

## *Surface Tension Balance No. 160 for Interfacial Measurements*

With this balance can be made not only surface tension measurements but also interfacial measurements between any two liquids requiring either the raising or lowering of the ring with reference to the interface.

When the ring is raised the beam and chain readings give the actual pull on the ring in grams to 1/10 mg. When the ring is allowed to sink under its own weight and that of the special ring holder the beam and chain readings give the actual resistance in grams to 1/10 mg of the interfacial tension to the downward movement of the ring.

The beam reads 0 to 1 gram in 100 mg graduations both sides of center, the chain column reading 100 mg to 1/10 mg above and below the zero mark located at the center of column.

*Bulletin No. 360*

**CHRISTIAN BECKER, Inc.**

*Sales Offices:*

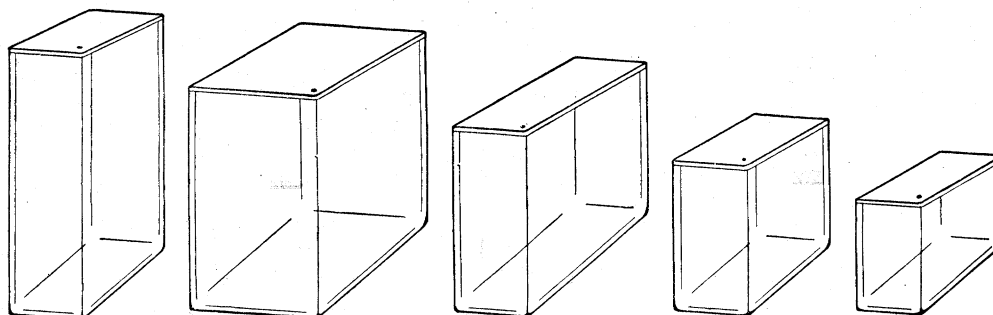
92 Reade Street, New York City

228 No. La Salle Street, Chicago, Ill.

49 California St., San Francisco, Cal.

Factory: 147-153 Eighth St., Jersey City, N. J.

## RECTANGULAR MUSEUM JARS



**T**HESE jars are made from clear white glass with an unusually fine finish due to their being blown over wet wooden moulds. Great care has been taken in their proper annealing so that breakage during use because of temperature changes is eliminated. They are supplied with ground-on lids for permanent sealing, the cover having a small vent hole drilled in the corner to allow for expansion, contraction, and refilling. *The most frequently utilized jars are indicated by size numbers appearing in bold-faced type and are currently carried in stock. The other sizes can be imported to order.*

Educational institutions, museums, and hospitals using these jars in quantity will find it advantageous to permit us to import them specially to order. The saving which can be effected by this means is considerable and prices, depending on the quantity and sizes required, will be submitted promptly on application.\*

### 10215—Museum Jars

Size No. ....	1	2	3	<b>3A</b>	4	5	6	7	7A	8
Height, cm .....	5	10	15	15	15	16	20	20	20	20
Width, cm .....	5	4.5	8	10.5	15	10	8	13	15	13
Depth, cm .....	3	3	5	5	9	8	4.5	8	10	13
Each .....	.40	.50	.80	.95	1.70	1.20	.94	1.50	1.90	2.05
Per dozen, 10% discount.										
Size No. ....	9	10	11	12	13	13A	14	14A	14B	
Height, cm .....	22	25	25	22.5	25	26	30	30	31	
Width, cm .....	15	22	25	17.5	25	15	20	25	29	
Depth, cm .....	5.5	10	12	9	14	8	17.5	6	11	
Each .....	1.35	3.15	4.00	2.25	4.50	2.00	5.25	3.60	6.00	
Per dozen, 10% discount.										
Size No. ....	15	16	17	18	19	20	21	22		
Height, cm .....	34	36	42	50	40	30	65	40		
Width, cm .....	25	15	10.5	25	30	50	30	40		
Depth, cm .....	12	10	7.5	12	25	15	20	25		
Each .....	5.70	3.00	3.50	14.00	14.50	15.00	23.00	18.50		
Per dozen, 10% discount.										

