

SCIENCE

26 June 1959

Volume 129, Number 3365

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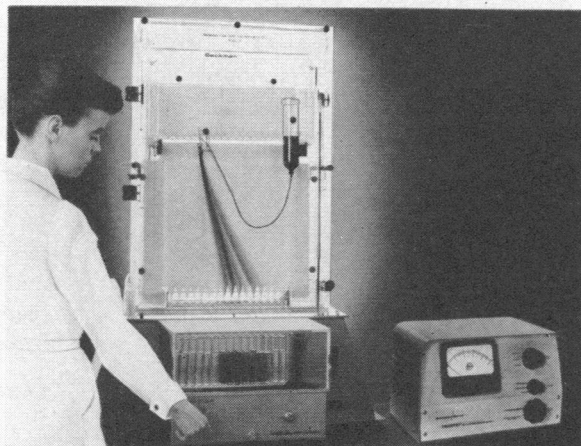
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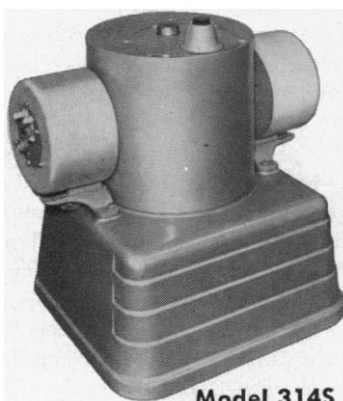
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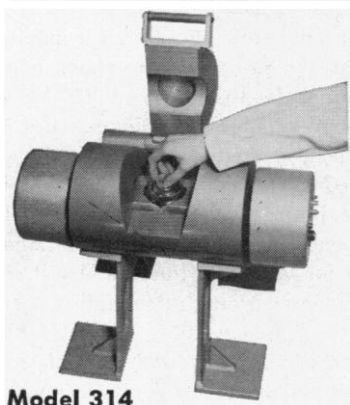
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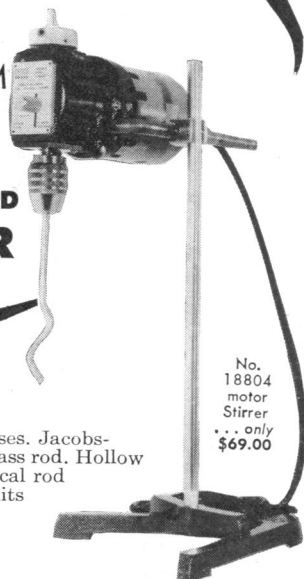
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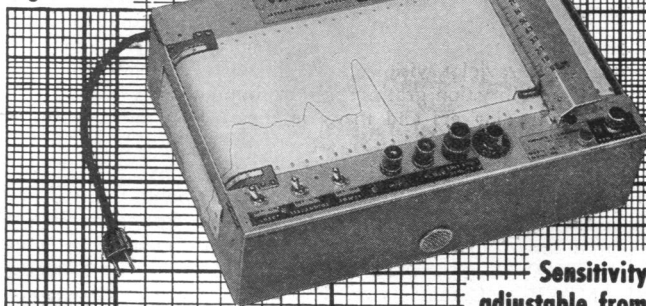
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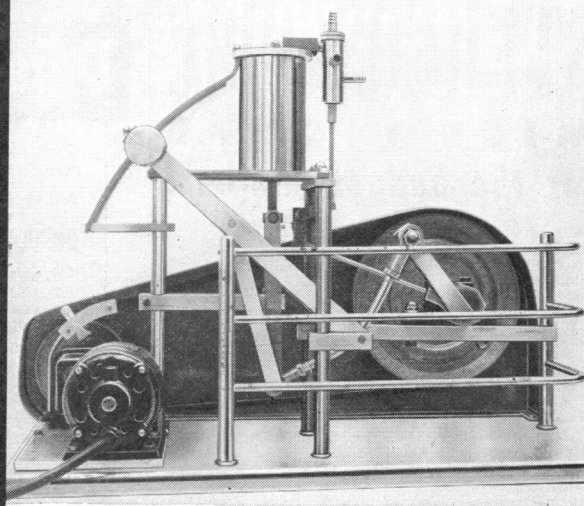
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shop. This exchange has always been one of the most popular features of the meetings.

