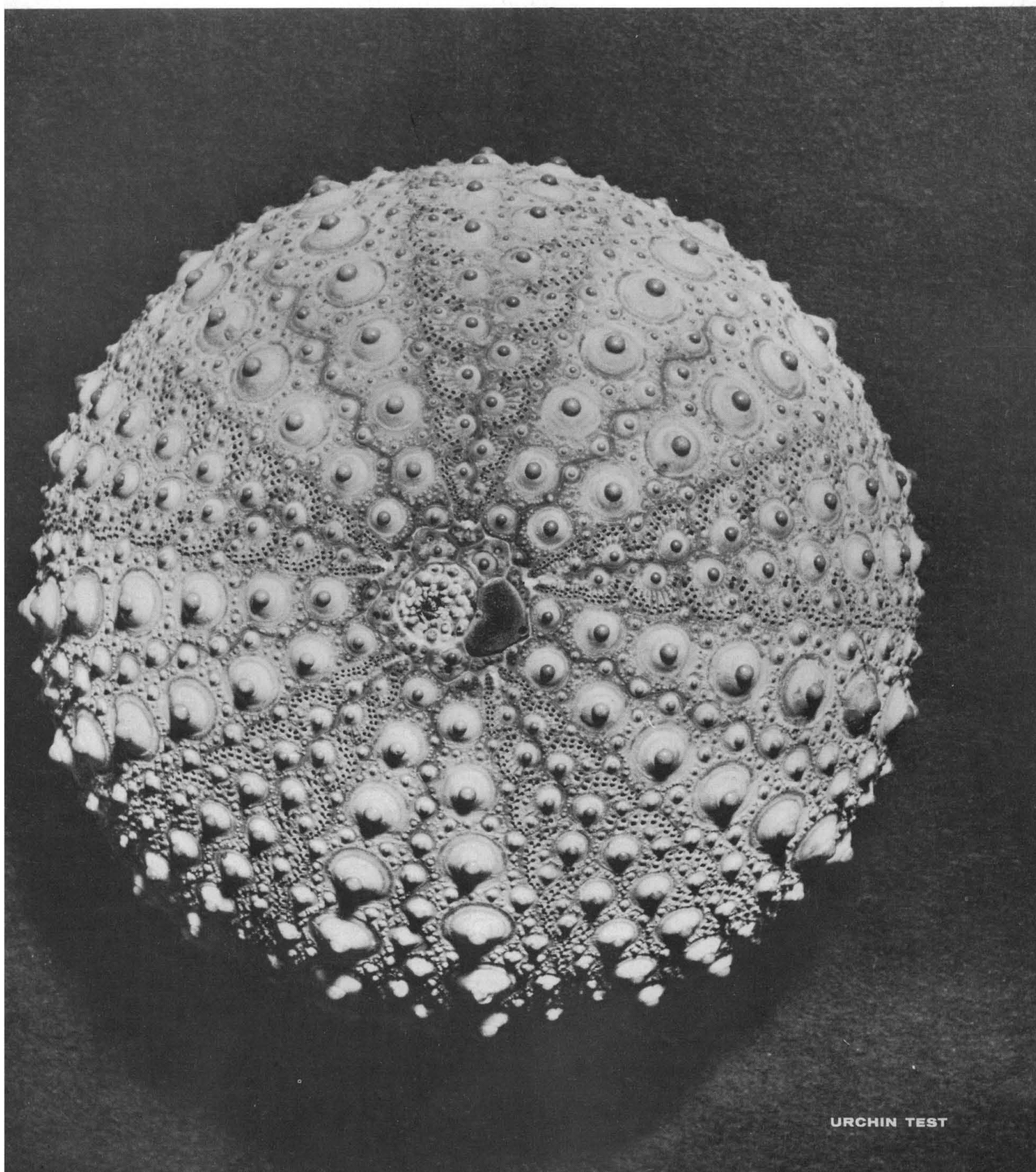


# SCIENCE

10 July 1964

Vol. 145, No. 3628

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE



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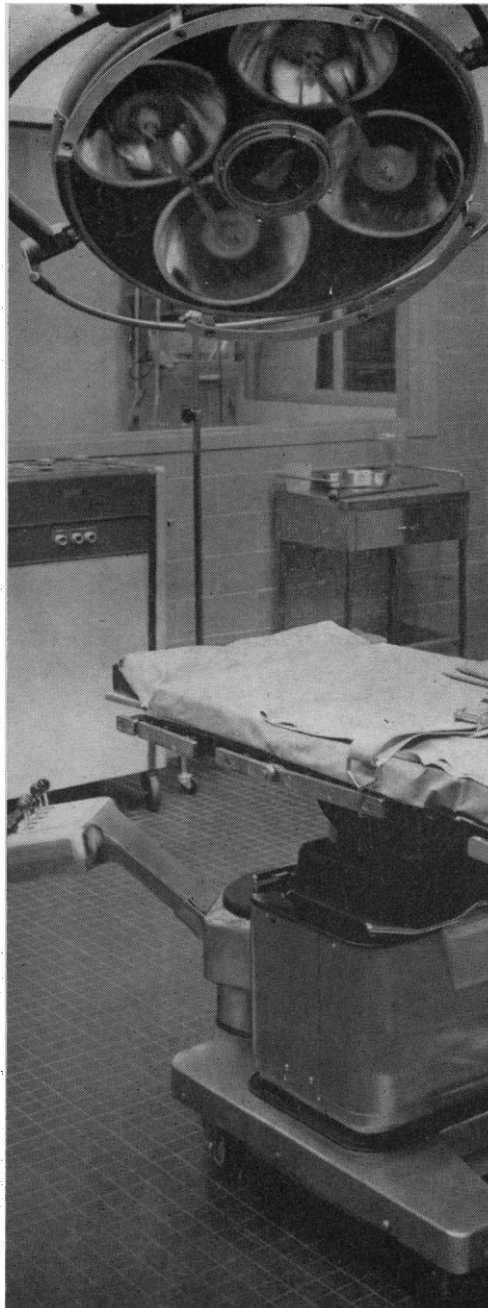
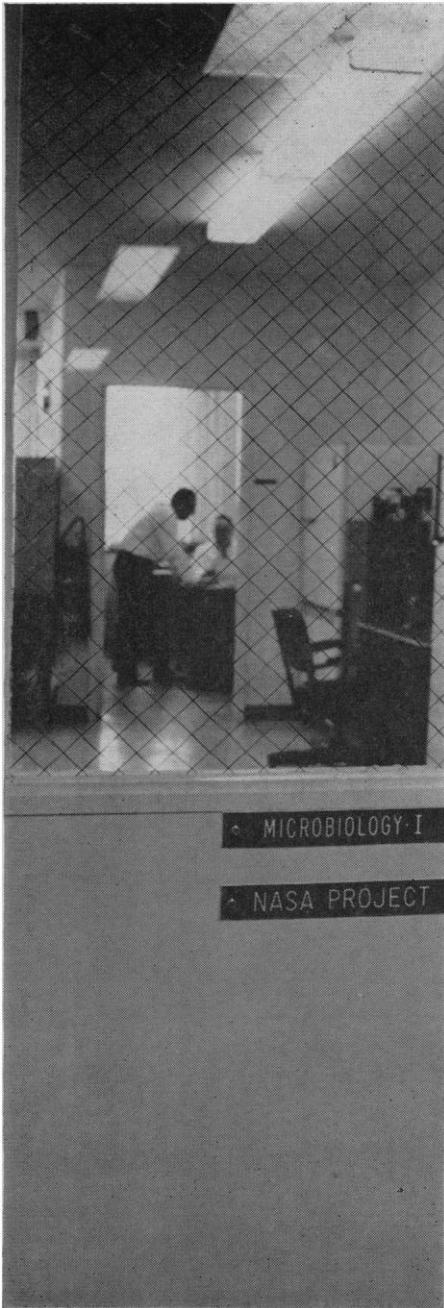
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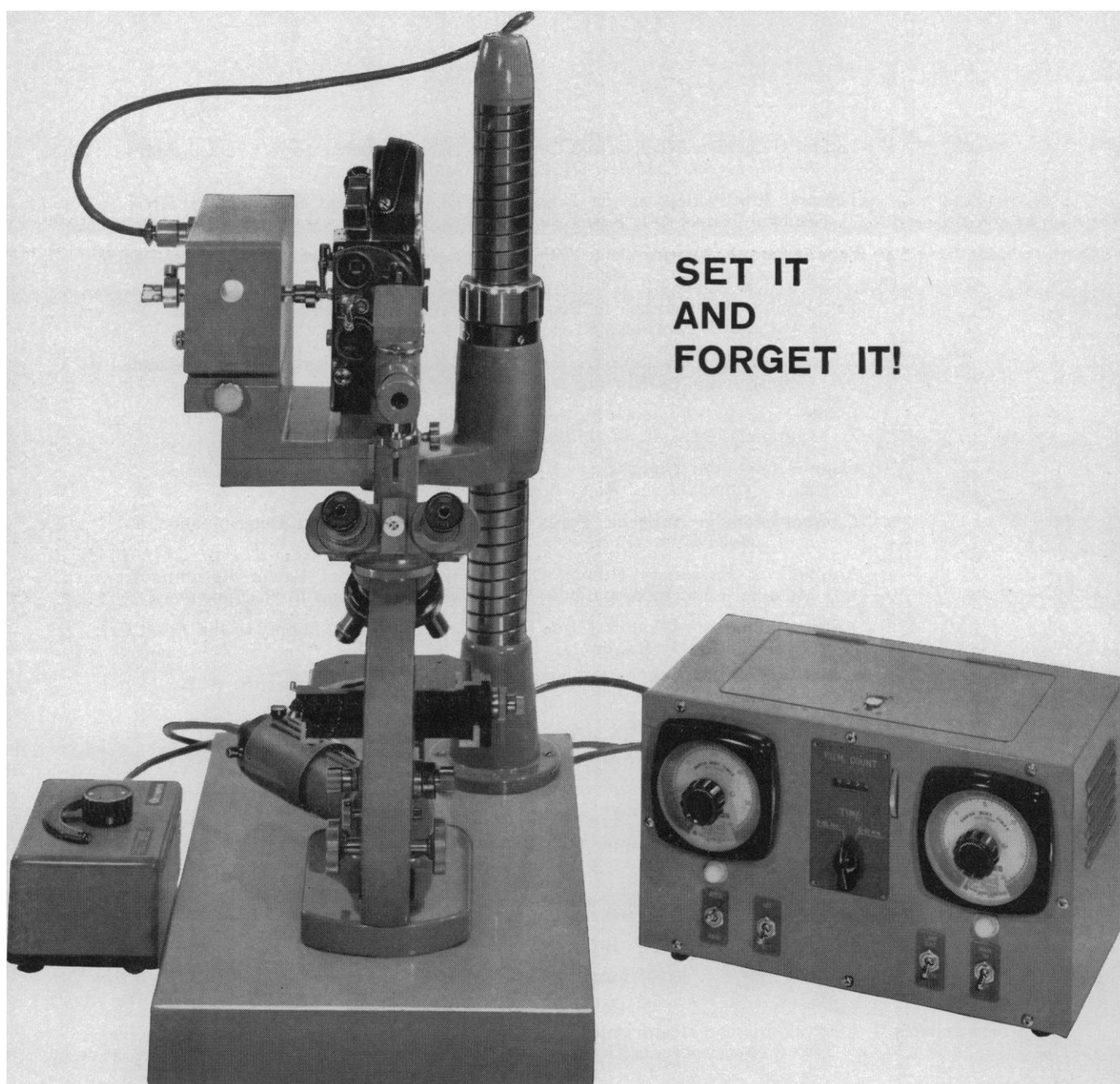
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## COVER

Aboral view of test of the sea urchin, *Strongylocentrotus franciscanus*. The pentaradiate construction of this shell is a fundamental characteristic of echinoderms. The heart-shaped structure (off center) is the madreporite under which a pulsating organ has recently been discovered. See page 173. (About 10 percent larger than actual size) [Richard A. Boolootian]



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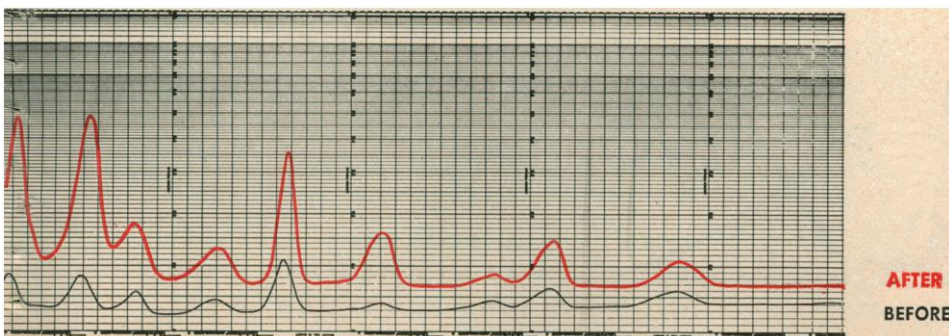
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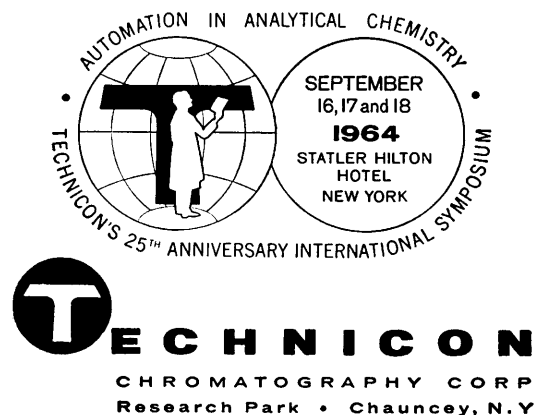
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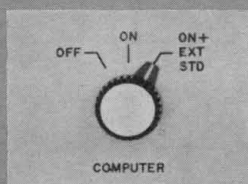
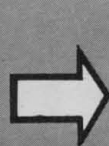
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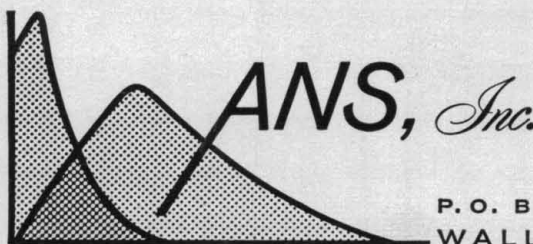


