

29-31. American Physical Soc., Berkeley, Calif. (K. Darrow, APS, Columbia Univ., 116 St. and Broadway, New York, N.Y.)

January

3-9. Indian Science Cong., 48th session, Roorkee (Uttar Pradesh), India. (General Secretary, ISC Assoc., 64 Dilkhusa St., Calcutta 17, India)

8-12. Thermoelectric Energy Conversion, symp., Dallas, Tex. (P. H. Klein, General Electric Co., Electronics Lab., Bldg. 3, Room 221, Syracuse, N.Y.)

8-13. American Acad. of Orthopedic Surgeons, Miami Beach, Fla. (J. K. Hart, 116 South Michigan Ave., Chicago 3, Ill.)

8-14. Bahamas Conf. on Hypertension, Nassau. (I. M. Wechsler, P.O. Box 1454, Nassau)

8-14. International Conf. of Social Work, 10th, Rome. (Miss R. M. William, ICSW, 345 E. 46 St., Room 1012, New York 17)

9-11. Reliability and Quality Control, 7th natl. symp., Philadelphia, Pa. (R. L. Schwerin, ACF Electronics Div., ACF Industries, Inc., 11 Park Place, Paramus, N.J.)

9-12. White House Conf. on Aging, Washington, D.C. (Special Staff on Aging, Office of the Undersecretary, Dept. of Health, Education and Welfare, Washington 25)

9-13. Society of Automotive Engineers, annual, Detroit, Mich. (SAE, 485 Lexington Ave., New York 17)

10-11. Conference on Physics of Polymers, Bristol, England. (Organizing Secretary, Physical Soc., 1 Lowther Gardens, London, S.W.7)

16-18. American Astronautical Soc., annual, Dallas, Tex. (F. F. Martin, AAS, 304 S. Woodstock Dr., Haddonfield, N.J.)

16-19. Instrument Soc. of America, winter instrument-automation conf., St. Louis, Mo. (W. H. Kushnick, 313 Sixth Ave., Pittsburgh 22, Pa.)

22-28. Bahamas Serendipity Conf., 3rd, Nassau. (I. M. Wechsler, P.O. Box 1454, Nassau)

23-25. Institute of the Aeronautical Sciences, 29th annual, New York, N.Y. (Meetings Dept., IAS, 2 E. 64 St., New York 21)

24-27. American Mathematical Soc., 67th annual, Washington, D.C. (J. W. Green, Univ. of California, Los Angeles)

24-27. Society for Industrial and Applied Mathematics, Washington, D.C. (G. Kaskey, Remington Rand Univac, 1900 W. Allegheny Ave., Philadelphia, Pa.)

24-27. Society of Plastics Engineers, 17th annual conf., Washington, D.C. (T. A. Bissell, SPE, 65 Prospect St., Stamford, Conn.)

25-27. Mathematical Assoc. of America, annual, Washington, D.C. (H. L. Alder, Dept. of Mathematics, Univ. of California, Davis)

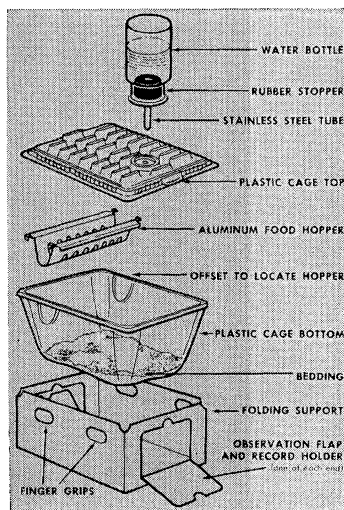
26-27. Western Spectroscopy Conf., 8th annual, Pacific Grove, Calif. (R. C. Hawes, Applied Physics Corp., 2724 S. Peck Rd., Monrovia, Calif.)

