

formulate the memorandum of agreement for cultural exchange visits between scientists of the Soviet Union and the United States. At most of the conferences, Professor Nesmeyanov was accompanied by the late A. V. Topchiev.

In intervals between the business meetings, I had an opportunity to talk with Nesmeyanov about his work, which included a considerable amount of absorption spectra of organic compounds with chromophoric centers (ferrocenes). I had published work in the same general area, and each of us was well aware of the other's work. I had an opportunity to visit his laboratory at the Lomonosov University (Moscow) and was particularly impressed by the fact that, although he carried a heavy administrative load as President of the Soviet Academy of Sciences (an operating organization with a large budget and many employees), he still held to a schedule which permitted a reasonable amount of time for visiting the laboratory and working with his research students and associates.

This continued interest and the productivity of directed work has resulted in a production rate of research papers which is matched only by such other scientific leaders as Roger Adams, Willstater, Hanzsch, Pope, Robinson, and Bancroft. The collection and translation into English of a selection of his papers on the occasion of Nesmeyanov's 60th birthday (in 1959) provides the chemist with a well-printed and easily read compilation of considerable size (1100 pages) and importance. The work is essentially organized into three major areas of his interest.

The first section deals with organo-metallic compounds, their synthesis, structure, stereoisomeric effects, and the ferrocene derivatives. The second deals with elemento-organic compounds, including onium compounds and organo-derivatives of silicon, titanium, and fluorine. The third deals with papers in synthetic organic research or chlorovinyl ketones, polychlorohydrocarbons, and related compounds.

Owing to the change that is inevitable in a political assignment, Nesmeyanov was replaced as President of the Soviet Academy in 1961-1962, only a short time after the Russian edition of this book was published. However, he was not relegated to oblivion or left without a reasonable assignment as is often the case with those scientists who accept politically sensitive assignments. He was given a choice assignment, the director-

ship of the Institute of Organo-Element Compounds, an institute that he had earlier organized. That relief from his political assignment has made it possible for him to publish and direct work is well indicated by the fact that during a 1-year period (June 1963 to June 1964), after 2 years of freedom from heavy administrative responsibilities, he was co-author of more than 60 papers published in Soviet journals.

It may well be that a supplementary volume of equivalent size, covering the work of the intervening years, will be issued on Nesmeyanov's 80th birthday. Although many may feel that a number of co-workers were assigned to Nesmeyanov, there can be no doubt that many of these workers sought the privilege of working with him, and many of the papers show evidence of the distinct personal interest and work of the preceptor or guiding professor. Most of his papers are published jointly with one or more of his associates, but his name does not appear as the first author on about a fourth of the papers, a reasonable recognition of the major contributions of his associates.

This collection of research papers also presents us with an interesting moral—if the spark of research can be kept alive by opportunity and assistance even though time may be limited by other duties and the rate of production may be quite low during an administrative assignment, it may be possible to fan the embers of interest into a steady flame when the opportunity is provided to revert to a research program.

Nesmeyanov has been recognized by many honors and awards in his own country and in the countries of the Soviet bloc. He is also a foreign Fellow of the Royal Society of London and of the Royal Society of Edinburgh and an honorary member of the Chemical Society (London), of the New York Academy of Sciences, and of many of the satellite academies.

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New Books

Biological and Medical Sciences

Advances in Insect Physiology. vol. 2. J. W. L. Beament, J. E. Treherne, and V. B. Wigglesworth, Eds. Academic Press, New York, 1964. 376 pp. Illus. \$11. Six papers: "Resilin. A rubberlike protein in arthropod cuticle" by Sven Olva Andersen

and Torkel Weis-Fogh "The active transport and passive movement of water in insects" by J. W. L. Beament; "Colour discrimination in insects" by Dietrich Burkhardt; "Insect ecdysis with particular emphasis on cuticular hardening and darkening" by C. B. Cottrell; "The control of visceral muscles in insects" by K. G. Davey; and "The hormonal regulation of growth and reproduction in insects" by V. B. Wigglesworth.

