

17-19. Astronomical Soc. of the Pacific, annual, Flagstaff, Ariz. (S. Einarsson, Univ. of California, Berkeley 4.)

17-19. Health Physics Soc., 3rd annual, Pittsburgh, Pa. (H. W. Patterson, Radiation Lab., Univ. of California, Berkeley.)

17-19. Military Electronics, national convention, Washington, D.C. (G. Rapaport, Emerson Radio & Phonograph Corp., 701 Lamont St., NW, Washington 10.)

17-20. Carbon Conf., 3rd, Buffalo, N.Y. (Carbon Conf., Univ. of Buffalo, Buffalo.)

17-20. Institute of Aeronautical Sciences, natl. summer, Los Angeles, Calif. (S. P. Johnston, IAS, 2 E. 64 St., New York 21.)

17-21. American Soc. for Engineering Education, annual, Ithaca, N.Y. (W. L. Collins, Univ. of Illinois, Urbana.)

17-21. Association of Official Seed Analysts, annual, Baton Rouge, La. (L. C. Shenberger, Seed Lab., Dept. of Agricultural Chemistry, Purdue Univ., Lafayette, Ind.)

17-21. Canadian Medical Assoc., 90th annual, Edmonton, Alberta, Canada. (CMA, 244 George St., Toronto, Ont.)

17-22. Coordination of Galactic Research, internatl. symp., Stockholm, Sweden. (P. T. Oosterhoff, University Observatory, Leiden, Netherlands.)

17-22. Internal Combustion Engine Cong., 4th internatl., Zurich, Switzerland. (C. C. M. Logan, British National Committee, 6 Grafton St., London, W.1.)

17-28. Wear Theory in Metal Cutting

and Bearing Design, special summer program, Cambridge, Mass. (Massachusetts Inst. of Technology, Cambridge 39.)

19-21. Association for Computing Machinery, annual, Houston, Tex. (J. Moshman, ACM, 2 E. 63 St., New York 21.)

19-21. Society for the Study of Development and Growth, 16th annual symp., Kingston, R.I. (R. O. Erickson, SSDG, Botanical Lab., Univ. of Pennsylvania, Philadelphia 4.)

20-22. American Assoc. of Physics Teachers, annual, Schenectady, N.Y. (F. Verbrugge, School of Physics, Univ. of Minnesota, Minneapolis.)

20-22. American Physical Soc., Notre Dame, Ind. (K. K. Darrow, APS, Columbia Univ., New York 27.)

20-22. Soc. of Nuclear Medicine, 4th annual, Oklahoma City, Okla. (R. Lackey, SNM, 452 Metropolitan Bldg., Denver, Colo.)

21-23. American Assoc. of Bioanalysts, annual, New Orleans, La. (G. Hoffman, 3707 Gaston, Suite 419, Dallas, Tex.)

22-28. American Soc. of Medical Technologists, annual, Chicago, Ill. (Miss R. Matthaei, ASMT, Suite 25, Hermann Professional Bldg., Houston 25, Tex.)

23-26. American Soc. of Agricultural Engineers, E. Lansing, Mich. (J. L. Butt, ASAE, St. Joseph, Mich.)

23-28. American Physical Therapy Assoc., annual, Detroit, Mich. (Miss M. E. Haskell, APTA, 1790 Broadway, New York 19.)

23-28. National Assoc. of Power En-

gineers, natl., Grand Rapids, Mich. (E. J. Schuetz, NAPE, 176 W. Adams St., Chicago 3, Ill.)

23-29. American Library Assoc., annual, Kansas City, Kans. (D. H. Clift, ALA Hq., 50 E. Huron St., Chicago 11, Ill.)

23-30. Rheumatic Diseases, 9th internatl. cong., in conjunction with American Rheumatism Assoc., Toronto, Ont., Canada. (E. Dunlop, Box 237, Terminal "A," Toronto.)

24-26. Aging, 10th conf., Ann Arbor, Mich. (Div. of Gerontology, Univ. of Michigan, Rackham Bldg., Ann Arbor.)

24-26. American Soc. of Heating and Air-Conditioning Engineers, Murray Bay, Quebec, Canada. (A. V. Hutchinson, ASHAE, 62 Worth St., New York 13.)