27-28. Royal College of Physicians and Surgeons, annual, Ottawa, Ontario, Canada. (T. J. Giles, 150 Metcalfe St., Ottawa)

(See issue of 18 November for comprehensive list)

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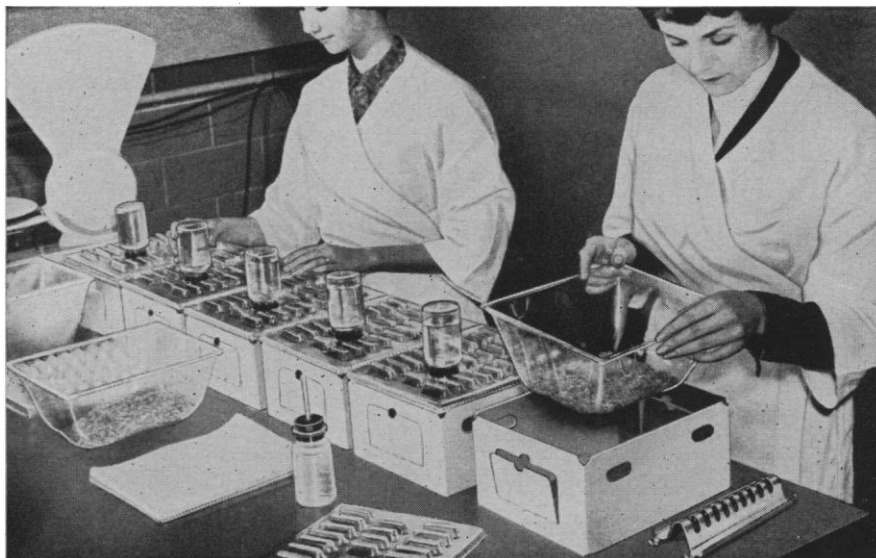
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SUMMING

UP

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wishes to call
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I. CARBOXYPEPTIDASE B

1. Folk, J. E.; Piez, K. A.; Carroll, W. R. and Gladner, J. A.: *Journal of Biological Chemistry*, 235, No. 8, 2272 (1960)
2. Folk, J. E. and Gladner, J. A.: *Journal of Biological Chemistry*, 231, No. 1, 379 (1958)

II. ACID DESOXYRIBONUCLEASE (Splenic DNase II)

Shimomura, M. and Laskowski, M.: *Biochimica et Biophysica Acta*, 26, 198 (1957)

III. CRYSTALLINE BEEF HEART LACTATE DEHYDROGENASE

Straub, F. B.: *Biochemical Journal*, 34, 483 (1940)

IV. LEUCINE AMINO PEPTIDASE

Spackman, Smith, Brown and Hill: *Biochemical Preparations*, Vol. 6, page 35 (edited by C. S. Vestling and published by John Wiley and Sons in 1958)

V. BACTERIAL ALKALINE PHOSPHATASE

1. Torriani, A.: *Biochimica et Biophysica Acta*, 38, 460 (1960)
2. Garen, A. and Levinthal, C.: *Biochimica et Biophysica Acta*, 38, 470 (1960)

VI. GABASE

1. Scott, E. M. and Jakoby, W. B.: *National Institute of Arthritis and Metabolic Diseases: Journal of Biological Chemistry*, 234, No. 4, 932 (1959)
2. Jakoby, W. B. and Scott, W. M.: *Journal of Biological Chemistry*, 234, No. 4, 937 (1959)



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New Products

The information reported here is obtained from manufacturers and from other sources considered to be reliable. Neither Science nor the writer assumes responsibility for the accuracy of the information. A coupon for use in mailing inquiries concerning the items listed is included in the post card insert. Circle the department number of the items in which you are interested on this coupon.

■ **VARIABLE-FREQUENCY** power source furnishes 50 watts with amplitude stability said to be better than ± 0.01 percent and harmonic distortion 0.1 percent. Voltage is continuously adjustable to 1500 volts and current to 12 amp. Frequency range is 20 to 20,000 cy/sec. (Krohn-Hite Corp., Dept. Sci900, 580 Massachusetts Ave., Cambridge 39, Mass.)

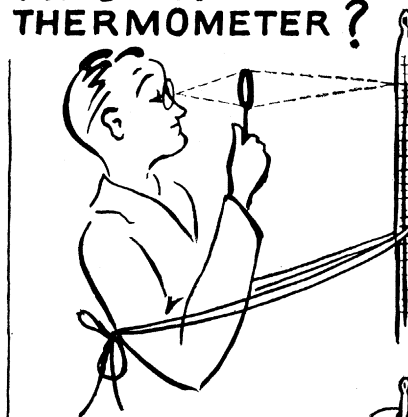
■ **STANDARD TAPER STOPPER** with Teflon sleeve is claimed not to bind, stick, or freeze. Eight different sizes are offered. The 1½- to 2-mm-thick Teflon sleeve is permanently attached to the hard borosilicate glass body. (Scientific Glass Apparatus Co., Dept. Sci903, Bloomfield, N.J.)

