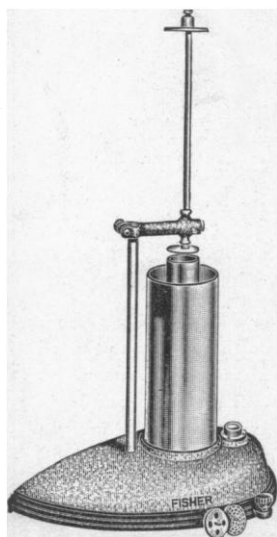


SCIENCE

NEW SERIES
VOL. 94, No. 2452

FRIDAY, DECEMBER 26, 1941

SUBSCRIPTION, \$6.00
SINGLE COPIES, .15



The Fisher-Gardner Mobilometer
with water jacket.

The improved Fisher-Gardner Mobilometer enables the determination of the mobility of a material by observing the time required for a standard disc to descend a fixed distance through the sample. By means of three interchangeable discs and a choice of weights for use on the plunger, the Mobilometer has a very wide range of application.

The improved model employs monel metal instead of brass and has a new, convenient releasing mechanism.

The Improved Fisher-Gardner Mobilometer has a monel metal water jacket which enables the laboratorian to control the temperature of the sample within close limits and thus insures representative results. The water jacket, by providing means for raising the temperature of the sample, increases the range of the apparatus to fluid and semi-fluid greases as well as other viscous products.

The Fisher-Gardner Mobilometer is furnished complete with 4-hole, 51-hole and solid discs, spirit level, removable sample cylinder and water jacket. The monel metal discs, cylinder, jacket and plunger are readily detached for cleaning. The base has leveling feet. **Each, \$58.00**

(When the high degree of accuracy and wide range of application provided by the complete Mobilometer are not required, the Mobilometer without water jacket can be employed. It can be had for \$48.00.)

Many American industries control the consistency of their products by means of the Fisher-Gardner Mobilometer.

Manufactured and Distributed by

FISHER SCIENTIFIC CO.

711-723 Forbes Street, Pittsburgh, Penna.



EIMER AND AMEND

633-635 Greenwich St., New York, N. Y.

Headquarters for Laboratory Supplies

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

Entered as second-class matter July 18, 1923, at the Post Office at Lancaster, Pa., under the Act of March 3, 1879.

UNIVERSITY OF CALIFORNIA Bulletins of the Department of GEOLOGICAL SCIENCES

VOLUME XXV

1940-1941

1. Metamorphism in the Southern Sierra Nevada Northeast of Visalia, California, by Cordell Durrell 1.25
2. Geology of the Covelo District, Mendocino County, California, by Samuel G. Clark25
3. A Review of the Genus *Aelurodon*, by V. L. VanderHoof and Joseph T. Gregory25
4. Phylogeny of North American Equidae, by R. A. Stirton50
5. A Systematic Study of the Fossil Gastropod *Exilia*, by Herdis Bentson50
6. Calderas and Their Origin, by Howel Williams 1.25
7. Volcanoes of the Medicine Lake Highland, California, by Charles A. Anderson 1.00
8. The Mandible of a Diadectid *Cotylosaur*, by S. P. Welles25

Each title may be purchased separately at its indicated price or the entire group of papers comprising the Volume at \$4.50.

UNIVERSITY OF CALIFORNIA
PRESS

Berkeley and Los Angeles

Address all communications to the Berkeley office

PATHOLOGY

For Students and Practitioners
of Dentistry

By WILLIAM E. EHRLICH, M.D.

Associate in Pathology, School of Medicine,
University of Pennsylvania, Philadelphia

NEW WORK

*Octavo, 509 pages, illustrated with 234 engravings.
Cloth, \$5.50, net.*

In this work oral pathology is presented as part of general pathology. For this reason the material is arranged according to such fundamental principles as heredity, infection and inflammation instead of following the structures of the mouth in an anatomical order. All of the general factors underlying disease are presented as well as the special pathology of the mouth including the salivary glands, tonsils and pharynx.

LEA & FEBIGER

WASHINGTON SQUARE PHILADELPHIA, PA.

THE HARVARD BOOKS ON ASTRONOMY

Edited by Harlow Shapley
and Bart J. Bok

Earth, Moon and Planets

By Fred L. Whipple

This book presents in non-technical language the latest information about the planets, their atmospheres and the possibilities for life outside the earth. The reader is carried in his imagination below the clouds on Venus, Mars and the giant planets, into the depths of the earth, and to the rough and airless surfaces on the Moon, Mercury and Pluto. Special attention is given to the problems of origin and evolution, particularly the origin of lunar craters and the evolution of the planets. Planetary motions and the working of Newton's Law of Gravitation are explained. The book contains 140 figures of which more than half are actual photographs. Charts of the Moon and Mars enable the reader to identify the more conspicuous markings seen in the photographs or through the telescope. A special feature of the book is the Planet Finder and Star Chart, which enables the reader to locate directly the planets in the sky at any time from the present through 1970.

