

16-19. American Assoc. of Petroleum Geologists, Soc. of Economic Paleontologists and Mineralogists, 44th annual, Dallas, Tex. (W. A. Waldschmidt, AAPG, 311 Leggett Building, Midland, Tex.)

16-20. American Inst. of Chemical Engineers, Atlantic City, N.J. (F. J. Van Antwerpen, AIChE, 25 W. 45 St., New York 36.)

16-20. National Assoc. of Corrosion Engineers, 15th annual conf., Chicago, Ill. (NACE, Southern Standard Bldg., Houston, Tex.)

16-20. Western Metal Exposition and Cong., 11th, Los Angeles, Calif. (R. T. Bayless, 7301 Euclid Ave., Cleveland 3, Ohio.)

17-19. National Health Council, Chicago, Ill. (P. E. Ryan, 1790 Broadway, New York, 19.)

18-25. International Social Science Council, 4th general assembly (by invitation), Paris, France. (C. Levi-Strauss, Secretary-General, International Social Science Council 19, avenue Kleber, Paris.)

19-21. Society for Research in Child Development, NIH, Bethesda, Md. (Miss N. Bayley, Laboratory of Psychology, National Inst. of Mental Health, Bethesda 14, Md.)

23-26. Institute of Radio Engineers, natl. conv., New York, N.Y. (G. L. Haller, IRE, 1 E. 79 St., New York 21.)

24-27. American Meteorological Soc., general, Chicago, Ill. (K. C. Spengler, AMS, 3 Joy Street, Boston, Mass.)

27-28. Michigan Acad. of Sciences, East Lansing. (D. A. Rings, Univ. of Michigan, Dept. of Engineering, Ann Arbor.)

28. South Carolina Acad. of Sciences, Columbia. (H. W. Freeman, Dept. of Biology, Winthrop College, Rock Hill, S.C.)

29-3. Latin American Congress of Chemistry, 7th, Mexico D.F., Mexico. (R. I. Frisbie, Calle Ciprés No. 176, Zone 4, Mexico, D.F.)

30-1. American Orthopsychiatric Assoc., San Francisco, Calif. (M. F. Langer, 1790 Broadway, New York 19.)

30-12. Bahamas Medical Conf., 7th, Nassau. (B. L. Frank, 1290 Pine Ave., W. Montreal, Canada.)

31-2. American Power Conf., 21st annual, Chicago, Ill. (N. S. Hibshman, AIEE, 33 W. 39 St., New York 18.)

31-2. Symposium on Millimeter Waves, 9th, New York, N.Y. (H. J. Carlin, Microwave Research Inst., 55 Johnson St., Brooklyn 1, N.Y.)

31-5. International Committee of Military Medicine and Pharmacy, 21st session, Paris, France. (Comité International de Médecine et de Pharmacie Militaires, Hôpital Militaire, 79, rue Saint Laurent, Liège, Belgium.)

April

1-3. American Assoc. of Anatomists, Seattle, Wash. (B. Flexner, Univ. of Pennsylvania Medical School, Philadelphia 4, Pa.)

1-4. National Council of Teachers of Mathematics, Dallas, Tex. (H. T. Karnes, Dept. of Mathematics, Louisiana State Univ., Baton Rouge 3.)


(See issue of 19 December for comprehensive list)

229 Ratemeter

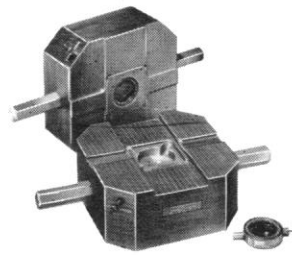


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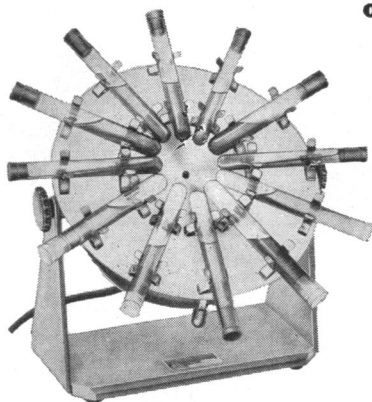