■ **FLUXMETER** of nuclear-magnetic-resonance type measures uniform magnetic fields in the range 1 to 52 kgauss. Frequency instabilities caused by varying external components or probe position are eliminated by buffering the probe completely from frequency determining circuitry. Standard probe cable length is 6 ft, but extensions of 50 ft or more can be supplied. (Varian Associates, Dept. Sci906, 611 Hansen Way, Palo Alto, Calif.)

■ **FRACTION COLLECTORS** in 12 models provide timed collection, volumetric siphon collection, or timed, siphon and drop-counting collection in one unit. Any of the three collecting units may be used with any of three turntables: a 19-in. model for 120 tubes, a 24-in. model for 240 tubes, and a sectional model for six sets of 40 tubes. Each section of the latter is individually removable. Completely refrigerated assemblies are also available. (Buchler Instruments, Inc., Dept. Sci910, 514 West 147 St., New York 31, N.Y.)

■ **METER CALIBRATOR** is a self-contained, completely solid-state instrument. Voltage ranges are 0-2.5, 0-5, 0-10, 0-25, 0-50, 0-100, 0-250, and 0-500, for a-c and d-c. Direct current range is 100 μ a to 1 amp. Resistance range is 25 ohms to 2.5 megohms. Accuracy is said to be ± 0.5 percent of full scale on all ranges between 65 and 90°F. Output ratings are: 50 ma (max.) for a-c voltage measurements; 100 ma (max.) for d-c voltage; and 750 mv (max.) for d-c current. (Mid-Eastern Electronics, Inc., Dept. Sci913, 32 Commerce St., Springfield, N.J.)

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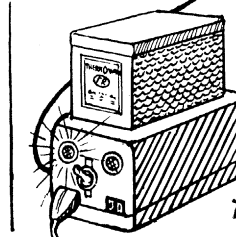
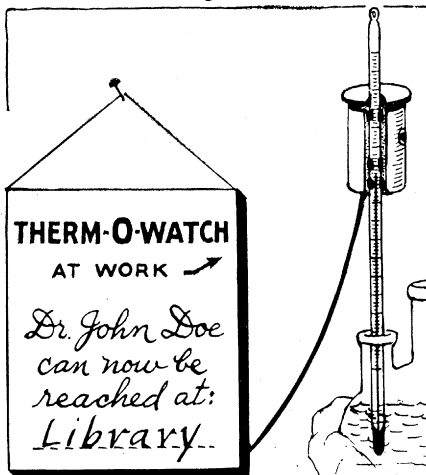
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■ **pH METER** of the glass-electrode type is said to have an accuracy of ± 0.05 percent. A 6-in. scale covers the range from 0 to 14 pH. Temperature compensation is continuously adjustable between 0° and 100°C . High resistance glass electrodes are employed against a silver chloride reference electrode. This instrument is said to remain unaffected in its reading by mains fluctuations of ± 10 percent. (New England Scientific Instruments Co., Dept. Sci909, 238 Main St., Cambridge 42, Mass.)

■ **TUNNEL-DIODE-CURVE TRACER** permits the study of forward characteristics of tunnel diodes including gallium arsenide types. Curves are displayed on any sensitive oscilloscope. Through the use of an external decade box, available as an accessory, it is possible to read actual negative resistance of the diode at any point on the curve. (Texas Instruments, Inc., Dept. Sci912, 3609 Buffalo Speedway, Houston 6, Tex.)

■ **VARIABLE LEAK** provides conductance variation over a range greater than 10^{12} , from $10\text{ cm}^3/\text{sec}$ to less than $10^{-11}\text{ cm}^3/\text{sec}$ for noncorrosive gas. The device is bakeable for extended periods at 450°C . The leak is said to be operable safely at external pressures to 400 lb/in.² A driving torque of 12 in. oz is said to be sufficient to seal the leak at 500 lb/in.² inlet pressure. (Granville-Phillips Co., Dept. Sci917, Box 198, Pullman, Wash.)

■ **TRANSISTOR ANALYZER** for demonstration purposes mounts components on a clear plastic plate 3/16 in. thick. Any general-purpose transistor may be used. Common emitter, common base, and common collector configurations can be demonstrated. Frequency limitations can also be shown. Available accessories include meters, audio oscillators, connectors, and clips. (Central Scientific Co., Dept. Sci918, 1700 Irving Park Rd., Chicago, Ill.)