24-27. Agricultural Inst. of Canada, with six other Canadian agricultural socs., annual, Vancouver, B.C. (W. J. Anderson, Dept. of Agricultural Economics, Univ. of British Columbia, Vancouver.)

24-28. American Inst. of Electrical Engineers, summer general, Montreal, Quebec, Canada. (N. S. Hibshman, AIEE, 33 W. 39 St., New York 18.)

24-28. Scientific Management, 11th internatl. cong., Paris, France. (Internatl. Committee of Scientific Management, 57, rue de Babylone, Paris 7°.)

24-29. Cosmical Gas Dynamics, 3rd symp. (by invitation), Internatl. Union of Theoretical and Applied Mechanics, Cambridge, Mass. (J. M. Burgers, Univ. of Maryland, College Park.)

25-27. Max Planck Soc. for the Advancement of Science, annual general assembly, Lübeck, Germany. (Max Planck Soc. for the Advancement of Science, Kaiserwertherstrasse 164, Dusseldorf, Germany.)

25-28. American Dairy Science Assoc., 51st annual, Stillwater, Okla. (H. F. Judkins, 32 Ridgeway Circle, White Plains, N.Y.)

25-28. American Home Economics Assoc., St. Louis, Mo. (Miss M. Horton, AHEA, 1600 20 St., NW, Washington 9.)

30-1. National Education Assoc., annual, Philadelphia, Pa. (W. G. Carr, NEA, 1201 16 St., NW, Washington 6.)

## July

1-3. Reproduction and Infertility, 3rd symp., Fort Collins, Colo. (F. X. Gassner, Colorado State Univ., Fort Collins.)

1-6. Brazilian Soc. for the Advancement of Science, 9th annual, Rio de Janeiro, Brazil. (Sociedade Brasileira Para o Progresso da Ciencia, Caixa Postal 2926, São Paulo, Brazil.)

1-6. Industrial Medicine, 12th internatl. cong., Helsinki, Finland. (L. Noro, Inst. of Occupational Health, Huopalahdenkatu 1, T8818, Helsinki.)

2-4. Neurological Basis of Behavior, Ciba Foundation Symp. (by invitation only), London, England. (G. E. W. Wolstenholme, Ciba Foundation, 41 Portland Pl., London, W.1.)

2-6. Physical Problems of Color Television, internatl. symp. of IUPAP, Paris, France. (Secretary, Colloque International sur les Problèmes de la Télévision en Couleurs, Conservatoire National des

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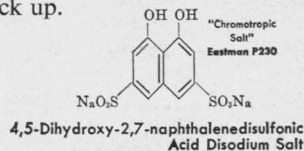
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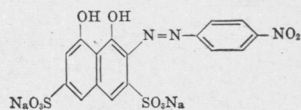
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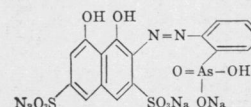
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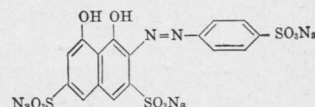
with which you can spot-test for borates, according to Feigl. Unless you need the exercise, that would be a little quixotic because you can buy the reagent as 4,5-Dihydroxy-3-(*p*-nitrophenylazo)-2,7-naphthalenedisulfonic Acid Disodium Salt (Eastman 4411).

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Arts et Métiers, 292, rue Saint-Martin, Paris 3<sup>e</sup>.)

3-6. Current Problems in Crystal Physics, conf. IUPAP and NSF, Cambridge, Mass. (J. S. Slater, Massachusetts Inst. of Technology, Cambridge 39.)

8-10. Astrophysical Symp., 8th internl., Liège, Belgium. (P. Swings, Institut d'Astrophysique, Université de Liège, Liège.)

8-10. Endocrine Aspect of Breast Cancer, Internatl., conf., Glasgow, Scotland. (A. P. M. Forrest, Dept. of Surgery, Western Infirmary, Glasgow, W.I.)

8-12. Inter-American Cong. of Philosophy, 5th, Washington, D.C. (R. M. Chisholm, Brown Univ., Providence, R.I.)

8-12. Poliomyelitis Conf., 4th inter-

natl., Geneva, Switzerland. (Secretariat, 4th International Poliomyelitis Conference, Hotel du Rhone, Geneva.)

