

American Soc. of Criminology (D. E. J. MacNamara, Dean, New York Inst. of Criminology, Inc., 40 E. 40 St., New York 16). 27-28 Dec.

American Soc. of Naturalists (J. Schultz, Inst. for Cancer Research, Philadelphia, Pa.).

American Soc. of Photogrammetry (R. G. Ray, U.S. Geological Survey, Washington 25). 29 Dec.

American Soc. of Zoologists (G. Mo- ment, Dept. of Biology, Goucher College, Towson, Baltimore 4, Md.). 27-29 Dec.

American Sociological Soc. (K. Davis, Inst. of International Studies, Univ. of California, Berkeley 4). 29 Dec.

Association of American Geographers, Middle Atlantic Div. (J. E. Guernsey, 9707 Parkwood Dr., Bethesda, Md.). 29 Dec.

Association for Computing Machinery (J. Douglas, Mathematics Dept., Rice Inst., Houston, Tex.).

Astronomical League (Miss G. C. Scholz, 410 Mason Hall Apts., Alexandria, Va.). 26 Dec.

Biometric Soc. (J. Cornfield, Johns Hopkins Univ., Baltimore, Md.). 30 Dec.

American Statistical Assoc. (E. Glazer, 305 George Mason Dr., Falls Church, Va.). 30 Dec.

Conference on Scientific Communica-

tion Problems (G. L. Seielstad, Applied Physics Lab., Johns Hopkins Univ., Silver Spring, Md.). 28-30 Dec.

Conference on Scientific Manpower (T. J. Mills, National Science Foundation, Washington 25). 30 Dec.

Ecological Soc. of America (D. E. Davis, Johns Hopkins Univ., School of Hygiene, Baltimore, Md.).

History of Science Soc. (M. C. Leikind, 1334 Aspen St., NW, Washington 12). 29 Dec.

Instrument Soc. of America (O. L. Linebrink, Battelle Memorial Inst., Columbus, Ohio). 30 Dec.

International Geophysical Year (H. Odishaw, National Acad. of Sciences, Washington 25). 29-30 Dec.

Junior Scientists Assembly (K. C. Johnson, Supervising Director of Science, District of Columbia Public Schools, Woodrow Wilson High School, Washington 16). 27-28 Dec.

Metric Assoc. (J. T. Johnson, 694 W. 11 St., Claremont, Calif.).

National Acad. of Economics and Political Science (D. P. Ray, Hall of Government, George Washington Univ., Washington, D.C.). 27 Dec.

National Assoc. of Biology Teachers (P. Klinge, Jordan Bldg., Indiana Univ., Bloomington). 26-30 Dec.

National Assoc. for Research in Science Teaching (E. S. Obourn, U.S. Office of Education, Washington 25). 26-30 Dec.

National Assoc. of Science Writers (J. Billard, U.S. News and World Report, Washington, D.C.).

National Geographic Soc. (W. R. Gray, NGS, 16 and M Sts., NW, Washington 6). 30 Dec.

National Science Teachers Assoc. (W. A. Kilgore, District of Columbia Teachers College, Washington 9). 26-30 Dec.

National Speleological Soc. (W. E. Davies, 125 Greenway Blvd., Falls Church, Va.). 28-29 Dec.

Philosophy of Science Assoc. (C. W. Churchman, Case Inst. of Technology, Cleveland, Ohio).

Pi Gamma Mu (Mrs. Effie B. Urqhart, Winfield, Kan.).

Scientific Research Soc. of America (D. B. Prentice, 56 Hillhouse Ave., New Haven 11, Conn.).

Sigma Delta Epsilon (Mrs. V. L. Blackford, 2630 Adams Mill Rd., NW, Washington 10). 26-30 Dec.

Society for General Systems Research (R. L. Meier, Mental Health Research Inst., Univ. of Michigan, Ann Arbor). 29 Dec.

Society for Industrial Microbiology, Washington section (W. N. Ezekiel, Bur. of Mines, Washington 25). 27-28 Dec.

Society of the Sigma Xi (T. T. Holme, 56 Hillhouse Ave., New Haven 11, Conn.). 29 Dec.

Society of Systematic Zoology (G. W. Wharton, Dept. of Zoology, Univ. of Maryland, College Park). 26-30 Dec.

United Chapters of Phi Beta Kappa (C. Billman, 1811 Q St., NW, Washington, D.C.). 27 Dec.

Washington Acad. of Sciences (G. W. Irving, ARS, U.S. Dept. of Agriculture, Washington 25).