140 Illus; 293 Pages; \$2.50 (1941)

THE BLAKISTON COMPANY, Philadelphia

ABOUT OURSELVES

By

JAMES G. NEEDHAM

Emeritus Professor at Cornell University

Illustrated by

WILLIAM D. SARGENT

It is a sane, timely, original and entertaining account of the physical and social science of life written so that all may understand. The book is a study of human nature from the zoological viewpoint. The book presents in untechnical language important basic facts which must be taken into account to really understand ourselves individually and collectively.

44 ORIGINAL ILLUSTRATIONS

269 Pages

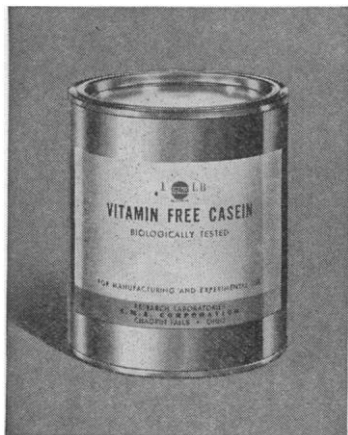
\$3.00

THE JAKES CATTELL PRESS

LANCASTER, PA.

VITAMIN-FREE CASEIN SMACO

IN VITAMIN EXPERIMENTATION the type of dietary protein employed may well be the most important factor. When Vitamin-Free Casein SMACO is the protein in the deficiency diet, uniform and consistent depletion of test animals occurs well within the required time interval specified by the U.S.P. or other standard test methods. Recent work suggests the suitability of Vitamin-Free Casein SMACO for vitamin K¹ and biotin² assay and experimental procedures in chicks.



Vitamin-Free Casein SMACO is prepared in our laboratories by a special extraction process which insures a completely vitamin-free product. Each package bears a control number that identifies the protocols showing rigid biological assay, control of uniformity and freedom from complicating vitamin factors.

Vitamin-Free Casein SMACO has found widespread acceptance in university, pharmaceutical and industrial laboratories. We therefore invite you to try this reliable source of protein in your next biological investigation.

Write for the booklet "Special Products for Nutritional Research" for additional information on Vitamin-Free Casein SMACO, prepared diets for U.S.P. assays, crystalline vitamins and other biochemicals of nutritional interest.

1. ANSBACHER, S.: *Proc. Soc. Exp. Biol. & Med.*, 46:421:1941.
2. ANSBACHER, S., and LANDY, M.: Biotin and Scaly Dermatitis of the Chick. *Proc. Soc. Exp. Biol. & Med.*, 48:3:1941.

RESEARCH LABORATORIES
S. M. A. Corporation
CHAGRIN FALLS, OHIO



NEW WILEY BOOKS

[[Visitors to the A.A.A.S. Meetings in Dallas are invited]]
to see our display of new books in Booth No. 54]]

Southwestern Archaeology

By JOHN C. McGREGOR, *Arizona State Teachers College, Flagstaff; Archaeologist and Curator, Museum of Northern Arizona.*

An introduction to the subject, for students of archaeology, anthropology, sociology, and history. The book is the first to present a general unified picture of heretofore scattered or regional technical reports.

403 pages 6 by 9 \$5.00

Physics

By W. F. G. SWANN, *Director, Bartol Research Foundation of the Franklin Institute, with the assistance of IRA W. FREEMAN, Associate Professor of Physics, Central College, Chicago.*

One of the series "The Sciences, A Survey Course for Colleges," edited by Gerald Wendt. This volume presents the broad fundamental laws and concepts underlying the "facts" of physics, without the technicalities.

274 pages 5½ by 8½ College Edition, \$1.75

Principles and Practice of Chromatography

By L. ZECHMEISTER and L. CHOLNOKY. Translated by A. L. BACHARACH and F. A. ROBINSON.

A discussion of a relatively new method for the separation of organic substances. It covers fundamental principles, the scope of the method, details of procedure, descriptions of apparatus, and the chromatographic separation of representative compounds.

362 pages 5½ by 8½ \$5.00

Methods of Correlation Analysis

By MORDECAI EZEKIEL, *Economic Adviser to the Secretary of Agriculture.*

In this edition there is new material on the meaning of standard errors, logical limitations to the flexibility of graphic curves, newer and more rapid methods of calculation, and new methods of estimating the reliability of an individual forecast.

