

terested in medical and scientific libraries. The total membership of the MLA at present is approximately 1800, with over 750 institutional members included.

Annual meetings of 4 to 5 days are held in various parts of the United States and Canada; regional group meetings of 1 to 3 days occur between regular conventions. There are now nine such regional groups. Medical school, medical society, dentistry, pharmacy, hospital, and public health libraries are represented in the organization. The 63rd annual meeting of the Association will be held in San Francisco, Calif., 1-5 June 1964.

The Association publishes a quarterly journal, the *Bulletin of the Medical Library Association*, which has gained an enviable international reputation. Other publications include: *Vital Notes on Medical Periodicals*, local checklists of serial holdings, the *Handbook of Medical Library Practice*, and the beginnings of a new monographic series.

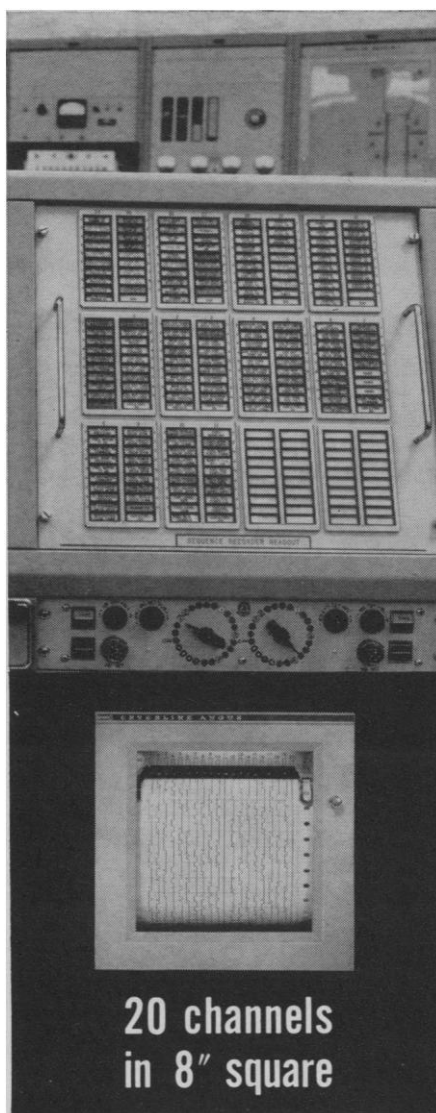
A prime activity of the organization is its exchange program whereby libraries "trade" their duplicate materials with one another. A certification program was initiated in 1947, which in turn encouraged special internship training programs and courses in medical librarianship offered in a number of universities throughout the country. Sponsorship of training of foreign students in medical librarianship has been one of the Association's more successful ventures.

The Association became affiliated with AAAS during the 1962 meeting in Philadelphia. The current officers of the MLA are: president, Louise Darling (University of California); vice president and president-elect, Estelle Brodman (Washington University); secretary, Myrl Ebert (University of North Carolina); treasurer, Carroll Reynolds (University of Pittsburgh); past president, Frank B. Rogers (University of Colorado Medical Center). The council representative to the AAAS is Sanford V. Larkey (Johns Hopkins University). The office of the Association is at 919 N. Michigan Ave., Chicago 11, Ill., and the executive secretary is Helen B. Schmidt.

FRANK B. ROGERS

*Denison Memorial Library, University of Colorado Medical Center,  
4200 East 9th Avenue,  
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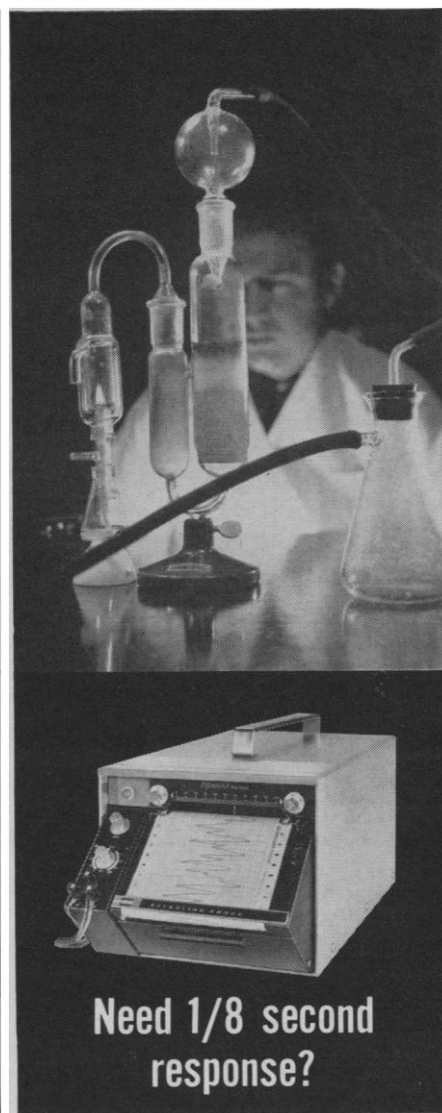
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# New Products

