EQUIPMENT NEWS

The information reported here is obtained from manufacturers and from other sources considered to be reliable. Science *does not assume responsibility for the accuracy of the information. All inquiries concerning items listed should be addressed to* Science, *Room 740, 11 W. 42 St., New York 36, N.Y. Include the name(s) of the manufacturer(s) and the department number(s).*

■ SAND AND DUST CHAMBER provides a controlled composition and density level and sand and dust for testing. Relative humidity is automatically maintained below 30 percent. Temperature is maintained constant at either 25° or 70°C. (Tenney Engineering Inc., Dept. S430)

■ X-RAY VIEWER increases readability of x-ray pictures through contrast enhancement and color TV techniques. Areas of equal optical contrast are displayed in the same color, while variations in density are distinguished by variations in color. The range of the photograph to be viewed is converted to a sequence of electric signals by a cathode-ray, flying-spot scanner. The signal is amplified and subjected to electronic contrast enhancement. The amplified signal is next fed through a color monitor where the picture is reproduced in color. The image can also be converted from negative to positive by electronic means. (Philco Corp., Dept. S439)

■ SPHYGMOGRAPH SYSTEM uses a condenser microphone to detect pulse waves and sounds and records them on an electrocardiograph recorder. Simultaneously recorded are occluding cuff pressures, which are converted into electric signals by a mercury manometer that contains accurately placed platinum electrodes. (Medical Electronics Development Co., Dept. S455)

■ HIGH-TEMPERATURE ACCELEROMETER provides an output of 8 mv/grav in ambient temperatures up to 500°F. The associated cathode follower and Teflon-insulated, noise-treated cable can also be used in 500°F ambient temperature; this permits them to be placed near the accelerometer. Acceleration range is 0.25 to 1000 grav. (Endevco Corporation, Dept. S465)

■ SEISMOGRAPH, manufactured by Hilger and Watts, Ltd., is of portable design. The instrument records for 24 hr at 60 mm/min. The seismometer elements are of the moving coil type with permanent magnetic field. The natural period is 1 sec in both vertical and horizontal positions. The unit is sealed in a metal case to permit burying in open ground. Ground movements on the order of 10^{-7} cm can be detected. The recorder, of the photographic drum type, can accommodate three seismometers. (Jarrell-Ash Co., Dept. S456)

■ LEAK DETECTOR is a halogen-sensitive instrument that will detect a vacuum system leak of 2 $in.^3$/year. The system to be inspected is connected to the instrument and evacuated to a pressure of 80 to 200 μ. The outside is then blanketed with Freon-12 as a tracer gas. This is followed by probing with a fine gas-stream probe to pinpoint an indicated leak. (NRC Equipment Corp., Dept. S438)

■ SELF-BALANCING POTENTIOMETRIC RECORDER measures current or voltage in 40 ranges. Nine chart speeds, from ⅓ to 12 in./min, are standard, with provision for optional 1-to-5 multiplication or 10-to-1 reduction. Eleven ranges from 1.25 to 1250 are selectably direct reading in millivolts, milliamperes, or microamperes. Higher voltage ranges are provided through a divider. Accuracy is ± 0.1 percent or ± 20 μv, whichever is greater, and speed is 1.8 sec full scale on standard instruments. Chart width is 250 mm. Chart motion at 20 ft/min is provided for scanning in either direction. (E. H. Sargent and Co., Dept. S459)

■ INTRAHEART MICROPHONE, designed to be passed through an artery or vein into any part of the heart, measures 0.05 in. in diameter by 0.75 in. long. The microphone is inserted into the tip of a standard cardiac catheter and connects by cable to an oscilloscope. Blood pressure is also measured by a diaphragm in the catheter tip and is displayed simultaneously. (Gulton Industries Inc., Dept. S453)