■ **THERMOMETER** allows measurement of surface temperature without contact. The instrument consists of a resistance sensing head that is positioned about 0.003 in. from the surface to be measured. A parabolic reflector behind the resistance element is said to compensate errors. Temperature to 450°F



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is measured. Operation is from a single flashlight battery and temperature indicates directly. Hand-held and panel-mounted models are available. (Gelman Instrument Co., Dept. Sci914, 106 Main St., Chelsea, Mich.)

■ **SYNCHRO INDICATOR** for nonambiguous remote indication of linear or angular position combines a 1:1 and a 36:1 indicator. A separate receiver is geared to each pair of concentric dial pointers. Reading accuracy is said to be ± 0.03 deg. Resetting and nonresetting models are available. (Scientific-Atlanta Inc., Dept. Sci922, Atlanta, Ga.)

■ **MICROMANOMETER** reads directly differential pressures as low as 0.0001 mm-Hg. Eight full-scale ranges from 0.01 to 30 mm-Hg are selected by a front-panel switch. In addition to visual readout, both phase sensitive a-c and polarized d-c electrical outputs are provided. Response time when using the electrical outputs is said to be of the order of 10 msec and accuracy of comparison of two pressures ± 0.05 percent or better. Low absolute pressures may be measured by connecting one pressure port directly to a vacuum pump. (Trans-Sonics, Inc., Dept. Sci915, P.O. Box 328, Lexington 73, Mass.)

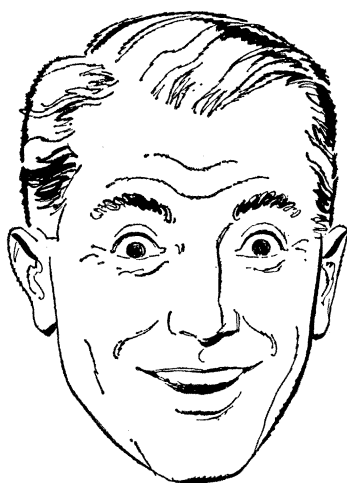
■ **TRAFFIC RECORDER** produces a punched-tape record suitable for translation into punched-card form. Totals are recorded every 15, 30, or 60 min. Signals are accepted from detecting elements such as treadle, pneumatic tube, radar, electric eye, or sonic detector. Portable and permanent models are available. Each carries a year's supply of tape for 15-min readout interval. (Fischer & Porter Co., Dept. Sci919, 552 Jacksonville Rd., Warminster, Pa.)

■ **A-C NULL DETECTOR** utilizes plug-in filter units that permit the detector to operate on 50, 60, 400, or 1000 cy/sec. Five choices of sensitivity cover a 10,000-to-1 range with maximum sensitivity $0.3 \mu\text{V}/\text{scale division}$ for source resistance up to 20,000 ohms. Period is less than 1 sec for 50 percent full-scale unbalance, and noise level is said to be less than $0.1 \mu\text{V}$ peak to peak. The indicator saturates on large signals at approximately 85 percent of full scale. (Leeds & Northrup Co., Dept., Sci916, 4934 Stenton Ave., Philadelphia 44, Pa.)

■ **ELECTRON MICROPROBE X-RAY ANALYZER** can quantitatively analyze an area of about $1 \mu^2$ on a metallurgical specimen for all elements from magnesium to uranium in the periodic system. A finely focused electron beam generates x-rays from the specimen in the area of electron bombardment. Three curved-crystal x-ray spectrometers permit simultaneous analysis of three elements continuously as the sample is moved across the electron beam. An optical microscope employing reflecting optics permits viewing, while analysis proceeds, of the portion of the sample surrounding and including the area being analyzed. (Applied Research Laboratories, Inc., Dept. Sci920, P.O. Box 1710, Glendale 5, Calif.)

■ **TRIGGER CONVERTER** permits oscilloscope viewing at trigger rates beyond the direct capabilities of the oscilloscope. The converter generates pulses with msec rise times at repetition rates of 50 kcy/sec and synchronous with the input signal. The fully transistorized instrument is designed to fit on top of the oscilloscope with which it is to be used. (Lumatron Electronics Inc., Dept. Sci921, 116 County Courthouse Rd., New Hyde Park, N.Y.)

