

SCIENCE

VOL. LXI

MAY 22, 1925

No. 1586

CONTENTS

<i>The Relationship of Human Constitution to Disease:</i> DR. GEORGE DRAPER	525
<i>The Differentials Effective in the Distribution of Plants in the Coastal Plain:</i> PROFESSOR JOHN W. HARSHBERGER	529
<i>Burt Green Wilder:</i> PROFESSOR J. H. COMSTOCK	531
<i>Scientific Events:</i>	
<i>Clément Ader and the Aeroplane; Captain Amundsen's Proposed Flight to the North Pole; The British Science Guild; Unpublished Prepara- tions for "Organic Syntheses"; The School of Medicine of the University of Chicago; Award of the Thompson Gold Medal of the National Academy of Sciences; The First Award of the Leidy Memorial Medal; The American Philo- sophical Society</i>	533
<i>Scientific Notes and News</i>	536
<i>University and Educational Notes</i>	539
<i>Discussion and Correspondence:</i>	
<i>The Kennelly-Heaviside Layer:</i> PROFESSOR ALEX- ANDER MCADIE. <i>Musical Echoes:</i> DR. MACFIE CAMPBELL. <i>A Historic Fossil:</i> DR. G. R. WIELAND. <i>A Philippine Rorqual:</i> ALBERT HERRE. <i>Legisla- tion on the Teaching of Evolution:</i> DR. BERT CUNNINGHAM	540
<i>Scientific Books:</i>	
<i>Castle on Genetics and Eugenics:</i> PROFESSOR CHAS. B. DAVENPORT	541
<i>Segregation of Carbohydrates in Maize Pollen:</i> DR. A. E. LONGLEY	542
<i>Scientific Apparatus and Laboratory Methods:</i>	
<i>The Use of Bakelite in the Preservation of Fossil Material:</i> PROFESSOR E. C. CASE	543
<i>Special Articles:</i>	
<i>The Inoculation of Tomato and Tobacco Plants with Potato Mosaic Virus:</i> DR. PETER K. OLITSKY AND DR. JOHN H. NORTHROP. <i>The Topography of the Golgi Apparatus in Gland Cells:</i> PROFESSOR ROBERT H. BOWEN	544
<i>The National Academy of Sciences:</i>	
<i>Abstracts of Papers presented at the Washington Meeting</i>	546
<i>Science News</i>	x

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, 1923, at the Post Office at Lancaster, Pa., under the Act of March 3, 1879.

THE RELATIONSHIP OF HUMAN CONSTITUTION TO DISEASE¹

THREE years ago at the meeting of this association in Boston I had the honor of reporting before the anthropological section the results of the attempts of our Constitution Clinic at the Presbyterian Hospital to apply the technique of anthropometry to clinical medicine. It is particularly gratifying now at the end of three years to discuss before the section on medicine the results of the work. Now because our first approach to the study of the subject was along the lines of anthropometry it must not be supposed that we have looked upon morphology as the main issue. This particular path was chosen simply because it offered at the moment the most obvious and practical entering wedge. It was indeed quite clear from the first that the subject of human constitution was sufficiently extensive and involved to occupy fully the efforts of many generations of workers; and as we have proceeded we have seen how true was Pope's famous line that the greatest study of mankind is man.

Viewed from this aspect disease ceases to be an entity in itself, a thing as it were added to or carried by man, and becomes rather the inevitable expression of conflict between unique individuality and an adverse specific environmental force. It is of course no new thought that the factor of susceptibility or predisposition to disease is of equal importance with the external specific agent. But perhaps it is just because of its antiquity that this factor has been overshadowed temporarily by the intensive studies which modern workers in medicine are directing at the lesion and the external agent.

The logical outcome of such a conception of disease is to turn an equally intensive research upon the factor of susceptibility. Obviously this must be a quality of the individual, an integral part of his constitutional plan. The successful investigation of this attribute consequently, as of any single character of plant or animal life is doubtless best furthered by a general and complete study of the whole organism. And so the thoughtful physician finds himself not primarily a student of disease, or menacing environment, but

¹From the Department of Practice of Medicine, Columbia University and Presbyterian Hospital, New York City. Read before the American Association for the Advancement of Science, Section M, Medical Sciences, Washington, D. C., December 29, 1924.

P. BLAKISTON'S SON & CO.,
PUBLISHERS :: :: PHILADELPHIA

BACHMANN & BLISS—Essentials Of Physiology

Including the Pharmacodynamics of Drugs

178 Illustrations. Cloth, \$3.50

It covers the physiology required by pharmacists and dentists. The course is adaptable to any use where requirements are for concise, clear and practical exposition of the fundamentals.

FAIRBANKS—Topical Outline Of Geography

This is a unique work, widely used and consulted. Five volumes (Each of the Continents), may be had in

Paper covers for \$2.40, or Velumet, \$3.15. Also Cloth, in Two Vols., \$3.25

BAILEY—Food Products, Their Source, Chemistry And Use

2nd Edition. 92 Illustrations. Cloth, \$2.50

A valuable reference work to the world's food products. The facts are clearly and interestingly set forth and handsomely illustrated.

WILEY—Foods And Their Adulteration

3d Edition. 98 Illustrations, Including 11 Colored Plates. Cloth, \$6.00

The origin, manufacture and composition of food products; description and simple tests for adulterations; Infants' and Invalids' foods, etc., are presented in this work.

WILEY—Beverages And Their Adulteration

42 Illustrations. Cloth, \$5.00

The origin, composition, manufacture, natural, artificial, fermented, distilled, alkaloidal and fruit juices. An indispensable reference to all phases of the beverage industry.