Second Edition 531 pages 6 by 9 \$5.00

Physical and Chemical Methods of Sugar Analysis

By C. A. BROWNE, *formerly Chief of the Bureau of Chemistry, U. S. Department of Agriculture,* and F. W. ZERBAN, *Chemist in Charge of the New York Sugar Trade Laboratory.*

This book represents an entirely rewritten and revised edition. Its main purpose is to give a clear account of the more important of the newer developments.

Third Edition 1353 pages 6 by 9 \$15.00

The Identification of Molecular Spectra

By R. W. B. PEARSE, *Lecturer in Physics, Imperial College of Science and Technology,* and A. G. GAYDON, *Leverhulme Research Fellow, Imperial College of Science and Technology.*

A compilation of tables designed to facilitate the identification of molecular spectra. The wavelength region considered is from 10,000 Å to 2,000 Å. Information is given as to origin, intensity in various sources, and appearance.

221 pages 7½ by 11 \$8.00

Organic Analytical Reagents

By JOHN H. YOE, *Professor of Chemistry, University of Virginia,* and LANDON A. SARVER, *Director of Research, American Viscose Corporation.*

A comprehensive treatise on organic analytical reagents. It represents probably the first attempt to collect in one volume the data hitherto scattered throughout the literature.

339 pages 6 by 9 \$4.00

An Introduction to Physical Statistics

By ROBERT BRUCE LINDSAY, *Hazard Professor of Physics, Brown University.*

This book presents clearly a brief survey of and introduction to all the fundamental methods of statistical technique now in use in physics.

306 pages 6 by 9 \$3.75

JOHN WILEY & SONS, INC. 440-4th AVE., NEW YORK

NEW WILEY BOOKS

Ready in January

Micromethods of Quantitative Organic Elementary Analysis

By JOSEPH B. NIEDERL and VICTOR NIEDERL.

A thoroughly revised second edition, with new chapters on the calibration of weights, the determination of the zero reading, and the use of ordinary analytical balances.

Second Edition 347 pages 6 by 9 \$3.50

Chemistry

By GERALD WENDT.

One of the series "The Sciences, A Survey Course for Colleges," edited by Dr. Wendt.

Approx. 212 pages; 5½ by 8½; Probable price, College Edition, \$1.75

To Discover Mathematics

By GAYLORD M. MERRIMAN.

For survey courses for college freshmen. It is designed to cultivate an appreciation of the aims and methods of mathematics.

435 pages 6 by 9 \$3.00

Organic Syntheses, Collective Volume I

Edited by HENRY GILMAN; revised by A. H. BLATT.

This revision includes those changes and improvements in procedure and methods which have been developed during the nine years the first edition was on the market.

Second Edition 580 pages 6 by 9 \$6.00

The Pacific Northwest

Edited by OTIS W. FREEMAN, HOWARD H. MARTIN and WARREN D. SMITH.

The first comprehensive study of the resources of this region which deals with the geographic bases involved.

541 pages 6 by 9 \$4.00

Soils and Fertilizers

By FIRMAN E. BEAR.

A revision of "Soil Management." The book covers the important phases of soil management, with modern concepts and terminology throughout.

Third Edition 374 pages 6 by 9 \$3.50

Textbook of Elementary Qualitative Analysis

By CARL J. ENGELDER.

For shorter courses in qualitative analysis. This third revised edition has been rewritten, with changes to bring it up to date and to make it even more teachable.

Third Edition: Approx. 363 pages; 6 by 9; Probable price, \$2.50

Seeding and Planting in the Practice of Forestry

By the late JAMES W. TOUMEY; Third Edition prepared by CLARENCE F. KORSTIAN.

This edition includes new data on seed extraction (kiln drying), seed storage, and mechanization of nursery operations.

Third Edition 518 pages 6 by 9 \$5.00

Elliptic Cylinder and Spheroidal Wave Functions

By J. A. STRATTON, P. M. MORSE, L. J. CHU, and R. A. HUTNER.

Defines certain standard forms of the solution of the wave equation of three important coordinate systems, offers formulas for important mathematical properties of these functions, and includes tables from which values of the solutions can be obtained.

127 pages 8½ by 11 Paper, \$1.00

Introduction to Vertebrate Embryology

By WALDO SHUMWAY.

This book constitutes a *real* comparative embryology, in which the different stages of development of amphioxus, frog, chick and man are compared.

Fourth Edition: Approx. 360 pages; 6 by 9; Probable price, \$4.00

Statistical Methods Applied to Agricultural Economics

By FRANK A. PEARSON and KENNETH R. BENNETT.