**Neuroelectric data processor** is both an "on line" and "off line" digital computer specifically designed to give the researcher and clinician an inexpensive universal systems capability to deal with a wide range of signal/noise separation problems in neurophysiology, ophthalmology, internal medicine, and electrophysiology. The Neurac 260 computer will automatically or manually provide an extensive number of variable control signals to several different types of sensory stimulus attachments for testing subjects with visual, audio, or tactile stimuli; process and store the ensuing neuroelectric data from the brain and/or retina; analyze the data and automatically make a "yes" or "no" decision as to whether the noisy data contain an evoked response correlatable to the input stimulus; transmit the results to appropriate recorders. The computer is designed as a compact laboratory instrument which is switch operated and requires no programming. As soon as it is plugged in, it is ready to go to work. It is a two-channel device and is completely integrated, having its own exceptional low-level differential amplifiers, and several very sharp cut-off band-pass filters to further enhance the signal/noise ratio. By means of a selector switch four different processing programs are offered; an automatic averaging program, which will compute the average response for each of a number of pre-selected, spatially distributed visual

stimuli; a manual averaging program, which will compute the average response of one spatial visual stimulus at a time; amplitude histograms; period histograms (from which a frequency histogram is easily derived). In addition, the computer will display both the incoming analog signals, or the processed averaged response waveforms, and histograms on a 5-inch oscilloscope. All ordinate amplitudes, and areas under both the positive and negative portion of the waveforms, may be read as bipolar decimal numbers by a digital readout device on the front panel. In addition, the base line of the oscillographic display is fixed, enabling signal and noise components to be precisely calibrated. For clinical use the Syber 260 Neurac and Electroperimeter attachment offers a unique technique to the clinician to realize a method of rapidly measuring visual fields by a truly objective test. (The patient is completely removed from the information loop; there is no need for patient response.) The patient may be an infant, elderly person, noncommunicative, critically ill, psychiatrically disturbed, comatose, or anesthetized. Neurac automatically programs the Electroperimeter to flash in a present manner the 45 xenon gas discharge lamps located in the hemispheric target. Alternatively, manual selection of each of the lamps may be made from the Neurac console. An interrupt button on the console allows any test point to be aborted and to be restarted, for such a reason as nonfixation by subject. The test may then be resumed at the discretion of the operator. A small collimated flickering beam of light focally impinges on the retina of the eye from a pre-designated spatial point. The light source induces an evoked retinal potential which travels through the visual pathways of the subject, terminating in the occipital lobes. This small evoked signal is masked by the normal ongoing electrical activity of the brain. Two differential scalp electrodes at the

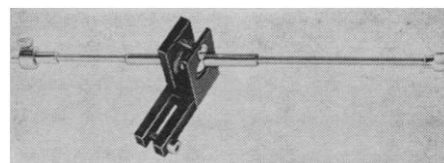
occiput convey this neuroelectric activity to Neurac. Neurac separates the induced signal from the noise by averaging and decides whether a signal is present. The decision is based on certain predetermined criteria. If the criteria are met, Neurac instructs a special display unit to record a "seeing" area; if not, a "non-seeing" area is indicated. Simultaneously, the oscillographic display on Neurac allows all responses to be graded in terms of the programmed threshold levels which are established to indicate a valid evoked response. The resolution of this technique is such that detection of the normal blind spot is easily demonstrated. A complete objective visual field examination may hence be automatically administered. A second channel, such as an ERG, may be simultaneously recorded to help localize lesions. In a like manner, Neurac may also be used for automatic administering and recording of objective hearing and tactile sensory testing.—R.L.B. (Syber Corp., 13 Mercer Rd., Natick, Mass.)

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**Total reading indicator** for dimensional measurement systems eliminates the necessity for adding the lowest and highest meter deflections of a varying indicator reading to obtain the total reading. The device consists of a drift-free electronic amplifier and a total indicator reading control box. The latter contains the circuitry that makes the low end of the meter deflection zero so that the highest possible deflection becomes the total reading. Maximum shift range offered by the device is 0.0005 inch (0.001 cm).—J.S. (Cleveland Instrument Co., 6220 E. Schaaf Rd., Cleveland 31, Ohio)

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**Macro-manipulator** employs the principle of the ball joint to permit a wide range of manipulations. A large ball is mounted between two contoured rings which allow the ball to rotate smoothly and evenly. Through the center of the ball is a hollow sleeve. A long rod, with a tool holder at one end and a knob at the other end, is held by this sleeve. In use, the tools to be manipulated are mounted in the holder and clamped by