Advances in Pharmaceutical Sciences. vol. 1. H. S. Bean, A. H. Beckett, and J. E. Carless, Eds. Academic Press, New York, 1964. 346 pp. Illus. \$11.50. Four papers: "Rheology" by Alfred N. Martin, Gilbert S. Banker, and A. H. C. Chun; "Solubility in systems containing surface-active agents" by B. A. Mulley; "Preservation of emulsions against microbial attack" by Doreen L. Wedderburn; and "Contemporary trends in heat sterilization" by G. R. Wilkinson and L. C. Baker.

Anatomy of the Dog. Malcolm E. Miller, George C. Christensen, and Howard E. Evans. Saunders, Philadelphia, 1964. 953 pp. Illus. \$20.

Atlas of Human Anatomy. vols. 1-3. vol. 1, *Osteology, Arthrology and Syndesmology, Myology* (317 pp.); vol. 2, *Splanchnology, Ductless Glands, Heart* (229 pp.); vol. 3, *Nervous System, Angiology, Sense Organs* (326 pp.). Ferenc Kiss and János Szentágothai. Pergamon, London; Macmillan, New York, ed. 17, 1964. Illus. \$17.50.

Biology Data Book. Compiled and edited by Philip L. Altman and Dorothy S. Dittmer. Federation of American Societies for Experimental Biology, Washington, D.C., 1964. 653 pp. Illus. \$10.

Brain Function. Cortical excitability and steady potentials: Relations of basic research to space biology. Preceedings of a conference (Los Angeles, Calif.), 1961. Mary A. B. Brazier, Ed. Univ. of California Press, Berkeley, 1963. 412 pp. Illus. \$10.

Control of Cell Division and the Induction of Cancer. An international symposium (Lima, Peru, and Cali, Colombia), May 1964 (National Cancer Monograph 14). C. C. Congdon and Pablo Morichavez, Eds. U.S. Department of Health, Education, and Welfare, Washington, D.C., 1964 (order from Superintendent of Documents, Washington, D. C.). 411 pp. Illus. \$4.50. Some 25 papers presented at the conference.

Computers in Medicine and Biology (*Ann. N.Y. Acad. Sci.* 115, art. 2). Harold E. Whipple, Ed. New York Acad. of Sciences, New York, 1964. 598 pp. Illus. Paper, \$9. Some 40 papers on the following topics: Computer Methods and Systems; Technological Foundations; Physiology; Neurophysiology; Psychiatry and Psychophysiology; Biological Applications; and Cardiology. The papers are based on a conference sponsored by the academy and held in May 1963.

Diabetische Angiopathie. Internationales Symposium über Diabetesfragen, Institut für Diabetes, Forschung und Behandlung, "Gerhardt Katsch" (3 October 1962), Karlsburg Greifswald. Gerhard Mohnike. Akademie Verlag, Berlin, 1964. 527 pp. Illus.

(Continued on page 305)

NEW BOOKS

(Continued from page 240)

Environmental Physiology and Psychology in Arid Conditions. vols. 22 and 24. vol. 22, *Reviews of Research*, Douglas H. K. Lee et al. (345 pp., 1963. Paper, \$11.50; cloth, \$13.50); vol. 24, *Proceedings of the Lucknow Symposium* (December 1962), C. S. Leithead and E. R. Gunn et al. (400 pp., 1964. Paper, \$7; cloth \$9). UNESCO Publications Center, New York. Illus.

Ergebnisse der Limnologie. vol. 2, *Remains of Animals in Quaternary Lake and Bog Sediments and Their Interpretation*. David G. Frey. Schweizerbart'sche, Stuttgart, Germany, 1964. 116 pp. Illus. Plates. DM 23.

The Geography of the Flowering Plants. Ronald Good. Wiley, New York, ed. 3, 1964. 534 pp. Illus. \$13.