■ **OSCILLOSCOPE CAMERA** has as its basic component a binocular viewing periscope that mounts on the cathode-ray-tube bezel. The periscope contains a dichroic mirror that reflects 80 percent of incident light and transmits the remaining 20 percent for simultaneous viewing. The camera unit mounts on top of the periscope. A choice of two camera-mounting plates offers either a



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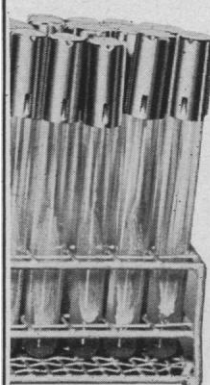
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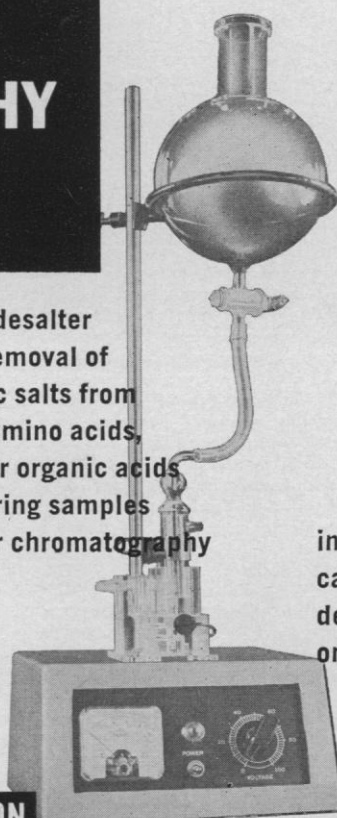
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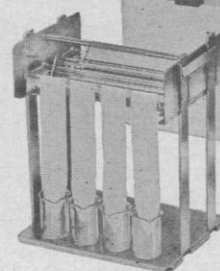
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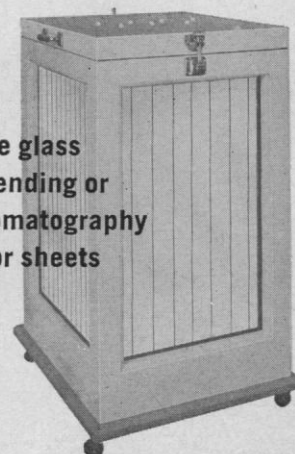
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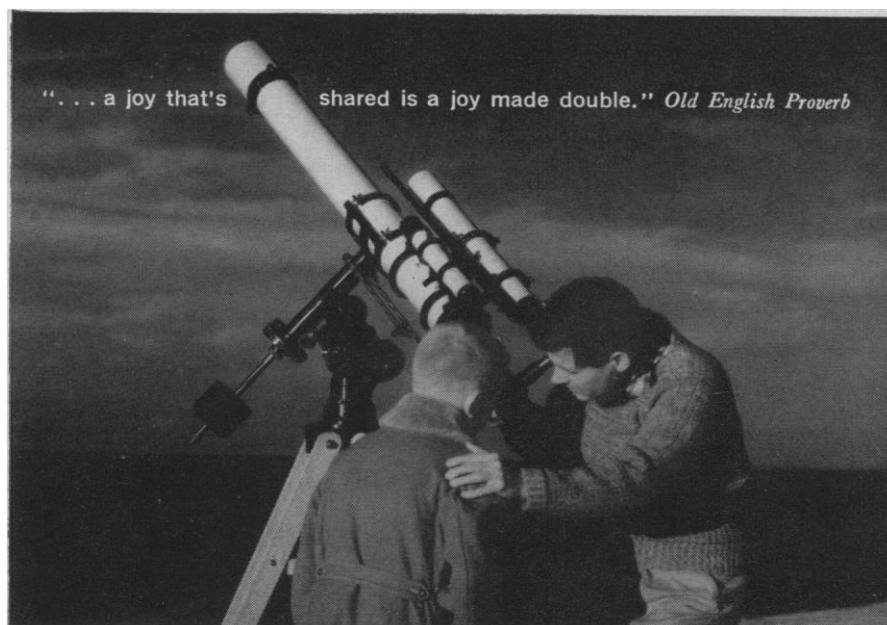
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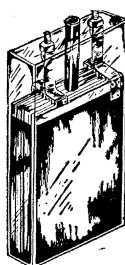
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■ **WHEATSTONE BRIDGE** measures from 1 ohm to 100 megohms in eight ranges. Accuracy is said to be ± 0.05 percent and indicator sensitivity 1 mv full scale representing 1 percent bridge unbalance from 5 ohms to 50 megohms. The read-out amplifier is a transistorized chopper amplifier. Power supplies for operation on 117 volts 60 cy/sec power are built into the instrument. (Calibration Standards Corp., Dept. Sci923, Pomona, Calif.)