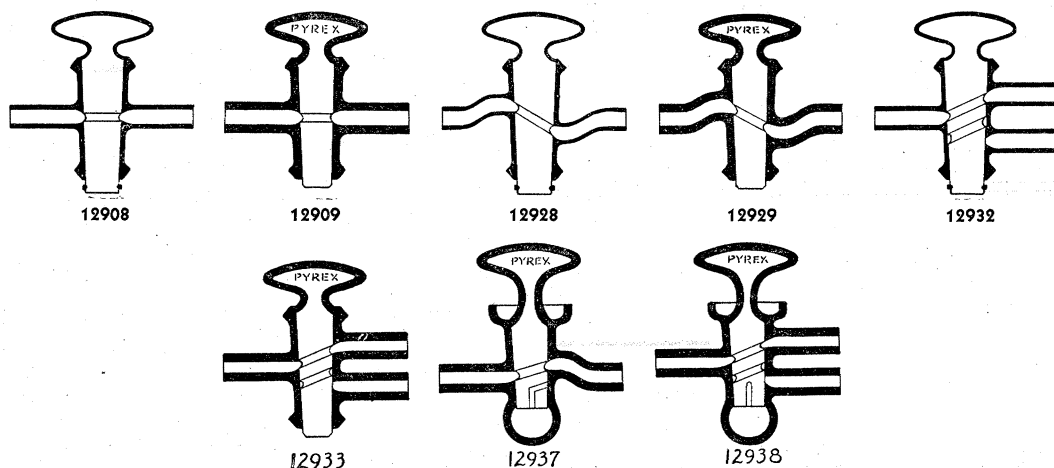
\*Inquiries are also solicited for Museum Jars of the above type but corresponding to the specifications of E. L. Judah of the Medical Museum, McGill University, Montreal, Canada, especially identified by having one face of the jar plane and polished to allow a perfectly clear and undistorted view of the specimen. Jars of this specification are not stocked but will be imported to order.

# WILL CORPORATION

LABORATORY APPARATUS AND CHEMICALS  
FOR  
CHEMICAL, BIOLOGICAL, METALLURGICAL AND CLINICAL LABORATORIES

ROCHESTER, N.Y.

# High Vacuum Stopcocks



**12908. STOP-COCKS, Apparatus Glass (Lime), straight.** End of plug grooved and fitted with rubber washer to prevent dislodgment.

Bore, mm	1	2	4	5	6	8
Each	..... \$ .80	..... \$ .90	..... \$1.00	..... \$1.20	..... \$1.40	..... \$1.90

10% discount in lots of 10; 20% discount in lots of 100.

**12909. STOP-COCKS, Pyrex Glass, straight.** Number in original package 12.

Bore, mm	1	2	3	4	6	8
Each	..... \$1.80	..... \$2.00	..... \$2.20	..... \$2.60	..... \$3.40	..... \$4.20

10% discount in original packages.

**12928. STOP-COCKS, Apparatus Glass (Lime), two-way, with plug bored at an angle.** End of plug grooved and fitted with rubber washer to prevent dislodgment.

Bore, mm	2	4	6	8
Each	..... \$1.10	..... \$1.30	..... \$1.75	..... \$2.25

10% discount in lots of 10; 20% discount in lots of 100.

**12929. STOP-COCKS, Pyrex Glass, two-way, with plug bored at an angle.** Number in original package 12.

Bore, mm	2	4	6	8
Each	..... \$2.20	..... \$2.80	..... \$4.00	..... \$5.00

10% discount in original packages.

**12932. STOP-COCKS, Apparatus Glass (Lime), three-way, plug bored with two holes at an angle.** Two outlets on one side, one on the other. End of plug grooved and fitted with rubber washer to prevent dislodgment.

Bore, mm	2	4
Each	..... \$1.30	..... \$2.20

10% discount in lots of 10; 20% discount in lots of 100.

**12933. STOP-COCKS, Pyrex Glass, three-way, plug bored with two holes at an angle.** Two outlets on one side, one on the other. Number in original package 12.

Bore, mm	2	4
Each	..... \$2.80	..... \$3.40

10% discount in original packages.