Instrumental Methods of Experimental Biology. David W. Newman, Ed. Macmillan, New York, 1964. 574 pp. Illus. \$15.

Laboratory Manual of Human Anatomy and Physiology. Russell M. DeCoursey and Frank Dolyak. McGraw-Hill, New York, ed. 2, 1964. 239 pp. Illus. Paper, \$3.75.

The Life of Plants. E. J. H. Corner. World, Cleveland, Ohio, 1964. 329 pp. Illus. \$12.50.

Major Problems in Neuroendocrinology. An international symposium. E. Bajusz and G. Jasmin, Eds. Williams and Wilkins, Baltimore, Md., 1964. 479 pp. Illus. \$18.

Man in Nature. Marston Bates. Prentice-Hall, Englewood Cliffs, N.J., ed. 2, 1964. 128 pp. Illus. Paper, \$1.75; cloth, \$3.95.

Manual of Procedures in Quantitative Genetics. Walter A. Becker. Washington State Univ., Pullman, 1964. 78 pp. Illus. Paper, \$2.65.

Molecular Modification in Drug Design. A symposium (New York), September 1963. Fred W. Schueler, Ed. American Chemical Soc., Washington, D.C., 1964. 236 pp. Illus. \$5.

The Natural Geography of Plants. Henry A. Gleason and Arthur Cronquist. Columbia Univ. Press, New York, 1964. 428 pp. Illus. \$10.

Nutritional Factors and Enzymological Disturbances in Animals. C. H. Gallagher. Lippincott, Philadelphia, 1964. 195 pp. Illus. \$7.50.

Nutritional Factors in Virus Formation. Kazuo Yamafuji. Lippincott, Philadelphia, 1964. 142 pp. Illus. \$7.

Our Plant Resources. Plants and their economic importance. Frederick L. Fitzpatrick. Holt, Rinehart, and Winston, New York, 1964. 173 pp. Illus Paper, \$1.28; cloth, \$2.50.

pH and Dissociation. A learning program for students of the biological and medical sciences. Halvor N. Christensen. Saunders, Philadelphia, ed. 2, 1964. 117 pp. Illus. Paper, \$2.25.

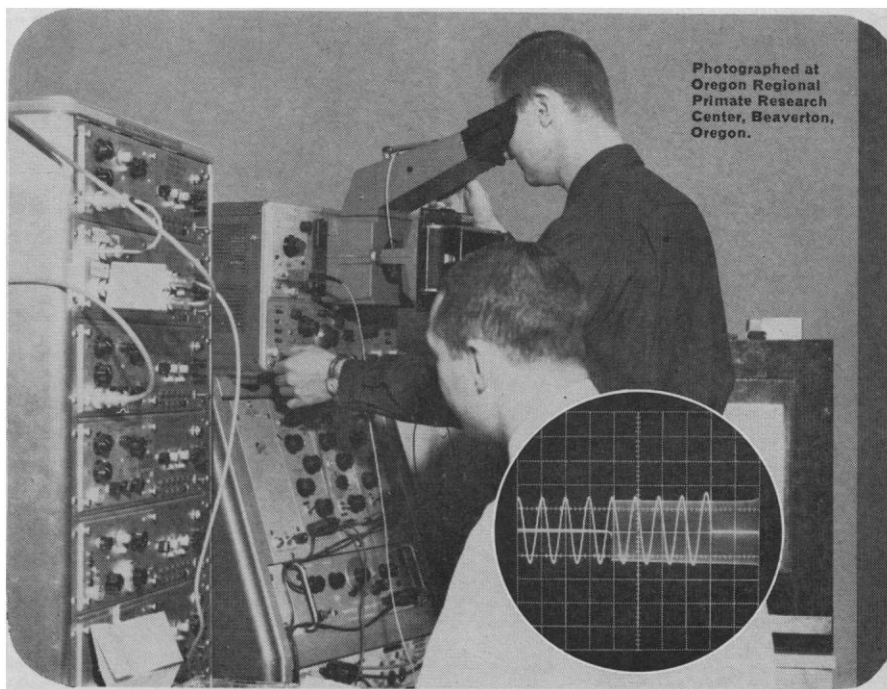
Pharmacology of Smooth Muscle. Edith Bülbirg, A. Kováříková, and I. Šeferna, Eds. Pergamon, London; Macmillan, New York, 1964. 171 pp. Illus. \$7.50.