■ **PERMEAMETER** measures magnetizing forces up to 300 oer with accuracy said to be ± 1 percent. Specimens of rectangular cross section up to 3 by 1 cm and 24 to 28 cm long can be tested. Features include slip-ring contacts on moving H-coil platform and solenoid drive for rotating H coils. Constants are derived from dimensions of the instrument so that calibration is not required. (Minneapolis-Honeywell Regulator Co., Dept. Sci924, Ridge Ave. at 35th St., Philadelphia 32, Pa.)

■ **REMOTE-READOUT MODULES** display six digits, using numeral-electrode gas-discharge tubes. Models are available that are equipped with integral amplifiers, power supply for ten-line-per-digit input or binary-decimal decoding networks. Other combinations can be furnished to order. (Transistor Specialties Inc., Dept. Sci927, Plainview, N.Y.)

■ **DISPLACEMENT CALIBRATION STAND** for differential-transformer type transducers consists of a vernier-type micrometer, a nonmagnetic threaded core rod, mounting block and binding posts. Range is 0 to 1 in. and accuracy of the micrometer is said to be $\pm 100 \mu$ in. (Schaevitz Engineering, Dept. Sci928, P.O. Box 505, Camden 1, N.J.)

■ **POWER SUPPLY** is said to provide ± 0.0005 percent regulation of line and load at terminals. Voltage stability is said to be less than 0.0002 percent plus 10 μ v for a 10-percent line voltage change. Internal impedance is less than 250 μ ohm, hum and noise level are less than 50 μ v, and output drift is ± 0.01 percent. Transient response is 25 μ sec for recovery to within 10 mv of steady-state voltage after applications of full load. Output voltage is continuously variable to 36 volts and settable to 10 mv. (Krohn-Hite Corp., Dept. Sci931, 580 Massachusetts Ave., Cambridge 39, Mass.)

■ **MIRROR BLANK** for lightweight telescope system consists of two fused-silica plates separated by walls or tubes of the same material. The ribs are permanently sealed to the plates. Weight is reduced to half that of a solid disk. Blanks are available in a wide range of sizes and shapes and can be formed to order. According to the manufacturer the blanks will accept any standard reflective coating and can be ground and finished with standard equipment. (Corning Glass Works, Dept. Sci929, Corning, N.Y.)

■ **SCANNER** switches sequentially digital data points in the form of contact closures at the rate of 50,000 points per second. Maximum switching capacity is 199 points. Actuating signal is a pulse of -10 volts per minute amplitude and 5 μ sec duration. The output signal may be used for switching if the load impedance is 4.7 kohm or greater. Operating temperature is -49° to +131°F. (Datex Corp., Dept. Sci936, 1307 S. Myrtle Ave., Monrovia, Calif.)

■ **ELECTRO-OPTICAL RELAY** has a conductance on/off ratio of 1,000,000 to 1 and is capable of speeds up to 100 operations per second. The device includes a light source which, when excited, actuates a photoconductor allowing either a-c or d-c power to pass. "On" life is said to be 2500 hours regardless of the number of switching operations. It is said to be free of any contact noise. (Raytheon Co., Dept. Sci932, Newton 58, Mass.)

■ **THERMAL-NOISE SOURCE** derives its signal from thermal agitation in a resistor. Frequency range extends more than 15 octaves, including subaudible, sonic, and ultrasonic. A filter network allows selection of equal energy per cycle per octave. (Western Electro-Acoustic Laboratory, Dept. Sci937, 11789 San Vincente Blvd., Los Angeles 49, Calif.)

■ **TUNING-FORK MODULE**, designed for use with printed circuitry, measures $\frac{3}{8}$ in. in diameter and $2\frac{3}{8}$ in. long. Weight is 8 oz. Frequency range is 350 to 1800 cy/sec directly. Accuracy is said to be ± 0.01 percent over a moderate temperature range. Operating temperature range is -55° to +100°C. (Gyrex Corp., Dept. Sci933, 3003 Pennsylvania Ave., Santa Monica, Calif.)