**12937. STOP-COCKS, Mercury Seal, Pyrex Glass, two-way, with plug bored at an angle.** The small end of the stop-cock barrel is closed to form a bulb which can be exhausted when the plug is in the proper position. The vacuum at this point seats the plug tightly. The upper portion of the plug is surrounded by a mercury well for effective sealing against atmospheric air pressure. Number in original package 12.



Bore, mm	2	4
Each	..... \$4.50	..... \$6.00

10% discount in original packages.

**12938. STOP-COCKS, Mercury Seal, Pyrex Glass, three-way, same as No. 12937, but with plug bored with two holes at an angle connecting the outlet on one side to either of two outlets on the other.** Number in original package 12.

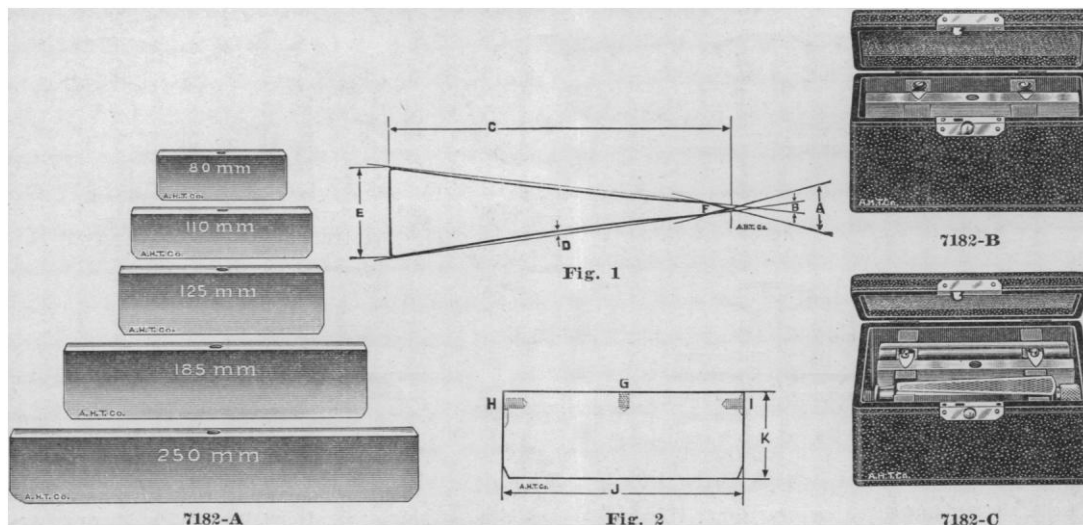
Bore, mm	2	4
Each	..... \$6.50	..... \$8.00

10% discount in original packages.

**CENTRAL SCIENTIFIC COMPANY**  
 LABORATORY  SUPPLIES  
 Apparatus  Chemicals  
 NEW YORK—BOSTON—CHICAGO—TORONTO—LOS ANGELES

# A.H.T. CO. SPECIFICATION

## SCHMID MICROTOME KNIVES



**MICROTOME KNIVES, SCHMID, A.H.T. Co. Specification.** Of a new wedge-shape cross-section with a slight concavity on each side. The dimensions, i.e. thickness of back E, width C and thickness at F (see Fig. 1), have been changed to reduce the tendency to "chatter" in use—a fault common with knives too thin at point F. The inclusive angle A of the cutting bevel has been increased and tempering is controlled by Rockwell test.

Three threaded holes are provided in each knife as shown in Fig. 2: that at G for the No. 7207-G Schmid Hand Sharpener, or for either No. 7204 or No. 7207 Fanz Automatic Sharpeners; that at H for the Bausch & Lomb microtome knife handle, and that at I for either the Spencer microtome knife handle or our No. 7184-A handle.

Knives without leather cases are shipped in a carton containing a wooden support which protects the knife against damage in transit. Our cases are made of wood, covered with genuine leather, velvet-lined, with hinged lid and knife support of hardwood with retaining clips. When knives are removed from and replaced in these cases with reasonable care, the cutting edge is entirely protected. All our microtome knives are sent out thoroughly greased so that care must be exercised in removing them from the case and in other handling because of the tendency to slip in the fingers. These accidents involve not only damage to the knife edge, but serious personal injury.