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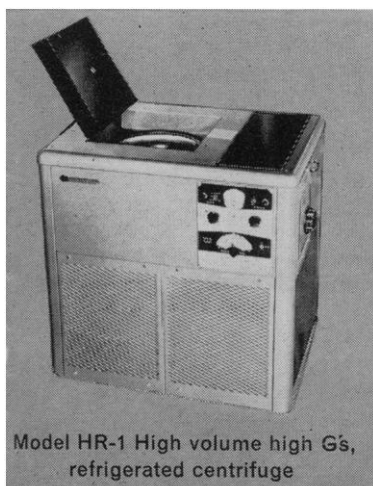
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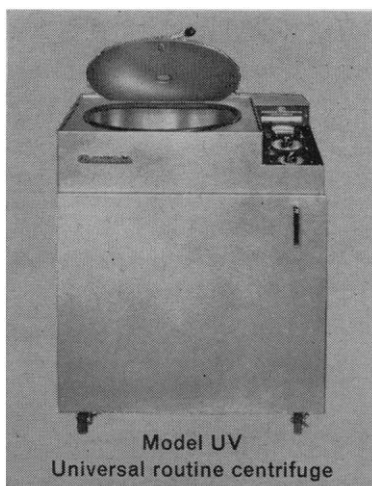
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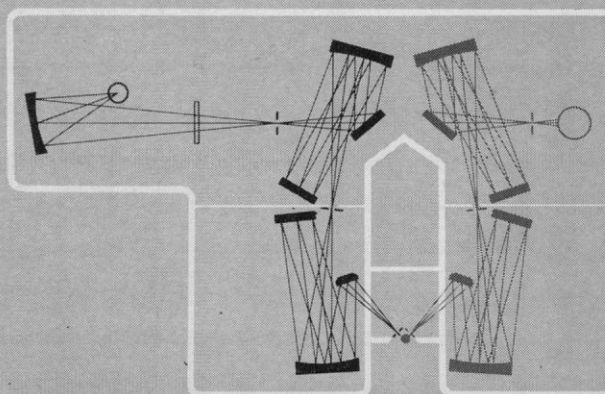
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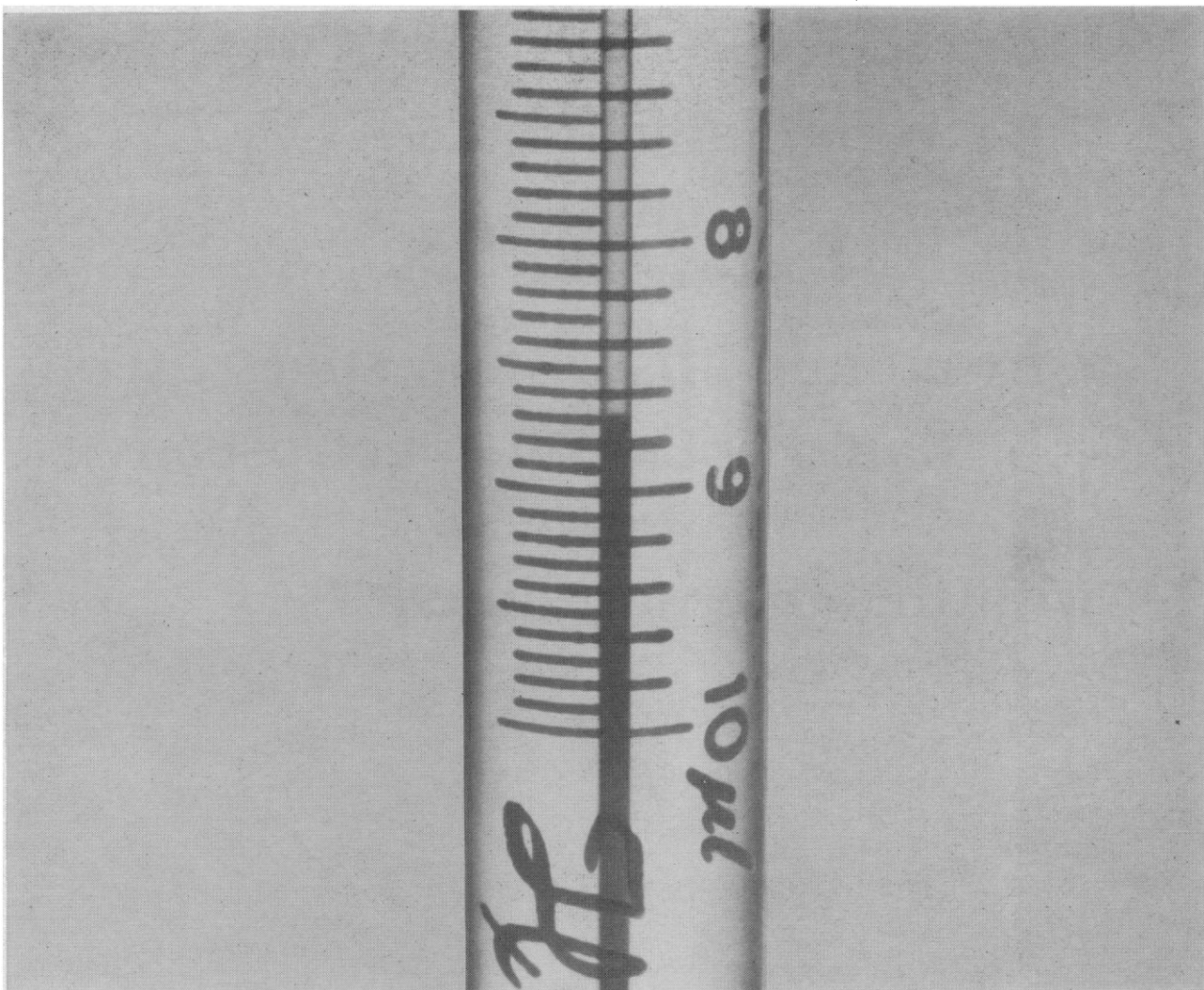
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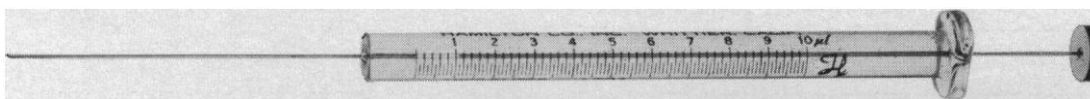
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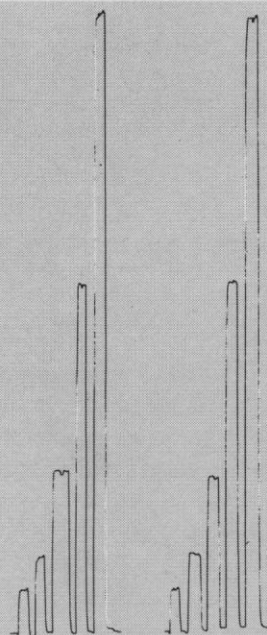
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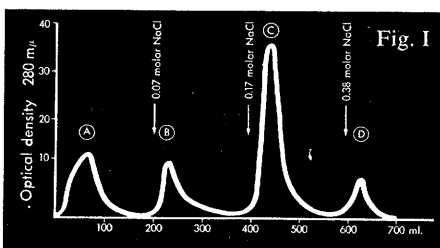
in A-50 are accessible to much larger molecules. A-50 has far greater binding capacity than A-25 for the larger molecules. Each has a total exchange capacity 3-4 meq/g.

### APPLICATION

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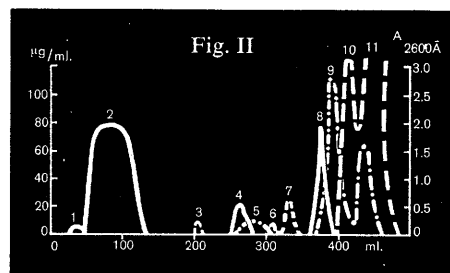
### Separation of Normal Human Serum



Nucleic acids, nucleotides, and a wide range of oligonucleotides can be readily bound and separated by fractional elution. Separation of polypeptide mixtures

is possible by fractionating through ion exchange and ion exclusion. This is exemplified by Fig. II.

Trichloroacetic acid extract from 21 ml blood cells from a case of von Gierke's disease.