SCIENCE, VOL. 143

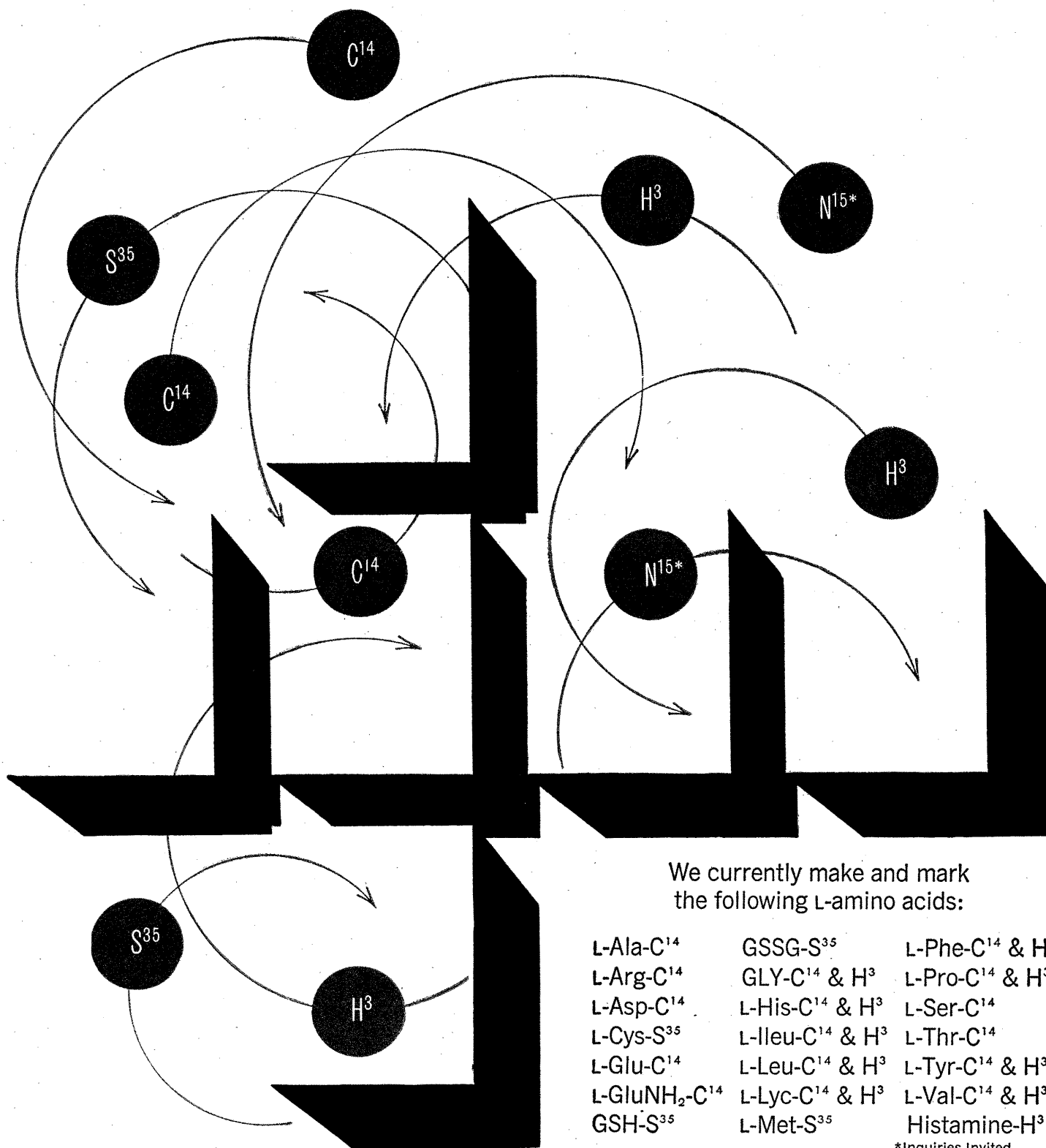
The material in this section is prepared by the following contributing writers:

Robert L. Bowman (R.L.B.), with the assistance of Denis J. Prager (D.J.P.), Laboratory of Technical Development, National Heart Institute, Bethesda 14, Md. (medical electronics and biomedical laboratory equipment).

Joshua Stern (J.S.), Basic Instrumentation Section, National Bureau of Standards, Washington 25, D.C. (physics, computing, electronics, and nuclear equipment).

The information reported here is obtained from manufacturers and from other sources considered to be reliable. Neither *Science* nor the writers assume responsibility for the accuracy of the information. A Readers' Service card for use in mailing inquiries concerning the items listed is included on page 1165. Circle the department number of the items in which you are interested on this card.