(See issue of 17 October for comprehensive list)

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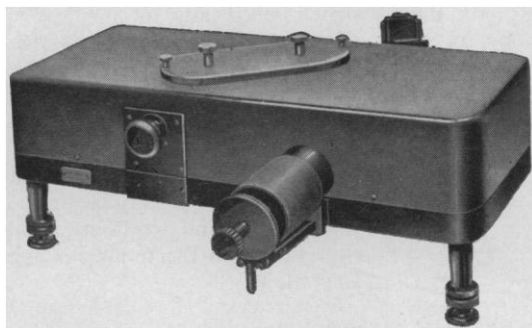
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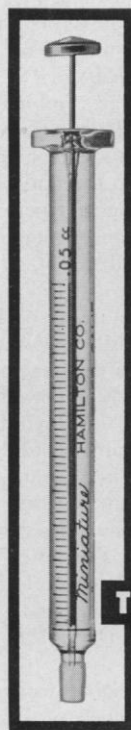
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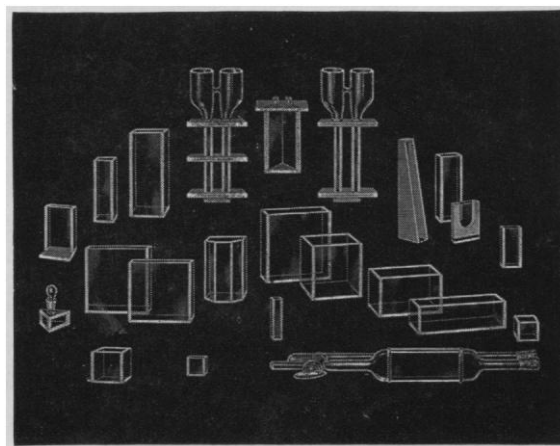
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# Equipment

*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. A coupon for use in making inquiries concerning the items listed appears on page 1230.*

■ **ELECTROMETER** measures currents as small as  $3 \times 10^{-14}$  amp with response times less than 0.1 sec, including effects of input cable capacitance. The instrument is direct-reading and has provisions for oscilloscope and recorder connection. (EH Research Laboratories, Dept. 474)

■ **THERMAL-RADIATION STANDARD SOURCE** consists of an isothermal cavity with a black-body aperture  $1\frac{1}{8}$  in. in diameter and a transistorized temperature-control unit. Operating temperature range is  $100^\circ$  to  $1000^\circ\text{C}$ . Temperature is controlled within  $\pm 1^\circ\text{C}$ . Effective total emissivity greater than 0.995 is accomplished through use of a biconical cavity the walls of which have high natural emissivity. Warm-up time from room temperature to  $1000^\circ\text{C}$  is 90 min; this may be reduced to 70 min by use of 140-v input power. (Electronic Communications Inc., Dept. 479)

■ **HIGH-SPEED CAMERA** provides 16-mm motion pictures at speeds up to 1000 frames per second. High frame rates are achieved by means of a rotary prism and a disk shutter that turn in synchronism with the continuously moving film. Variation of shutter opening permits control of exposure. (Traid Corporation, Dept. 477)

■ **TWO-CHANNEL OSCILLOSCOPE** is designed specifically for medical application—for example, simultaneous observation of electrocardiograph and electroencephalograph signals for monitoring anoxia in surgery. The two traces are displayed on a 5-in., long-persistence screen. Frequency response is 2000 cy/sec. Sweep rate is variable from 7.5 to 100 mm/sec and sensitivity is 330  $\mu\text{v}/\text{cm}$ . (Levinthal Electronic Products Inc., Dept. 456)

■ **VOLTAGE CALIBRATOR** furnishes direct current or 1 kcy/sec square-wave output continuously variable from 0.02 to 100 v. Accuracy is  $\pm 0.75$  percent (Exact Electronics, Inc., Dept. 457)

■ **FILTER** is continuously variable with separate high-pass and low-pass sections. Any bandwidth within the range 20 to 20,000 cy/sec can be set. The device is a passive network designed for 600-ohm circuits. Impedance-matching transformers are available as plug-in accessories. (Allison Laboratories, Dept. 475)

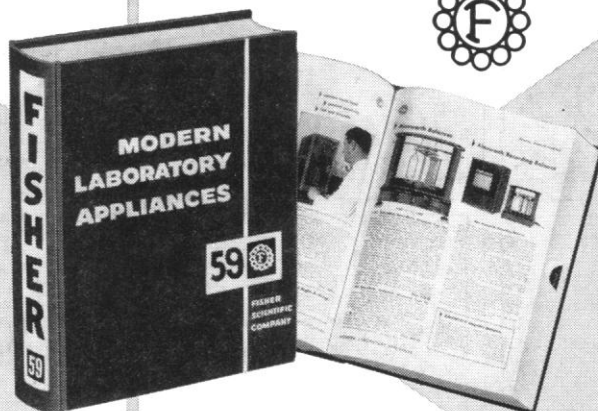
■ **GRATING ACCESSORY** for infrared spectrometers employs two replica gratings ruled at 1500 and 3000 lines per inch, respectively, for the ranges  $650$  to  $2150\text{ cm}^{-1}$  and  $2150$  to  $3650\text{ cm}^{-1}$ . The prism instrument operates in combination with the accessory as a double monochromator. A push-button control moves an auxiliary mirror into the optical path to blank out the grating and permit use of the simple prism monochromator. (Unicam Instruments Ltd., Dept. 476)