This book is notable for its complete coverage of the field of statistical methods for the student of agricultural economics.

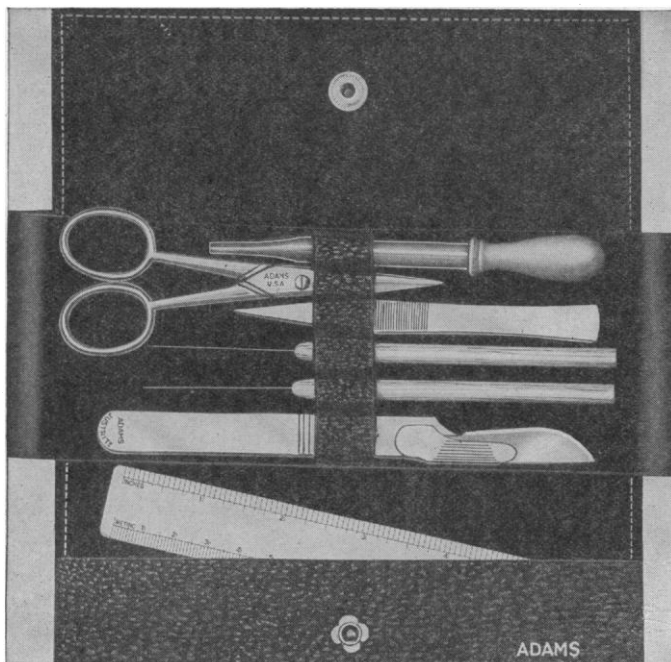
443 pages 6 by 9 \$4.00

JOHN WILEY & SONS, INC. 440-4th AVE., NEW YORK



JUSTRITE Replaceable Blade Scalpel

**LOW PRICED DISSECTING KIT WITH
A REPLACEABLE BLADE SCALPEL**



Featuring a real surgical blade made of highest quality surgical steel. Handle is cadmium plated cold rolled steel. Length including blade is 6".

B-300 Replaceable Blade Scalpel, as illustrated.
Also shown in kit.
Each 50c, dozen \$5.00

B-300X Blades for B-300 Scalpel
dozen \$1.00

A-199 Dissecting Kit, complete as illustrated.
Each \$1.40, dozen \$14.40

Write for quantity discounts.

Consult our Catalog No. 102S **LABORATORY INSTRUMENTS AND SUPPLIES** for other kits and Dissecting Instruments. If you don't have a copy, please write for one on your letterhead.

CLAY-ADAMS CO. INC.
44 EAST 23rd STREET, NEW YORK, N. Y.



LaMOTTE SOIL TESKIT

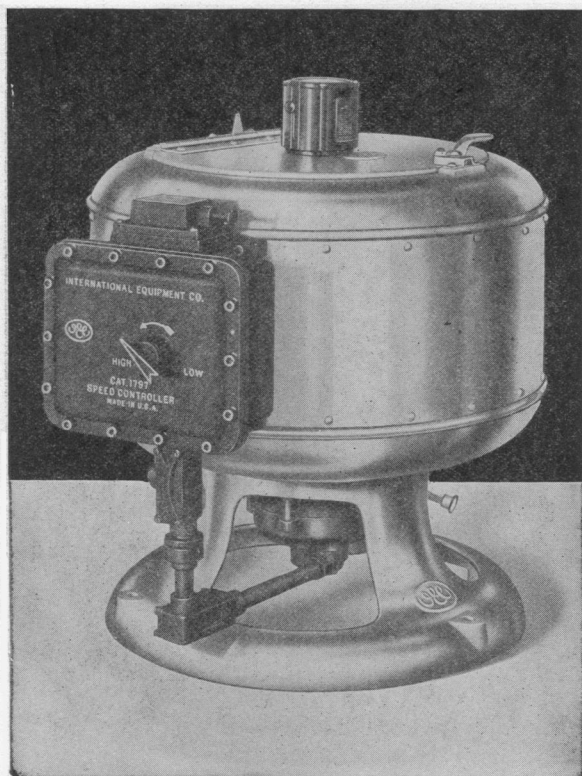
A pocket size Kit designed for the amateur gardener which enables you to tell quickly how "sweet" or how "sour" (alkaline or acid) your soil is. A color chart gives the result without any calculations. Complete with LaMotte Soil Handbook and full instructions, price \$2.00 F.O.B., Towson, Baltimore, Md.

LaMotte Chemical Products Co.
Dept. "H" Towson, Baltimore, Md.