In specifying the dimensions of the knives, "total length" refers to J of Fig. 2; "width of blade" refers to K of Fig. 2; and "thickness of back" to E of Fig. 1.

**7182-A. Microtome Knives Schmid, A.H.T. Co. Specifications, as above described. Knife only, without leather case, in shipping carton.**

Total length, mm	80	110	125	185	250
Width of blade, mm	30	30	40	45	45
Thickness of back, mm	8	8	12	12	12
Each, in shipping carton	5.00	6.75	9.00	14.00	18.00
Code Word	<i>Kepat</i>	<i>Kepco</i>	<i>Kepek</i>	<i>Kepgh</i>	<i>Kepic</i>
<b>7182-B. Ditto, i.e. knife only, but in leather case.</b>	7.50	9.50	12.00	17.50	21.75
Code Word	<i>Kepmu</i>	<i>Kepnr</i>	<i>Kepop</i>	<i>Keppn</i>	<i>Keprj</i>
<b>7182-C. Ditto, but with honing back and handle, complete in leather case</b>	12.00	14.00	16.50	25.50	31.75
Code Word	<i>Keqar</i>	<i>Keqel</i>	<i>Keqib</i>	<i>Keqko</i>	<i>Kequc</i>

NOTE—The two larger sizes, i.e. 185 mm and 250 mm. are furnished with an additional small handle for screwing into the opposite end of the knife, which feature adds to convenience and safety in sharpening the larger and heavier knives.

## ARTHUR H. THOMAS COMPANY

RETAIL—WHOLESALE—EXPORT

### LABORATORY APPARATUS AND REAGENTS

WEST WASHINGTON SQUARE

Cable Address, BALANCE, Philadelphia

PHILADELPHIA, U. S. A.

# SCIENCE

VOL. 74

FRIDAY, OCTOBER 30, 1931

No. 1922

*The South's Contribution to Science:* DR. EMMETT B. CARMICHAEL ..... 421

## Obituary:

*Samuel Wesley Stratton:* DR. F. C. BROWN.  
*Recent Deaths* ..... 428

## Scientific Events:

*The New Federal Citrus Fruit Laboratory in Texas; Psychiatric Education; The Ninth International Congress of Pure and Applied Chemistry; The Henry Burchard Fine Hall of Mathematics*..... 431

*Scientific Notes and News* ..... 433

## Discussion:

*Courses on the History of Physics in American Colleges and Universities:* PROFESSOR E. H. JOHNSON. *A New Elm Disease:* CURTIS MAY. *The Gall Bladders of Chicks in a Vitamin D Deficient Condition:* DR. WALTER C. RUSSELL and DONALD F. CHICHESTER. *A Trematode from the Cloaca of the Gull:* RAYMOND M. CABLE and DR. HORACE W. STUNKARD. *Hybrid Words:* DR. G. S. FRAPS 435

## Reports:

*Gravitational and Electromagnetic Fields*..... 438

## Scientific Apparatus and Laboratory Methods:

*Protective Coatings for Mineral and Rock Specimens:* DR. ROBERT W. CLARK. *A Short Method for the Preparation of Animal Tissues for Staining:* DR. PAUL W. BOWMAN and MARK N. LINCH..... 439

## Special Articles:

*Further Experiments on Cortico-adrenal Extract: Its Efficacy by Mouth:* PROFESSOR S. W. BRITTON and H. SILVETTE. *Varved Clay in Holmes County, Ohio:* PROFESSOR GEORGE W. WHITE..... 440

*Science News* ..... 10

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.

## THE SOUTH'S CONTRIBUTION TO SCIENCE<sup>1</sup>

By Dr. EMMETT B. CARMICHAEL

SCHOOL OF MEDICINE, UNIVERSITY OF ALABAMA

THE general impression has been that most of the scientists of the United States have come from the northern and eastern sections, with the exception of a few, who have come from the western part of the country. On careful investigation, however, it was discovered that a great number of distinguished men of science have come from the South. There are perhaps two main reasons for such an erroneous impression: (1) the after-effects of the Civil War, and (2) the accumulation of the wealth of the nation in the northern and eastern parts of the country. Since war has a tendency to suppress the normal development of the conquered land, we might have expected that progress of all sorts, especially scientific progress, would have been delayed. And since many recent scientific achievements have come from institutions which have had the necessary capital for materials and equipment, it would be quite logical to

think that the lack of wealth in the South would have had a curbing effect on interest in science. But regardless of the Civil War and this centralization of wealth of the nation, there have been many investigators of the South who have merited national and, in some instances, international recognition.