Phospholipids: Chemistry, Metabolism and Function. G. B. Ansell and J. N. Hawthorne. Elsevier, New York, 1964. 453 pp. Illus. \$20.

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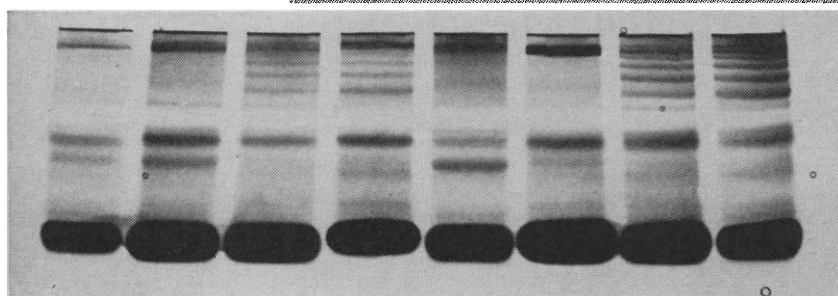
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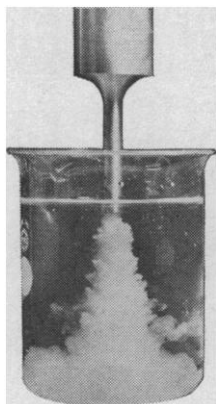
Mathematics, Physical Sciences,
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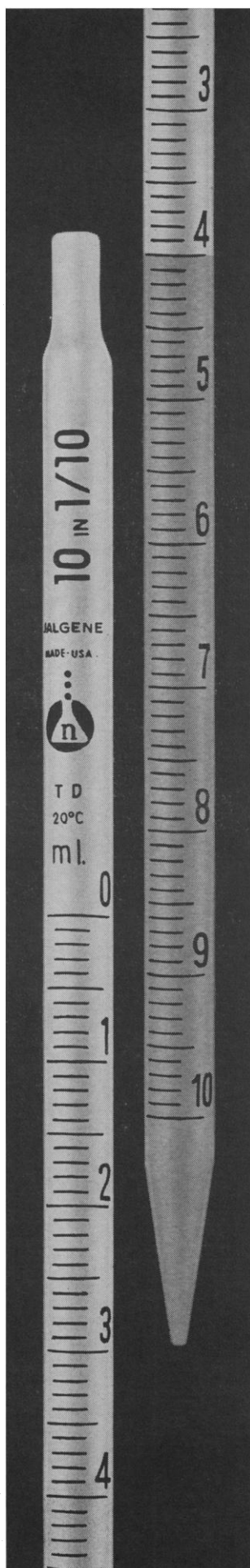
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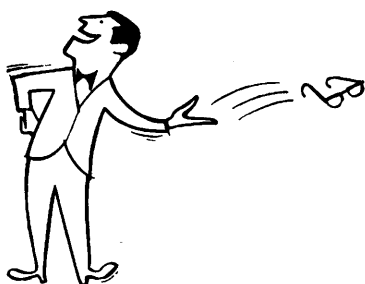
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The RS-7A Induction Salinometer (U.S. Patent 2,542,057) is designed for rapid, serial measurements of salinity of sea water samples (50 ml) by comparison with Copenhagen sea water or a substandard. A dual platinum resistance temperature compensator circuit corrects quickly and automatically for temperature differences between standard and sample, as large as 3°C, and avoids the use of a constant temperature bath. The measuring circuit comprises a transformer conductivity bridge utilizing a ratio transformer and inductive conductivity cell in separate arms.