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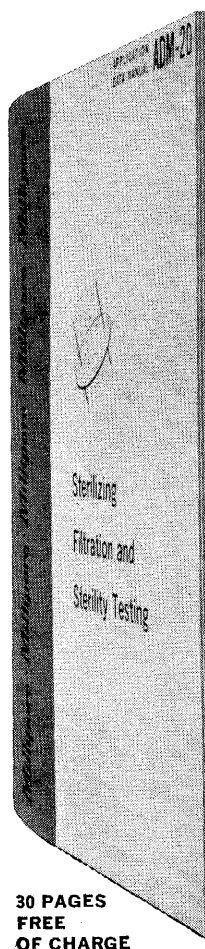
a knurled screw. Movement through a large range of angles is accomplished by moving the control knob at the opposite end of the rod and movement towards and away from the object is also available as the rod slides freely in the friction sleeve within the ball. The mounting bracket is designed to fit on a micromanipulator.—D.J.P. (C. H. Stoelting Co., 424 N. Homan Ave., Chicago 24, Ill.)

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**Sealed infrared absorption cell and holder, "The Amalgam Sandwich Cell,"** is constructed from two polished salt plates, sandwiched together and sealed using an amalgam spacing of silver-mercury or lead-mercury, depending on the path length. Filling ports are located at each end of the cell. When the cell is mounted in its holder these filling ports are sealed with two fittings. The fittings, in turn, permit the cell to be filled and cleaned without spilling on the cell exterior. Depending on path length, cell volumes are as small as 2  $\mu$ l, suitable for analysis of trapped gas



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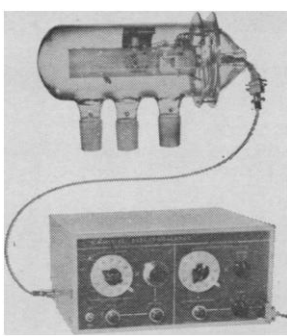
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chromatographic fraction. The holder is said to allow the cell to be positioned for maximum transmission in the beam of all instruments.—R.L.B. (Guy McCann, Instrument Div., Barnes Engineering Co., 30 Commerce Rd., Stamford, Conn.)

Circle 5 on Readers' Service card

**Stable klystron signal source system** operates from 7.5 to 18 Gcy/sec. The system includes a klystron power supply, a klystron cooling control, and 3 radio-frequency sources covering the range from 7.5 to 10, 8.2 to 12.4, and 12.4 to 18 Gcy/sec. The high stability of the system is said to be the result of constant voltages supplied by the manufacturer's MO-4 power supply and uniform cooling provided by the Model KC-1 water cooling unit. The beam supply and repeller supply each have short-term stability of  $\pm 0.01$  percent and long-term stability of  $\pm 0.1$  percent. Regulation of each is  $\pm 0.01$  percent for a  $\pm 10$  percent variation in line voltage. The cooling system is a self-contained gravity-flow system that does not require access to an external source of water. A float-actuated pump returns water from a lower reservoir to an upper reservoir. The system has sufficient capacity to cool two klystrons simultaneously. The radio-frequency sources provide less than 20 kcy/sec incidental frequency modulation when operated continuous wave or when 100-percent square-wave modulated.—J.S. (Weinschel Engineering, Box 577, Gaithersburg, Md.)

Circle 6 on Readers' Service card

**Electronic integrator (model D-2)** for gas chromatographs automatically prints seven-digit integrals which are directly proportional to the concentration of each component of an analyzed mixture. An automatic range-changer permits the new Perkin-Elmer Model D-2 integrator to operate unattended. Quantitative analysis by gas chromatography depends upon the measurement of the time-integral of peak-shaped signals. A separate signal peak is produced by each component of a mixture under analysis. Over-all accuracy of analysis depends directly upon the accuracy with which each signal peak can be measured. Accuracy of data obtained by the D-2 is enhanced by the high counting rate at which the integrator operates; effective maximum rate is 120,000 count/sec. The short time constant of the model D-2—just 10 msec—enables the integrator to

