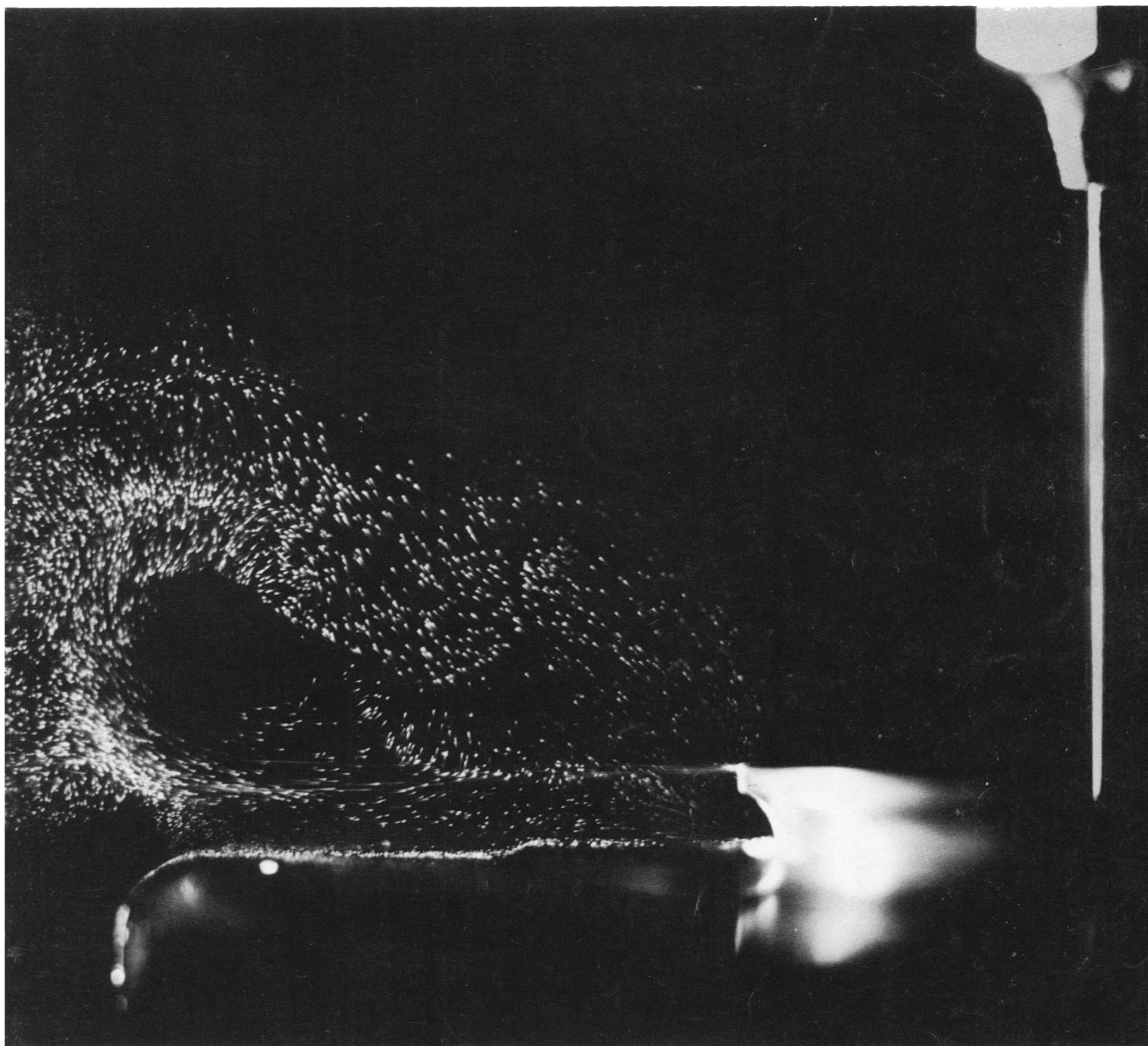


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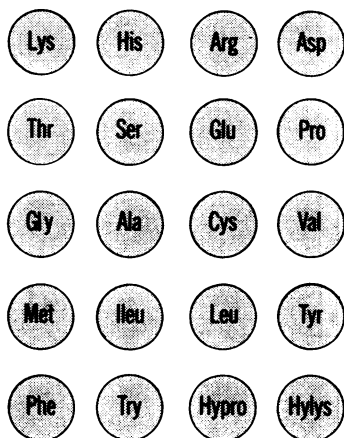
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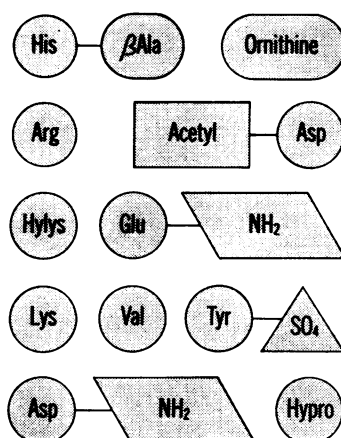
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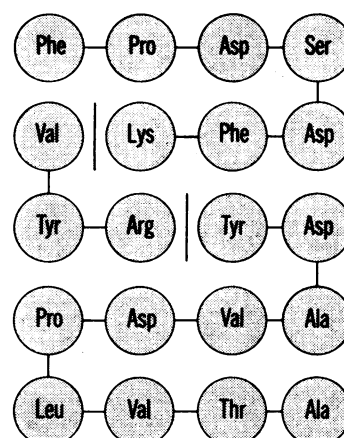
### Amino acid isolation

... separation, collection, and identification of amino acids and related compounds in physiological fluids and tissue and plant extracts on both analytical and preparative scale.