The current officers of the college are as follows: president, George W. Calver (Washington, D.C.); president-elect, Osler A. Abbott (Emory University, Ga.); vice presidents, Dwight E. Harken (Boston, Mass.), Ignacio Chavez (Mexico City, Mexico), Myron Prinzmetal (Beverly Hills, Calif.); secretary-treasurer and executive director, Philip Reichert (New York); assistant secretary, Henry I. Russek (Staten Island, N.Y.); assistant treasurer, Louis F. Bishop (New York). The council representative to the AAAS is George W. Calver. The office of the executive director is in the Empire State Building, 350 5th Ave., New York 1, N.Y.

PHILIP REICHERT

American College of Cardiology,
New York

West Central Biochemical Society

The newly formed West Central States Biochemical Society will meet in Columbia, Mo., 30-31 October. Severo Ochoa, professor of biochemistry at New York University School of Medicine, will be the guest speaker at a dinner on the opening day. Papers will be heard on 31 October, then the conference will terminate with a business meeting. For information, write to the secretary, D. F. Millikan, College of Agriculture, University of Missouri, Columbia, Mo.

International Endocrinology Congress

The program of the first International Congress of Endocrinology, which will be held in Copenhagen 18-23 July 1960, will consist of ten symposia, a round-table discussion, and groups of shorter (10-minute) papers. Speakers at the symposia and at the round-table discussion are invited, but the short papers may be submitted. Forms for registration in the congress, along with forms for the submission of abstracts, may be obtained by writing to Dr. Svend G. Johnsen, Hormone Department, Statens Seruminstitut, Copenhagen S, Denmark. The final date for the submission of abstracts is 31 December 1959.

The official languages of the congress are English, French, German, and Spanish. A volume containing advance abstracts of symposium contributions and the short communications (in one of the official languages and translated into Interlingua) will be distributed to members on registration at the Technical University of Denmark in Copenhagen. Titles and abstracts should not be sent to the program committee, but the pro-

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gram committee will review and arrange for the presentation of such papers in appropriate congress sessions. Gregory Pincus of the Worcester Foundation for Experimental Biology, Shrewsbury, Mass., is chairman of the Subcommittee on Program.

Instrument Symposium and Exhibit

The ninth annual Instrument Symposium and Research Equipment Exhibit will be held 28 September–1 October, at the National Institutes of Health, Bethesda, Md. Sponsors of the exhibit are the nation's leading instrument manufacturers, who will display the newest developments in laboratory glassware and electronic, surgical, radiation, optical, gas-sampling, and other research equipment.

Sponsors of the symposium are the Washington, D.C., sections of the American Association of Clinical Chemists, American Chemical Society, Instrument Society of America, Professional Group on Medical Electronics of the Institute of Radio Engineers, Society of American Bacteriologists, and the Society for Experimental Biology and Medicine. For additional information, write James B. Davis, National Institutes of Health, Bethesda 14, Md.

Forthcoming Events

July

26–30. International Psychoanalytical Assoc., Copenhagen, Denmark. (Miss P. King, 37 Albion St., London, W.2.)

27–4. International Federation of Translators, Bad Godesberg, Germany. (Dritter Internationaler FIT-Kongress, Kongress Sekretariat, Bundesverband der Dolmetscher und Übersetzer e. V. (BDÜ) Hausdorfstrasse 2, Bonn, Germany.)

30–31. Computers and Data Processing, 6th annual symp., Estes Park, Colo. (W. H. Eichelberger, Denver Research Inst., Univ. of Denver, Denver 10, Colo.)

August

1–8. World Congress of Esperantists, 44th, Warsaw, Poland. (Office of Intern. Conferences, Dept. of State, Washington 25.)

4–5. American Astronautical Soc., 2nd annual western, Los Angeles, Calif. (A. P. Mayernik, AAS, 6708 53 Rd., Maspeth 78, N.Y.)