Since this paper is an attempt to give a brief survey of the whole South's contribution to science, of course, only some of the most important efforts can be included. I shall mention not only contributions made by men who were born and wholly educated in the South, but I shall mention also the scientific labors of those who were born and even educated in the North, but who were undoubtedly strongly influenced through teaching or living in the South.

This study naturally begins with the consideration of that well-known, beloved friend of birds, John J. Audubon, of Louisiana (1780-1851). He painted pictures of birds during his leisure hours and, since he was a poor man, he had to make several business

<sup>1</sup> Address of the retiring president of the Alabama Academy of Science, University, Alabama, March 13, 1931.

### WALKER PRIZES IN NATURAL HISTORY

Two prizes, founded by the late Dr. William Johnson Walker, are annually offered by the BOSTON SOCIETY OF NATURAL HISTORY for the best memoirs written in the English language, on subjects proposed by the Board of Trustees.

For the best memoir presented a prize of sixty dollars may be awarded; if, however, the memoir be one of marked merit, the amount may be increased to one hundred dollars, at the discretion of the Walker Prize Committee.

For the next best memoir a prize not exceeding fifty dollars may be awarded.

Prizes will not be awarded unless the memoirs presented are of adequate merit.

*The competition for these prizes is not restricted, but is open to all.* It is nevertheless the tradition of the Society that the founder of these prizes intended them more in the nature of encouragement to younger naturalists than as rewards for the work of mature investigators.

Attention is especially called to the following points:

1. In all cases the memoirs are to be based on a considerable body of original and unpublished work, accompanied by a general review of the literature of the subject.
2. Anything in the memoir which shall furnish proof of the identity of the author, shall be considered as debarring the memoir from competition.
3. Although the awards will be based on their intrinsic merits, preference may be given to memoirs bearing evidence of having been prepared with special reference to competition for these prizes.
4. Each memoir must be accompanied by a sealed envelope enclosing the author's name and superscribed with a motto corresponding to one borne by the manuscript, and must be in the hands of the Secretary on or before March 1 of the year for which the prize is offered.
5. The Society assumes no responsibility for publication of manuscripts submitted, and publication should not be made before the Annual Meeting of the Society in May.

#### SUBJECT FOR 1932:

*Any subject in the field of Geology or Mineralogy.*

**BOSTON SOCIETY OF NATURAL HISTORY,**  
Boston, Mass., U. S. A.

#### SUBJECT FOR 1933:

*Any subject in the field of Botany.*

**CLINTON V. MACCOY, Secretary.**  
November, 1931.

## THE WISTAR INSTITUTE BIBLIOGRAPHIC SERVICE

A condensed summary of each paper appearing in the journals listed below is issued prior to publication of the article in full. This distribution of abstracts enables a biologist to familiarize himself with *contemporary research* in a minimum of time, and to select the articles which he wishes to purchase in reprint form. To receive these abstracts he may subscribe to the Advance Abstract Sheets or to the Bibliographic Service Cards.

The Advance Abstract Sheets are issued twice a month, each sheet containing ten or more abstracts, together with the price per reprint. Subscription rate is \$3.00 per year.

The cards also are issued twice a month. In addition to the abstracts, the cards provide subject headings and complete bibliographic reference. The cards are convenient for filing and library records. Price, \$5.00 per year.

At regular intervals the abstracts are assembled and published in book form with complete authors' and analytical subject indices. Price, \$5.00 per volume.