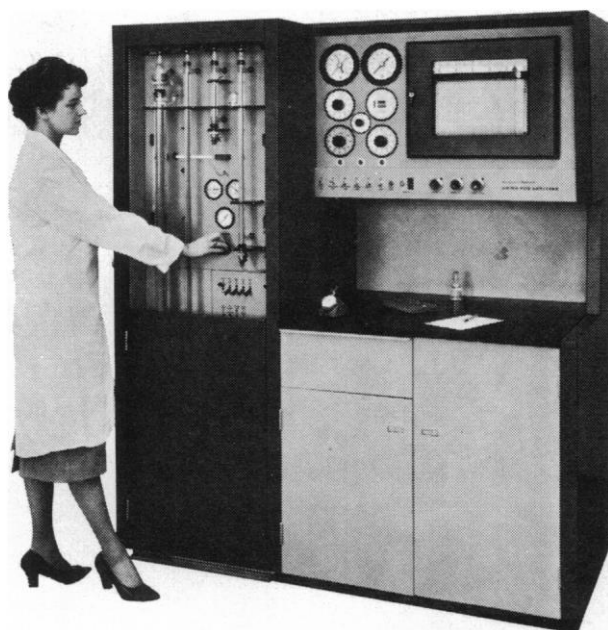


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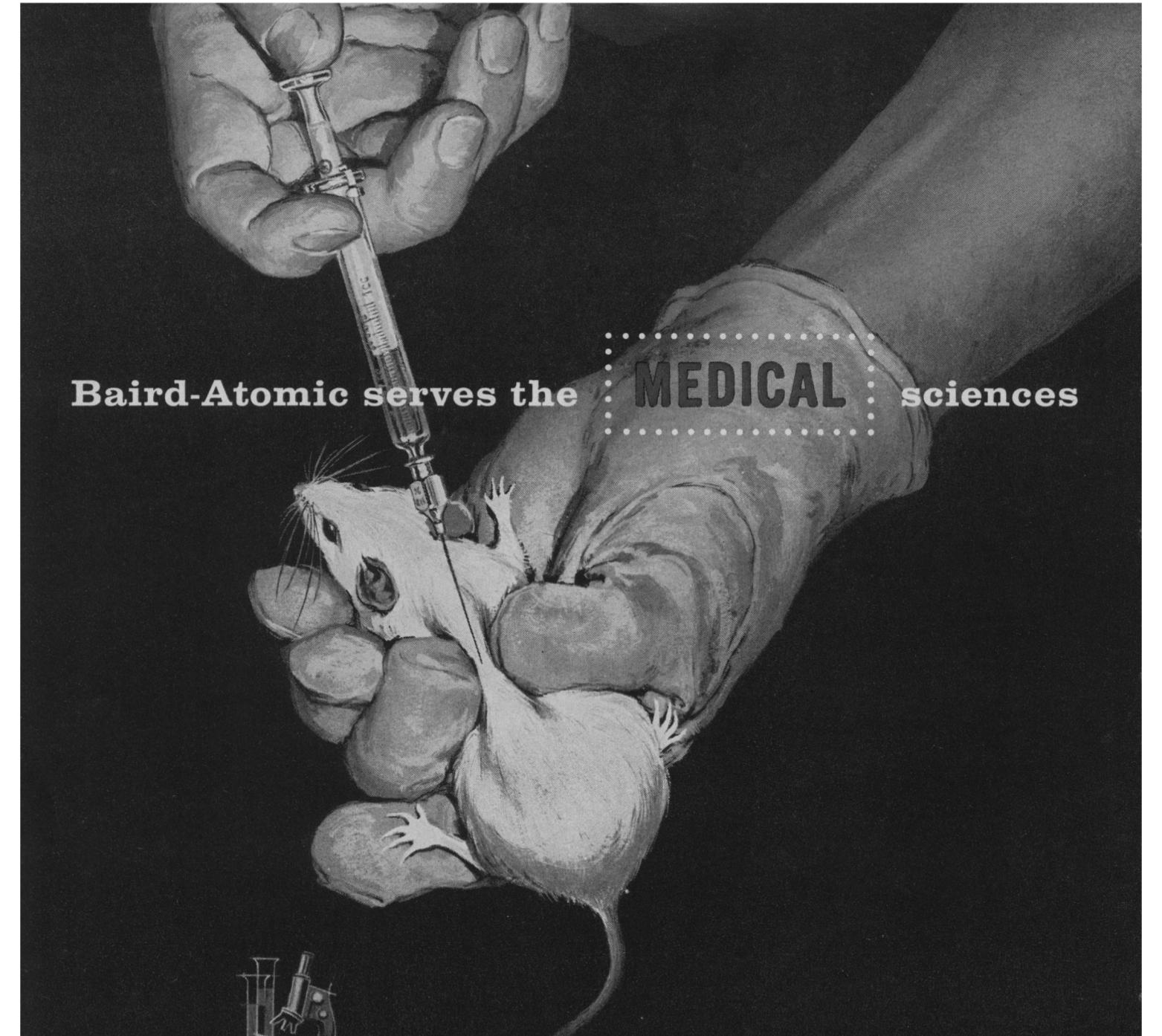
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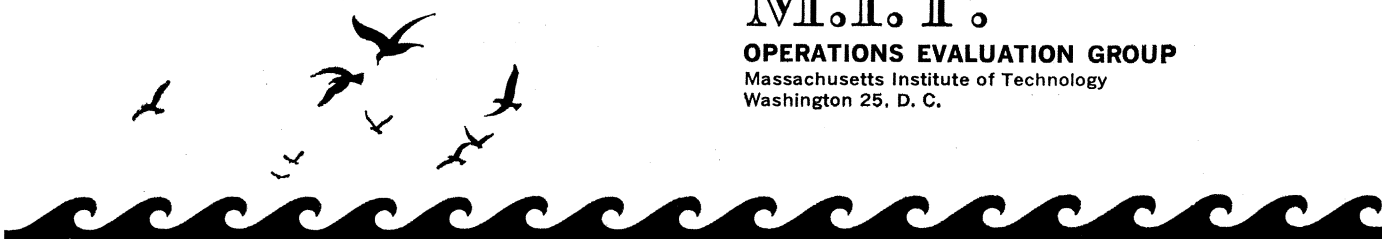
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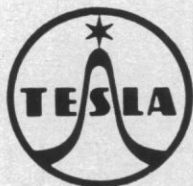
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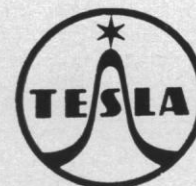