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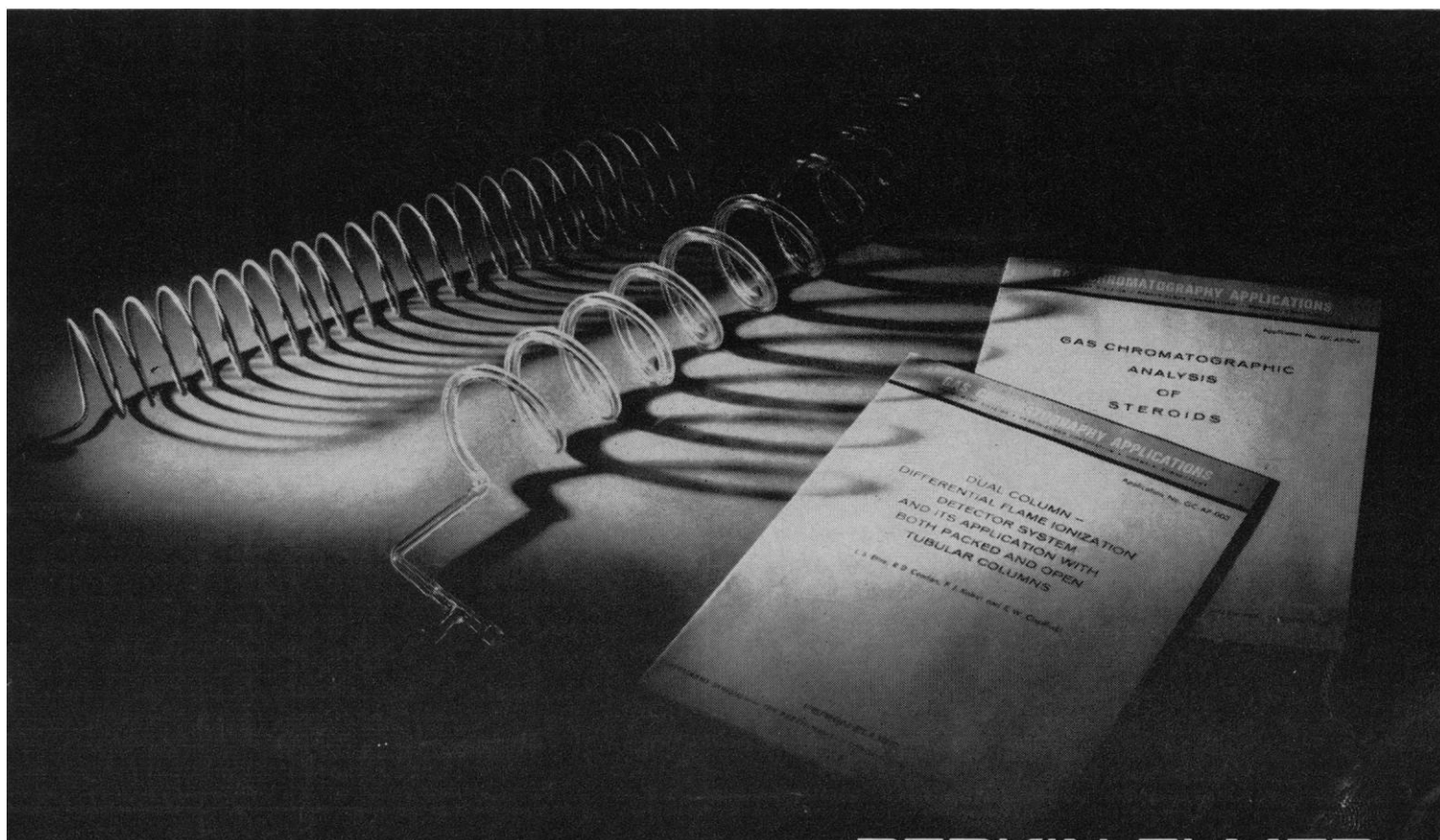
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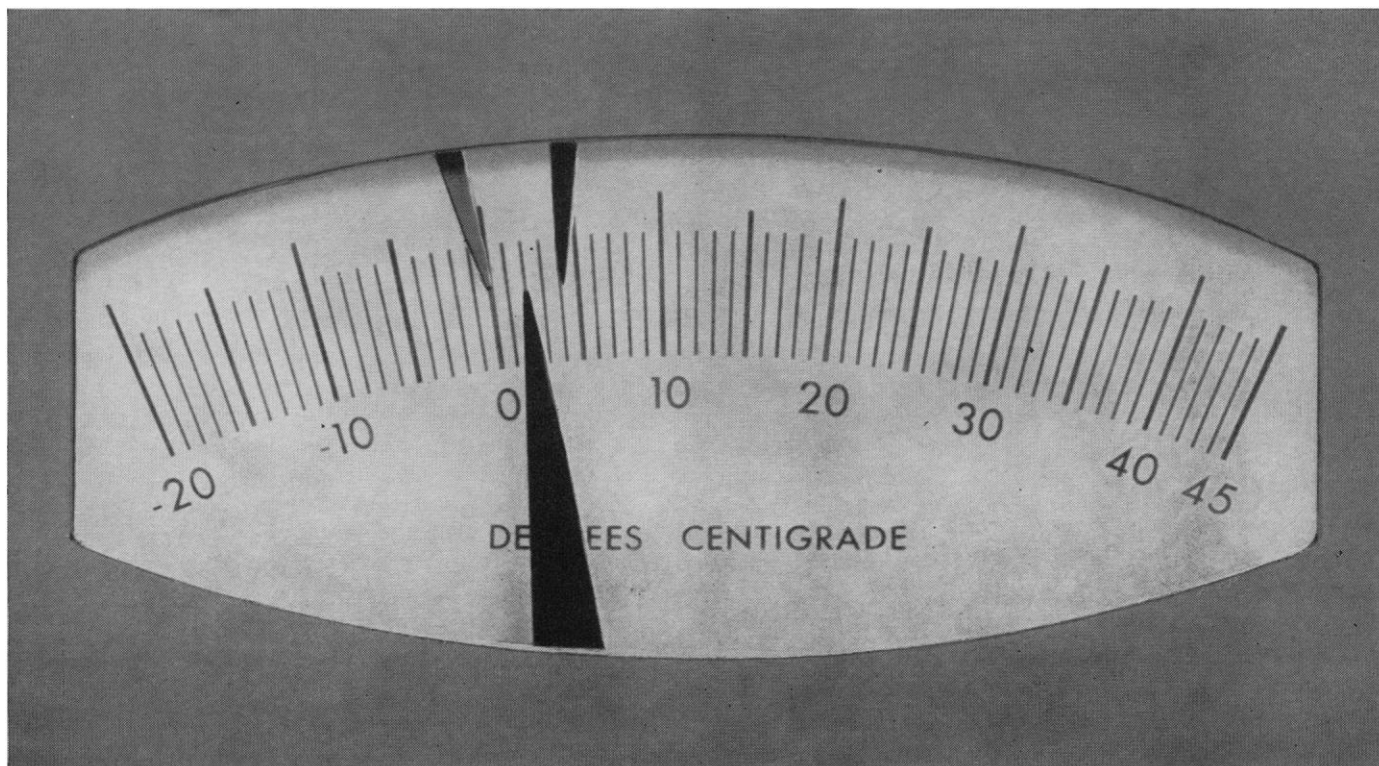
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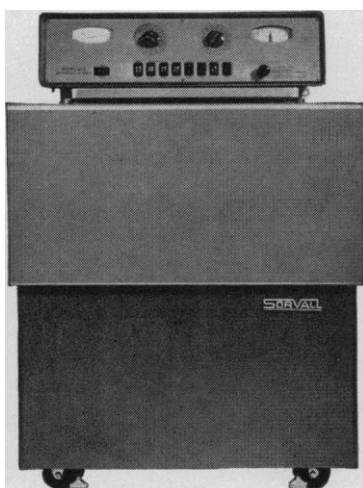
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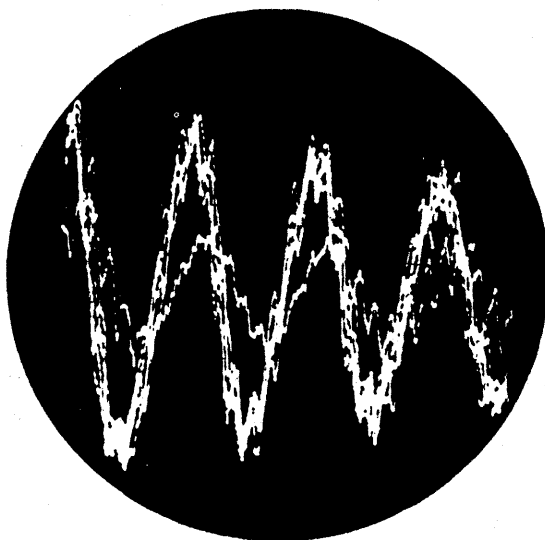