■ CONTACT MICRORADIOGRAPHY INSTRUMENT forms an image by bringing the specimen into close contact with a photographic plate. The photographic x-ray image is in turn magnified and photographed with a light microscope. Useful magnification of 500 is obtainable. Very soft x-radiation is obtained from a tube provided with an extremely thin beryllium radiation window and operating at 5 kv or lower. (Philips Electronics Inc., Dept. S461)

■ AMPLIFIER provides either differential or single-ended output. The instrument is entirely transistorized. Direct-current amplification is provided without choppers or carriers. Drift is less than 3 μv over a 2-hour period. Frequency response is

constant within 1 db from direct current to 20 kcy/sec. Input impedance is 0.5 Mohm. Units measure 3½ by 6 by 12 in. (Video Instruments Co., Inc., Dept. S431)

■ MICROMICROAMMETER covers six decades, from 10^{-13} to 10^{-7} amp, on a single scale. Response time is less than 2 sec to 90 percent of currents larger than 10^{-12} amp with 5000 μμf across the input. Zero drift is within 0.5 decade in 8 hr. Accuracy is ± 0.2 decade. A 216-v tap for polarizing ion chambers is provided, as well as a 6-v output, proportional to input, for driving recorders. (Keithley Instruments, Inc., Dept. S460)

■ COIL TURN COUNTER measures the number of turns on coils wound on nonmagnetic forms. Models are available for ranges up to 0 to 61,000 turns. Accuracy is said to be better than ± 0.1 percent. The instrument reads directly in number of turns. (Sunshine Scientific Instrument Co., Dept. S508)

■ BIOLOGICAL STAINS and related products are described in a 52-page catalog supplement. Stains in crystalline and in solution form are listed, as well as histological and histochemical reagents. (Hartman-Leddon Co., Dept. S486)

JOSHUA STERN
National Bureau of Standards

PERSONNEL PLACEMENT

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Replies to blind ads should be addressed as follows:
Box (give number)
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POSITIONS WANTED

Biochemist; Ph.D.; 7 years' experience in research and teaching in physiology and pharmacology. Desires academic or industrial position. Box 230, SCIENCE. X

Clinical Chemist; M.S. biochemistry; 5 years of clinical experience, including organization and supervision of hospital laboratory. Box 223, SCIENCE. X

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POSITIONS WANTED

Cytologist-Cytochemist. Completing requirements for Ph.D. at large northeastern university. Background in botany. Desires teaching and/or research position. Box 233, SCIENCE. X

Organic Chemist, Ph.D.; 6 years' university teaching; 7 years, director department, pharmaceutical company. Medical Bureau, Burneice Larson, Director, 900 North Michigan Avenue, Chicago. X

Zoologist. Ph.D., endocrinology, 39. Desires position with teaching and/or research. Interests: endocrinology, general physiology, histology, and pathology; 9 years' experience in independent research with teaching secondary. Publications. Box 234, SCIENCE. 8/2

POSITIONS OPEN

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Electrochemistry
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Industrial Relations Department
Hooker Electrochemical Co.
Niagara Falls, New York

POSITIONS OPEN

Bacteriologist to head division of bacteriology and serology in 450-bed hospital. Training in medical bacteriology preferred. Salary depends on experience and degree. Apply to Director of Laboratories, Good Samaritan Hospital, Dayton 6, Ohio. 8/2, 9

Biochemist. M.S. or Ph.D. for full-time research in medical research laboratory. Apply to Director of Research, Midwest Medical Research Foundation, 3241 Victor Place, Wichita 8, Kansas. 8/2