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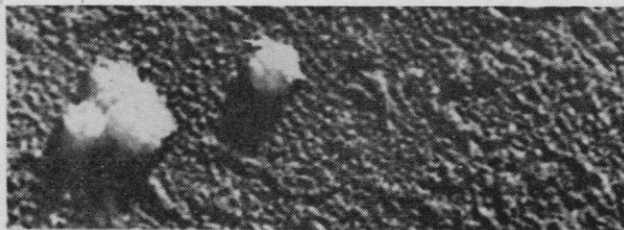


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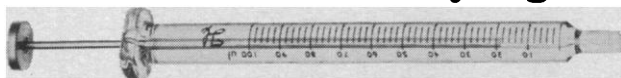
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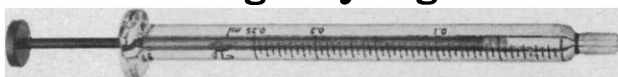
## CHEMICAL RESEARCH

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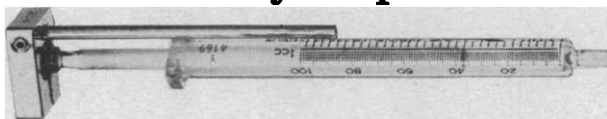
Accurate liquid discharges may be made in the range of 500 ul to 0.02 ul by direct reading of the Hamilton Microliter Syringe scale. These instruments have proven very valuable as research and analysis tools in chromatography, chemistry, biology, and medicine. Hamilton Microliter Syringes are made of precision bore NC glass, are individually fitted with stainless steel plungers, and are not interchangeable. The clean, unlubricated syringe is leak tight when tested with water at 150 psi. Subdivision of calibration is with precision of graduation better than 2%. Six syringe models, from a 1.0 ul capacity to a 500.0 ul capacity. \*Patent Number 2933087.

### Gas-Tight Syringes\*



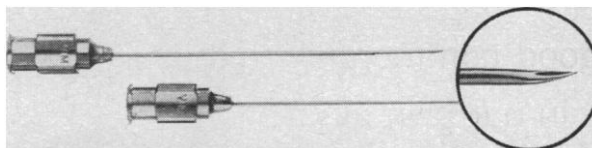
Hamilton Gas-Tight Syringes are ideal for gas chromatography, for pipetting gas, for pipetting corrosive liquids, and particularly liquids which ordinarily cement syringe plungers to the barrel. They incorporate a stainless steel plunger, coated with corrosion resistant Teflon Resin, and a Teflon tip to provide for stiff but smooth plunger movement. Seven gas-tight syringe models, from a 0.05 ml capacity to a 10.0 ml capacity. \*Patent pending.

### Chaney Adaptors



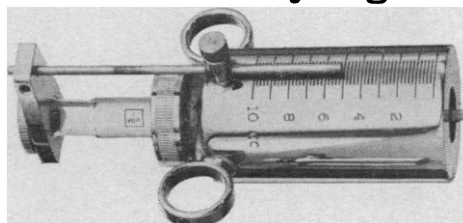
Chaney Adaptors were developed to rapidly deliver a precise quantity of liquid throughout a series of injections or deliveries. They easily give repeatability of 1% or better with semi-skilled operators. With careful work, repeatability can be 0.1%. These syringes with adaptors are ideal when chromatography is used for plant control, in the laboratory pipetting of standard solutions for routine analysis, or making a series of standard volume injections.

### Special Purpose Needles



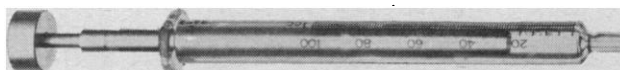
Hamilton needles are available in any length to about 8 feet, with any style point from a square polished tip for paper chromatography, to a 22 degree bent bevel polished for the penetration of septums or rubber closures. All stainless steel needles and the nickel plated brass hubs. These hubs, electroplated with gold, can be supplied with platinum needles in the following sizes: 22 and 28 gauge.

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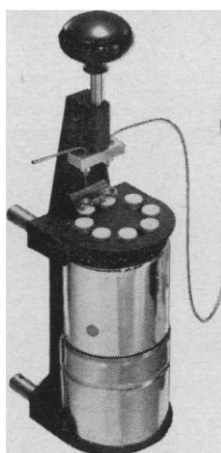
Hamilton Microsyringe pipet controls make pipetting rapid and precise. Smooth control of the meniscus is guaranteed by Hamilton's excellent workmanship and quality control. The optimum in operating range for the 1 ml Microsyringe is from 1 lambda to 200 lambda. \*Patent Number 2561273.