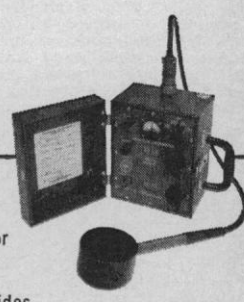
Ranges and Accuracies

Salinity	0-49 ‰ Salinity ± 0.003 ‰	0-1.4 Conductance Ratio
Conductivity	0-140 millimhos/cm ± 0.07 millimhos/cm	
	0-1400 millimhos/cm ± 0.7 millimhos/cm	
Temperature	0-50°C ± 0.05°	

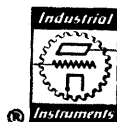
Mechanical	
Size	20" x 16" x 11"
Weight	40 pounds
Case Material	Glass fiber reinforced plastic
Power Input	115 volts, 60 cps, single phase, 30 watts
Cell Volume	50 ml

MODEL RS5-2 FOR IN SITU MEASUREMENTS

IN SITU determinations of salinity, temperature and conductivity may be made by unskilled personnel and without the necessity for sample bottles or time consuming titrations. The RS5-2 salinometer features an inductive cell that operates without electrodes and eliminates all electrode maintenance problems. The instrument provides direct linear readout of salinity, temperature and conductivity to depths of 400 feet by simply lowering the electrodeless cell. Salinity is a function of conductivity and temperature. In the RS5-2, these two measurements are automatically combined by a self-contained computer circuit that provides the salinity readout. Temperature is measured with a built-in DC Wheatstone Bridge incorporating a thermistor. Salinity and temperature gradients are easily determined and any changes in salinity or temperature quickly detected. The inductive cell is sturdily constructed of epoxy to exclude all metal-to-sea-water contact. The fully gasketed instrument is portable and features splashproof construction with the cover on-or-off. Stable solid-state electronics assure a battery life of more than 6,000 measurements.



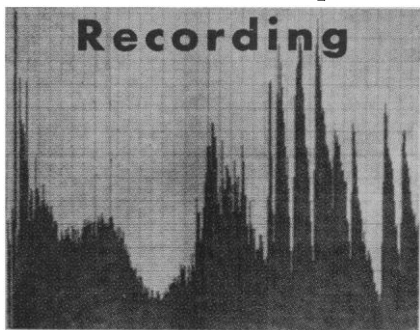
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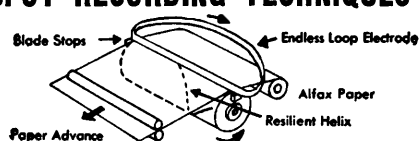


