# SCIENCE

NEW SERIES Vol. 93, No. 2410

FRIDAY, MARCH 7, 1941

SUBSCRIPTION, \$6.00 SINGLE COPIES, .15

## TEXTBOOKS of TIMELY INTEREST

By reason of the National Preparedness Program greater stress is being constantly placed on the importance of physical fitness. Hand in hand with this program is the teaching of a sound knowledge of the nutritive requirements and processes of the body. Modern, practical and authoritative texts are essential in attaining this aim and the two described below are particularly recommended to all concerned with the building of sound health.

## Bogert's Nutrition and Physical Fitness

Third Edition!—This widely used text makes plain the present-day knowledge of nutrition and its application to physical fitness. Dr. Bogert gives the nutritive needs of the body and tells how these needs are best met. The physiologic viewpoint is apparent throughout the text. The Vitamins are discussed in very full detail.

By L. Jean Bogert, Ph.D., formerly Instructor in Medicine, University of Chicago. 602 pages,  $5\,\frac{1}{4}''$  x  $7\,\frac{3}{4}''$ , illustrated. \$3.00

#### McLester's Nutrition and Diet

Third Edition!—Dr. McLester's book is a comprehensive presentation of diet and nutrition in health and disease. It is written from the approach of what the individual must eat rather than what he must not eat. It contains the latest table of food values of the Bureau of Home Economics, Department of Agriculture, the Vitamins, from A to K, etc.

By James S. McLester, M.D., Professor of Medicine, University of Alabama. 838 pages, 6" x 9".

## Etheredge's Health Facts for College Students

Third Edition!—The everyday health problems of the college student are here discussed in a style particularly distinguished for its simplicity and ability to hold the student's attention. Special attention is given *mental* health and the cause and prevention of disease.

By Maude Lee Etheredge, M.D., Dr.P.H., Professor of Hygiene and Medical Advisor for Women, University of Illinois,  $410\,$  pages,  $5'' \ge 7\frac{1}{2}''$ , illustrated. \$2.00

## Schneider's Physiology of Muscular Activity

Second Edition!—The numerous and often delicate adjustments imposed on the body by its own activities are described in this text. Dr. Schneider demonstrates how the body variables work together to maintain the efficiency of the bodily machine as a whole. Includes tests for measuring physical fitness.

By Edward C. Schneider, M.P.E., Ph.D., D.Sc., Professor of Biology at Wesleyan University, Middletown, Connecticut. 428 pages,  $5'' \times 7\frac{1}{2}''$ , illustrated. \$3.00

#### W. B. SAUNDERS COMPANY

West Washington Square

Philadelphia

Science: published weekly by The Science Press, Lancaster, Pa.

Entered as second-class matter July 18, 1928, at the Post Office at Lancaster, Pa., under the Act of March 3, 1879.

# PISTON'S Meteorology

2nd Edition—Illustrated

Thoroughly modernized, clearly and concisely presented, this successful text contains the material for a semester course in the science of the weather. It includes important new matter on air mass methods and the applications of air mass analysis to weather phenomena. The chapter on Clouds conforms to the International Classification, and excellent new cloud pictures are included. Certain Climatic Charts have been replotted using two modifications of Cahill's Octahedral Projection. Useful tables, lists of collateral and reference reading, and well chosen problems are included.

CONTENTS: Make-up of the Atmosphere; Physical Behavior of Dry-air; Physical Behavior of Moist-air; Clouds, Fogs, Precipitation; Meteorological Aspects of Radiation; Migratory Cyclones and Anticyclones; Source Regions, Fronts and Air Masses; Thundershowers and Tornadoes; Weather Maps and Forecasting; Climatology.

By Donald S. Piston, Ph.D., Physicist, The Twining Laboratories, Fresno, California. 100 Illus., 13 Maps, 233 Pages \$3.00

THE BLAKISTON COMPANY, Philadelphia

#### **EARLY**

## CARNEGIE INSTITUTION OF WASHINGTON PUBLICATIONS

A Few Copies Now Available at Reduced Prices

Pub No.