9-11. Biological Symp., 8th annual, Univ. of Michigan, Ann Arbor. (B. L. Baker, Dept. of Anatomy, Univ. of Michigan, Ann Arbor.)

9-13. European Molecular Spectroscopy Conf., Freiburg, Breisgau, Germany. (R. Mecke, Dept. of Physical Chemistry, Univ. of Freiburg, Freiburg.)

9-13. International Cong. for the Study of Social Insects, Paris, France. (G. Richard, International Union for the Study of Social Insects, Faculty of Sciences, University of Rennes, Rennes, France.)

10-12. Thermodynamic and Transport

Properties of Fluids, conf., IUPAC, London, England. (Institution of Mechanical Engineers, 1, Birdcage Walk, Westminster, London, S.W. 1.)

10-17. International Union of Crystallography, 4th genl. assembly, Montreal, Canada. (G. A. Jeffrey, Chemistry Dept., Univ. of Pittsburgh, Pittsburgh 13, Pa.)

14-19. International Assoc. of Gerontology, Merano, Italy. (A. I. Lansing, Dept. of Anatomy, Univ. of Pittsburgh, Pittsburgh 13, Pa.)

14-20. Clinical Pathology, 4th internatl. cong., Brussels, Belgium. (M. Welsch, Service de Bactériologie et de Parasitologie, Université de Liège, Blvd. de la Constitution, Liège, Belgium.)

15-19. Institute on College Administration, annual, Ann Arbor, Mich. (A. D. Henderson, 2442 U.E.S., Univ. of Michigan, Ann Arbor.)

16-19. American Malacological Union, annual, New Haven, Conn. (Miss M. C. Teskey, P.O. Box 238, Marinette, Wis.)

16-24. International Cong. for Pure and Applied Chemistry, 16th, Paris, France. (R. Morf, Secy. Genl., IUPAC, Sandoz, S.A., Basel, Switzerland.)

20-21. Medical-Sociological Aspects of Senile Nervous Diseases, internatl. symp., Venice, Italy. (S. N. Feingold, Jewish Vocational Service of Greater Boston, 70 Franklin St., Boston 10, Mass.)

21-28. Neurological Sciences, 1st internatl. cong., Brussels, Belgium. (P. Bailey, National Institutes of Health, Bethesda 14, Md.)

23-24. Modern Electrochemical Methods of Analysis, Internatl. symp., Paris, France. (G. Charles, Ecole Supérieure de Physique et de Chimie, 10, rue Vauquelin, Paris 5<sup>e</sup>.)

25-26. Structure Properties Relationships of Polymers (IUPAC), Paris France. (International Union of Pure and Applied Chemistry, 4, Avenue de l'Observatoire, Paris 6<sup>e</sup>.)

25-29. Protein Chemistry Symp., IUPAC, Paris, France. (J. Roche, College de France, Place Marcellin Berthelot, Paris 5<sup>e</sup>.)

26-27. Experimental Psychology and Animal Behavior Section of International Union of Biology, Brussels, Belgium. (H. S. Langfeld, Dept. of Psychology, Princeton Univ., Princeton, N.J.)

26-27. Linguistic Soc. of America, Ann Arbor, Mich. (A. A. Hill, Box 7790, University Station, Austin 12, Tex.)

26-27. Military Psychology, internatl. symp., Brussels, Belgium. (National Academy of Sciences, 2101 Constitution Ave., NW, Washington 25.)

26-7. International Congress on Nutrition, 4th, Paris, France. (Quatrième Congrès International de Nutrition, CNERNA, 71, boulevard Péreire, Paris 17<sup>e</sup>.)

28-1. Psychoanalysis, 20th internatl. cong., Paris, France. (Dr. Nacht, 187, rue Saint-Jacques, Paris 5.)

