, fee \$100. Applications should be made to the Dean's Office.

YALE UNIVERSITY School of Medicine

Affiliated with the New Haven Hospital and New Haven Dispensary

113TH SESSION

Reorganized on a full-time basis

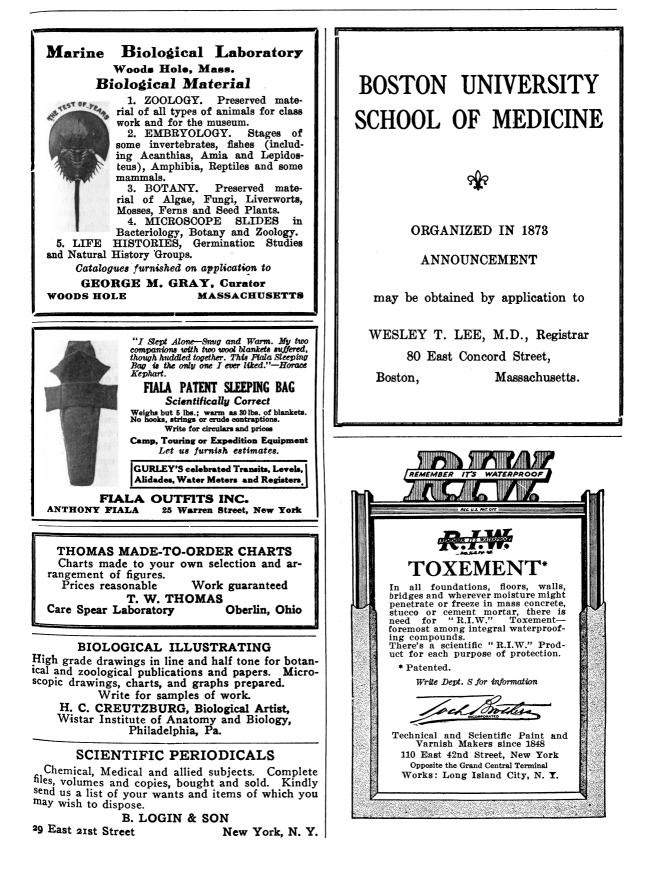
Entrance Requirements: A minimum of three years (or its equivalent) of college including general biology, physics, general and organic chemistry, qualitative analysis, physical chemistry or laboratory physics, and either French or German.

ALL THE GENERAL FACILITIES OF THE UNIVERSITY ARE AVAIL-ABLE TO MEDICAL STUDENTS

As the number admitted to each class is limited, applications must be made before July I.

Dean, Yale University School of Medicine

NEW HAVEN, CONN.



College of

Medicine

Montevideo

Spencer Lens Co., Buffalo, New York. Please tell me about Daylight Projection and its value in classrooms. Name Address Institution

In the Universities of South America

YOU will find the Spencer Delineascope and Trans-Lux Screen carrying Daylight Projection to the classrooms and laboratories of schools and colleges the world over.

For years the hallmark of Spencer has ranked first in the minds of users of projection equipment throughout the teaching profession.

Send the coupon for the Story of Daylight Projection.

Spencer Lens Co.

442 Niagara St. Buffalo, N. Y.

Three New Catalogs of Turtox Products

1924-25 Biological Red Book Preserved Materials for Botany, Zoology and Embryology Many illustrations

Microscope Slide Catalog

Lists over 1,000 different preparations Illustrated by 100 reproductions of original photomicrographs

Jewell Model Catalog

Models for Botany, Zoology and Embryology Some of the illustrations are in color



 The Sign of the Turtox Pledges Absolute Satisfaction

 GENERAL BIOLOGICAL SUPPLY HOUSE,

 1177-79 East 55th Street
 Chicago, Ill.

THE MICROSCOPE

By SIMON H. GAGE of Cornell University Revised Edition (14th) in Preparation.

COMSTOCK PUBLISHING CO., ITHACA, N. Y.



Gas Testing Apparatus For Educational, Industrial, Clinical and Research Work Write for further details, stating your requirements

EIMER & AMEND

Third Avenue, 18th to 19th Street New York, N. Y. PITTSBURGH, PA. Agent, 4048 Franklin Road, N-S•