■ **ELECTROPOLISHER** pumps electrolyte through a series of orifices so that it contacts the specimen in the form of a rotating and continuously renewed vertical column of liquid, thus avoiding flow lines. The self-contained polishing unit with its own pump is separate from the power supply. Thus several polishing units can be connected in turn to the same power supply. The latter furnishes 50 v at 5 amp with controls for automatic or manual polishing. (Shandon Scientific Co., Ltd., Dept. 483)

■ **TAPE READER** is designed to read simultaneously a fixed block of information of up to 160 bits on perforated 5- or 8-hole tape. Output terminals are available for all bits. (Wang Laboratories, Inc., Dept. 482)

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■ **PUNCHED-CARD READER** achieves a reading rate of 2000 cards per minute by substituting photoelectric hole detection for electrical brush contacts. Movement of the card is used to time reading by using the leading edge of the card to actuate 12 photocells. Vertical feed provides gravity assist to the feeding mechanism. (Uptime Corp., Dept. 471)


■ **MICROVOLT-AMMETER** measures d-c voltages from 1  $\mu\text{v}$  to 1 v and currents from 1  $\mu\text{a}$  to 3 ma. Full-scale voltage sensitivity is  $\pm 10 \mu\text{v}$ , full-scale current sensitivity  $\pm 10 \mu\text{a}$ . Accuracy is  $\pm 3$  percent of full scale, and frequency range is from d-c to 0.2 cy/sec at 3 db down. The use of a photoconductive chopper reduces drift to less than 1  $\mu\text{v}$  over several hours. Input impedance is normally 1 megohm, but higher impedances are obtainable. (Hewlett-Packard Co., Dept. 473)

■ **SCINTILLATION SPECTROMETER** records the energy range 25 kev to 8 Mev over 10 in. of chart length. The equipment includes an amplifier, scintillation counter and lead shield, a logarithmic counter-rate meter, and a power supply. The recorder chart-drive motor also drives the scanning potentiometer. Stability is 0.25 percent per day. Linearity is better than 1 percent. Background is less than 25 count/min. (Hamner Electronics Co., Inc., Dept. 478)