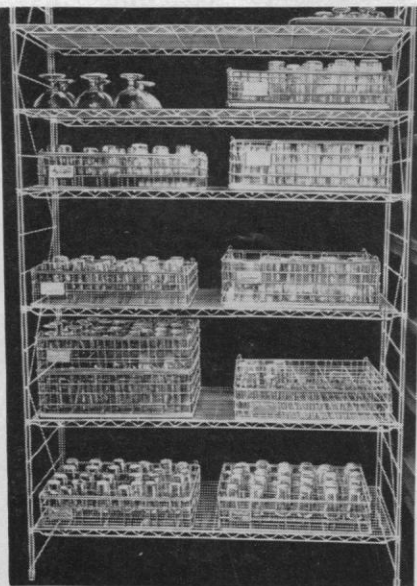
28-3. Psychology, 15th internatl. cong., Brussels, Belgium. (L. Delys, 296, avenue des Sept Bonniers, Forest-Bruxelles.)

31-5. International Assoc. for Hydraulic Research, Lisbon, Portugal. (M. Coelho Mendes da Rocha, Laboratorio Nacional de Engenharia Civil, Avenida do Brasil, Lisbon.)

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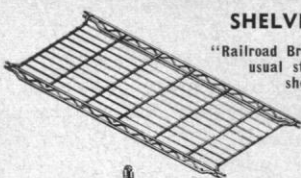
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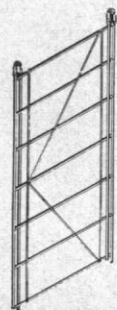
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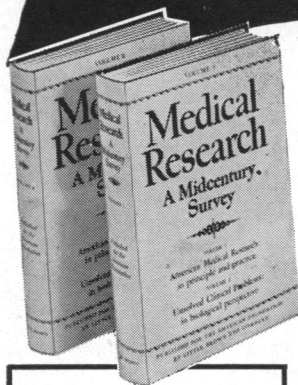
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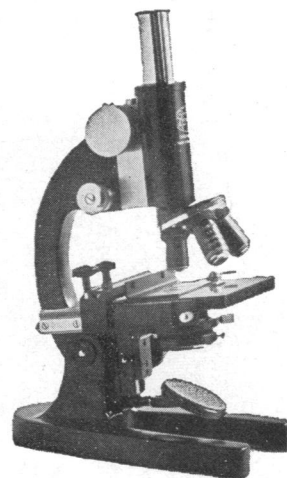
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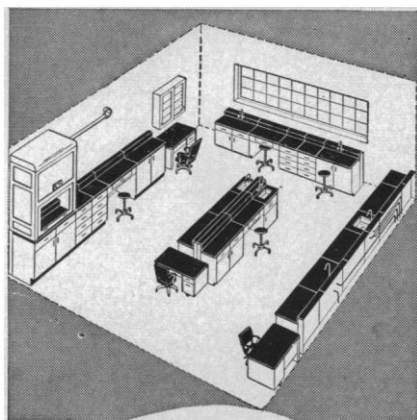
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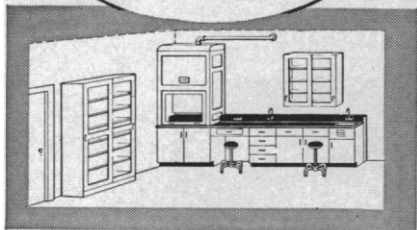


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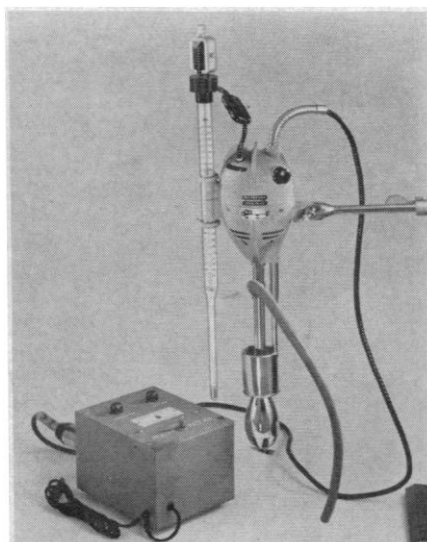


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31-6. Dermatology, 11th internatl. cong., Stockholm, Sweden. (C. H. Floden, Hudkliniken, Karolinska Sjukhuset, Stockholm 60.)

#### August

5-11. Pan American Cong. of Pediatrics, 5th, Lima, Peru. (C. F. Krumdieck, Washington 914, Lima.)

5-17. Curare and Curare-Like Agents, internatl. symp., Rio de Janeiro, Brazil. (C. Chagas, Instituto de Biofisica, Universidade do Brasil, 458 Avenida Pasteur, Rio de Janeiro.)