- Peters, C. H. F., and E. B. Knobel. Ptolemy's Catalogue of Stars. A Revision of the Almagest. Quarto, vi+307 pp., 1 plate. \$1.00, paper; \$1.50, cloth.
- 169. Callaway, Morgan, Jr. The Infinitive in Anglo-Saxon. Octavo, xiii+339 pp., \$1.00, paper; \$1.50, cloth.
- 259. Davenport, Charles B., and Mary T. Scudder. Naval Officers: Their Heredity and Development. Octavo, iv + 236 pp., 60 charts. \$1.00, paper; \$1.50, cloth.
- 323. Joslin, Elliott P. Diabetic Metabolism with High and Low Diets. Octavo, viii + 334 pp. \$2.00, paper; \$2.50, cloth.
- 382. Willis, Bailey. Studies in Comparative Seismology: Earthquake Conditions in Chile. Quarto, xi + 178 pp., 75 plates, 19 text-figures. \$2.00, paper; \$2.50, cloth.

#### SCIENTIFIC BOOKS

-New and Secondhand-

#### SCIENTIFIC, TECHNICAL AND MEDICAL BOOKS OF ALL PUBLISHERS

Orders dispatched by return mail

Write for catalogues stating particular interests.

H. K. LEWIS & CO. LTD.

136 GOWER STREET, LONDON, W.C.1, ENGLAND

#### Permeability and the Nature of Cell Membranes

Volume VIII 283 p. (8"×11") 1940

Cold Spring Harbor Symposia on Quantitative Biology

Biological, chemical, physical and mathematical aspects of the problem are considered in 28 papers.

Previous volumes: I (1933) Surface Phenomena; II (1934) Growth; III (1935) Photochemical Reactions; IV (1936) Excitations; V (1937) Internal Secretions; VI (1938) Protein Chemistry; VII (1939) Biological Oxidations. Single volume \$4.50; set of three \$10.00; set of eight \$20.00. Table of contents from The Biological Laboratory, Cold Spring Harbor, N. Y.

#### A Manual of the Flowering Plants of California by Willis Linn Jepson

Containing an essay on distribution, geographic origins and endemism in the native flora. Reinforced binding, waterproof buckram with design of Calochortus in gold on side; 1248 pages, 1023 illustrations. \$5.00 + .06 postage. (In Cal. add .15 sales tax.)

Associated Students Bookstore, University of California, Berkeley, Cal.

SUPERIOR CANDIDATES suggested on request to administrators and heads of departments in all fields of Science and Mathematics, and on every level of responsibility. Careful study given to requirements. If you are an individual scientist, ready for professional advancement, we would be glad to be of service to you.

#### AMERICAN COLLEGE BUREAU

28 E. Jackson Blvd.

Chicago, Ill.

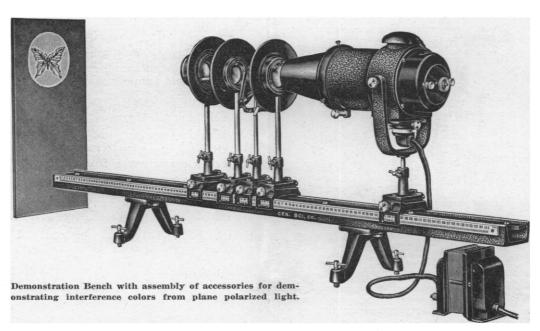
## THE SCIENCE PRESS PRINTING COMPANY

PRINTERS OF

SCIENTIFIC AND EDUCATIONAL JOURNALS, MONOGRAPHS AND BOOKS

Correspondence Invited

LANCASTER, PENNSYLVANIA



# For Demonstrations of Light Phenomena THE CENCO DEMONSTRATION BENCH

Speaking broadly, there is probably no more generally useful item of apparatus than a good optical bench. In fact, a well designed optical bench with suitable accessories suffices for practically all the laboratory experiments in the optics courses. In addition, again with properly designed accessories, it is applicable to numerous experiments in other branches of physics, particularly those designed for demonstration by projection. The Cenco Demonstration Bench embodies all the features that make for ease of operation and accuracy of measurement. It consists of a steel bed with two rails accurately matched on which the carriages ride. A scale 125 cm long graduated in mm permits the setting of any carriage to be measured to a plus or minus 0.2 mm. The bed is bolted to two pairs of supporting legs provided with leveling screws and finished with gloss-black enamel. Between the rails is secured a strip of steel to which the carriages are clamped.