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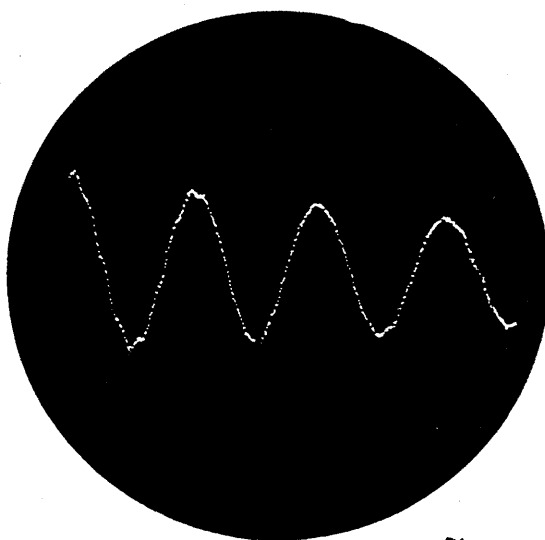
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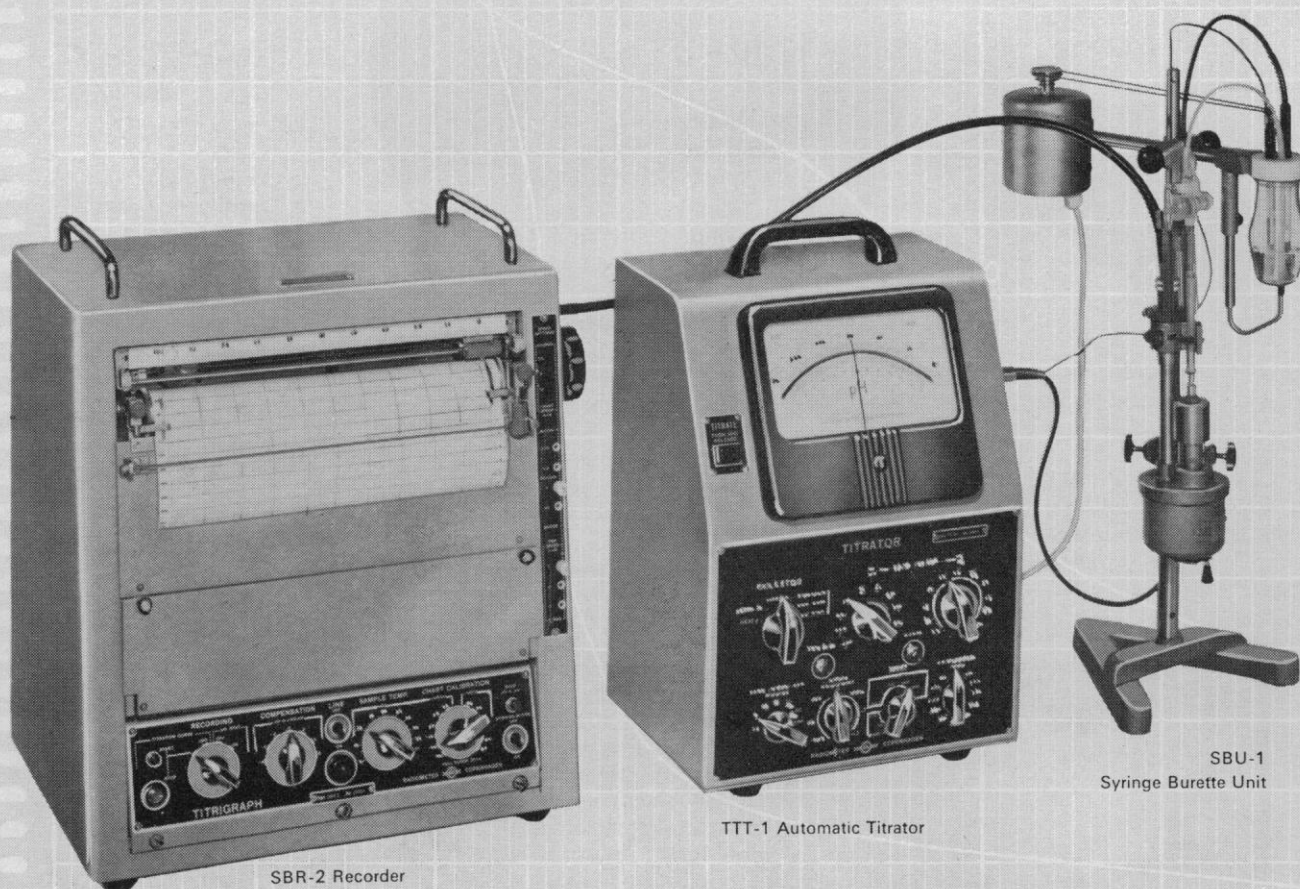
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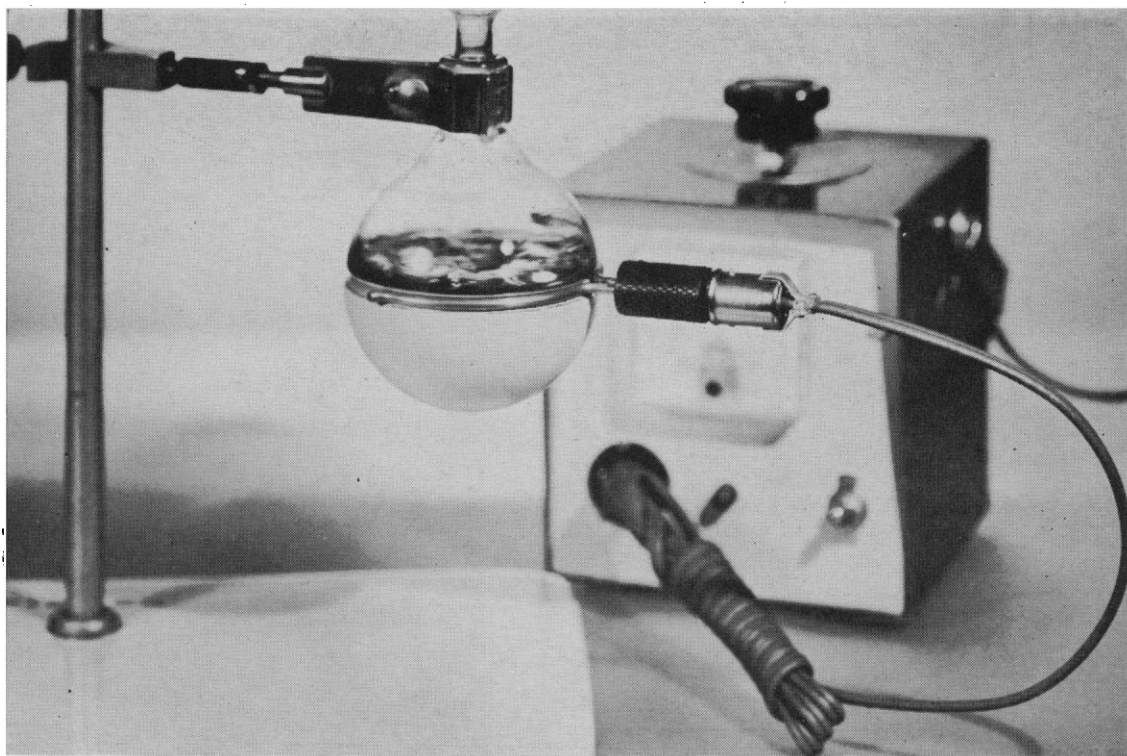
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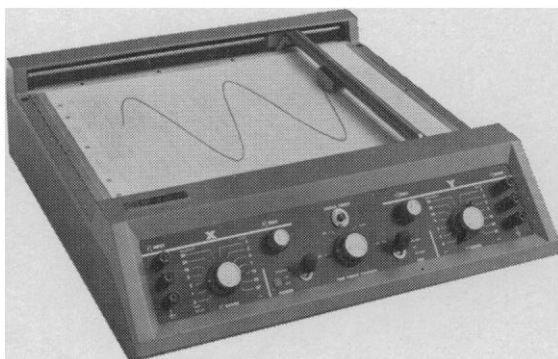