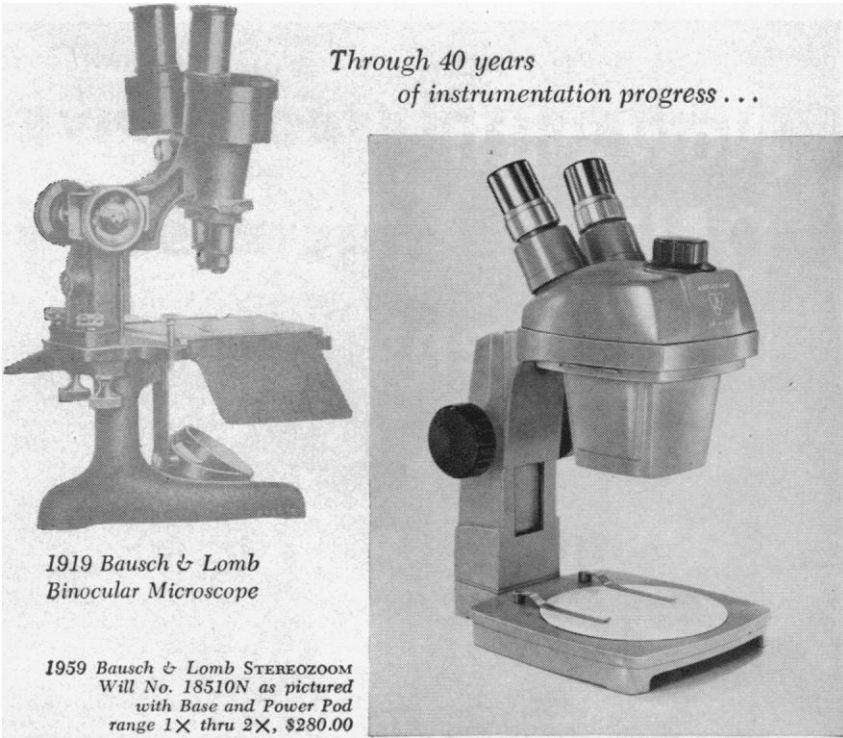
6–8. Human Pituitary Hormones, colloquium (by invitation only), Buenos Aires, Argentina. (G. E. W. Wolstenholme, Ciba Foundation, 41 Portland Place, London W.2, England.)

9–12. American Soc. of Mechanical Engineers (Heat Transfer Div.), conf., Storrs, Conn. (D. B. MacDougall, ASME, 29 West 39 St., New York 18.)

9–15. Physiological Sciences, 21st intern. cong., Buenos Aires, Argentina. (C.

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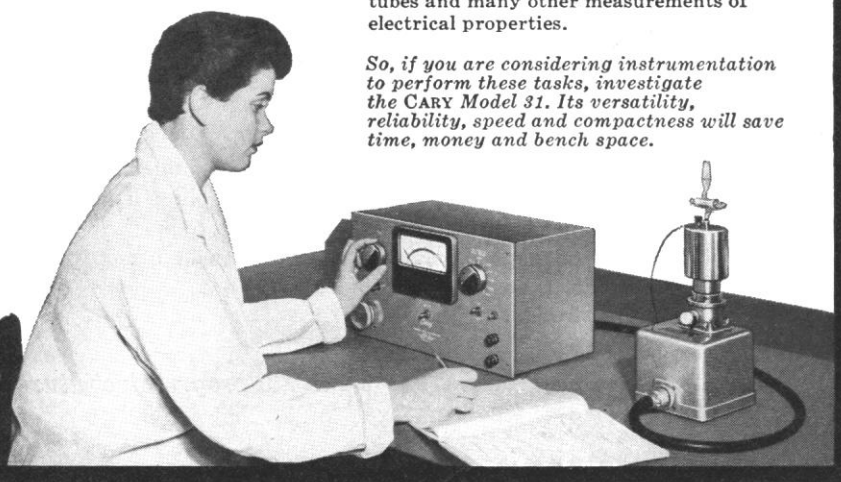
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F. Schmidt, Univ. of Pennsylvania School of Medicine, Philadelphia 4.)

10-13. National Medical Assoc., Detroit, Mich. (J. T. Givens, 1108 Church St., Norfolk, Va.)

10-13. Society of Automotive Engineers, natl. West Coast meeting, Vancouver, B.C., Canada. (R. W. Crory, Meetings Operation Dept., SAE, 485 Lexington Ave., New York 17.)

16-19. Botanical Nomenclature, discussions (Intern. Bureau for Plant Taxonomy and Nomenclature), Montreal, Canada. (J. Rousseau, Natl. Museum, Ottawa, Canada.)

16-21. American Pharmaceutical Assoc., Cincinnati, Ohio. (R. P. Fischelis, APA, 2215 Constitution Ave., NW, Washington 7.)

17. Ultrasonics, natl. symp., San Francisco, Calif. (L. G. Cumming, Inst. of Radio Engineers, 1 E. 79 St., New York 21.)

17-21. Pacific Southwest Assoc. of Chemistry Teachers, Pacific Grove, Calif. (W. A. Craig, 416 N. Citrus Ave., Los Angeles 36, Calif.)

17-22. Logopedics and Phoniatrics, 11th intern. cong., London, England. (Miss P. Carter, 46 Canonbury Square, London N.1, England.)