Illustrated Accessories: Two extra No. 85804 Carriages \$3.85 each; No. 86605A Illuminator \$47.50 each; No. 86607 Light Shield \$4.00 each; 2 No. 87604 Polaroid Disk Holders \$9.00 each; 1 pair No. 87602 Polaroid Disks \$6.00 pair; No. 72288 Lens Holder \$1.90 each; No. 87535A Polarization Specimen \$4.50 each; and No. 86120A Projection Objective \$30.00 each.

## Central Scientific Company

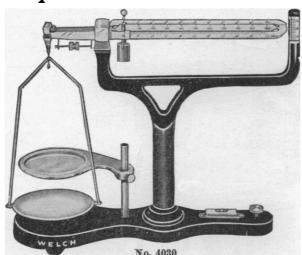
SCIENTIFIC INSTRUMENTS & LABORATORY APPARATUS

CHICAGO 1700 Irving Park Blvd., Lakeview Station



BOSTON 79 Amherst St., Cambridge A Station

#### Improved STAINLESS STEEL BALANCE



Complete as illustrated (without extra

each, \$17.50 each, \$15.75

All metal parts, down to the last screw and washer, are STAINLESS STEEL (except Base and Pillar, which have Vitreous Enamel Finish). Strongly resistant to acid fumes and corrosive salts.

PATENTED ONE-PIECE TRIPLE BEAM has all three scales visible at eye level.

BEARINGS are all GROOVED AGATE, with dust-proof covers.

KNIFE EDGES of rust-proof "COBA-LITE."

HIGH SENSITIVITY—0.01 g. or less.

CAPACITY—111 g. alone, and 201 g. with an extra weight.

Ideal for physics and chemistry laboratories desiring RAPID and ACCURATE weighings.

Send for complete circular

W. M. Welch Scientific Company Established 1880

1517 Sedgwick Street

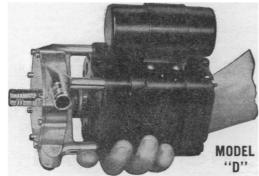
Chicago, Illinois. U.S.A.



#### EASTERN PUMPS STAND ALONE IN THEIR FIELD

Well known as the "Midget Family," Eastern Pumps can be counted on to outperform much larger and more expensive pumps.

Light, portable, economical to run, they stand up under the severest use. Model "D," illustrated, has a wide scope of applications—and is entirely sparkproof, for hazardous conditions. Available in Monel metal, stainless steel, and other alloys.



Type: Centrifugal Weight: 14 lbs.

Size: 734 x 634 x 51/8 1/20 H P split capacitor motor

Weight: 14 lbs.

Maximum capacity

5 gals. per minute

Chromium plated bronze

Monel metal or stainless steel

Send for Eastern's new pump folder, describing our complete line of Midget Pumps and giving specifications and performance charts.

PRECISION TEMPERATURE REGULATOR

Accurate-Dependable-Portable—Inexpensive

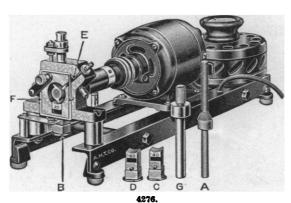
Ideal for ovens, incubators, water baths, oil baths, organic reaction mixtures and general laboratory service. Responds to temperature changes of 1/50° C. Range up to 300° C. Relay unit available for 110 volt 60 cycles A.C. and also for 110 volt D.C. Handles heaters up to 1100 watts. Price

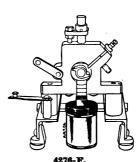


EASTERN ENGINEERING COMPANY, 39 FOX ST., NEW HAVEN, CONN.

#### F.R.I. MICRO MODEL

#### WILEY LABORATORY MILL





Collecting Jar for larger samples than obtainable with metal receivers B, C and D.