6-9. Poultry Science Assoc., annual, Columbia, Mo. (C. B. Ryan, Texas A&M. College, College Station.)

7-9. Industrial Applications of X-Ray Analysis, 6th annual conf., Denver, Colo. (J. P. Blackledge, Metallurgy Div., Denver Research Inst., Univ. of Denver, Denver 10.)

7-9. International Union against the Venereal Diseases and the Treponematoses, 31st general assembly, Stockholm, Sweden. (Secretary General, Institut Alfred Fournier, 25, boulevard Saint-Jacques, Paris 14<sup>e</sup>, France.)

8-15. International Statistical Inst., 30th, Stockholm, Sweden. (Secretary General, ISI 30th Session, Fack, Stockholm 5.)

8-15. International Union for the Scientific Study of Population, Stockholm, Sweden. (F. Lorimer, c/o American University, Washington 16.)

11-14. Heat Transfer, national conf., University Park, Pa. (G. M. Dusenberry, Pennsylvania State Univ., University Park.)

11-17. World Federation for Mental Health, 10th annual, Copenhagen, Denmark. (Miss E. M. Thornton, 19 Manchester St., London, W.1, England.)

12-16. Canadian Teachers' Federation, annual, Edmonton, Alberta, Canada. (G. G. Croskery, 444 MacLaren St., Ottawa 4, Ont.)

12-18. Theory of Functions, internatl. colloquium, Helsinki, Finland. (B. Eckmann, Ecole Polytechnique, Federale, Zurich, Switzerland.)

12-25. International Soc. of Soil Mechanics and Foundation Engineering, 4th Conf., London, England. (A. Banister, Institution of Civil Engineers, Great George St., London, S.W.1.)

18-21. American Astronomical Soc., Urbana, Ill. (J. A. Hynek, Smithsonian Astrophysical Observatory, 60 Garden St., Cambridge 38, Mass.)

19-22. American Veterinary Medical Assoc., annual, Cleveland, Ohio. (J. G. Hardenbergh, AVMA, 600 S. Michigan Ave., Chicago 5, Ill.)


19-23. Clay Conf., 6th natl., Berkeley, Calif. (Dept. of Conferences and Special Activities, Univ. of California Extension, Berkeley 4.)

19-23. Clinical Chemistry, 2nd international European cong., Stockholm, Sweden. (K. Agner, Box 12024, Stockholm 12.)

19-24. Finite Groups, internatl. colloquium, Tübingen, Germany. (H. Wielandt, Faculty of Mathematics and Natural Science, Eberhard-Karls-Universität, Tübingen.)

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## 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).*

■ **AMPLIFIER** is designed for laboratory applications requiring high input impedance and broad-band response. Frequency response is flat from  $\frac{1}{2}$  cy/sec to 2 Mcy/sec. Input impedance ranges from 0.1 to 500 Mohm. Up to ten amplifiers fit side by side in a 19-in. relay rack. (Atlantic Research Corp., Dept. S299)

■ **VACUUM VALVE** for pressures of  $10^{-10}$  mm-Hg and lower has an effective conductance for nitrogen of  $1 \times 10^{-11}$  lit/sec. The valve can be baked at temperatures up to 450°C. The valve assembly consists of a Monel cup sealed off by a flexible Monel diaphragm. Closure is effected by metal-to-metal contact between a nose piece carried by the diaphragm and a 0.25-in. orifice. (Consolidated Electro-dynamics Corp., Dept. S345)

■ **X-RAY ANALYZER** designed for the continuous analysis of a single element utilizes x-ray fluorescence, measuring the ratio of fluorescent radiation characteristic of the element to scattered radiation. Spectral lines from 0.35 to 2.8 Å may be employed. This permits measurement of elements from titanium to cerium by their K-spectra and of elements up to atomic number 100 by their L-spectra. A curved crystal of lithium fluoride is used as the dispersive element of the spectrometer. Results are presented on a strip-chart ratio recorder. Errors are said to be less than  $\pm 1$  percent of full scale. (Applied Research Laboratories, Dept. S331)