19-26. Refrigeration, 10th intern. cong., Copenhagen, Denmark. (M. Kondrup, Danish Natl. Committee, Intern. Congress of Refrigeration, P.O. Box 57, Roskilde, Denmark.)

19-29. Botanical Cong., 9th intern., Montreal, Canada. (C. Frankton, Secretary-General, 9th Intern. Botanical Cong., Science Service Bldg., Ottawa, Ontario, Canada.)

19-29. International Assoc. of Wood Anatomists, Montreal, Canada. (IAWA, Laboratorium für Holzforschung E.T.H. Universitätsstrasse 2, Zurich, Switzerland.)

19-29. Mycological Soc. of America, Montreal, Canada. (E. S. Beneke, Dept. of Botany and Plant Pathology, Michigan State Univ., E. Lansing.)

19-29. Phycological Soc. of America, Montreal, Canada. (W. A. Daily, Dept. of Botany, Butler Univ., Indianapolis 7, Ind.)

20-22. Rocky Mountain Radiological Soc., Denver, Colo. (J. H. Freed, 4200 E. Ninth Ave., Denver 20.)

20-25. Chemical Thermodynamics, symp., Wattens, Austria. (F. Vorländer, Deutsche Bunsen-Gesellschaft, Carl-Bosh-Haus, Varrentrappstrasse, 40-42, Frankfurt a.M., Germany.)

20-27. Therapeutics, symp., Gardone, Italy. (R. Morf, c/o Sandoz S.A., Basel 13, Switzerland.)

20-2. Limnological Cong., 14th intern., Vienna and Salzburg, Austria. (Secretary, 14th Intern. Limnological Congress, Biologische Station, Lunz am See, Austria.)

23-26. American Farm Economic Assoc., Ithaca, N.Y. (C. D. Kearl, Dept. of Agricultural Economics, Warren Hall, Cornell Univ., Ithaca.)

23-27. Veterinary Medicine, 3rd Pan-American Cong., Kansas City, Mo. (B. D. Blood, Pan-American Congresses of Veterinary Medicine, P.O. Box 99, Azul, Buenos Aires Province, Argentina.)

24-26. American Accounting Assoc., Boulder, Colo. (C. Cox, 437 Hagerty Hall, Ohio State Univ., Columbus 10.)

24-26. Anti-Submarine Warfare (classified), symp., San Diego, Calif. (R. R. Dexter, Inst. of the Aeronautical Sciences, 2 E. 64 St., New York 21.)

24-26. Dynamics of Conducting Fluids, symp. (American Rocket Soc. and Northwestern Univ.), Evanston, Ill., (J. J. Hartford, ARS, 500 Fifth Ave., New York 36.)

24-27. American Hospital Assoc., New York, N.Y. (E. L. Crosby, 18 E. Division St., Chicago, Ill.)

24-28. Australian and New Zealand Assoc. for the Advancement of Science, 34th cong., Perth, Western Australia. (J. R. A. McMillan, Science House, 157 Gloucester St., Sydney, Australia.)

24-29. Infrared Spectroscopy Inst., 10th annual, Nashville, Tenn. (N. Fuson, Director, Infrared Spectroscopy, Fisk Univ., Nashville 8.)

24-29. International Assoc. for Hydraulic Research, cong., Montreal, Canada. (IAHR, c/o Laboratoire Hydraulique, Raam 61, Delft, Netherlands.)

24-29. Ionization Phenomena in Gases, 4th intern. conf., Upsala, Sweden. (A. Nilsson, Secretary-General, Inst. of Physics, Upsala, Sweden.)

24-29. Polarography, 2nd intern. cong., Cambridge, England. (Mrs. B. Lamb, Chemistry Lab., Evershed & Vignoles, Corner of Iveagh Ave., N. Circular Rd., London N.W.10, England.)

24-30. Modern Systems for Detecting and Evaluating Optical Radiation (Intern. Optical Commission), symp., Stockholm, Sweden. (S. S. Ballard, Dept. of Physics, Univ. of Florida, Gainesville.)

25-27. Petroleum Industry Conf., AIEE, Long Beach, Calif. (N. S. Hibshman, AIEE, 33 W. 39 St., New York 18.)

25-28. Alaskan Science Conf., Alaskan Div., AAAS, 10th, Juneau. (N. J. Wilimovsky, Bur. of Commercial Fisheries, Box 2021, Juneau.)

