# SCIENCE

Vol.	LXV	May	27,	1927	No.	1691
		,				
		CO	NTEN	TS		

Higher Endeavor in Science: Professor M. I. PUPIN	509
The University and Medical Education: Dr. FRANK- LIN C. MCLEAN	511
Carl H. Eigenmann: PROFESSOR FERNANDUS PAYNE, DR. DAVID STARR JORDAN	515
Scientific Events:	
The Institute of Pacific Relations; Award of Prizes by the American Medical Association for Scientific Exhibits; The National Museum of Engineer- ing and Industry; Appointment of Fellows in Medicine by the National Research Council	516
Scientific Notes and News	519
University and Educational Notes	522
Discussion and Correspondence:	
The Arctic Flying of Captain Wilkins and Lieu- tenant Eielson: COMMANDER RICHARD E. BYRD and DR. VILHJALMUR STEFANSSON. Effect of High Voltages on Tantalum Anodes: EARL M. DUNHAM. Losses in Speckled Trout Fry after Distribution: PROFESSOR A. P. KNIGHT. The Need for Definitely indicating New Synonymy and New Combina- tions in Taxonomy: S. A. ROHWER. Surface Ten- sion Methods: DR. J. M. JOHLIN	
Scientific Books:	
Harding's Fauna of British India: PROFESSOR T. D. A. COCKERELL. Ebert's Vorgeschichtliches Jahrbuch: DR. GEORGE GRANT MACCURDY	526
Special Articles:	
The Decomposition of Ammonia on Iron Catalysts: Dr. C. H. KUNSMAN. A Critical Factor in the Existence of Southwestern Game Birds: JOSEPH GRINNELL	527
Societies and Academies:	
The Federation of American Societies for Experi- mental Biology; The American Society for Phar- macology and Experimental Therapeutics; The Ohio Academy of Science	529
Science News	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, 1928, at the Post Office at Lancaster, Pa., under the Act of March 8, 1879.

### HIGHER ENDEAVOR IN SCIENCE<sup>1</sup>

PHILADELPHIA, Princeton and Menlo Park are the beginning, the middle, and the end of a tiny strip of territory which is the cradle of American history. No other spot in the vast territory of these United States reminds us of so many great historical events. No names of Americans remind us of so many great events in the history of American science as the following names: Benjamin Franklin, of Philadelphia, Joseph Henry, of Princeton, and Thomas Edison, of Menlo Park. Just as the achievements of the continental congresses in Philadelphia, and Washington's victories at Trenton and Princeton laid the foundation of these United States, so the scientific achievements of Franklin, of Joseph Henry and of Edison laid the foundation and added some of the superstructures of earlier American science.

The tiny state of New Jersey and the tiny strip of its territory on which we are standing to-day can justly claim the lion's share of the glory of these great achievements. The Battle Monument at Princeton, speaking in accents modulated by the chisel of Macmonnies, tells the story of a great victory; these buildings the cornerstones of which we are laying to-day will be monuments which will tell a wonderful story of great achievements in American science and of a victory which was one of the crowns of these achievements. This victory, just like that of the battle of Princeton, was won right here at Princeton. It is seemly that on this memorable occasion I recite a bit of this story.

Prior to Franklin's time the natural philosopher riveted his attention upon electricity at rest. Franklin's discovery that lightning is a motion of electricity revolutionized the mental attitude of the natural philosopher of Franklin's time, and motion of electricity became the favorite subject of his inquiry. Just as during the century preceding Franklin the genius of Galileo and of Newton had revealed a new universe, the universe of matter moving in obedience to simple laws, so during the century which Franklin's discovery inaugurated a new universe was revealed; it is the universe of electricity in motion obeying simple laws of electrical action. The discovery and formulation of these laws are the greatest scientific glory of the century which began with Franklin's discovery.

<sup>1</sup> Address on the laying of the cornerstones of an engineering building and a chemical laboratory at Princeton University, on May 12, 1927.

CěB

### Marine Biological Laboratory Woods Hole, Mass.

Woods Hole, Mass.Facilities for research in Zoology,INVESTIGATIONEntire YearEmbryology, Physiology, and Botany.Entire Year\$100 each and ninety-four privatetaboratories \$200 each for not overthree months.Fifty-six tables are available for beginnersin research who desire to work under the direction of members of the staft.INSTRUCTIONCourses of laboratory instructionJune 28 to AugustEmbryology, Physiology, and Morphology8, 1927Embryology, and Course requires the<br/>full time of the student.

SUPPLY DEPARTMENT Open the Entire



**BIOLOGICAL SUPPLIES** For the classroom, museum or col-

lector. First class preparations. Send for new (1926) Catalogue No. 1. Zoological and Embryological ma-terial, Life Histories and Habitat Groups.

Catalogue No. 2, Botanical material.

Catalogue No. 3, Microscopic slides.

Address all correspondence regard-ing material and catalogues to: Supply Department, GEO. M. GRAY.

Curator, Woods Hole, Mass. The annual announcement will be sent on application to The Director, Marine Biological Labora-tory, Woods Hole, Mass.

is the important factor in all activities

### SAVE IT

by using

### The Wistar Institute Bibliographic Service

which brings to your table authors' abstracts of all papers about to appear in the:

Journal of Morphology and Physiology The Journal of Comparative Neurology The American Journal of Anatomy The Anatomical Record The Journal of Experimental Zoology American Anatomical Memoirs American Journal of Physical Anthropology Folla Anatomica Japonica (Tokyo, Japan) Biological Bulletin The Journal of Parasitology Biological Bulletia The Journal of Parasitology Stain Technology Australian Journal of Experimental Biology and Medical Science (Adelaide, South Australia)

Both appear before the complete articles are published

> A reprint of any paper may be purchased. Prices quoted on advance abstract sheets.