LABORATORY MILL, Wiley-F.R.I. Micro Model. A combined cutting and screening apparatus for use in quantitative analysis. As designed and used in the Food Research Institute of Stanford University, for the milling of very small quantities of organic materials for micro-analysis. This mill has been successfully used in preparing homogeneous samples of cereals, leaves, barks, roots, crab shells, fish scales, bones, desiccated animal tissues, etc. Dried materials are generally essential.

Consisting of a polished iron chamber, within which a rotor with two steel cutting edges is so mounted as to revolve at high speed past a stationary steel blade and the cutting end of a steel feed tube, producing a shearing action. This rapid rotation, i.e. up to 5000 r.p.m., keeps the sample agitated and causes it, when cut to sufficient fineness, to fall through the sieve top of the removable delivery tube mounted below the grinding chamber.

The capacity of the feeding tube is 5 ml. The chamber is 31.5 mm diameter × 16 mm deep, its capacity for one charge being about ten kernels of wheat or several leaves. The delivery tubes are offered with sieve tops of 20, 40 and 60 mesh and with removable receivers which afford convenient collection of samples and ease in cleaning. No. 4276-F collecting jar, 2 oz. capacity, with adapter for attachment to the delivery tube, can be substituted for the metal receiver when larger samples are restricted. quired. Contamination of samples after milling is avoided by the use of this jar as the threaded top with adapter can be removed and replaced by the plastic cap regularly supplied with the jar.

A polished glass plate, held in place on the face of the mill by a swing-aside screw clamp, closes the cutting chamber and at the same time permits observation of the sample during grinding and, when removed, exposes the entire interior for easy cleaning. The mill is coupled by direct drive to a high speed motor, with speed control rheostat, all conveniently mounted on the same base.

See W. H. Cook, C. P. Griffing and C. L. Alsberg, "A Mill for Small Samples," Industrial and Engineering Chemistry, Analytical Ed., Vol. 3, No. 1 (Jan. 15, 1931), p. 102.

Copy of pamphlet EE-107, "Wiley Laboratory Mills," sent upon request

#### ARTHUR H. THOMAS COMPANY

RETAIL-WHOLESALE-EXPORT

#### LABORATORY APPARATUS AND REAGENTS

WEST WASHINGTON SQUARE

PHILADELPHIA, U. S. A.

Cable Address, BALANCE, Philadelphia

## EACH CAN SAY



"I WAS A CLERK"



"I WAS A LINEMAN"



"I WAS A DRAFTSMAN"

Thirty-seven years ago, in 1904, the president of the American Telephone and Telegraph Company went to work as a clerk in one of the Bell System companies.

About that time, the 18 men who are now the presidents of the Bell telephone companies were starting their careers. For, like the head of the System, they have worked many years in the business — an average of 38 years each. Each of them can say: "I was a clerk," "I was a lineman," "I was a draftsman"— and so on.

The "know how" is here — for the every-day job of running the telephone business or to serve you in emergency. Up-from-the-ranks management is doubly important these days.



BELL TELEPHONE SYSTEM

The Bell System is doing its part in the Country's program of National Defense.

#### LABORATORY SUPPLIES

AMERICAN-MADE GIEMSA STAIN

for blood smears.

We manufacture a high grade GIEMSA STAIN.

\$2.00 for 2 ounces.

Stains and Reagents carefully made and tested on actual cases.



Write for Catalogue.

GRADWOHL LABORATORIES

3514 Lucas Avenue St. Louis, Missouri

#### LaMotte Soil Testing Service

This service includes a full series of portable outfits for conducting the following accurate tests:

pH (acidity and alkalinity) Magnesium Available Potash Available Phosphorus Nitrate Nitrogen Ammonia Nitrogen Manganese

Replaceable Calcium Aluminum Organic Matter Chlorides Sulfates

Prices and information sent on request

LaMotte Chemical Products Co. Towson, Baltimore, Md.

Dept. "H"

#### Standardized WHITE SWISS MICE

Shipped anywhere in U. S. A. Competitive prices Live delivery and satisfaction guaranteed

Pacific Animal Supply 126 N. Sparks St., Burbank, Calif.

in New and Weed Glasses! All makes.