■ **VOLTAGE REFERENCE** is designed for the calibration of voltmeters operating in the frequency range 10 to 1000 Mcy/sec at voltages from 0.5 to 300 volts. The instrument consists of an adjustable waveguide-below-cutoff attenuator feeding an ultra-high-frequency vacuum thermocouple. The d-c output of the couple is read on an auxiliary millivoltmeter. The instruments are furnished with National Bureau of Standards cali-



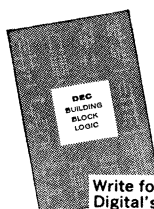
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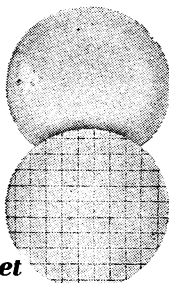
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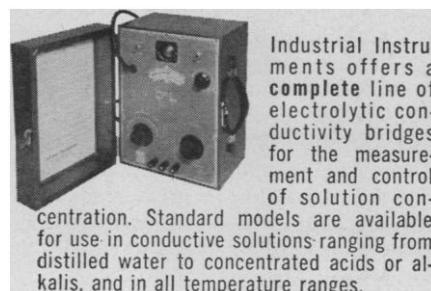
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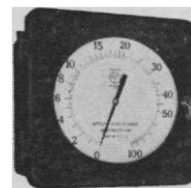
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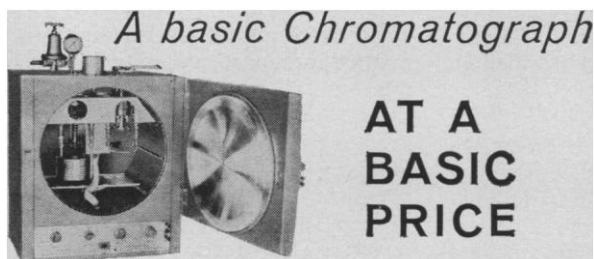
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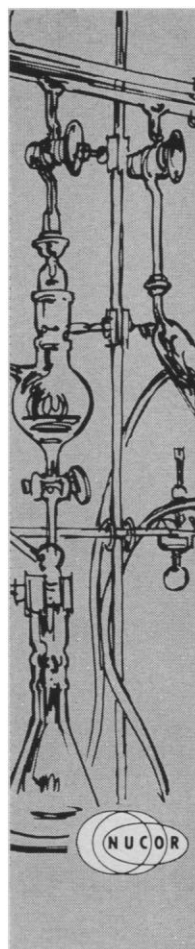
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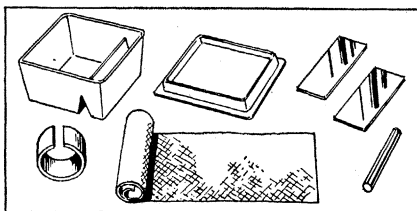
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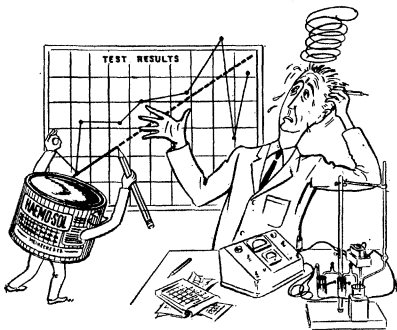
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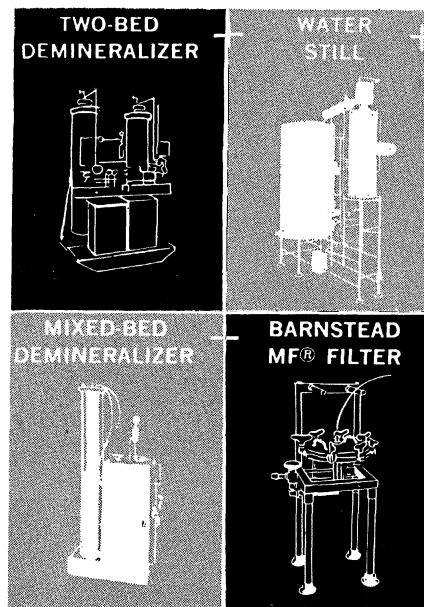
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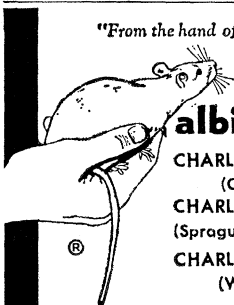
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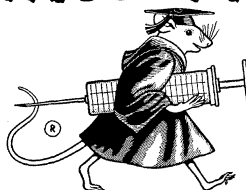
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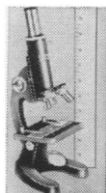