■ **ELECTRON TUBE TESTER** uses perforated cards to effect the proper circuit adjustments for tube testing. The testing procedure consists of insertion of the tube, selection of the card appropriate to the tube type, and pushing of buttons to observe quality. (Hickok Electrical Instrument Co., Dept. S245)

■ **FREQUENCY STANDARD** employs a stabilized tuning fork to generate a 400 cy/sec signal with an accuracy of  $\pm 0.005$  percent. Operation is on 115-v, 60-cy/sec power. (Industrial Test Equipment Co., Dept. S319)

■ **MICROFILM CAMERA** assembly consists of a book-holder base, a metal column, and a camera. The camera operates on a 3-sec cycle per exposure. One second is devoted to the actual exposure. Adjustment to four sizes of the area to be copied is provided. (A. Seidell, Dept. S249)

■ **THERMAL CONDUCTIVITY CELL** for chromatographic analysis operates over a range of 30° to 325°C and accommodates liquids with boiling points up to 425°C. Flake thermistors are used as temperature-sensing elements. The detector is constructed of stainless steel and enclosed in an oven in which the temperature is continuously variable from 30° to 350°C. Resistance is measured by a Wheatstone bridge designed for use with flake thermistors. (Barnes Engineering Co., Dept. S330)

■ **AUTOMATIC ANALYZERS** for total hardness and silica content perform continuous analysis and record results. Both instruments utilize colorimetric methods. Total hardness determination is based on complex formation of calcium and magnesium with a dye. Silica determination is based on formation of colloidal molybdenum blue. The operating cycles of the instruments simulate closely the corresponding manual operations. Standard range of the hardness analyzer is 0 to 3 (Moh) and of the silica analyzer 0 to 0.2. (Milton Roy Co., Dept. S314)

■ **DEWAR FLASKS** of stainless steel have a radiant heat transfer of less than 3000 cal/hr at 300°F ambient, with temperature of contents 40°F. Conduction through the neck in a 4-in. length is less than 20 cal/hr deg C. The flasks are of welded construction. (Consolidated Electro-dynamics, Dept. S350)


■ **ROENTGEN METER** measures gamma and x-ray rates in body cavities. The detecting element is an anthracene crystal mounted in a slender probe. The probe is designed to avoid corrections for radiation hardness. The probe and cable can be sterilized by alcohol immersion. (NRD Instrument Co., Dept. S297)

■ **POWER SUPPLY** for proportional counters and ionization chambers furnishes 1 to 10 kv d-c output at 0 to 1 ma. Two models are available. One has regulation of 0.01 percent, stability 0.1 percent per day, and noise and ripple less than 10 mv. The other has regulation of 0.002 percent, stability 0.01 percent per day, and noise and ripple less than 10 mv. The latter model uses a chopper amplifier and standard cell reference. Both models are designed to mount in a 19-in. rack. (Beva Laboratory, Dept. S326)

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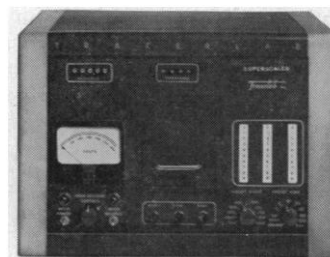


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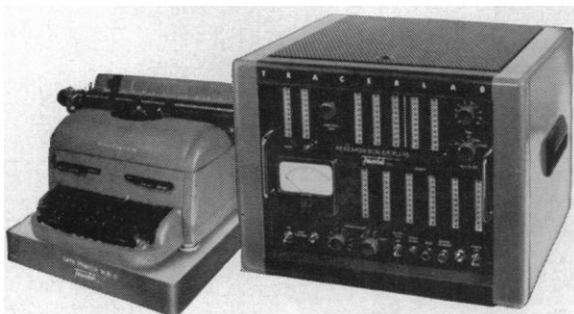
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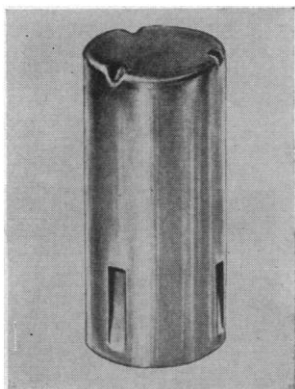


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† Morton, Harry E. — 1957 "Stainless Steel Culture Tube Closures as a Replacement for Cotton Plugs."  
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