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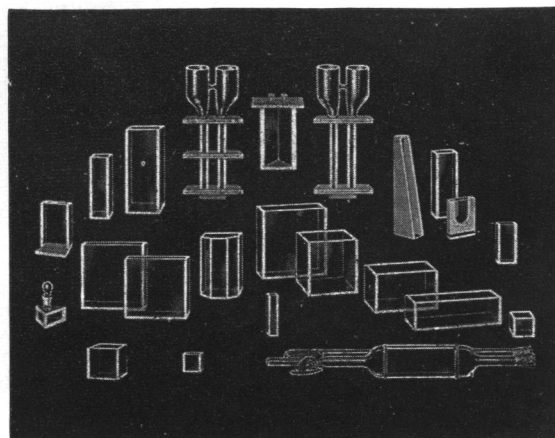
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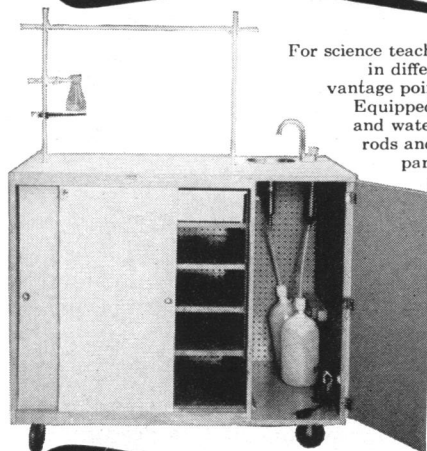
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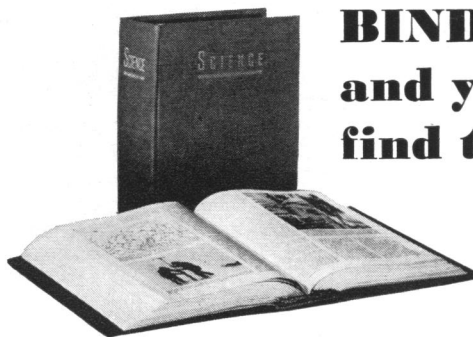


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Equipment

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■ **PHOTORELAY** combines a cadmium-sulfide cell with a double-pull, double-throw relay with contacts rated at 5 amp, 120 v a-c. Spectral response is S-15. The unit will operate with 1 ft-ca intensity. Weatherproof enclosures are available. (Berkeley/Dynamics, Dept. 580)

■ **METERING PUMP** for chemical solutions produces a range of flow from 0 to 2.0 ml/min with accuracy of 0.01 ml/min. All parts in contact with the fluid being pumped are made of glass or Teflon. Flow is regulated by the controlled displacement of a piston. Flow is adjusted by a dial calibrated in milliliters per minute. Other models provide flow rates up to 10 ml/min. (Harold Kruger Instruments, Dept. 566)

■ **FORCE CALIBRATION SYSTEM** is transistorized and battery operated. During operation the force is applied to a load ring that has a differential transformer attached to its internal bosses. Deflection is transmitted to a null-balance instrument where it is balanced against the measured displacement of another transformer. Sensitivity is $20 \mu\text{a}/0.0001 \text{ in.}$ of ring deflection. Accuracy is $\pm 0.1 \text{ percent}$. Current drain in operation is $20 \mu\text{a}$. (Morehouse Machine Co., Dept. 567)

■ **SIGNAL GENERATOR** produces sine-wave or square-wave signals in five bands from 5 cy to 600 kcy/sec. Accuracy of frequency setting is $\pm 1 \text{ percent}$ or 1 cy/sec. Amplitude is constant within $\pm 1 \text{ db}$. Output level is 10 v r.m.s. into 600 ohm. Distortion at this level is less than 1 percent. (Precision Apparatus Co., Dept. 568)

■ **OSCILLATOR** for operation at any specified frequency in the range 8 to 150 Mcy/sec is $1\frac{3}{4} \text{ in.}$ long and $\frac{3}{4} \text{ in.}$ in diameter. Frequency stability is $\pm 0.005 \text{ percent}$. Output power is 0.1 to 1.0 mw. Output impedance is 50 to 1000 ohm. Operating temperature range is -55° to $+75^\circ\text{C}$ or -55° to $+105^\circ\text{C}$. (Delta-f, Dept. 571)

■ **OPTICAL COMPARATOR** projects simultaneous images through separate optical systems to permit viewing of an object in two planes. The two optical systems may be the same or they may differ in magnification, focal length, or projection path. Separate screens or common screens range from 3 ft square to 20 in. in diameter. Triple systems are also possible. (Stocker & Yale, Dept. 575)

■ **TORQUEMETER** measures torque in ranges from 5 to 250 oz-in. full scale. Dynamic torques are measured on shafts turning between 50 and 12,000 rev/min. Accuracy is $\pm 2 \text{ percent}$ of full scale. The indicator may be located remotely and connected electrically to the torque pickup. Overload protection up to twice the rated load is provided. Shafts are $\frac{1}{4} \text{ in.}$ in diameter by $\frac{7}{16} \text{ in.}$ long. (Metron Instrument Co., Dept. 570)