**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**  
**Folia Anatomica Japonica (Tokyo, Japan)**  
**Physiological Zoology (Chicago, Illinois)**  
**Stain Technology (Geneva, New York)**  
**Ecological Monographs (Durham, North Carolina)**

**The Wistar Institute of Anatomy and Biology**  
Thirty-sixth Street and Woodland Avenue  
Philadelphia, Pa., U. S. A.

## National Research Council National Research Fellowships in the Biological Sciences

The post-doctorate fellowships in the biological sciences (zoology, botany, anthropology, psychology, agriculture and forestry), available through the National Research Council, will be assigned by the Board of National Research Fellowships in the Biological Sciences for the academic year 1932-33 at two meetings, the first to be held about the first of February. Applications for this should be filed with the office of the Board by December 15th. The second meeting will be held sometime in the spring. Appointments may be made prior to the conferring of the doctor's degree, to be effective upon the receipt of the degree within six months. *Forms of application and statement of conditions will be furnished on application by letter or by wire to*

**The Secretary, Board of National  
Research Fellowships in the  
Biological Sciences**  
National Research Council, Washington, D. C.

## BIOLOGICAL and NATURAL HISTORY MATERIAL

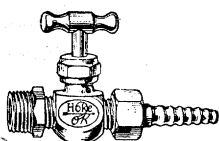


Zoological Groups  
Embryological Slides  
Botanical Life Histories  
Drosophila Cultures

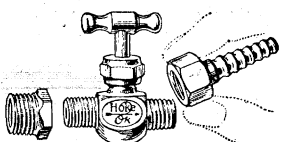
Catalogs on request: Address.

## MARINE BIOLOGICAL LABORATORY

Supply Department  
Woods Hole, Mass., U. S. A.



Use **Hoke**  
Needle-Valves  
Instead of Plug-cocks



on your pipe-lines. No lubricant to dry, therefore not apt to leak even after long service. They save power and hold vacuum.

Ask for Folder CV.

**Hoke Inc.**

22 Albany St.,  
New York City

## Biological Supplies



The Sign of the Turtle  
Pledges Absolute  
Satisfaction

Preserved Material  
Living Specimens  
Apparatus  
Museum Preparations  
Skeletons  
Microscope Slides  
Lantern Slides  
Jewell Models

Write for catalogs

## General Biological Supply House

[Incorporated]  
761 E. 69th Place, Chicago, Illinois

## SPECIAL SALE

G-M 1281

## PHOTOELECTRIC RELAYS

at 25% discount to dispose of present limited stock. Write for further information.

G-M LABORATORIES INC.  
1735 Belmont Ave., Chicago

Well established London firm desires to hear of *NEW* developments in *Scientific, Optical and Electrical* laboratory and works equipment, with a view to creating a vigorous demand in Great Britain.

Write to W. Edwards & Company, Allendale Road, Denmark Hill, London S. E. 5, England.

## "POSTLIP"

(No. 633 Mill)

## ENGLISH FILTER PAPERS

Manufactured in  
ANNUALLY INCREASING QUANTITIES  
for upwards of 50 years.

White and  
Grey Plain,  
Antique,  
Crinkled,  
and  
Embossed



All sizes in  
Squares, and  
Circles, and  
Folded  
Filters  
Rolls made  
to order.

Pure Filterings for Laboratory  
Work and in quantities for all  
industrial purposes

See Report of TESTS made by The  
National Physical Laboratory, a copy  
of which will be sent on application,  
together with free samples if required.

EVANS, ADLARD & CO., Ltd.

POSTLIP MILLS,

WINCHCOMBE, CHELTENHAM, ENGLAND.

## NEW (15th) EDITION OF THE MICROSCOPE

By SIMON HENRY GAGE

Revised throughout, and a wholly new chapter on  
the Ultra-Violet Microscope. Price \$4.00.

THE COMSTOCK PUBLISHING CO., Ithaca, N. Y.



## Hq-Speed MIXERS

Clamp to any tank, operate from light circuit, mix all liquids, maintain even temperature baths. Thousands used in sizes for 1 to 50,000 gallon tanks.