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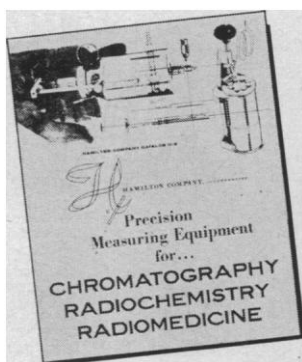


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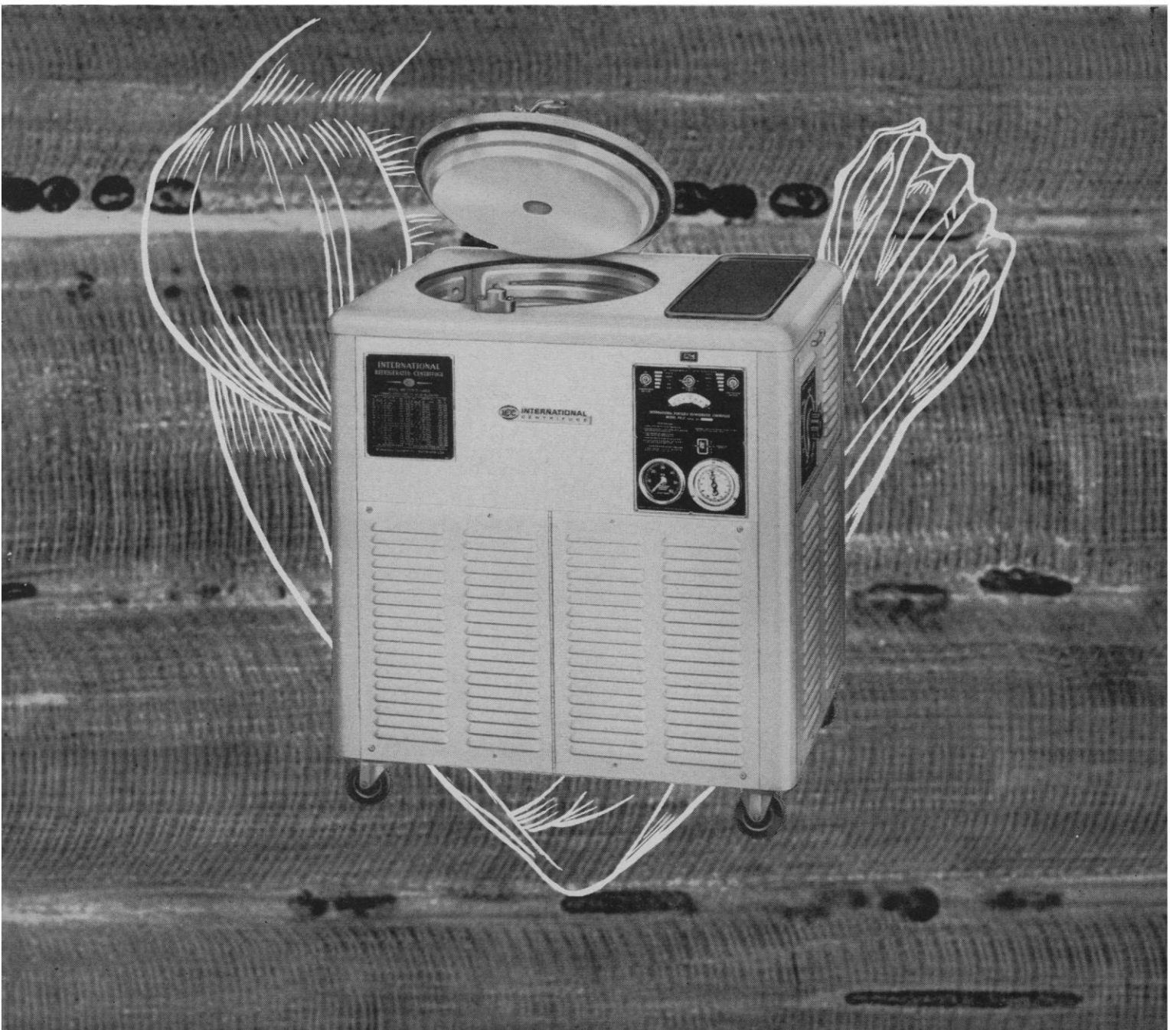
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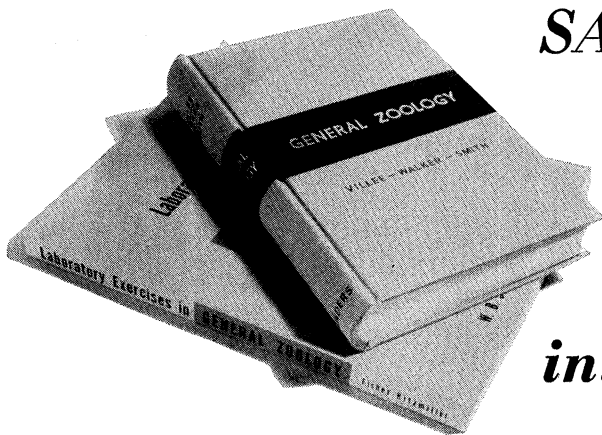
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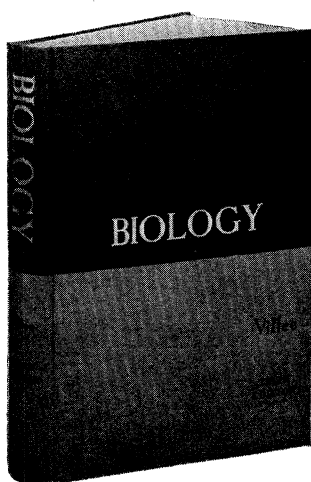
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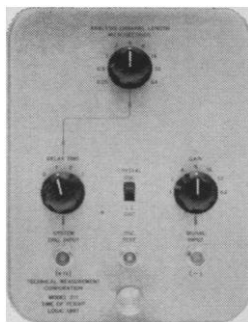
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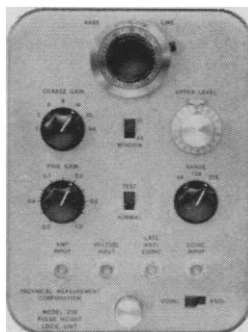
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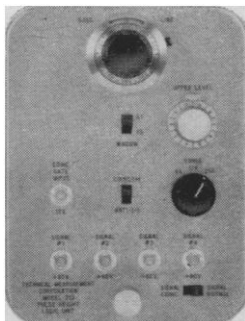
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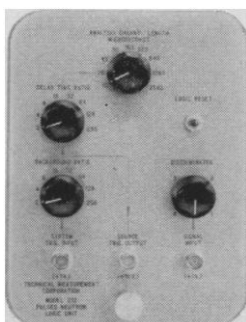
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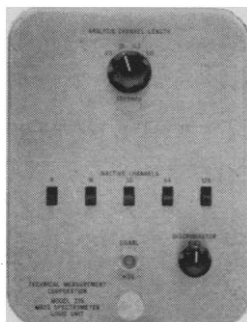
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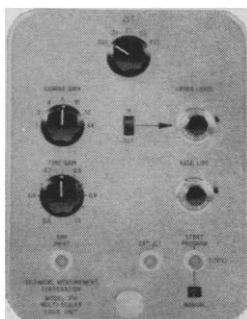
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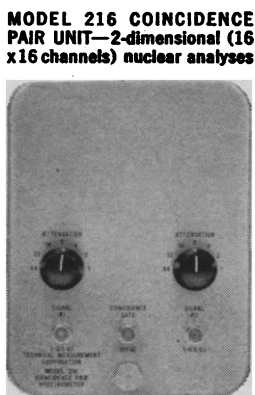
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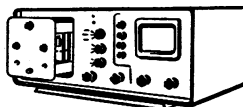
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SCIENCE, now combined with THE SCIENTIFIC MONTHLY, is published each Friday by the American Association for the Advancement of Science at National Publishing Company, Washington, D.C. SCIENCE is indexed in the *Reader's Guide to Periodical Literature*.