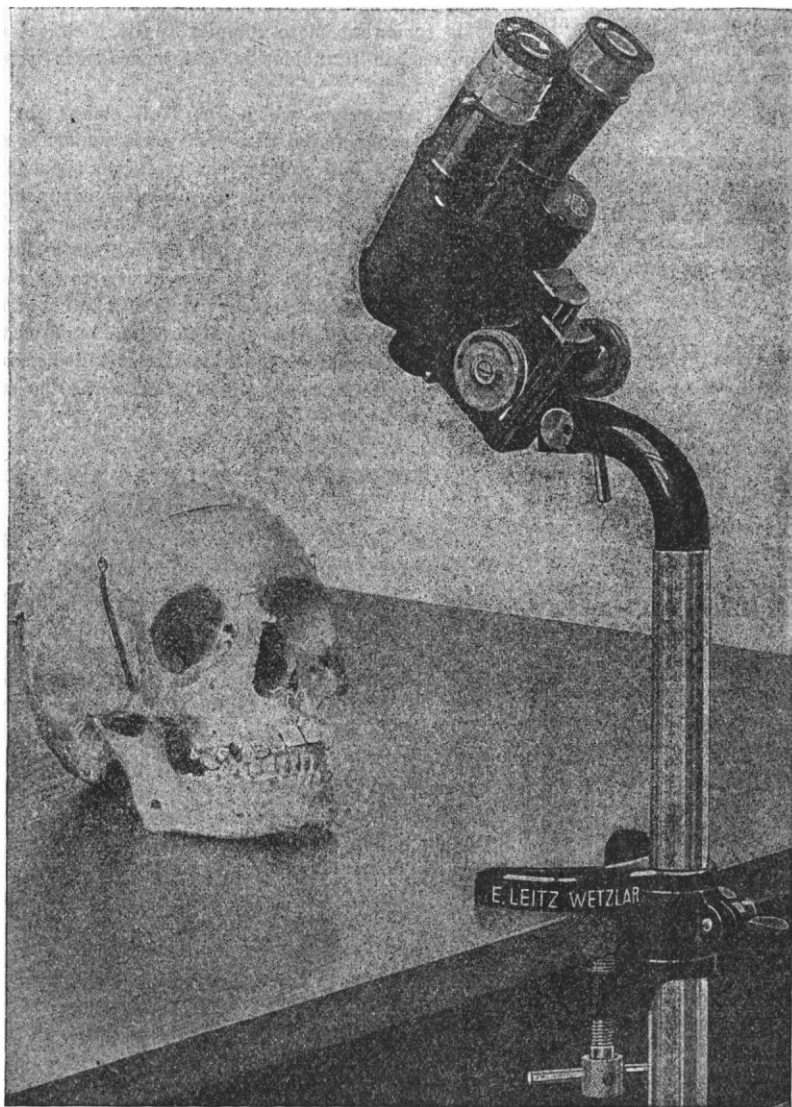
GOULD—Pocket Pronouncing Medical Dictionary

8th Edition. Flexible Binding, \$2.00. With Thumb Index, \$2.50

Contains 40,000 words, and includes auxiliary sciences. It is accurate, comprehensive and authoritative.

LEITZ

BINOCULAR STEREO MAGNIFIERS



Large Field,
Stereoscopic
Vision, Long
Working
Distance

Model "BSM-F"

Adapted in an
ideal manner for
use in:

ANATOMY
BOTANY
EMBRYOLOGY
HISTOLOGY
ZOOLOGY
and

Allied Studies.

Interchangeable
eyepieces offer a
variety of magni-
fications.

Prism body can
be used on any
one of a variety
of ten (10) stands
to fit each individ-
ual need.

WRITE FOR
PAMPHLET
NO. (0) 1060

MODEL "BSM-F," No. 22146.



60 EAST 10th ST.
AGENTS:

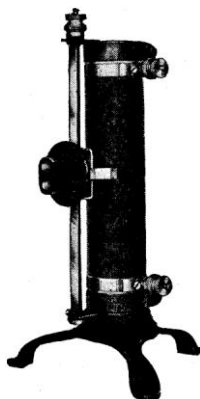
Pacific Coast States: SPINDLER & SAUPPE, 86 Third St., San Francisco, Cal.

Canada: THE J. F. HARTZ CO., Ltd., Toronto, Canada.

Philippine Islands: BOTICA DE SANTA CRUZ, Manila, P. I.

Cuba: TEXIDOR CO., Ltd., Habana, Cuba.

JAGABI LABORATORY RHEOSTATS



Vertical Rheostat. Occupies small amount of table space. Rack and pinion adjustment can be supplied for this form of mounting and is recommended.

SCIENTISTS, Professors, Research Engineers and laboratory workers *everywhere* have found our JAGABI LABORATORY RHEOSTATS well made and useful devices for the control of electric current in a host of laboratory purposes.

Fifty-seven different ratings of Jagabi Rheostats are made—ranging in resistance as high as 30,000 ohms (.1 ampere) to as low as .34 ohm (25 amperes). These are in three different sizes—8, 16 and 20 inch lengths of porcelain enameled tube on which the resistance wire or strip is wound. The slider moves the entire length of the winding, giving virtually as many steps of resistance as there are turns of wire or strip on the tube.

We carry in stock this complete line of Jagabi Rheostats and make prompt shipments on short notice.

Bulletin 1040-S lists the 57 different ratings as well as a large variety of special rheostats including stone, non-inductive, Dodge Design and carbon types; write for copy.



JAMES G. BIDDLE

ELECTRICAL AND SCIENTIFIC INSTRUMENTS

1211-13 ARCH STREET, PHILADELPHIA