A Short HISTORY OF THE PLANT SCIENCES

by **Howard S. Reed**, Prof. of Plant Physiology, Univ. of California:—The first history of botany written by an American and published in America. The discovery and domestication of plants in ancient times as well as the development of the plant sciences in selected fields, since the opening of the 20th century, receive particular attention.—A New Series of Plant Science Books," edited by F. Verdoorn, Vol. 7, 323 pages, 37 ill., buckram. \$5.00

Chronica Botanica Co., Waltham, Mass.
New York Toronto Rio de Janeiro
G. E. Stechert Wm. Dawson Livr. Kosmos



Centrifuge, with explosion proof motor, for hazardous locations

To meet the demand of the Oil Industry for a large centrifuge with an explosion proof motor, the International Model AE Centrifuge was developed. The Model AE, equal in size and capacity to the Size 2 Centrifuge, has a maximum speed of 1,700 r.p.m. which is sufficient for the testing of oils. However, the Chemical and Paint Industries require the higher speeds of the new explosion proof motor which is now available.

The International Size 2 Centrifuge

with explosion proof motor of 3,450 r.p.m.

accommodates the regular centrifuge equipment and has the safety features of the Model AE with the added advantage of higher speed for more general industrial uses. The special adjustable high speed motor is approved for Class 1—Group D locations.

A speed regulator and disconnect switch are mounted permanently in a vaporproof box on the side of the centrifuge and connected through conduit and explosion proof fittings to the motor. The sealed ball bearings of the motor require no attention. A conveniently located hand brake permits rapid stopping.

Further information upon request



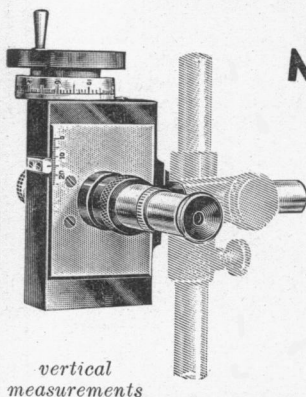
**INTERNATIONAL EQUIPMENT
COMPANY**

352 Western Avenue Boston, Mass.
Makers of Fine Centrifuges for over Forty Years

for accurate linear measurements of short range

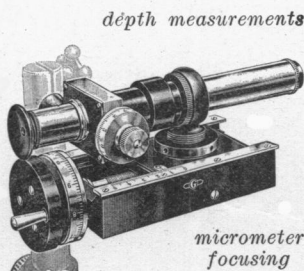
GAERTNER MICROMETER SLIDES

fitted with microscope or telescope, permit—



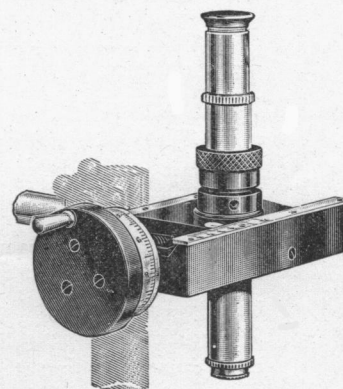
*vertical
measurements*

A most desirable feature of these instruments is the diversity of applications possible. In addition to the uses indicated, displacements on small objects can be measured by mounting them directly on the slide. Two slides can be mounted to form a small coordinate comparator. Etc., etc.