25-28. American Dietetic Assoc., 42nd annual, Los Angeles, Calif. (Miss R. M. Yakel, ADA, 620 N. Michigan Ave., Chicago 11, Ill.)

25-30. American Ornithologists' Union, Regina, Saskatchewan, Canada. (H. G. Deignan, Div. of Birds, U.S. National Museum, Washington 25.)

26-29. International Assoc. of Milk and Food Sanitarians, Glenwood Springs, Colo. (V. T. Foley, Health Dept., Kansas City, Mo.)

26-29. International Union of Pure and Applied Chemistry, 20th conf., Munich, Germany. (Div. of Chemistry and Chemical Technology, Natl. Research Council, Washington 25.)

27-29. American Assoc., of Clinical Chemists, 11th annual, Cleveland, Ohio. (A. Hainline, Jr., AACC, Cleveland Clinic Foundation, 2020 E. 93 St., Cleveland 6.)

27-29. American Physical Soc., Hawaii. (K. K. Darrow, APS, Columbia Univ., New York 27.)

28-29. Weather Modification (with American Soc. of Civil Engineers), conf., Denver, Colo. (H. G. Houghton, AMS, Dept. of Meteorology, Massachusetts Inst. of Technology, Cambridge 39, Mass.)

28-30. American Folklore Soc., annual, Albany and Cooperstown, N.Y. (MacE. Leach, 110 Bennett Hall, Univ. of Pennsylvania, Philadelphia 4.)

(See issue of 19 June for comprehensive list)

26 JUNE 1959

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Letters

Founding of Association of American Geologists

The recent article in *Science* [129, 1106 (1959)] entitled "Geology, geologists, and the AAAS" reminds me of the part played by the Franklin Institute in the founding of the Association of American Geologists. The organization meeting of that association was held in the hall of the Franklin Institute 2, 3, and 4 April 1840. At the request of the association an abstract of the proceedings of the meeting was prepared by its secretary, Lewis C. Beck, "for publication in the American Journal of Science, and in the Journal of the Franklin Institute." This abstract appeared in the *Journal of The Franklin Institute* in April 1840 (vol. 29, pp. 219-220) and in the *American Journal of Science* in July 1840 (vol. 39, pp. 189-191) and was also published by the association in 1843 (*Reports of the First, Second, and Third Meetings of the Association of American Geologists and Naturalists*, pages 9-11). The text is the same in all three publications, but Beck's name appears at the end of the abstract only in the *Journal of The Franklin Institute*.

The archives of the Franklin Institute contain a holographic communication, signed by Lewis C. Beck, secretary, and containing a resolution of thanks to the institute for the use of its rooms by the Association of American Geologists "during the present meeting"; it is endorsed on its back "read April 15/40." The manuscript minutes of the stated meeting of the board of managers of the Franklin Institute on 15 April 1840 record the receipt of this communication and contain its complete text. Of the 18 founders of the association, seven were members of the Franklin Institute.

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Is There a Vapor Gap Around Plant Roots?

A "narrow vapor gap" around plant roots has been invoked by J. Bonner to explain the movement of water into roots without an accompanying transport of salt [*Science* 129, 447 (1959)]. While there is a distinct need for improved theory to explain observed effects of soil salinity on plant growth, the following appear to be formidable obstacles to the vapor gap hypothesis.

The osmotic effect of salinity on plant growth in water culture is comparable to that in soil culture (1), and a vapor gap explanation for the osmotic gradient is, of course, out of the question in water cultures. Furthermore, the effects of salinity on plant growth are apparent at high levels of soil moisture and at low rates of water absorption from the soil. These conditions, as a matter of fact, are induced by soil salinity which reduces the rate of water uptake from soil and makes it impossible for the plant to deplete the soil moisture to values that would be obtained under nonsaline conditions. In other words, the factors that would be necessary for the development of a vapor gap, rapid water uptake and low soil-moisture content, do not usually develop in saline soils.