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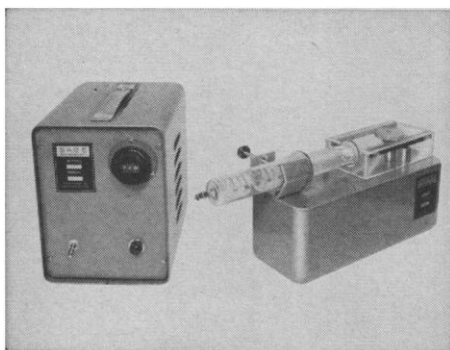
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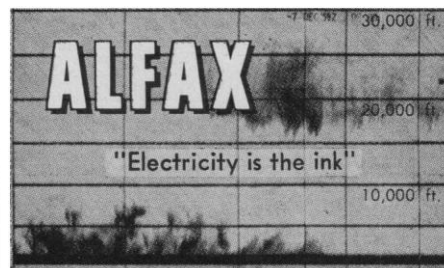
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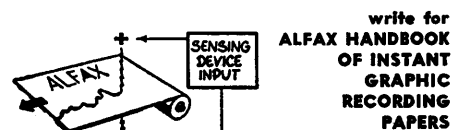
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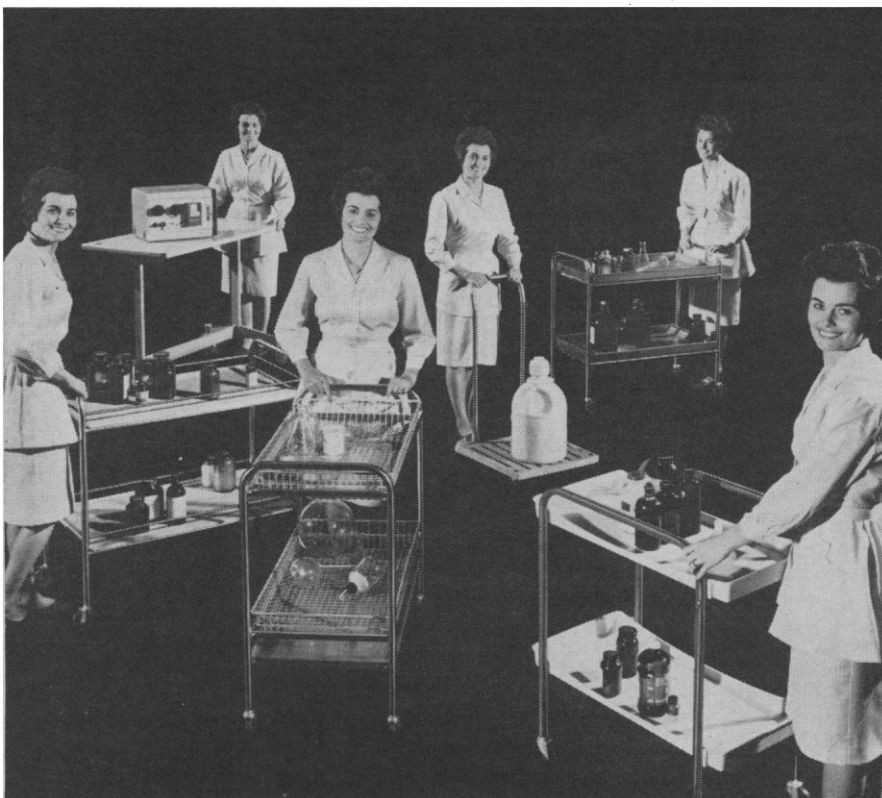
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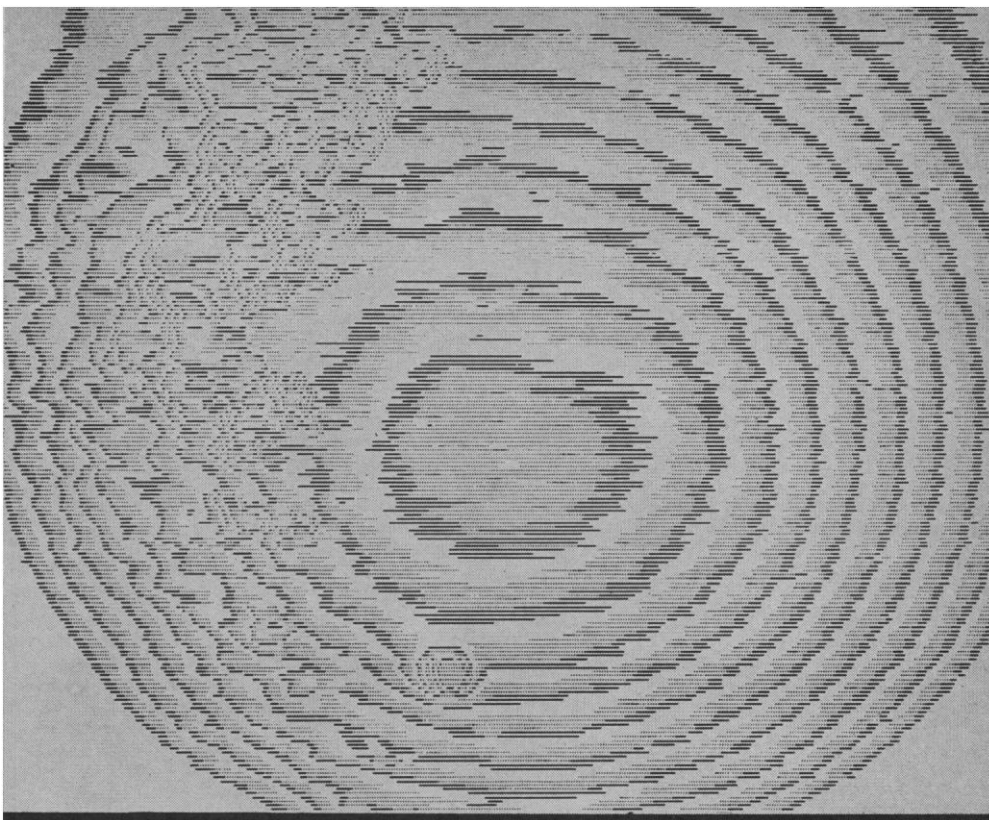