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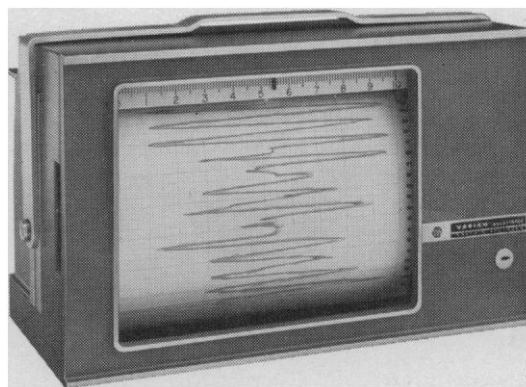
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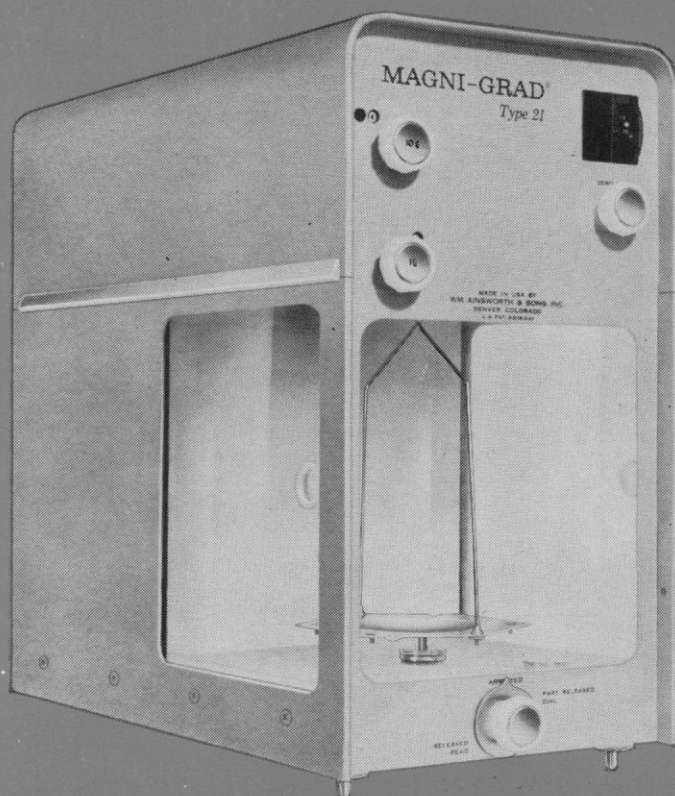