**Editorial correspondence** should be addressed to SCIENCE, 1515 Massachusetts Ave., NW, Washington 5, D.C. Manuscripts should be typed with double spacing and submitted in duplicate. The AAAS assumes no responsibility for the safety of manuscripts or for the opinions expressed by contributors. For detailed suggestions on the preparation of manuscripts, see *Science* 125, 16 (4 Jan. 1957).

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In several countries, locally reproduced or translated copies exceed the number mailed by the printer. This supplementary distribution explains some peculiar comparisons in our mailing figures. We mail the giant U.S.S.R. 29 copies of each issue of *Science*, and small Poland 88. We send 10 copies to the huge Peoples Republic of China, and 14 to tiny Ceylon.

In most countries, institutional coverage is complete or nearly complete in the sense that the libraries of every major university and research establishment receive copies. (In a few of the eastern European countries, we can only assume that this statement is true; all or most of the subscriptions in each of these countries go to a single address, presumably for local distribution.) But in some of the less-developed countries there are gaps. The AAAS recently received funds with which to subsidize subscriptions for the major universities and research institutions of these countries that do not already subscribe to *Science*. A comparison of the *Science* subscription list with lists of universities and research institutions named in *The World of Learning* or recommended by the embassies of the countries involved or by scientists familiar with those countries showed that there are only a hundred or two such institutions throughout the world that do not already receive *Science*.

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*Science* will help the new recipients to keep abreast of a wide range of scientific thinking, analyses, news, and publications, and thus will help the scientists of these developing nations to become a more integral part of the world-wide scientific community. *Science* is international. So is *Science*.—D.W.



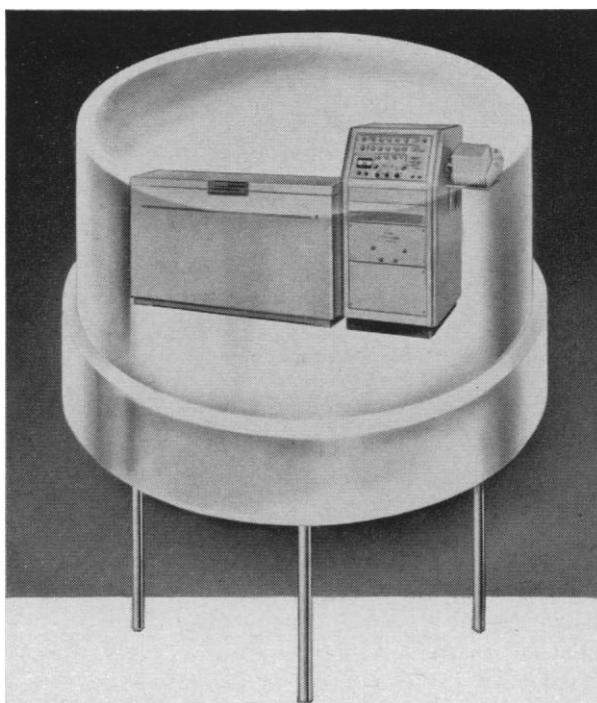
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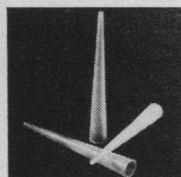
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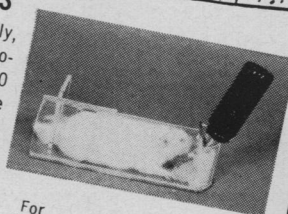
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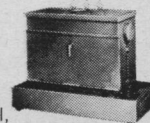