Size & powers of nature, sport & hunting glasses, \$6. upward. Telescopes, spotting & rifilescopes. Microscopes, magnifiers & com-passes, \$1. upward. Repair work & goods passes, \$1. upward. guaranteed.

LORING. OWEGO, N.Y.

Catalog free, Box B.

#### Patten CHICK EMBRYO MODELS The Patten Chick Embryo Models are so designed that the embryo as it appears in toto is clearly reproduced and by skillful removals, the underlying tissues and organs are shown without loss. Blood vessels and organ rudiments are exposed in relief and, in many cases, almost in entirety by proper undercut thus assuring clear and accurate conceptions. Sturdiness is obtained in certain minute details by casting them in metal and combining their separate parts with the strong composition of the major portion of the models. In short, no other series of models offers the same completeness and strength of detail. If you are not familiar with this series refer to our catalog No. 47 or write for descriptive booklet. Illustrated: Patten Chick Embryo Model —(44-hour stage) one -(44-nour stage) one of the series of seven models which in-cludes the 18, 25, 30, 36, 44, 60 and 96-hour embryos.

For complete listings of Chemistry, Physics, Biology and General Science laboratory supplies see our catalog No. 48. If not in your files, write.

Chicago Apparatus/Company Science Laboratory Equipment



### Sand—Symbol of Optical Independence

BY itself, only a handful of sand—fine, pure, white crystals of quartz from a Pennsylvania hillside. But, blended with boron, sodium, barium, lead, phosphorus and other elements—fused and fined at white heat—cooled, sorted, annealed and selected—it becomes optical glass, one of the basic indispensable materials of national defense—and of modern civilization.

Thirty years ago America was wholly dependent on Europe for a supply of glass for optical instruments. But before the first World War had cut off that source, Bausch & Lomb scientists, at Rochester, New York, were at work on the development of a glass-making technique. By 1918, glass to fill the vital needs of optical manufacturing in the United States was pouring from the B&L glass plant.

Today, for binoculars and fire control equipment that are the eyes of the Army and Navy—for metallographic and spectrographic equipment that are the eyes of industrial research—for microscopes that are the eyes of all science—for spectacle lenses that are the eyes of the nation's citizens—America is completely independent of foreign supply.

#### **BAUSCH & LOMB**

OPTICAL CO. • ROCHESTER, NEW YORK

ESTABLISHED 1853

AN AMERICAN SCIENTIFIC INSTITUTION PRODUCING OPTICAL GLASS AND INSTRUMENTS FOR NATIONAL DEFENSE, EDUCATION, RESEARCH, INDUSTRY AND EYESIGHT CORRECTION

## SCIENCE

Vol. 93	FRIDAY,	March 7	, 1941	No. 2410
		Carlo mario de mario de mario de la como de		
The National Roster of Scie Personnel: Dr. Leonard Ca		217 $Pre$		of a Serologically Re-
The American Association for the Advancement of Science:		tra	active Polysaccharide by a Sterile Bacterial Extract: Dr. EDWARD J. HEHRE. On Vitamins in Wheat Germ: Dr. HERBERT H. BUNZELL	
Report of the President to Association for the Advance	ement of Science: Dr.	g . ;		
ALBERT FRANCIS BLAKESLEI	E £	119	tific Apparatus and Lai	v
Membership of the America R. MOULTON		CEN	A Method for Making Snowflake Replicas: Vincent J. Schaefer. The Use of Infra-Red Film for Electrophoretic and Ultracentrifugal Analyses:	
Obituary:		DR	HENRY P. TREFFERS a	nd Dr. Dan H. Moore 239
Sir Joseph John Thomson: I	OR. W. F. G. SWANN 2	227 Scien	ce News	10
Scientific Events:				
Scientific Developments in t sional Programs for the St. American Chemical Society The American Association of gical Engineers; Presentatio fessor Cohen; Recent Deaths	Louis Meeting of the ; Scientific Meetings; f Mining and Metalluren of a Portrait of Pro-	ment lished	of Science, edited by J every Friday by	urnal devoted to the Advance- MCKEEN CATTELL and pub-
Scientific Notes and News		232 т		Garrison, N. Y.
·		Lanca	aster, Pa.	•
Discussion:			New York City: Gr	and Central Terminal
General or Special in the I matics: Professor G. A.		Annu	al Subscription, \$6.00	Single Copies, 15 Cts.
Printed Matter: Dr. Chr. Catalogue of North America sils of the Gulf and Atlant H. B. Stenzel	ISTIAN A. RUCKMICK. an Early Tertiary Fos- tic Coastal Plain: Dr.	tion f ing n the o	or the Advancement of	gan of the American Associa- Science. Information regard- ciation may be secured from secretary in the Smithsonian ton, D. C.