depth measurements

*micrometer
focusing*

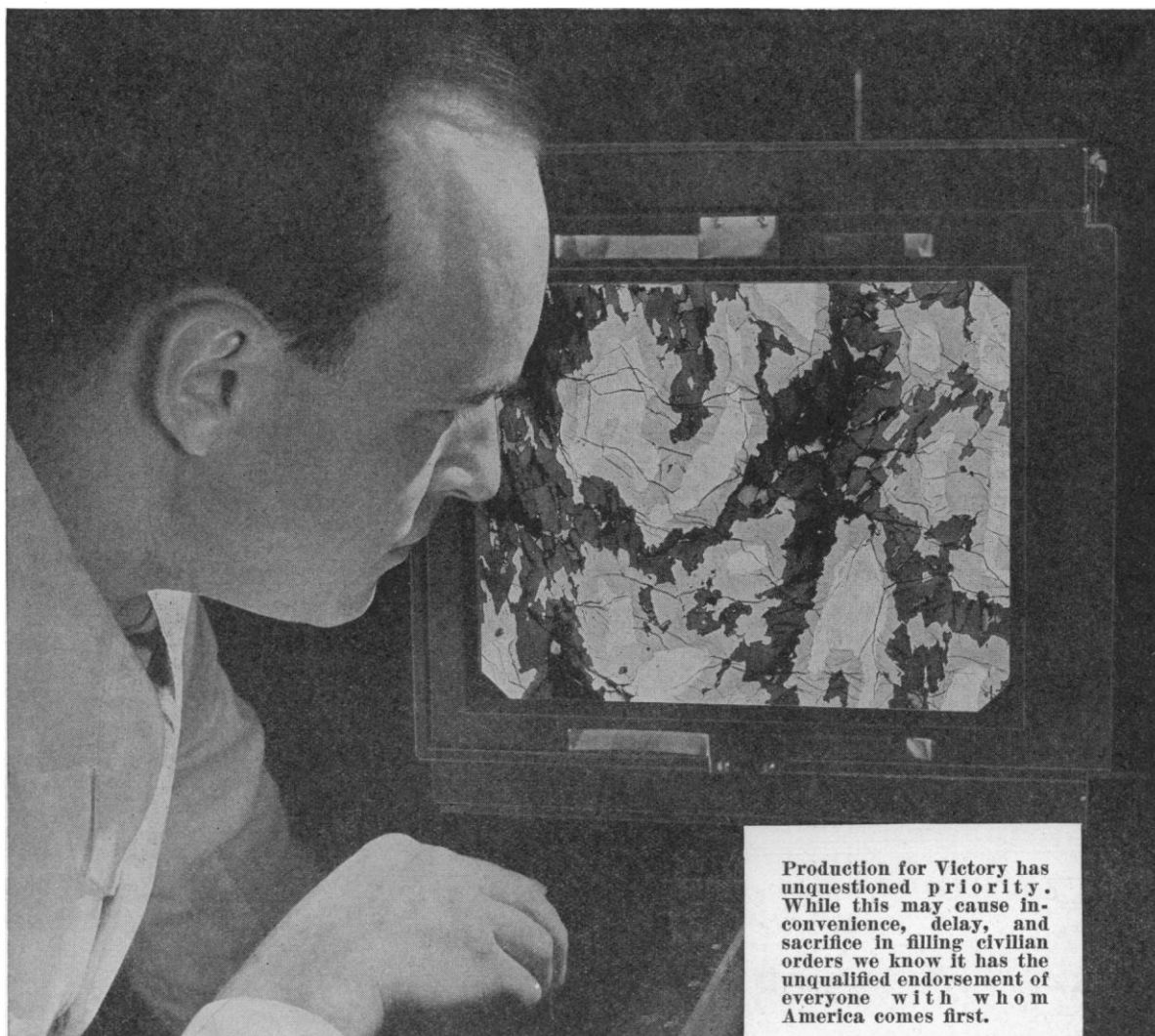


*horizontal
measurements*

RANGES: up to 4 inches (100 mm) · READINGS: to .00005 inch (0.001 mm) by vernier

THE GAERTNER SCIENTIFIC CORPORATION

1204 Wrightwood Ave. · Chicago · U.S.A.



Production for Victory has unquestioned priority. While this may cause inconvenience, delay, and sacrifice in filling civilian orders we know it has the unqualified endorsement of everyone with whom America comes first.

Character Portrait of a War Machine

NO thin-skinned beauties are Uncle Sam's battleships and tanks. Tough warriors of the land and sea, they are ready to give punishment and ready to take it. To the metallographer, photographs such as the one above tell just how tough these war machines will be.

In steel mills, in rolling mills, in the tool-making industry—wherever metals are made or fabricated for specialized purposes, wherever specific qualities must be maintained—you will find the metallographer standing guard.

With his mosaic-patterned photographs he is today safeguarding the qualities that insure the survival of the floating gray steel fortresses that

guard our ocean lanes and of the thundering tanks of our new armored divisions, as for years he has been improving our automobiles and our planes and even our razor blades.

To the metallographer, as to the physician, the teacher, the industrial research worker and those who are dedicated to the conservation of vision, the name of Bausch & Lomb on any optical instrument stands for optical excellence and mechanical precision.