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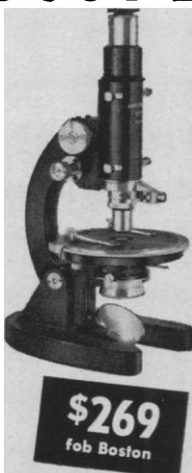
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Allen D. Bass and Gordon K. Moe, Editors June 1960

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## Meetings

### The Teaching of Chemistry

A seminar on "The Status and Development of the Teaching of Chemistry" was held in June 1960 in Greystones, Ireland, under the auspices of the Office for Scientific and Technical Personnel of the Organization for European Economic Cooperation (OEEC). It was attended by delegates from Austria, Belgium, Denmark, France, Germany, Greece, Iceland, Ireland, Italy, Luxemburg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States. The U.S. representatives were J. A. Campbell (Harvey Mudd College, Claremont, California); L. E. Strong (Earlham College, Richmond, Indiana); Robert Rice (University of California, Berkeley); and Paul Westmeyer (University of Illinois, Urbana).

The seminar made recommendations to the OEEC as follows.

1) Three *ad hoc* committees (A, B, and C) should be set up on an international basis, each committee to consist of six to eight members—university teachers, secondary school teachers, and school inspectors from the various member countries.

Committee A would examine the developments in theoretical chemistry in the light of their pertinence to secondary school teaching and of reports from the seminar and comments received on them from member countries. It would then draft the outline of a modern syllabus of chemistry suitable for secondary schools of the member countries. This syllabus would be expanded by explanatory notes and would be published by the OEEC as a manual or handbook for teachers of chemistry in secondary schools.

Committee B would undertake a similar task in relation to practical applications and would extend the manual to cover laboratory and demonstration experiments.

Committee C would examine the matter of training and retraining of teachers of chemistry at secondary school level, with a view to establishing machinery to insure an adequate supply of teachers conversant with modern scientific developments and capable of teaching a course based on modern concepts.

2) Chemistry students should have, at all stages of instruction, the necessary background in physics and mathematics. It was recommended that courses in physics (in particular, introductory electricity) and mathematics (through elementary solid geometry) precede the introduction of chemistry.

While it was conceded that teaching of physics and chemistry by the same person in courses at the introductory level is desirable, it was emphasized that specialist teachers of the two subjects are required at the more advanced levels of secondary school teaching. It was agreed that much coordination in mathematics, physics, and chemistry courses could be achieved through co-operation of teachers in the planning stage.

3) Instruction in the following areas is basic to the teaching of chemistry at all levels and should be particularly emphasized at the higher levels in secondary schools: atomic structure and electronic theory of valency, chemical equilibria, and energy in chemical reactions. Presentation (particularly in courses on inorganic chemistry) of disconnected factual data unnecessary for illustrating underlying principles should be eliminated.

4) Practical work, both demonstrational presentations to illustrate lessons on theory and experimental work by students in the laboratory, is essential to the proper teaching of chemistry at all stages and should be included in the secondary school program.

5) The OEEC might recommend to member countries who operate a national syllabus and examination that certain designated schools be permitted to teach, on an experimental basis, approved courses not included in the syllabus.

6) In view of the importance of teacher retraining programs to provide teachers for the modernized course in chemistry, the OEEC should discuss with the suitable authorities in the various member countries means of promoting and financing extensive retraining programs.

A final report on the seminar is scheduled for publication in late spring.

MAX HELLMANN

National Science Foundation,  
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## Forthcoming Events