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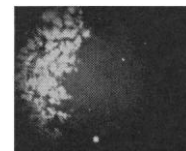
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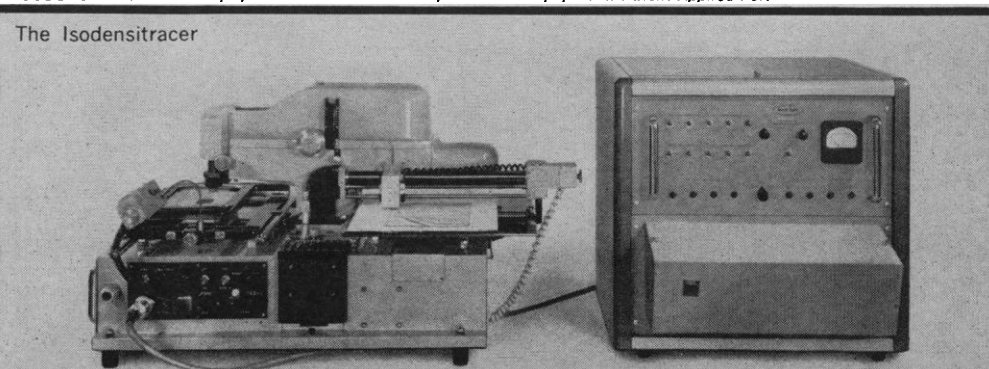
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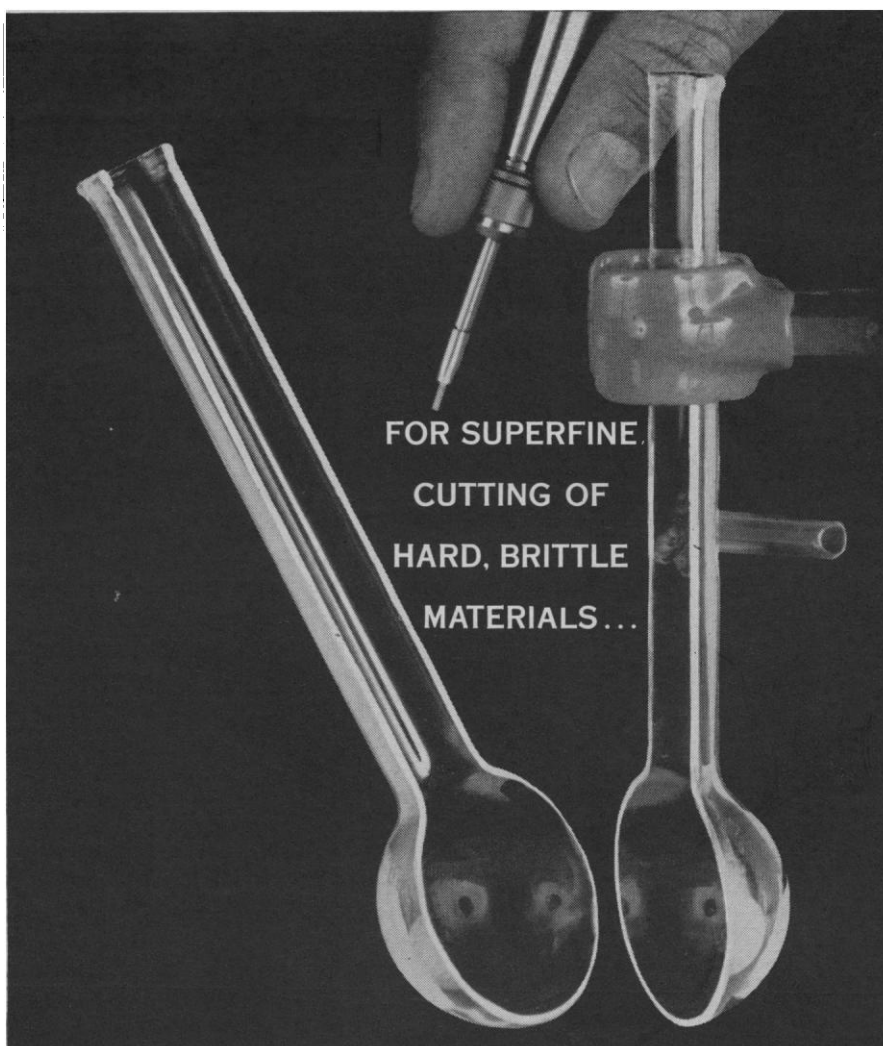
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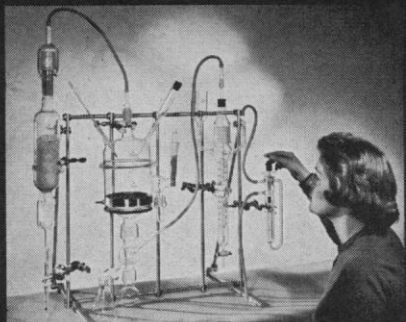