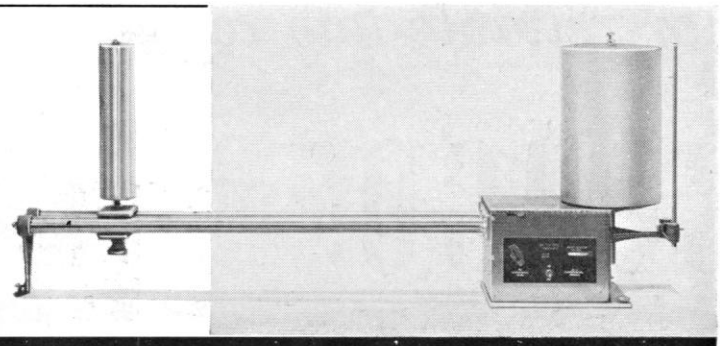
Chemist. Teaching position in general chemistry, organic-biochemistry with some research opportuinty. Salary ($5500 to $7500) and title depending upon qualifications and experience. Position is on a 10-month basis. Interview requested. Write details of training and experience to F. Reese Nevin, Chairman, Department of Science and Mathematics, State University Teachers College, Plattsburgh, New York. 8/2, 9

(a) Clinical Chemist, Ph.D.; qualified to supervise department; ample opportunity for research; department well staffed, well equipped; 250-bed general hospital; New England; $9500. (b) Neurophysiologist or Physiological Psychologist interested in career in audition research; preferably Ph.D.; new laboratory; university affiliation; long-range research program; West. (c) Organic Chemist to direct new department, pharmaceutical company; young man, Ph.D., well versed in theoretical chemistry; medical school city, Midwest. (d) Biochemist well qualified in toxicology to serve as assistant director, department of industrial toxicology; East. (e) Clinical Physiologist, preferably one whose background has been in respiratory physiology; M.D. or Ph.D.; university medical center; West. S7-3 Medical Bureau, Burneice Larson, Director, 900 North Michigan, Chicago. X

Clinical Chemist, with hospital experience preferred, for 450-bed hospital. Salary in range of $5000 and dependent on degree and experience. Apply to Director of Laboratories, Good Samaritan Hospital, Dayton 6, Ohio. 8/2, 9

BIRD

Walton Kymograph



This is our standard large size kymograph, in which we have embodied many improvements suggested by Dr. Walton. It is substantially built and may be relied upon to give long service.

The characteristics required in research or classroom demonstrations are featured in this kymograph. A combination of five gear shifts and a variable transformer Universal series motor makes available speed ranges of nine thousand to one. The approximate maximum speed is 400 cm. per minute and the minimum .045 per minute. Any speed within this range may be selected.

The drum is made of laminated bakelite tubing and is 64 cm. in circumference, 30.5 cm. high.

A support arm for mounting instrument support rods is provided. This arm pivots on and may be raised and lowered along a column which is coaxial with the drum shaft. As many as four support arms may be mounted on this column. (One arm is normally included with each kymograph.)

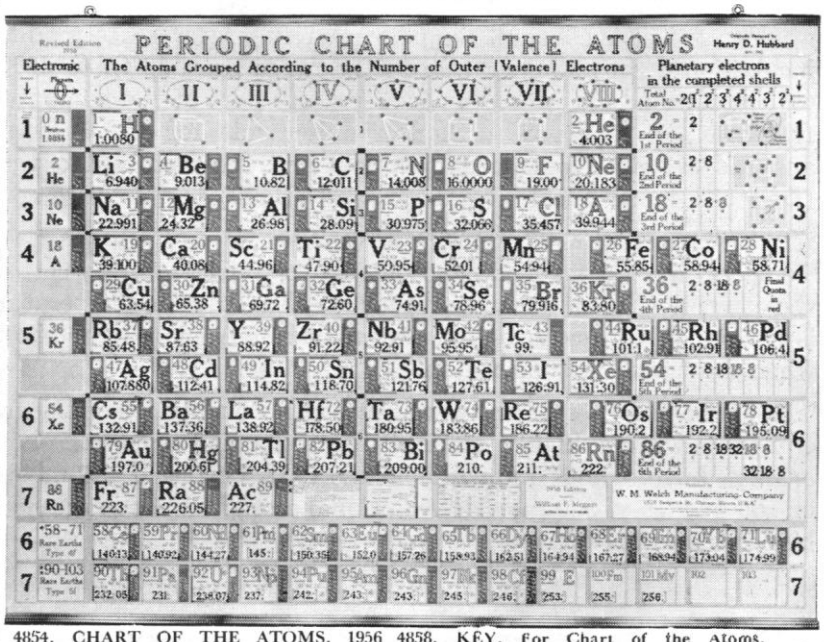
Paper belt lengths up to approximately 275 cm. may be used.