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. 94

FRIDAY, DECEMBER 26, 1941

No. 2452

<i>The Dyche Museum at the University of Kansas:</i> DR. ALEXANDER WETMORE	593	<i>Special Articles:</i>	
<i>Some Unsolved Problems of Theoretical Dynamics:</i> DR. GEORGE D. BIRKHOFF	598	<i>The Protection of Mice Against Infection with Airborne Influenza Virus by Means of Propylene Glycol Vapor:</i> DR. O. H. ROBERTSON and OTHERS. <i>Properties of the Isolated Macromolecular Component of Normal Chick Embryo Tissue:</i> DR. J. W. BEARD and OTHERS. <i>Crystalline Catalase from Beef Erythrocytes:</i> MICHAEL LASKOWSKI and PROFESSOR JAMES B. SUMNER	612
<i>Obituary:</i> <i>Elmer Samuel Ines:</i> DR. W. F. G. SWANN. <i>Max Kriss:</i> PROFESSOR E. B. FORBES. <i>Deaths and Memorials</i>	600	<i>Scientific Apparatus and Laboratory Methods:</i> <i>A Grinder for Homogenizing Bacterial Clumps or Infected Tissues:</i> JOHN H. HANKS. <i>Denaturation of Egg Albumin by Pressure:</i> E. A. GRANT, DR. R. B. DOW and DR. W. R. FRANKS	615
<i>Scientific Events:</i> <i>The Advisory Board on Sanitary and Public Health Engineering; Research Grants of the Virginia Academy of Science; The American Chemical Society; The Meeting of Mathematicians at Lehigh University; The Dallas Meeting of the American Association</i>	602	<i>Science News</i>	10
<i>Scientific Notes and News</i> ..	604		
<i>Discussion:</i> <i>Mean Sea-level and Sand Movements:</i> HARRY LEY-POLDT. <i>Zipf's "Law of Urban Concentration":</i> PROFESSOR JOHN B. CARROLL. <i>"The Breathing Mechanism of Turtles":</i> PROFESSOR F. H. McCUTCHEON. <i>On the Occurrence of Stereoisomeric Carotenoids in Nature:</i> DRs. L. ZECHMEISTER and W. A. SCHROEDER	607		
<i>Special Correspondence:</i> <i>Letter from Douglas Cockerell:</i> PROFESSOR T. D. A. COCKERELL. <i>Post-graduate Course in Tropical Medicine at Tulane University:</i> PROFESSOR ERNEST CARROLL FAUST	610		
<i>Scientific Books:</i> <i>Gases; Atoms:</i> DR. M. E. ROSE	611		

SCIENCE: A Weekly Journal devoted to the Advancement of Science, edited by J. MCKEN 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.

THE DYCHE MUSEUM AT THE UNIVERSITY OF KANSAS¹

By Dr. ALEXANDER WETMORE

ASSISTANT SECRETARY, SMITHSONIAN INSTITUTION

SOME years ago I found myself a graduate from Montgomery County High School in Independence, Kansas. The study of birds was a paramount interest with me and I had aspirations for college. Iowa, California, other places, offered inducements, until a friend loaned me a catalogue of the University of Kansas and I learned of the University Museum, now the Dyche Museum. Among other descriptive details I read of a collection of Central American birds. Foreign birds at the time were unknown to me, except for a few that I had seen in circus menageries or

stuffed in the parlors of friends, and were an irresistible attraction. I decided at once that the courses in biology offered at K. U. were the ultimate of my desire, and in September several days before the fall term opened I was in Lawrence. My first visit to the "Hill" led me to the cool great hall of this museum, and in this building it was my fortune to spend much of my time during my undergraduate years.

The foreign birds, I may add, proved to be the Gaumer collection from Yucatán, given by an alumnus who had worked with Snow and with Dyche, and who later had settled in Mexico. No one had studied these specimens, so that I had the keen delight of identifying and labeling many of them—and since I have known most of them in their native haunts in life.

¹ Address given at the reopening of the Dyche Museum during ceremonies on the occasion of the seventy-fifth anniversary of the founding of the University of Kansas, June 6, 1941.

Four Outstanding New Books

AEROPHOTOGRAPHY AND AEROSURVEYING

By JAMES W. BAGLEY, Lieut. Col. U. S. Army, Retired. Lecturer at the Institute of Geographical Exploration, Harvard University. 326 pages, 6 x 9. \$3.50

Broad in scope, logical in arrangement, and strictly up to date, this important and new text covers the fields of standard mapping and exploration mapping. The author discusses aerial photographs, standard laboratory practice, and the various methods of utilizing aerial photographs for making maps, mosaics, and engineering surveys. Particular attention is given to the solution of basic problems and the presentation of practical processes.

MATTER, ENERGY AND RADIATION

By J. R. DUNNING and H. C. PAXTON, Columbia University. *The Columbia College Natural Science Series*. 665 pages, 6 x 9. \$3.50

This volume is the first of a series of four texts prepared for a two-year science course at Columbia University, designed for those students who do not intend to enter the sciences professionally, but who do desire a general acquaintance with the chief fields of scientific investigation, a discussion of the major problems, concepts, and theories in these fields, and an introduction to experimental techniques. In this text the authors focus attention on three major concepts—matter, energy, and radiation—emphasizing important sub-topics and introducing the more vital questions in the various fields.