Write for Catalogue

## ALSO ENGINEERING CO.

39 West 60th St., New York



## Field Equipment for Engineers, Explorers, Hunters, Travelers

Scientific Instruments; Packing Equipment;  
Skis; Firearms; Clothing; Fiala Pat. Sleeping  
Bags; Optical Instruments; Astronomic  
Telescopes; Range Finders; Binoculars.  
Paulin Altimeters. Write for Catalog "A"

## FIALA OUTFITS

47 Warren St., New York



## NEW LISTS FINE SHELLS

A Generic List of recent Mollusca covering 34 sheets has just been issued and will be mailed to those interested. Nothing quite like it in existence. Also 5 sheets covering books on Conchology. Will quote prices on any Mollusca desired from any part of the World. Largest scientific stock in existence.

WALTER F. WEBB

202 Westminster Road

Rochester, N. Y.

## RECENT SCIENTIFIC BOOKS

which by arrangement with The Science Press are offered by  
**G. E. STECHERT & CO., 31 East 10th St., New York**  
 to which firm orders should be addressed

## MATHEMATICS—PHYSICS

*Ergebnisse der exakten Naturwissenschaften.* Vol. X. 118 ill. pp. iii + 452. \$9.02.

**Fowler, R. H.** *Statistische Mechanik.* Ill. 594 pp. \$8.64.

**Kommerell, V.** *Theorie der Raumkurven und krummen Flaechen.* 4th ed. Vols. 1-2. Ill. 400 pp. \$4.80.

**Kowalewski, G.** *Einfuehrung in die Theorie der Kontinuerlichen Gruppen.* 396 pp. \$6.24.

**Kronecker, Leopold.** *Werke.* Ed. Hensel. Vol. III. 2. \$5.28.

**Mathesis.** *Beitrage z. Weiterbildg. d. Mathematik u. verwandter Gebiete i. Sinne d. Geisteswissenschaft.* Ill. 260 pp. \$2.04.

**Piccard's** *Forschungspflug in d. Stratosphaere. Verlauf d. Stratosphaerenfluges u. dessen wissenschaftl. Ergebnis.* Mit Beiter. v. Prof. Piccard & Ing. Kipfer. 18 plates. 128 pp. \$4.80.

**Ranke, Otto.** *Die Gleichrichter-Resonanztheorie. Eine Erweiterung d. Helmholtzschen Resonanztheorie d. Gehoers durch physik. Untersuchung d. Fluessigkeitsschwingungen in d. Cochlea.* Ill. 89 pp. \$1.20.

## ASTRONOMY

**Freundlich, v. Klueber & v. Brunn.** *Ueber die Ablenkung d. Lichtes im Schwerefeld d. Sonne. Beobachtungsergebnisse mit d. 8.5m Horizontal Doppelkamera.* Einzelausg. 12 plates. 61 pp. \$3.36.

*Geschichte des Fixsternhimmels, enthaltend die Sternörter der Kataloge des 18. und 19. Jahrhunderts.* Ed. by the Preuss. Akad. d. Wiss. Abt. I: Der noerdl. Sternhimmel. Vol. 15: 14<sup>th</sup> Rektascension. pp. xiv + 141. \$8.64.

*Meteorologisches Taschenbuch.* Ed. by F. Linke. Ausg. 1. 1931. pp. xi + 316. \$3.60.

**Otto, Rudolf.** *Das Leben der kleinsten Gebilde unserer naechsten Umgebung in d. unsichtbaren Welt.* Ein Beitr. zur Loesg. d. Weltraetsel. 40 ill. 123 pp. \$1.44.

**Milne-Thompson, L. M.** *Die elliptischen Funktionen von Jacobi.* 5 stellige Taf. mit Differenzen, von sn u, cn u, dn u mit d. natuerl. Zahlen als Argument, nach Werten von m ( $k^2$ ) rangiert, nebst Formeln u. Kurven. 69 pp. \$2.52.

## CHEMISTRY AND CHEM. TECHNOLOGY

*Baumwollspinnerei.* (Technologie d. Textilfasern IV. 2A, a. b.)

a) Maschinen f. d. Gewinnng. u. d. Verspinnen d. Baumwolle, by Glafey. 340 ill. 254 pp. \$9.36.

b) Praxis d. Baumwollspinners, by Bruecher. 343 ill. pp. viii + 413. \$13.92.

**Bergmann-Gnam-Vogel.** *Die Gerbung mit Pflanzengerbstoffen. Gerbmittel u. Gerbverfahren.* 139 plates. 165 ill. pp. xi + 571. \$13.44.