Price—The complete Kymograph as illustrated and described for 115 volts, 60 cycles A.C.

PHIPPS & BIRD, INC.
Manufacturers & Distributors of Scientific Equipment
6th & Byrd Streets - Richmond, Va.

Welch 1956 Edition of

CHART OF THE ATOMS



As revised by William F. Meggers of the U.S. Bureau of Standards

LITHOGRAPHED IN SIX COLORS

SIZE 42 x 58 INCHES

The principal items portrayed on the chart are as follows:

- Atomic Name and Symbol
- Atomic Number
- Atomic Diameter
- Atomic Weight
- Boiling Point
- Configuration of Atom
- Crystal Lattice
- Density
- Diamagnetism
- Electron Shell Groups
- Electronegativeness
- Electropositiveness
- Elementary Particles
- End-Atom Cubic Structure
- End-Atom Number Formula
- Expansivity
- Group (Column or Family)
- Ionization Potential
- Isotopes
- Lowest Spectral Term of Normal State
- Mass-Energy Equivalent
- Melting Point
- Nuclear Composition
- Paramagnetism
- Periods (Rows)
- Planets
- Quantum States of Valence Electrons
- Radioactive Atoms
- Specific Heat
- State (Solid, Liquid, Gas)
- Valence (Chemical)
- Valence (Electronic)
- Valence (Ionic)
- Young's Modulus

4854. CHART OF THE ATOMS. 1956 Edition. With formed-metal chart molding at top and bottom, with eyelets for hanging. Each, $7.50

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Each, $1.00. Per Dozen, $9.00. Lot of 100, $65.00.

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Manufacturers of Scientific Instruments and Laboratory Apparatus

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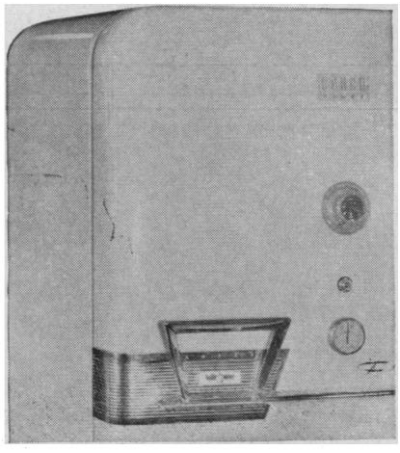
REFRIGERATED INCUBATOR



The temperature control knob, pilot light and thermometer are all located on the front and can be easily reached without opening the door.

No. 46043 Cenco Refrigerated Incubator, 115 v. 60 cy., A.C. **$475.00**

For full details,
write for Circular No. 1267.

This constant temperature refrigerator is designed for incubation at any temperature in the range from 5° C. to 50°C. with variations not exceeding 1° C. in any part of the incubator. It meets the standard methods requirements for the bacterial anaylsis of water and dairy products and the dissolved oxygen (DO) and biochemical oxygen demand (BOD) in water, sewage, sewage effluent and industrial wastes.

Temperature is controlled from outside the refrigerator by setting the convenient dial indicator on the door. Exact inside temperature is shown on the easy-to-read thermometer. A pilot light shows when the heater is in operation.

The entire unit is extremely well built, thoroughly insulated and equipped with a highly efficient heating unit. It is porcelain-enameled throughout and will hold 120 BOD bottles of 190-ml size or 105 bottles of 300-ml size. Additional storage space is provided by racks on the door.

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