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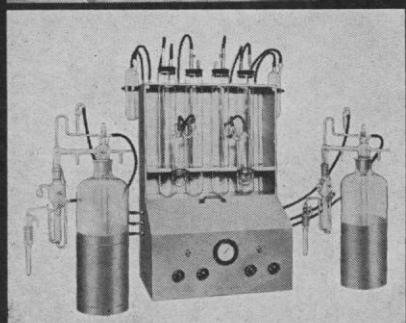


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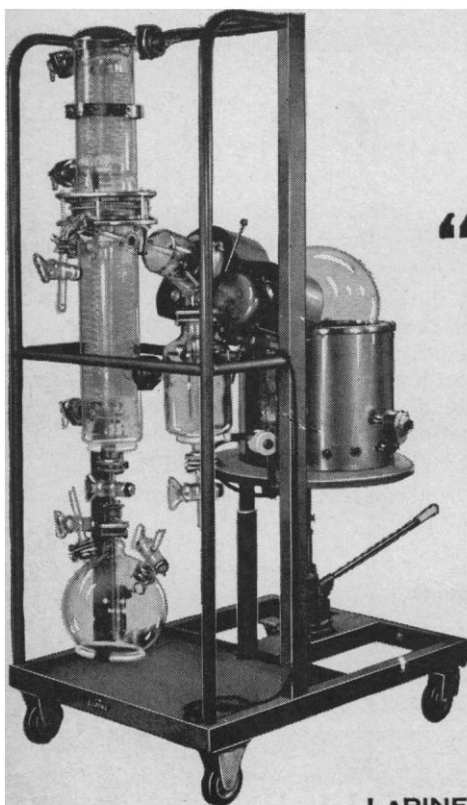
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