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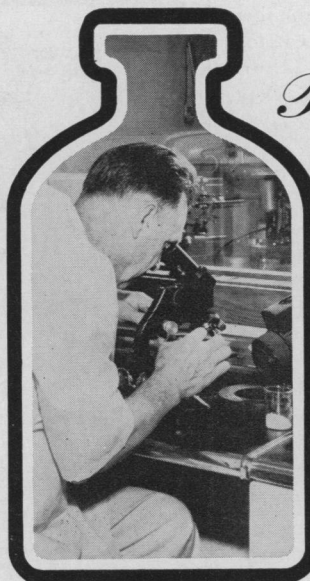
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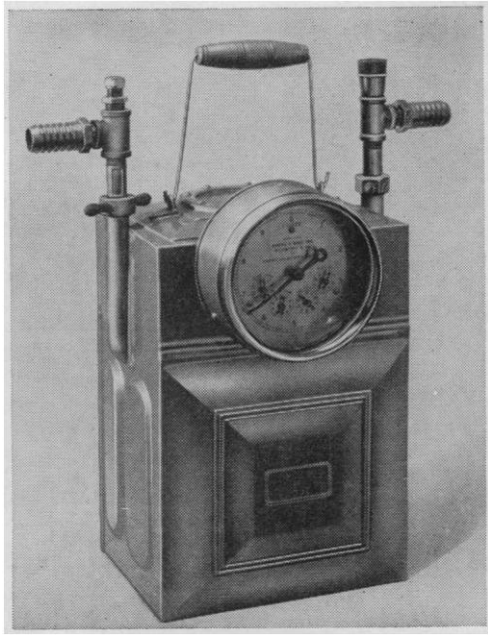
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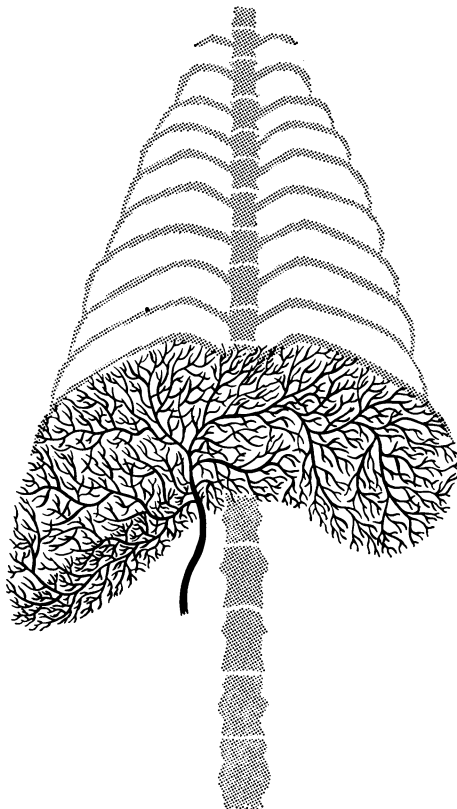
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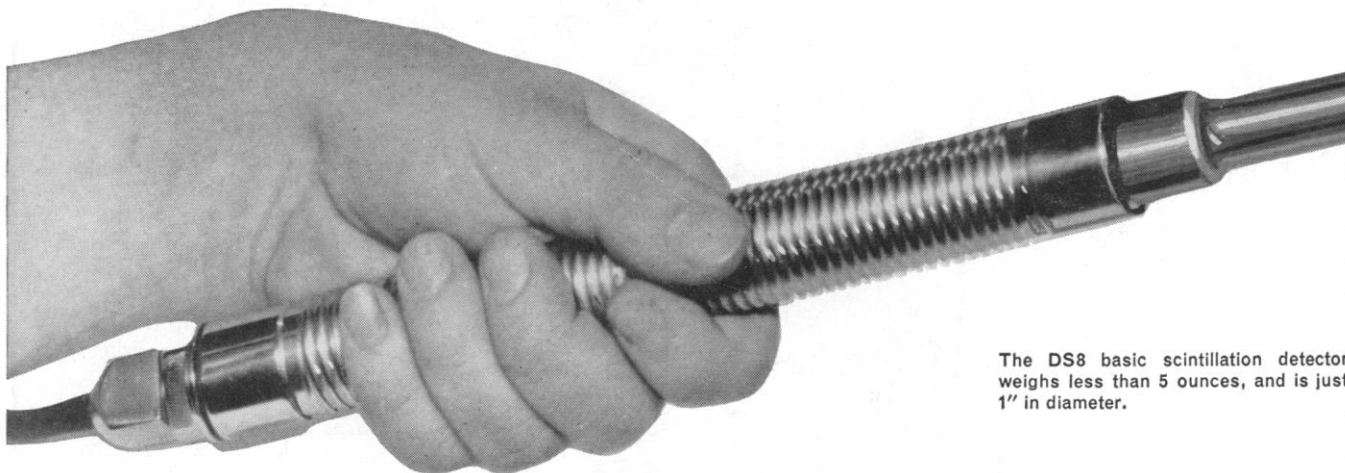
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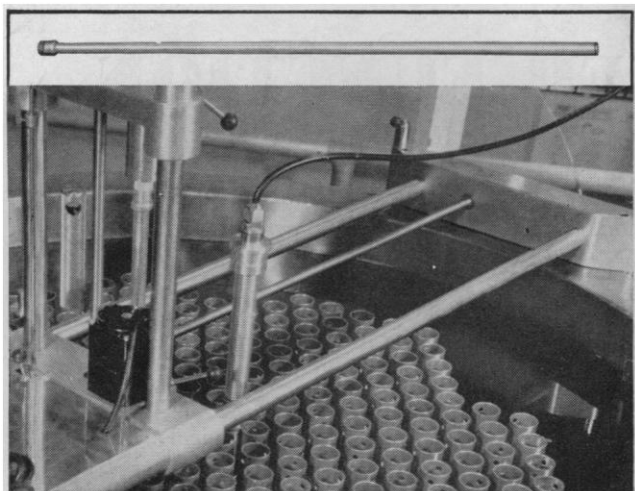
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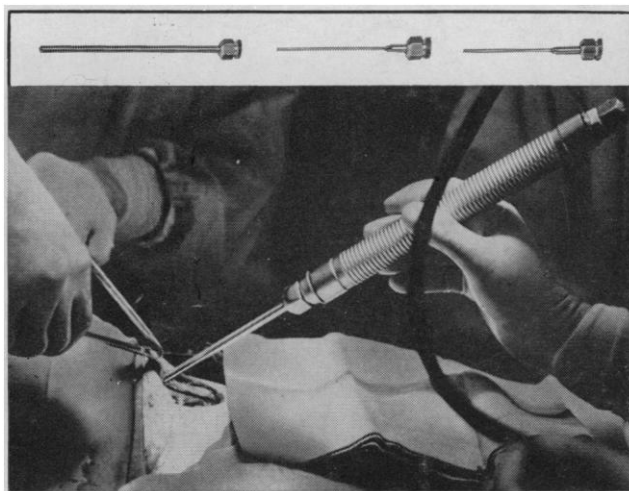
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