### June

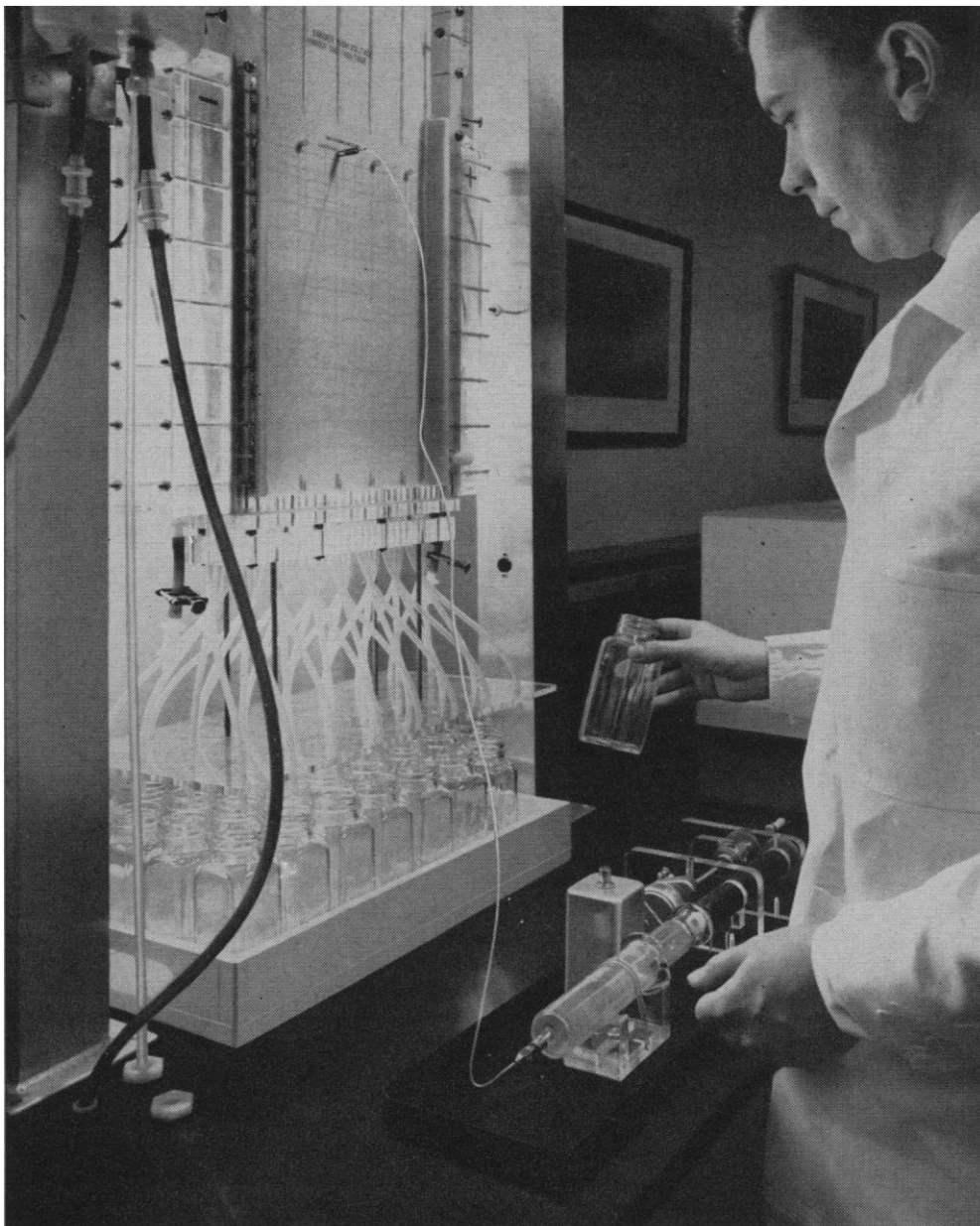
2-3. Canadian Soc. for Clinical Chemistry, annual general meeting, Guelph, Ont. (C. R. Cameron, Ontario Veterinary College, Guelph)

2-5. Latin-American Congress of Physical Medicine, Lisbon, Portugal. (C. Lopez de Victoria, 245 E. 17 St., New York, N.Y.)

3-11. Medical-Surgical Film Festival, 4th intern., Turin, Italy. (Minerva Medica, Corso Bramante 83-85, Turin)

4-9. Mass Spectrometry, ASTM Committee E-14, Chicago, Ill. (G. Crable, Gulf Research Center, P.O. Box 2038, Pittsburgh 30, Pa.)

4-10. World Congress of Psychiatry, 3rd, Montreal, Canada. (A. Roberts, Al-



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lan Memorial Inst., 1025 Pine Ave. West, Montreal 2, P.Q.)

4-12. Cellular Regulatory Mechanisms, 26th Cold Spring Harbor Symp. on Quantitative Biology, Cold Spring Harbor, N.Y. (A. Chovnick, Long Island Biological Assoc., Cold Spring Harbor)

5-7. American Soc. for Quality Control, Philadelphia, Pa. (W. P. Youngclaus, Jr., 161 W. Wisconsin Ave., Milwaukee 3, Wis.)

5-7. Fundamental Aspects of Radiosensitivity, symp., Upton, N.Y. (A. H. Sparrow, Brookhaven National Laboratory, Upton, L.I.)

5-8. International Instrument-Automation Conf. and Exhibit, Instrument Soc. of America, Toronto, Canada. (I.S.A., 313 Sixth Ave., Pittsburgh 22, Pa.)

5-9. Animal Reproduction, 4th intern. cong., Amsterdam, Netherlands. (Secretariat, Burgemeester de Monchyplein 14, The Hague, Netherlands)

5-9. Effects of Ionizing Radiation on the Nervous System, symp., Vienna, Austria. (J. Burt, International Atomic Energy Agency, United Nations, New York, N.Y.)

5-10. International Colloquium on Spectroscopy, 9th, Lyon, France. (Secretariat, Groupement pour l'Avancement des Méthodes Spectrographiques, 1, rue Gaston Boissier, Paris 15)

5-16. Operations Research and Systems Engineering, Baltimore, Md. (Dean, School of Engineering, Johns Hopkins Univ., Baltimore 18)

6-8. Tissue Culture Assoc., 12th annual, Detroit, Mich. (F. E. Payne, Dept. of Epidemiology, Univ. of Michigan, Ann Arbor)

8-11. American Electroencephalographic Soc., Atlantic City, N.J. (G. A. Ulett, Malcolm Bliss Mental Health Center, 1420 Grattan, St. Louis 4, Mo.)