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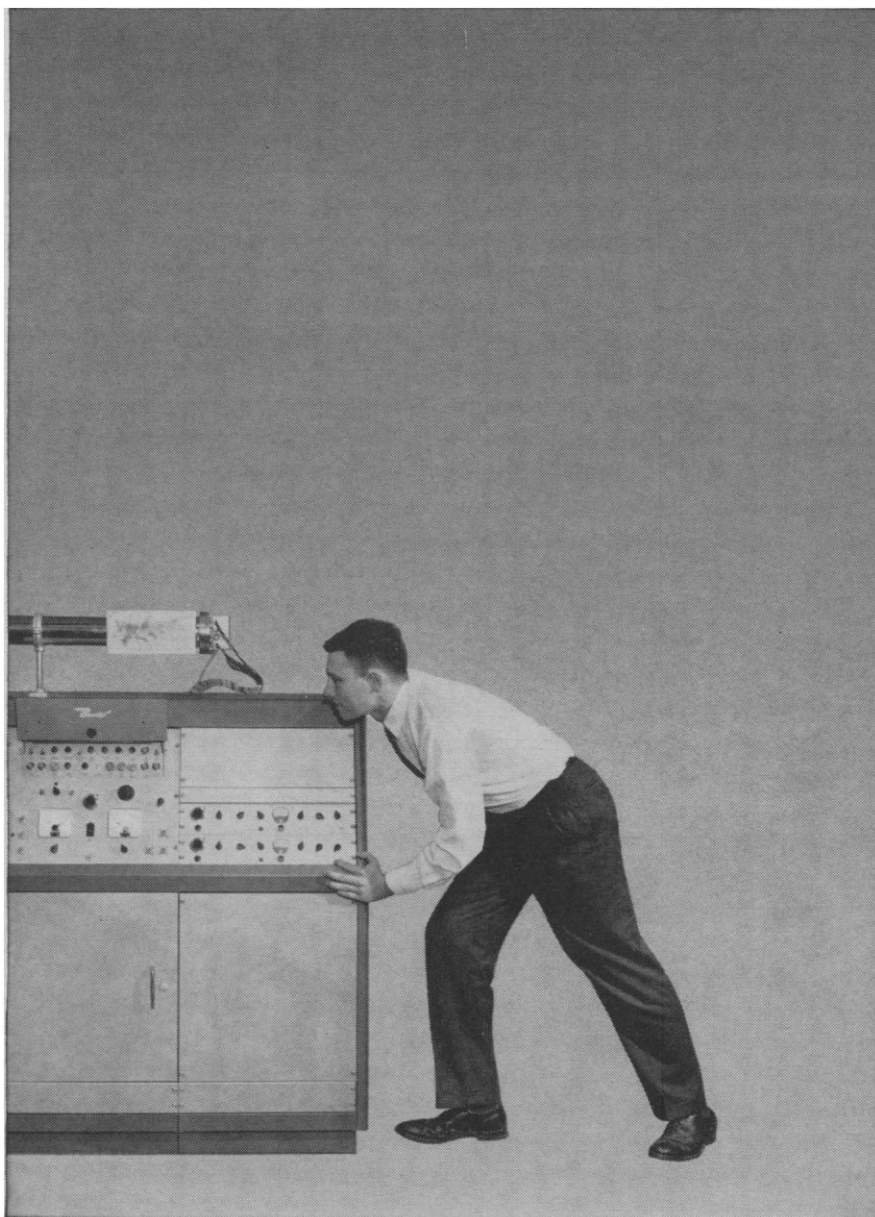
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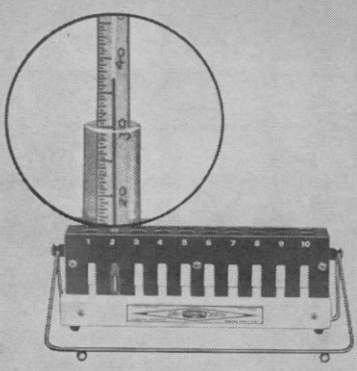