INTRODUCTION TO MODERN PHYSICS. *New third edition*

By the late F. K. RICHTMYER; and E. H. KENNARD, Cornell University. *International Series in Physics*. 718 pages, 6 x 9. \$5.00

This well-known text has been brought up to date and almost entirely rewritten in accordance with recent advances in atomic theory and in the physics of the nucleus and of fundamental particles. The double process of shortening existing material and of modernizing the viewpoint has resulted in a text admirably adapted to the requirements of the student who wishes to obtain a correct perspective of the growth and present trend of physics as a whole.

PRINCIPLES OF MECHANICS

By J. L. SYNGE and B. A. GRIFFITH, University of Toronto. 506 pages, 6 x 9. \$4.50

The authors of this new textbook in theoretical mechanics cover the usual range of theory and applications, up to and including an introduction to Lagrange's Equations, with emphasis on general principles and underlying philosophical ideas. A chapter on the special theory of relativity is included.

Send for copies on approval

McGRAW-HILL BOOK COMPANY, INC.

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

Aldwych House, London, W.C.2

ZEISS

MICROSCOPES and MICROSCOPIC ACCESSORIES
PHOTOMICROGRAPHIC and METALLOGRAPHIC APPARATUS
PHOTOMETERS POLARISCOPES
SPECTROSCOPES and SPECTROGRAPHS
REFRACTOMETERS INTERFEROMETERS
TELESCOPES PLANETARIUM INSTRUMENTS BINOCULARS
OPHTHALMOLOGICAL INSTRUMENTS EYE LENSES
CYSTOSCOPES GASTROSCOPES ETC.
SURVEYING INSTRUMENTS PRECISION MEASURING INSTRUMENTS
PHOTOGRAPHIC LENSES ZEISS IKON CAMERAS

WE BUY

repair, recondition, resell

USED

ZEISS INSTRUMENTS

CARL ZEISS, INC.

485 Fifth Avenue
NEW YORK, N. Y.

The Foundations of Science

By H. POINCARÉ

Pp. xi + 553.

Containing the authorized English translation by George Bruce Halsted of "Science and Hypothesis," "The Value of Science" and "Science and Method," with a special preface by Poincaré, and an introduction by Josiah Royce. *Price, postpaid, \$5.00.*

THE SCIENCE PRESS

Lancaster

Pennsylvania

THE SCIENCE PRESS PRINTING COMPANY

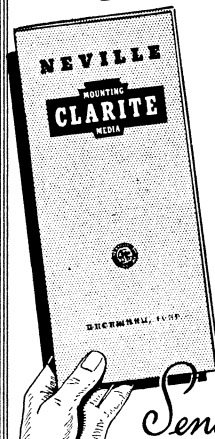
PRINTERS OF

SCIENTIFIC and EDUCATIONAL
JOURNALS,
MONOGRAPHS
and BOOKS

Correspondence Invited

LANCASTER, PENNSYLVANIA

MOUNTING CLARITE^{*} MEDIA For Covering Histological Sections on Slides



*REG. U.S. PAT. OFF.

Clarite and Clarite "X" Resins are available in lumps or ready-to-use solutions.

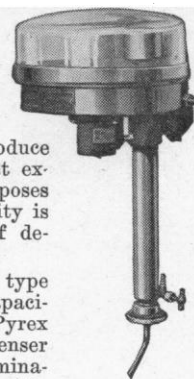
Inert, high-melting, water-white; many advantages over Canada balsam and gum damar. Clarites have proper refractive indices and adhesion to glass, and will neither become acid nor discolor with age. Clarites are pure, uniform, perfectly transparent. Will not cause stains to fade with age because they are absolutely neutral and remain so.

for booklet "Neville Clarite Mounting Media"

THE NEVILLE COMPANY

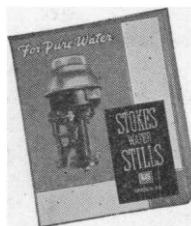
PITTSBURGH • PA.

Pure Water for Research Purposes



Stokes Automatic Water Stills produce pure water, well-suited for the most exacting research and laboratory purposes . . . water in which exceptional purity is maintained by exclusive features of design and construction.

Six improved electric models of the type illustrated are now available, in capacities from ½ to 1½ g.p.h., with Pyrex glass covers, solid block-tin condenser tubes and funnels, automatic gas eliminators, triple vapor baffles, chromium finish, corrosion-resistant construction throughout many other features.



Write for new complete 24-page catalog showing 26 stock electric, gas and steam-heated models in capacities up to 100 g.p.h. and describing method of operation, details of construction, etc.

Sold through dealers or direct.

F. J. Stokes Machine Company
5958 Tabor Road, Philadelphia, Pa.

F.J. Stokes

FJS
EST. 1895