■ **CULTURE APPARATUS** for large quantities of bacteria, yeasts, molds, and other microorganisms consists of a double-walled, cylindrical stainless-steel chamber which houses a rotating agitator with aeration fins. The chamber measures 16 in. in diameter by 30 in. high. Front controls govern sterilization and agitator

speed. Liquid nutrient is added and bacterial suspension is removed at the same rate through a cooling bath, and the cells are separated in a centrifuge. (American Sterilizer Co., Dept. 578)

■ **PRESSURE PICKUPS** of variable reluctance type cover pressure ranges from zero to 5000 lb/in.² gage, differential or absolute. Operating temperature range is -85° to $+500^\circ\text{F}$. Zero drift is less than $10 \mu\text{v/v } ^\circ\text{F}$, and sensitivity drift is less than 0.02 percent of full scale per degree Fahrenheit. (Tavis Instruments, Dept. 579)

■ **GAS ANALYZER** enables measurement of concentration of one gas in a multicomponent mixture without chemical or physical changes in the gas mixture. The

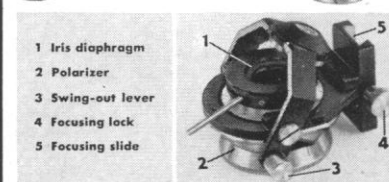
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■ RADIO-FREQUENCY VOLTMETER covers up to six ranges, switch controlled, between 1 v and 300 v full scale in any one instrument. Frequency range is d-c and from 7 cy to 5 Mcy/sec in the 1-v range and to 150 kcy/sec in the 300-v range. Response is true r.m.s. when a thermocouple and D'Arsonval movement are used. Resistance is 200 ohm/v. Accuracy is 0.5 percent of full scale over the frequency ranges indicated. (Sensitive Research Instrument Corp., Dept. 572)

■ SOUND SOURCE is a small, self-contained acoustic calibrator for sound measuring systems. Sound at a level of 108 db is generated for 14 sec by means of 14,000 1-mm precision steel balls striking against a metal diaphragm. Each source is calibrated in terms of its r.m.s. value with accuracy ± 1 db. The effect of temperature on calibration is less than 0.5 db over the range 32° to 160° F. (B & K Instruments, Dept. 577)

■ CURRENT PROBE is designed to permit measurement of radio-frequency interference without direct connection to the product being tested. The probe is a current transformer designed to couple radio-frequency noise into a calibrated receiver of 50-ohm input impedance. Current in the primary is read in terms of secondary voltage. The probe is insulated for 600 v. (Stoddart Aircraft Radio Co., Dept. 576)

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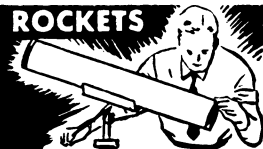
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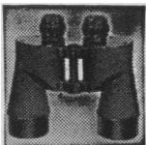


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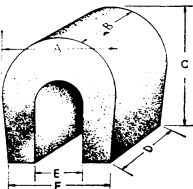


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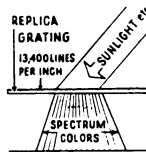
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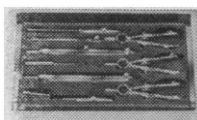


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sugar
tobacco

A combination drying unit and precision balance for measuring the moisture content of 10 gram samples of a wide variety of materials with a sensitivity of $\pm 0.1\%$. Can also be used as direct reading balance, sensitivity 0.01 gram.

Balance is of the substitution type. Loss of weight on the beam caused by evaporation of moisture from the sample is compensated for by the addition of chain to one arm of the beam. Chain is added by turning the graduated dial on front of the instrument. Knife edges are of hardened, ground and polished steel. Bearing surfaces are of long-wearing agate. Beam is provided with zero adjustment. Entire system is magnetically damped. A shadow type indicating vane gives immediate indication of balance position.

The 650 watt infrared heater provides rapid, even evaporation and is adjustable both in percentage output and in distance above the sample. Heating chamber has a heat-resistant handle for safety and a Pyrex glass window for observation of the sample. Timer automatically shuts off the heat at any period from 1 to 60 minutes.

Advantages

Manually operated precision balance, chain weighing substitution type.

Heating temperatures can be varied during the drying process.

Takes samples up to 10 grams.

Direct readings of loss can be made periodically during the drying period, enabling the operator to plot weight loss against time and heater adjustment for reproducible determinations.

Sample can be observed during the drying process.

Pan is readily accessible.

Disposable pan liners of aluminum foil save cleaning time.

Pan remains stable when loaded off center or with liquids.

Removable clean-out tray under pans prevents spillage from entering the balance.

BALANCE, Moisture Determination, Ohaus No. 6000, as above described, overall dimensions $12\frac{1}{2} \times 10 \times 15$ inches high; complete with 25 disposable pan liners. For 115 volts, 60 cycles, a.c. **295.00**

More detailed information sent upon request



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