At low water contents, large gradients may be set up in the vicinity of the root. However, the existing data (2), including values estimated by Philip (3), indicate that, even at the dry end of the plant-growth moisture range, water movement in the liquid phase is still more important than that in the vapor phase. Under isothermal conditions, the soil-water diffusivity for vapor movement, expressed in terms of the gradient of the water content of the soil, is calculated to be of the order of 10^{-6} cm²/sec and probably seldom exceeds 10^{-5}



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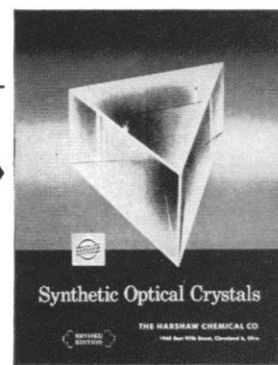
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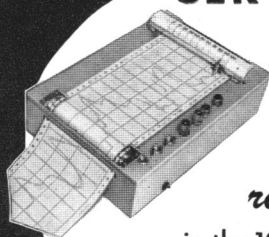
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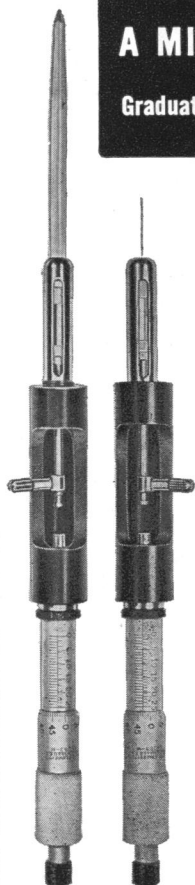
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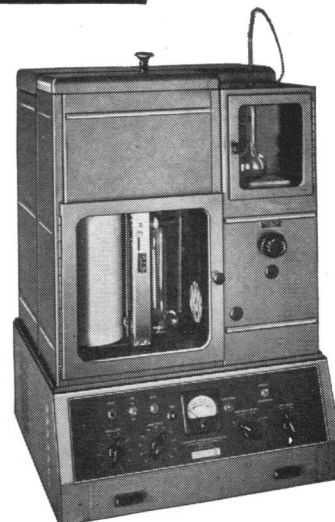
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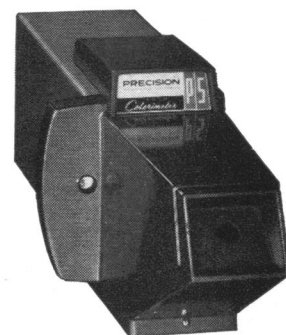
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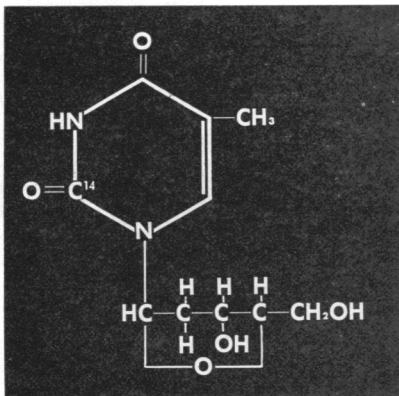
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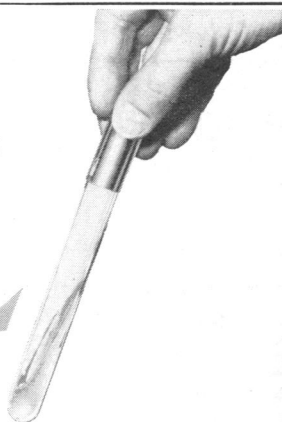
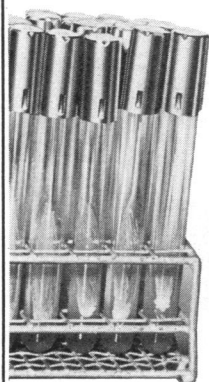
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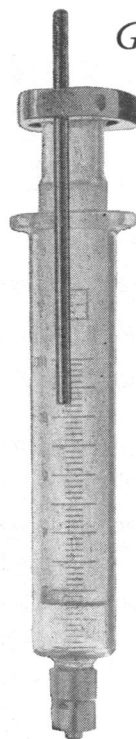
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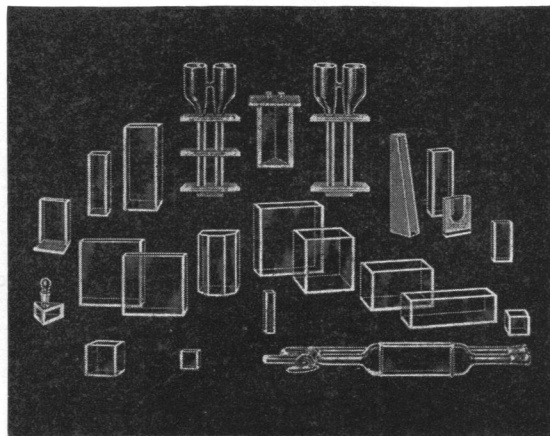
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