#### THE NATIONAL ROSTER OF SCIENTIFIC AND SPECIAL-IZED PERSONNEL: A PROGRESS REPORT

#### By Dr. LEONARD CARMICHAEL

PRESIDENT OF TUFTS COLLEGE, DIRECTOR OF THE NATIONAL ROSTER OF SCIENTIFIC AND SPECIALIZED PERSONNEL

In a previous communication (SCIENCE, August 16, 1940, Vol. 92, No. 2381, pages 135–137) a preliminary report was made of the plans for the National Roster of Scientific and Specialized Personnel. The roster, although still far from complete, is now actually in use. Each week it is called upon by an increasing number of defense agencies to provide lists of names of individuals with special qualifications. As stated before the roster is jointly administered by the National Resources Planning Board and by the United States Civil Service Commission.

The general questionnaire, the projected form of which was described in the first report, has been made. This questionnaire is broken into 30 elements, the information asked including: (1) Name; (2) Date of

birth; (3) Place of birth; (4) Citizenship status; (5) Marital status; (6) Race and sex; (7) Military service; (8) Reserve membership; (9) Foreign language proficiency; (10) Federal service; (11) Federal Civil Service examinations taken; (12) Foreign travel and residence; (13) Physical condition; (14) Height and weight; (15) Names of persons for reference; (16) College and university education, including the special honors received and membership in honorary academic or scientific societies; (17) Important hobbies; (18) List of significant full-time positions held; (19) The five most important fields of specialization listed in order of significance (these five fields are taken by the individual filling out the questionnaire from the technical checklist described below); (20) The individual's

#### Two Outstanding Biology Texts

#### FUNDAMENTALS OF BIOLOGY

By Arthur W. Haupt, University of California at Los Angeles. McGraw-Hill Publications in the Zoological Sciences. Third edition. 443 pages, 6 x 9. \$3.00

Like previous editions of this standard text, the present revision deals with the basic principles common to all living things, with emphasis on those aspects of biology which seem to be of greatest value in contributing to a liberal education. While the plan of the book has not been materially altered, greater stress has been placed on the animal side of biology. New material has been added to many chapters, especially those dealing with protoplasm and the cell, unicellular organisms, lower animal groups, and the vertebrates. Other topics have been greatly expanded and many new illustrations have been added.

"This is the third edition of a textbook which gained many friends for its clear exposition, interesting presentation, and rigid restriction of material to the most essential and basic facts. The newest revision will win new friends and keep the old ones."—The Biologist

"In its first two editions, this book proved itself to be well suited for one-semester orientation courses in the biological sciences. . . . The subject matter is well selected and readably presented. The value of this book is attested by its successful classroom record."—Bios

#### Laboratory Directions for General Biology

Third edition. 65 pages, 6 x 9. \$1.00

#### ANIMAL BIOLOGY

By the late ROBERT H. WOLCOTT. Revised by members of the Zoology Department, University of Nebraska. *McGraw-Hill Publications in the Zoological Sciences*. Second edition. 621 pages, 6 x 9. \$3.50

Teachers were enthusiastic about the first edition of this successful text; they like the second edition even better, commenting particularly on the retention of the logical, systematic organization of material, the new sections on the parasites, the revision of the treatment of Annelid worms, and the wealth of new illustrations. As before, teachers find that *Animal Biology* fits exceptionally well into their courses, without stressing too heavily either the "types" or the "principles" approach.