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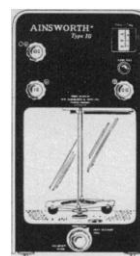
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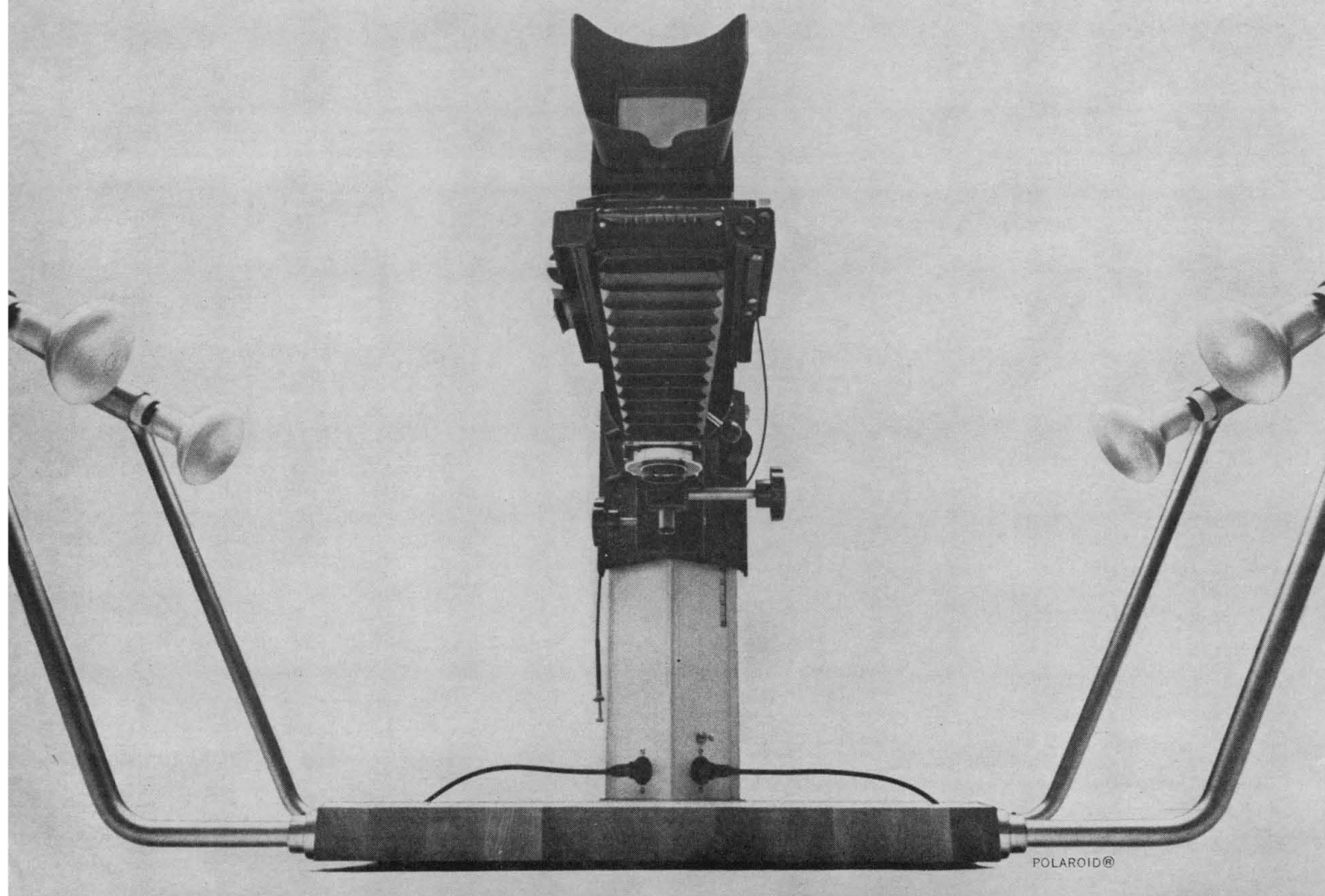
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(i) how the same information can be collected with less time and money or  
(ii) how, with the same time and money, it will be possible to gather more information.

I know that many researchers have been burned by statistics and will forever stay away. Human nature being what it is I can't blame them, but unfortunately these people are often in a position to influence others less biased than they, and consequently a great many scientists never even try to see how statistics can help them in their work. . . .