**Franck, Makkus & Janke.** *Der Kalkstickstoff i. Wissenschaft, Technik u. Wirtschaft.* Ed. by Grossmann. pp. xv + 213. \$3.84.

**Herrmann, Paul.** *Laboratoriumsbuch fuer die Zuckerfabrikation.* 31 ill. pp. viii + 158. \$2.28.

CHEMISTRY AND CHEM. TECHNOLOGY—  
Continued

**Lehmann, Erich.** *Lehrbuch der anorganischen Chemie fuer Studierende der Landwirtschaft, der Forstwirtschaft u. d. Gartenbaues.* 16 textill. pp. viii + 248. \$3.02.

**Ley, Hermann.** *Die neuzeitliche Seidenfaerberei.* Handb. f. d. Seidenfaerbereien, Faerbereischulen u. Faerbereilaboratorien. 2nd ed. 61 textill. pp. v + 241. \$4.32.

**Martiny, Paul.** *Laboratoriumsbuch fuer die kolorimetrische Wasseruntersuchung.* Ill pp. vi + 73. \$1.63.

**Mayer, Albert.** *Chemical Dictionary.* Vol. II: English-German-French. 943 pp. \$18.00.

**Piatti, L.** *Dampfdrucke binarer Gemische u. ihre Bedeutung fuer die Absorption Fluechtiger Stoffe.* Ill. 53 pp. \$1.15.

**Schwalbe, Hellmuth.** *Die Bereitung des Papierganzstoffes.* 283 ill. pp. viii + 464. (Technik u. Praxis d. Papierfabrikation, Vol. I. 2) \$6.72.

*Taschenbuch fuer Parfuemerie und Kosmetik,* ed. Davidsohn, Rietz. Jg. 1. 1931. Ill. 340 pp. \$3.00.

**Wagner, Hans & Hoffmann, G.** *Vergleichende Untersuchungen ueber Substrat- und Verschnittfarben.* Ill. 35 pp. \$1.56.

**Wuestenfeld, Hermann.** *Trinkbranntweine und Likoere, ihre Herstellung, Untersuchung u. Beschaffenheit.* 145 ill. pp. xvii + 505. \$7.20.

## GEOLOGY AND GEOGRAPHY

**Biese, Walter.** *Ueber Hoehlenbildung.* Ed. by the Preuss. Geolog. Landesanst., Berlin. Pt. I: Entstehung d. Gipshoelen am suedl. Harzrand u. am Kyffhaeuser. Ill. 71 pp. \$1.44.

*Festband Reinhard Brauns.* Zum 70. Geburtstage (20. Aug. 1931) Ed. by Schneiderhoehn. Ill. pp. xxvi + 850. \$20.40.

**Haberfelner, E. & Mueller, H.** *Bulgarische Kohle. Beitrage z. Kenntnis, ihrer Geologie u. Wirtschaft.* Ill. pp. iv + 132. \$4.32.

**Hassinger, Hugo.** *Geographische Grundlagen der Geschichte.* 331 pp. \$2.64.

**Herrmann, Albert.** *Die Erdkarte der Urbibel.* Mit e. Anh. ueber d. Tartessos- u. Etruskerfrage. Ill. 203 pp. \$3.60.

**Kluepfel, Walter.** *Stratigraphie der Weserkette.* (Oberer Dogger u. Malm unter bes. Beruecks. d. Oberoxford, Pts. 1-2) Ed. by the Preuss. Geol. Landesanst., Berlin. 422 pp. \$4.32.

**Koeppen, W.** *Grundriss der Klimakunde.* 2nd ed. Ill. pp. xii + 388. \$2.88.

**Matern, Hans.** *Das Oberdevon der Dill-Mulde.* Ed. by the Preuss. Geolog. Landesanst., Berlin. Ill. \$2.16.

**Mecking, Ludwig.** *Japans Haefen, ihre Beziehungen zur Landesnatur u. Wirtschaft.* Ill. 616 pp. \$7.20.

**Samoilovitch, R.** *Der Weg nach dem Pol.* 60 ill. 38 pp. \$1.56.