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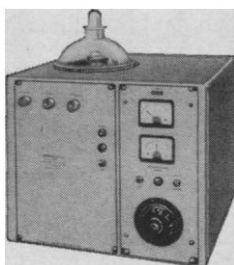
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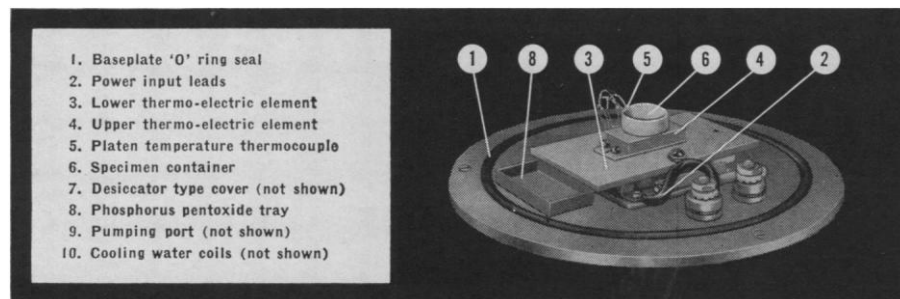
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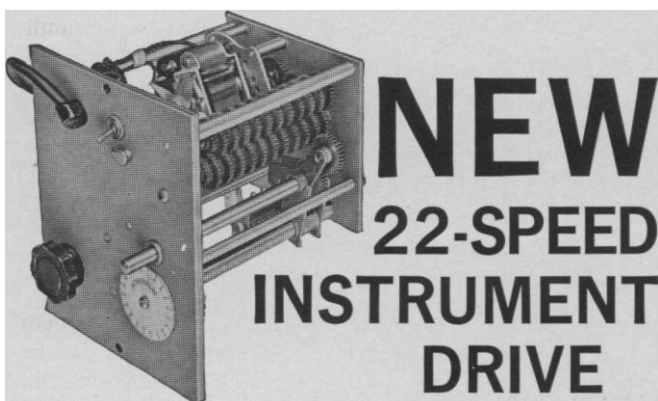
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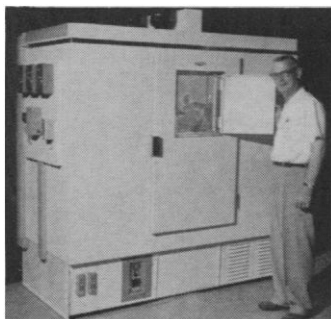
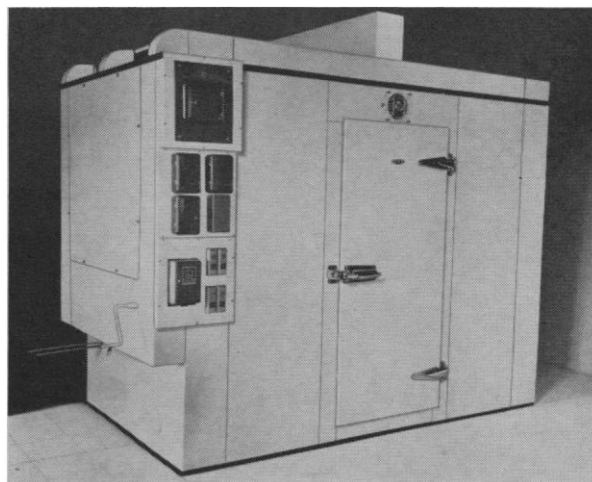
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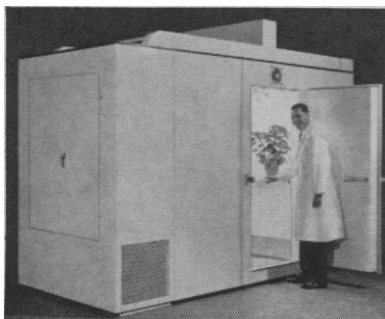
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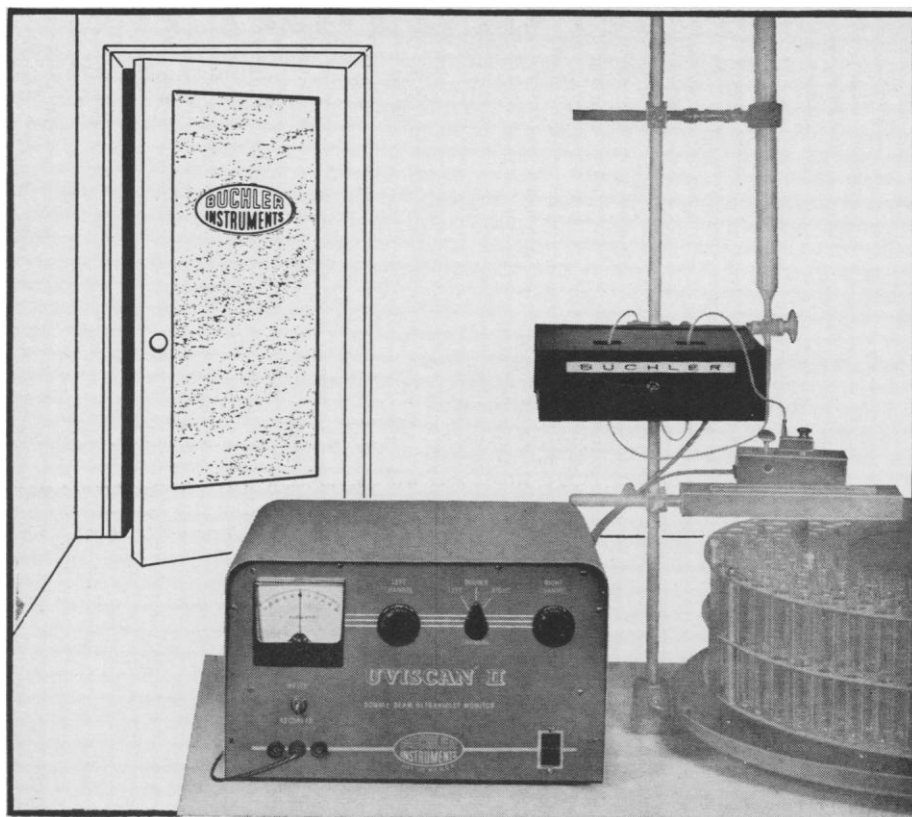
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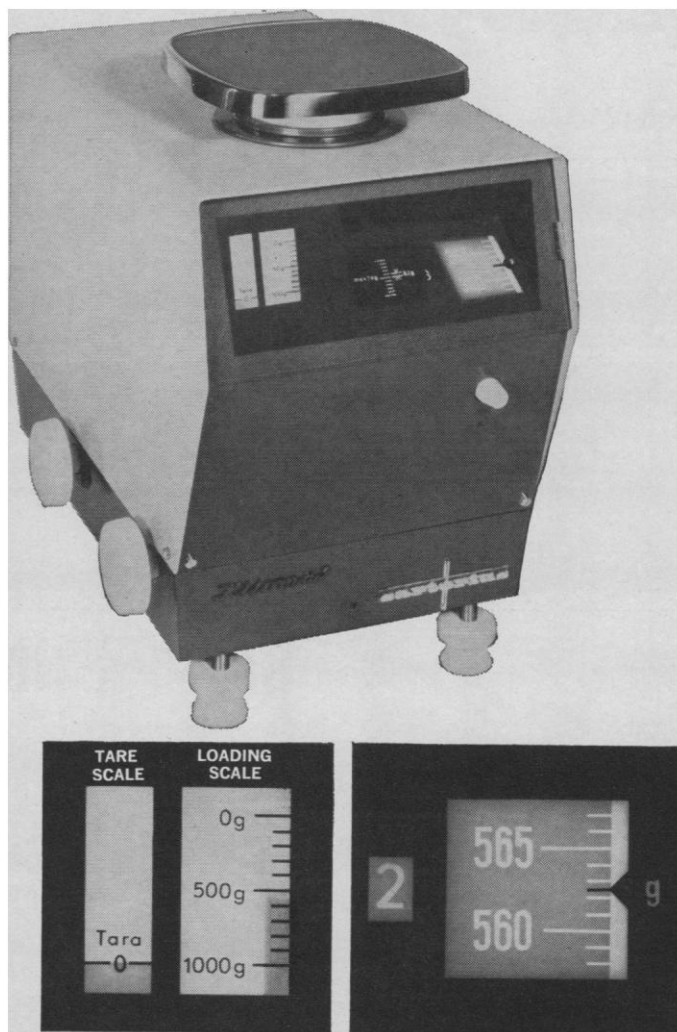
Magnetic stirrer without a cord is operated on rechargeable nickel-cadmium batteries without a cord, or with plug-in with cord on 115 volts a-c. It can be used inside laboratory fume hoods, glove boxes, dry boxes, incubators, or refrigerators, or in the field, without an electrical connection. The Porta-Stir magnetic stirrer has a d-c motor, which makes its performance superior to a-c motor magnetic stirrers in torque, speed, and speed control. It stirs liquids with viscosity of water to 1750 rev/min. It can even stir a mixture of 87-percent glycerin in water at 1000 rev/min. Because the nickel-cadmium batteries operate at constant voltage and undergo practically no voltage drop throughout their useful life, the stirring speed of the stirrer does not decrease. It can stir a liquid of water viscosity at least 10 hours before recharging. Recharging is done by plugging in removable line cord and setting knob to "charge" position. Batteries receive a "trickle" charge when cord is plugged in and knob is in "off" position. Stirrer is 5½ inches (14 cm) square and 3½ inches (9 cm) high.—R.L.B. (LaPine Scientific Co., 6001 S. Knox Ave., Chicago, Ill.)