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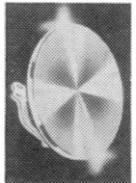
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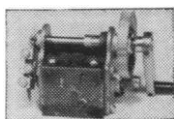
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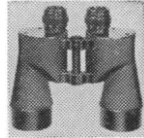
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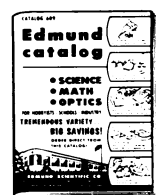
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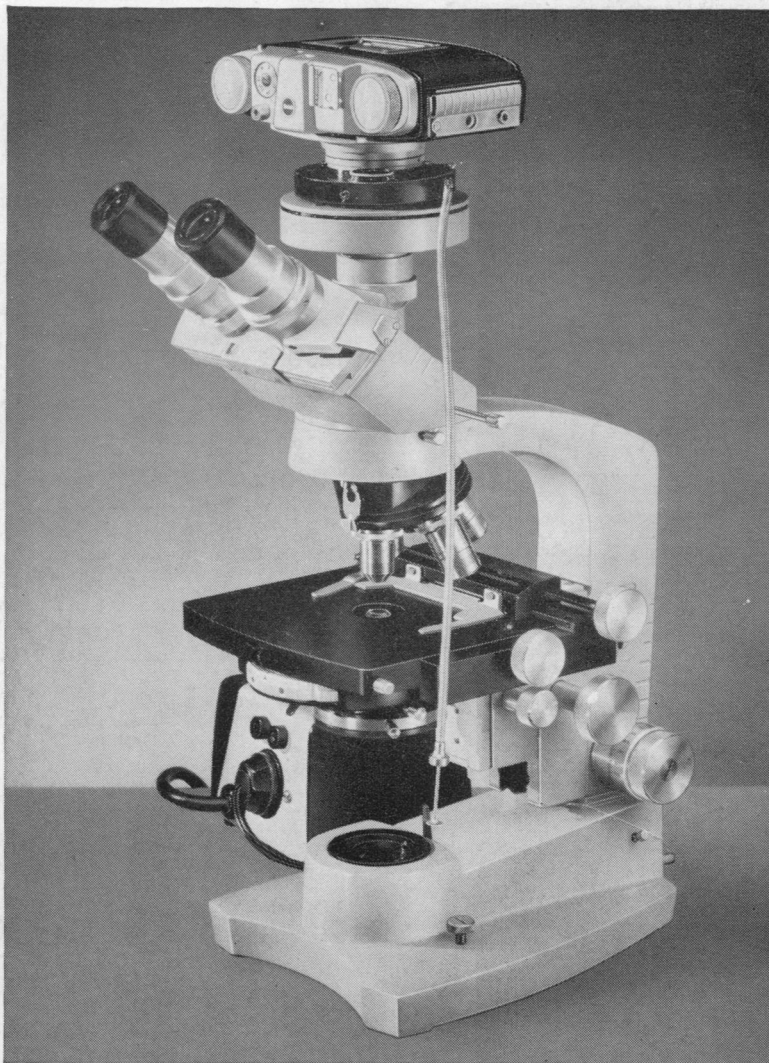
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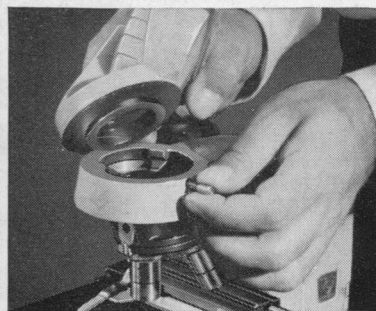
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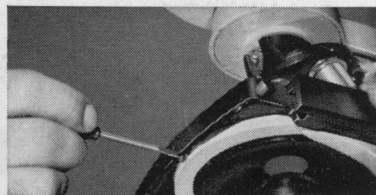
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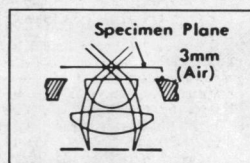
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