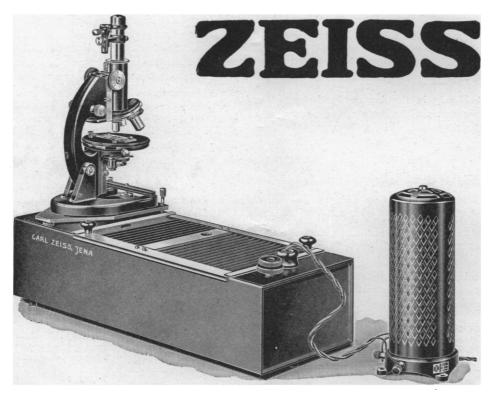
"Professor Wolcott's splendid text has been revised by the staff of the Department of Zoology of the University of Nebraska. . . . The revised edition is an improvement of a very teachable text."—Bios

Send for copies on approval

#### McGRAW-HILL BOOK COMPANY, INC.

330 West 42nd Street, New York, N. Y.

Aldwych House, London, W.C.2



## SIMPLIFIED MICRO-PROJECTION APPARATUS

#### Compact—Light Weight—Brilliant Illumination

THE parts of the instrument are housed in a metal case in such a manner that troublesome adjustments are practically excluded. A special condenser ensures a correct beam of light. The source of light is an arc lamp, which is so arranged that each carbon can be adjusted independently. The position of the arc may be examined on a ground glass in the cover of the housing. The carbons are adjusted by two milled knobs which are coaxial and so arranged that they may be simultaneously worked by one hand.

Price with reversing prism, but without microscope, including 100 pairs of carbons, for 110 v.D.C. 5 amps. \$169.00 for 110 v.A.C. 10 amps. \$179.00

A copy of catalog Micro 451/36 will be sent on request

#### CARL ZEISS, INC.

485 Fifth Avenue 728 So. Hill Street
NEWYORK CARLTESS LOS ANGELES

### Important MOSBY COLLEGE TEXTS

Equally adaptable for classroom or reference use, these texts which discuss these basic sciences can be of practical value to the student or practitioner seeking dependable information.

#### ESSENTIALS of ZOOLOGY

The author brings into this book the essential fundamentals which every zoology student should have, regardless of the length of the course he happens to take. Some emphasis is placed on the economic aspect, on the human relation, and on the principles involved. The arrangement of the chapters is in an order which seems logical, however they are written in such a way that the teacher may change their order with no difficulty. Since this is true, the teacher has some option in the possibility of striking a workable combination of "types" and "principles" material as well as balance in laboratory-lecture program.

By George Edwin Potter. 532 pages, 204 illustrations. Price, \$3.75

#### TEXTBOOK of PHYSIOLOGY

This new seventh edition brings with it a closer approach to perfection through the addition of Dr. W. W. Tuttle as its co-author. Because of Dr. Tuttle's having taught Physiology both in the undergraduate school and in the school of medicine, he naturally is familiar with the balance needed for an undergraduate book in Physiology. This balance is implanted into this new edition. Both authors have worked in bringing this material up to date so that it now offers the latest thoughts and developments. The book is comprehensive in its coverage; clear and understandable in its style; and practical in its descriptions and applications.

By W. D. Zoethout and W. W. Tuttle. 743 pages, 302 illustrations. Price, \$4.50

#### FUNDAMENTALS of BIOLOGY

This book offers the teacher many worthwhile advantages. It is large enough that it can serve both as a class-room text and at the same time contains a good deal of reference reading for the course in general biology. It has survey chapters on animals and plants in which a large group of organisms is given so that individual instructors can select those which in their opinions best illustrate. Emphasis has been placed on the application of biology in the field of health, wealth and conservation. Human biology, therefore, has been well emphasized.

By William C. Beaver. 2nd Ed. 889 pages, 301 illustrations, 14 color plates. Price, \$4.00

#### The C. V. MOSBY COMPANY

3525 PINE BOULEVARD

ST. LOUIS, MISSOURI