### THE WISTAR INSTITUTE

Thirty-sixth Street and Woodland Avenue Philadelphia, Pa.

### The Biological Laboratory Cold Spring Harbor, Long Island, N. Y.

Investigation Facilities for research in Physiology, Protozoology, Embryology and other branches of Zoology, and Bot-any. Fee for private room \$75. Special equipment for mammalian work. Opportunities for beginning investigators. Fee \$50.

Instruction Six weeks, June 29th to August 9th. Courses in Field Zoology, Physiology, Experimental Surgery, Endocrinology, Field Botany and Plant Ecology.

Biological Laboratory, Cold Spring Harbor, Long Island, N. Y.

#### LIVING BULLFROGS Safe delivery guaranteed

We are just recovering from the acute shortage due to the unprecedented drouths of 1924 and 1925. Be sure to reserve your next year's supply while in season, March, April or May. Correspondence solicited.

Also headquarters for living and preserved specimens of all types, microscopic slides, life histories, demonstrations, insect collections. We specialize in many important southern species not obtainable elsewhere.

All material guaranteed without reservations. Southern Biological Supply Co., Inc., Natural History Building, New Orleans, La.

### **Chemical Indicators**

The Coleman & Bell Company manufacture a complete list of indicators, including all of the common indicators used in analytical and biological work, the hydrogen-ion indicators recommended by Sorensen and Clark and Lubs, and in addition many rare indicators suitable for special work.

Complete catalogue of Laboratory Reagents upon request.

The Coleman & Bell Company (Incorporated) Manufacturing Chemists NORWOOD, OHIO, U. S. A.



### ANNOUNCEMENT

may be obtained by application to

THE REGISTRAR

80 East Concord Street,

Boston,

Massachusetts

### 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.

### **COURSES FOR GRADUATES**

In addition to offering instruction to students enrolled as candidates for the degree of Doctor of Medicine, the School also offers Courses for Graduates in Medicine. In each of the clinical departments opportunity for advanced instruction will be offered to a small number of physicians, who must satisfy the head of the department in which they desire to study that they are likely to profit by it.

Students will not be accepted for a period shorter than three academic quarters of eight weeks each, and it is desirable that four quarters of instruction be taken. The courses are not planned for purposes of review but for broad preparation in one of the lines of medical practice or research. The opportunities offered will consist in clinical work in the dispensary, ward-rounds, laboratory training, and special clinical studies.

The academic year begins the Tuesday nearest October 1 (October 4, 1927), and students may be admitted at the beginning of any academic quarter. The charge for tuition is \$50 a quarter, payable in advance.

Inquiries should be addressed to the Executive Secretary of the School of Medicine, Johns Hopkins University, Washington and Monument Streets, Baltimore, Maryland.

## School of Tropical Medicine

University of Porto Rico under the auspices of

**COLUMBIA UNIVERSITY** 

#### San Juan, P. R.

An institution for the study of tropical diseases and their prevention.

New building containing well equipped laboratories and library. Clinical facilities in general and special hospitals. Field work in cooperation with Insular Department of Health.

Courses in bacteriology, mycology, parasitology, pathology, food chemistry, public health and transmissible diseases, open to graduates in medicine and others having equivalent preparation. Number of students limited.

First term of second session begins Oct. 1, 1927; second term, Feb. 1, 1928. Special students and investigators admitted at other times as space and circumstances permit. In all cases arrangement in advance is advised.

For further information apply to

Director School of Tropical Medicine San Juan, Porto Rico.

### CENCO ROTARY BLOWER AND VACUUM PUMP

No. 1398-SMALL SIZE

For producing a blast for the operation of blast lamps and for use with other laboratory devices requiring moderate air pressure or vacuum. The blowers are of small size, very compact, and with few parts. They are free from mechanical troubles and require practically no attention except an occasional oiling. They are mounted on a cast iron base, direct connected to a constant speed motor of generous size, and are provided with a valve on the outlet tube, by means of which the air pressure can be varied. The outer casing of the blower is water jack-eted so that the heat developed by compression during continuous use may be removed.



Specifications

Size of base, 5 x 91/2 inches.

Speed, 1725 r. p. m.

Pressure at maximum speed, 7 pounds per square inch.

Cubic feet of air per minute, 0.75.

Number of blast lamps operated simultaneously, 2. Vacuum at maximum speed, 16 inches of mercury. Power consumption, 66 watts.

Jacket water cooled to prevent heating on continuous use.

	omplete with 1/20 h	i. p. direct coni	nected motor	and pressure	regulator,	mounted of	on ja-
panne	ed iron base.		•	n	<b>C</b>	D	
	No	••••••••	A	в	C D.C	D	
	For volts		110	220	110	220	
	Each		48.00	50.00	48.00	\$50.00	
13 <b>99.</b>	For volts Each Blower and Vacuus	m Pump only of	f No. 1398, wi	th grooved pul	lley, but wit	hout base,	motor
	or other accessor	ies	• • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • •	••••••	• • • • • • • • • •	<b>\$15.00</b>

### No. 1400-LARGE SIZE

Similar to No. 1398, but of larger size and capacity.

### Specifications