8-18. International Organization for Standardization, general assembly (members only), Finland. (American Standards Association, 70 East 45 St., New York 17)

9-11. Society of Biological Psychiatry, Atlantic City, N.J. (G. N. Thompson, 2010 Wilshire Blvd., Los Angeles 57, Calif.)

9-17. European Convention of Chemical Engineering, Frankfurt, Germany. (DECHEMA, Postfach No. 7746, Frankfurt/Main 7)

11-15. American Soc. of Mechanical Engineers, summer annual, Los Angeles, Calif. (O. B. Schier II, 29 W. 39 St., New York 18)

12-13. Radio Frequency Interference, 3rd natl. symp., Washington, D.C. (E. F. Mischler, National Engineering Service, Washington, D.C.)

12-14. American Dairy Science Assoc., Madison, Wis. (H. F. Judkins, 32 Ridgeway Circle, White Plains, N.Y.)

12-14. American Neurological Assoc., Atlantic City, N.J. (M. D. Yahr, Neurological Inst., 710 W. 168 St., New York 32)

12-14. Society for the Study of Development and Growth, regeneration symp., Williamstown, Mass. (A. C. Braun, Rockefeller Inst., New York 21)

12-15. Nature of the Real, conf., Milwaukee, Wis. (E. D. Simmons, Dept. of Philosophy, Marquette Univ., Milwaukee 3)

12-15. Physics of Electronic and Atomic Collisions, intern. conf., Boulder, Colo. (B. Bederson, Physics Dept., New York Univ., New York 53)

12-16. Association of Official Seed Analysts, Richmond, Va. (D. D. Forsyth, Agronomy Building, Madison 6, Wis.)

12-16. Molecular Structure and Spectroscopy, symp., Columbus, Ohio. (R. A. Oetjen, Dept. of Physics and Astronomy, Ohio State Univ., Columbus 10)

12-18. European Assoc. for Animal Production, 8th intern. cong., Hamburg, Germany. (European Assoc. for Animal Production, Via Barnaba Oriana 28, Rome, Italy)

12-24. European Inst. of Scientific Studies for the Prevention and Treatment of Alcoholism, Amsterdam, Netherlands. (D. Ehlbeck, Intern. Bureau against Alcoholism, Case Gare 49, Lausanne, Switzerland)

12-29. Statistical Quality Control Intensive Courses for the Chemical and Processing Industries, 18th annual, Rochester, N.Y. (H. M. Kentner, Extended Services Div., Rochester Inst. of Technology, Rochester 8)

13-14. Product Engineering and Production, 5th natl. conf., Philadelphia, Pa. (P. J. Riley, R.C.A., Building 10-6, Camden 2, N.J.)

13-16. Gas Chromatography Symp., 3rd biennial, East Lansing, Mich. (J. E. Callen, Procter and Gamble Co., Miami Valley Laboratories, P.O. Box 175, Cincinnati 39, Ohio)



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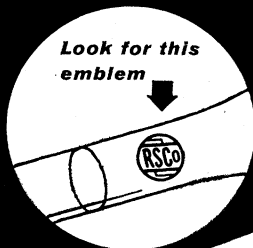
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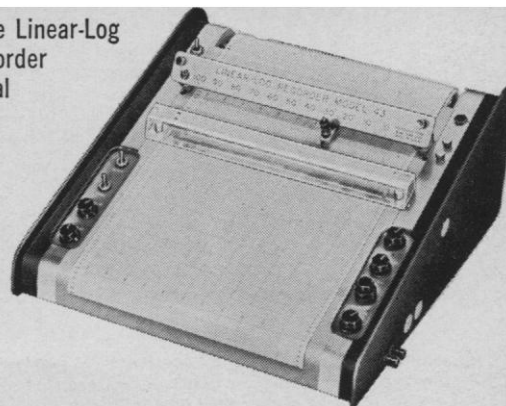
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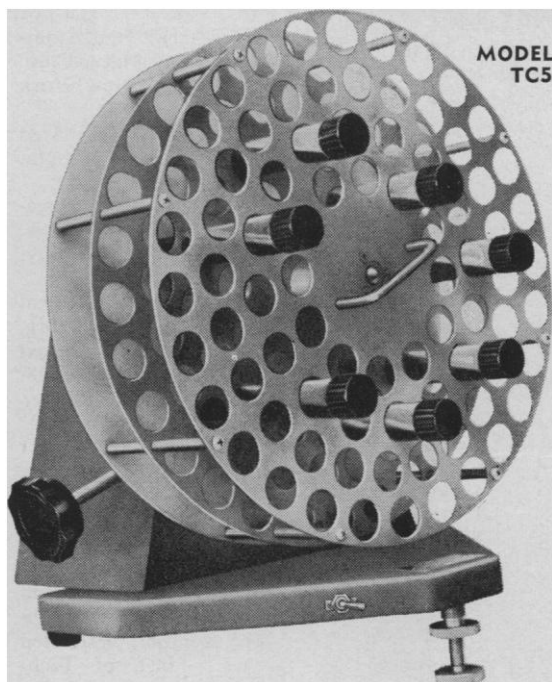
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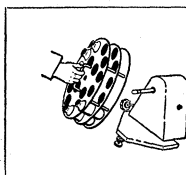
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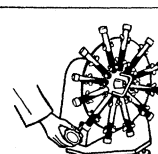
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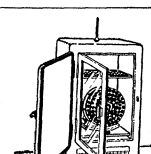
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