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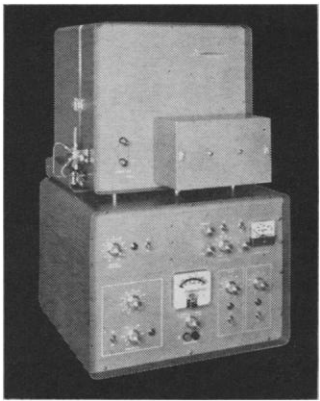
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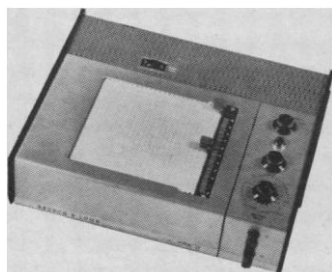
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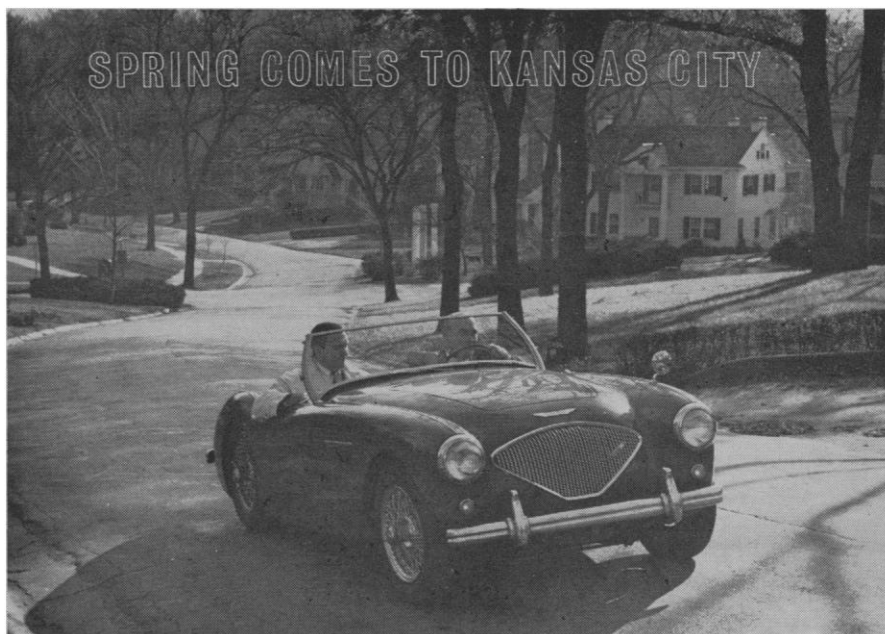
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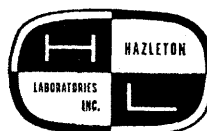
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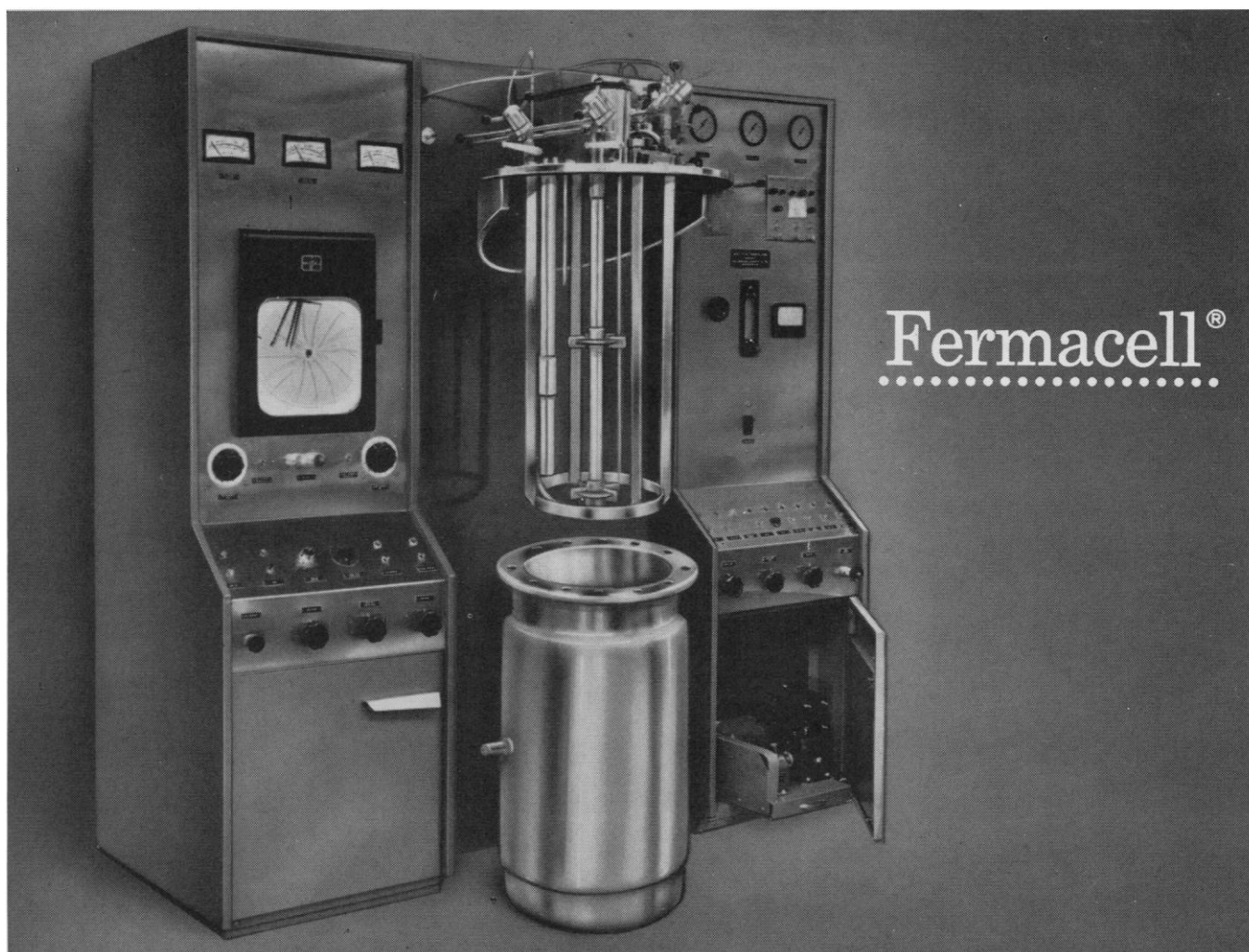
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