PETER W. FINKEL

*Agricultural Research Service,  
U.S. Department of Agriculture,  
Washington 25, D.C.*

**Cuba**

A number of opinions adverse to Adolf A. Berle's review (24 Jan., p. 341) of *The Atomic Age* have appeared in your columns. It may not be superfluous, therefore, to comment that at least this reader appreciated the absence of slogans in his premises, his incisive logic, and the inspiration he received from the review for thinking not based on clichés.

I also would like to draw attention to Theodore Draper's article in the *New Leader* of 27 April, which contradicts the notion of Castro as "agrarian reformer" more effectively than any article that I can recall contradicted the similar character of the Chinese communists before the final denouement. Rabinowitch (Letters, 22 May, p. 953) seems to have overlooked this article.

EUGENE P. WIGNER

*Princeton University,  
Princeton, New Jersey*

**Coauthors and Gentlemen**

D. J. de Solla Price's delightfully written article on the ethics of scientific publication (8 May, p. 655) contained a statement which I wish were not true, ". . . there is now at least ten times as much value in being listed first on the by-line as there is in being anywhere else on the . . . list."

Price's predecessor at Yale, John Farquhar Fulton, convinced me in 1930 that gentlemen publish with names in alphabetic order. With few exceptions,

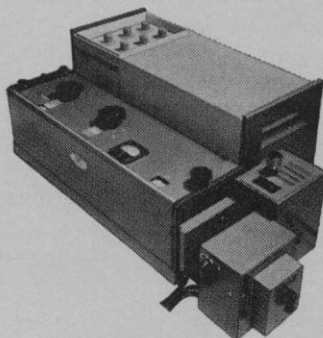


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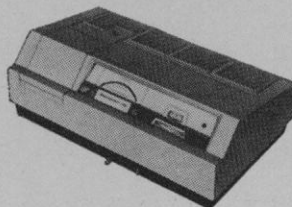
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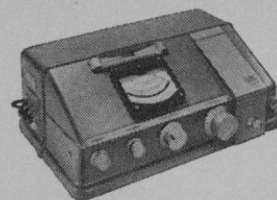
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Glas-Col Ponchos and mantles shown fitted on Corning-Q.V.F. flasks of (l. to r.) one, 200 and 100-liter capacities. Poncho garment worn by model was hand crafted in Cusco, Peru.

**PROCESS HOT FLAMMABLES WITH SEALED-IN  
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**PONCHO\***

*the safety shield that seals the flask into the heating mantle*



**WHAT IT IS:** The Poncho is a spun aluminum safety shield for use with Glas-Col high-wattage heating mantles. The Poncho/Mantle method of high temperature processing of flammable liquids is unequalled for safety .. in the lab .. or in all-glass plants where growing use of large Q.V.F. glass flasks has made ultimate safety an absolute *must*.

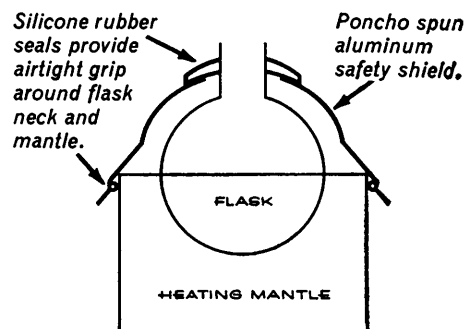
**WHAT IT DOES:** The Poncho protects mantles from spillover, flasks from falling objects, personnel from flying glass in cases of implosion or explosion. And it serves as an efficient heating shield.

**PROOF:** To prove its safety, we fit a glass flask and Glas-Col quartz heating mantle with a Glas-Col Poncho safety shield .. brought to 650°C at full wattage .. then drenched it with ether, acetone, gasoline. *We could not produce a fire.*

**REASON:** The Poncho actually *seals* the flask *into* the mantle, greatly reducing fire hazards. Nitrogen purging further reduces danger when using flasks 12 liters and larger.

Write for descriptive **Poncho Bulletin** .. which includes facts on Glas-Col's new *Splash Guard\** designed for smaller, low-wattage mantle and flask protection. Poncho/Mantle combinations available for flasks 500 ml to 200 liters, single or multiple neck.

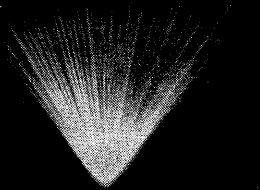
Trademark Reg. U.S. Patent Office. U.S. Patents 2,231,506; 2,739,220; 2,739,221 and 2,282,078. \*Patents pending.



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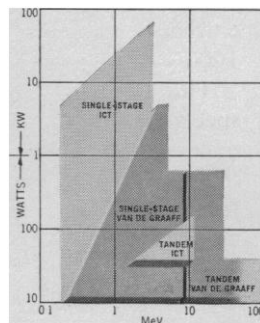
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Dept. SC, 711 Hulman Street • Terre Haute, Indiana

# CHARGED PARTICLES



Development of higher energy Van de Graaff particle accelerators which retain high beam precision, stability, and homogeneity, remains a continuing contribution by HVEC to "energy-oriented" research.

To provide even greater freedom of experimentation, HVEC is also anticipating the need for the higher beam intensities required in power-oriented research projects. Invented by Dr. R. J. Van de Graaff, the new Insulating Core Transformer (ICT) accelerator now provides high beam currents with all the desirable beam char-



## THE ICT CONCEPT: new high-current machines emerging from HVEC research

acteristics of Van de Graaff machines. As the graph shows, the high power levels available from the ICT accelerator now make possible a new realm of precision experimentation.

### The Insulating Core Transformer

The ICT is essentially a three-phase power transformer with multiple secondaries, each of which is insulated from the other. Rectified current from the secondaries is series-connected to achieve total voltage. In the ICT, electrostatic and electromagnetic fields exist in the same space, as contrasted to the conditions in a conventional transformer. The result is a highly efficient dc power source capable of stable operation at elevated potentials and power levels.

A number of ICT accelerators and power generation systems are now available.

### Single-Stage ICT Accelerators

Two types of single stage ICT accelerators have been developed for research use. The first incorporates an ICT power source coupled to the acceleration assembly through a coaxial cable.

	PROTON ENERGY (KeV)	CURRENT (MAX.) (Analyzed)	TANK HEIGHT Feet	TANK HEIGHT Meters	TANK DIAMETER Feet	TANK DIAMETER Meters
ICT 300	300	15 mA	4'4"	1.32	4	1.2
ICT 500	500	10 mA	5'3"	1.60	4	1.2

The second system utilizes a rigid transmission line to transmit electrical power to the accelerator terminal.

4 MeV ICT	ENERGY (MeV)	CURRENT	DIMENSIONS Length Feet	DIMENSIONS Length Meters
Positive Ions	1.5-4	3 mA	26'6"	8.08
Electron Conversion	1.5-3	10 mA	26'6"	8.08
3 MeV ICT Electrons	1.5-3	20 mA	29'	8.84

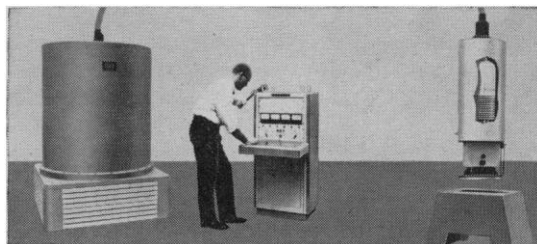
### 8 MeV ICT Tandem Accelerator

The 8 MeV ICT Tandem provides proton energies continuously variable from 3 to 8 MeV at a maximum guaranteed beam current of  $2\mu\text{A}$ . The ICT power source is capable of providing 12 mA at 4 mv which, in combination

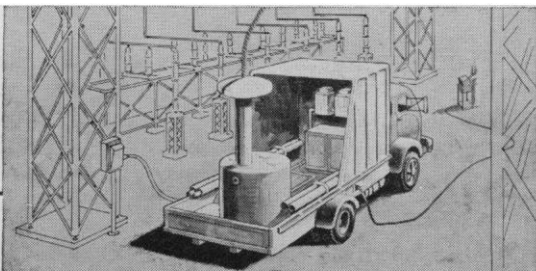
with newly developed components emerging from HVEC, will enable the accelerator to keep pace with future research requirements. The 8 MeV Tandem is convertible to single-stage ion or electron operation.

### ICT Electron Processing Systems

Developed primarily as high-current sources of electrons for industrial processing applications, these systems allow extreme flexibility of operation. Two models are available: 300 kv at 30 mA maximum beam current and 500 kv at 20 mA maximum beam current.



### Series 7 ICT Power Supplies



*ICT equipment has crossed many barriers to dc operation at high particle energies and currents. There is no indication that a ceiling exists to further advances of similar importance.*

Available with output ratings ranging from 240 kv at 80 mA to 600 kv at 20 mA, these highly stable power sources are suitable for use in high energy beam separator systems, r.f. transmission systems, plasma research and high voltage testing programs.

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## A Special Opportunity

One of President Johnson's first acts of initiative concerned the employment of women in government. At a cabinet meeting last January the President made it clear that he felt the government was wasting a "national resource" by treating women as second-class citizens. Since that time he has appointed or promoted more than 1000 women to jobs paying more than \$10,000 a year.

This action by President Johnson indicates alert recognition of a special opportunity for improving our society. We have been curiously unresponsive to the profound effects which the technological revolution has had on the lives of women. The median life expectancy of females has steadily increased. At the same time, family planning has become more effective. Not so long ago the median age of mothers at the birth of the last child was 32 years; it now has dropped to 26. The average mother of today is likely to live for 50 years after she gives birth to her last child—a drastic change from two generations ago!

In primary and secondary school, girls are often better students than boys. Thereafter many become preoccupied with acquiring a husband, and intellectual activities become secondary. After marriage a few happy years of family life ensue, but all too soon the children are in school and already more than half lost to the parents. When the children have left home, women in the middle 40's often find that they have little role in the world. They feel insecure and face 30 years of life without significant purpose.

In contrast, at this time the career mother blossoms. In the June issue of the *Ladies Home Journal*, Betty Friedan cites studies which indicate that "women who pursue a conscious goal for their life expressed in creative work reach the height of their human powers in the last half of their life, long after the so-called bloom of physical maturity." She further states, "I could see this as I went around the country seeking them out. They all looked ten to twenty years younger than they were—not in the embalmed sense of a woman who dyes, diets, and tries to hide her age with makeup, but in the very bloom of eyes and skin, and a kind of vitality that burned inside." Perhaps Miss Friedan exaggerates, but we have all seen vitality and bloom in older women who have broad intellectual interests.

At present there are many barriers against the full training and utilization of women in professions, especially in science. The early educational process takes mainly into account the brief span of active motherhood. Women are often discouraged from taking science courses in college. If they do obtain training, they are likely to be offered jobs not commensurate with their capacities. Once married, they have limited opportunities for part-time work during the years of motherhood. The income tax laws impose a discouraging additional burden. When their maternal responsibilities have ended, they are likely to find that their professional training is obsolescent and that it is not easy to get back into the mainstream of science. Removal of some or any of these obstacles could result in a substantial increase in the number of women active in science, with results beneficial both to society and to the individuals concerned.—PHILIP H. ABELSON

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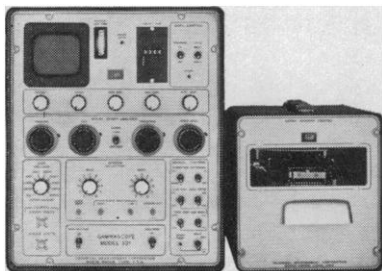
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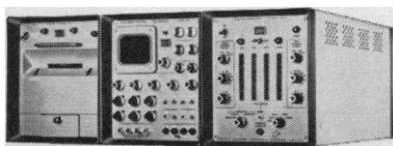
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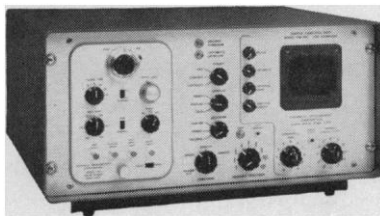


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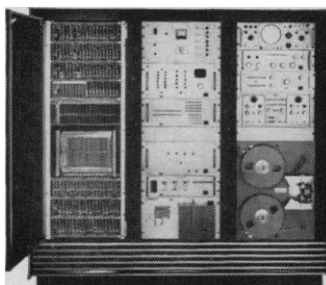
For field or laboratory applications in health physics, geological surveys, medical, chemical and physics laboratories where broad operating capabilities and compactness are important . . . **400-SERIES**, 400-channel pulse height analyzers with optional equipment for resolving and integrating data, with digital or analog readout. Models also available with inputs for Mössbauer effect studies.

## For General Nuclear Use



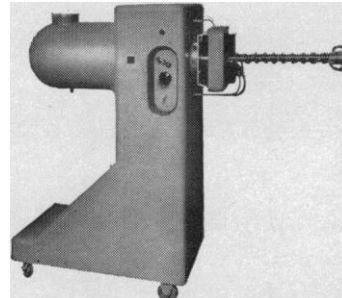
In 1959 TMC produced the first transistorized multichannel analyzer with plug-in logic . . . the **CN-110 256-channel pulse analyzer** still used throughout the world. Plug-in logic for the **CN-110** and the **CN-1024 (1024-channel model)** includes units for pulse height analysis, pulsed neutron studies, time-of-flight and for sampling a wide range of analog signals for digital conversion. A choice of readouts is available.

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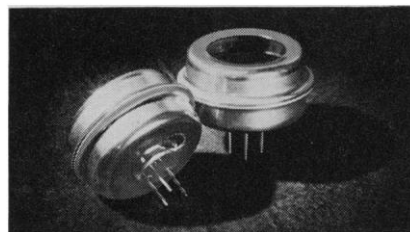
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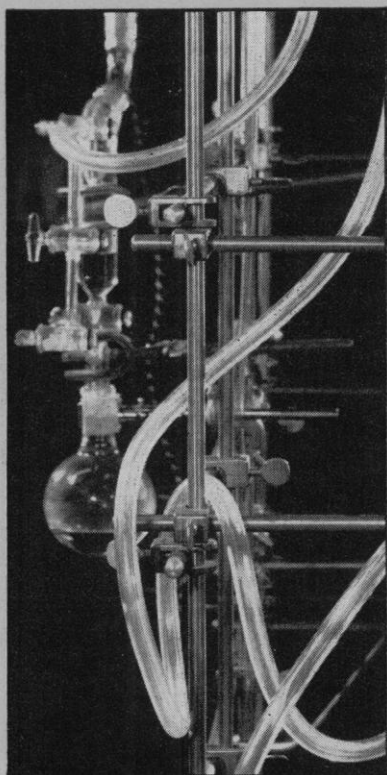
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ably, other types of  $\gamma$  can arise by a combination of inter- and intramolecular cross links. Since  $\beta$  and  $\gamma$  can also be made synthetically from noncross-linked collagen, the products are assigned modified terms, S- $\beta$  and S- $\gamma$ , with appropriate subscripts where the chain composition is known.

It is hoped that this nomenclature will be generally useful and will provide the clarity and flexibility needed as research in this area progresses. It is strongly urged that it be employed by everyone in the field.

The workshop was part of the Aging Research Program at Western Reserve and was supported in part by a grant from the National Institutes of Health (HD00669).

ROBERT R. KOHN  
HOWARD B. BENSUSAN  
LEROY KLEIN

Western Reserve University,  
Cleveland, Ohio

## Forthcoming Events

### July

20-22. **Magnetic Resonance** in Biological Systems, Boston, Mass. (R. G. Shulman, Bell Telephone Laboratories, Murray Hill, N.J.)

20-23. New Mexico Acad. of **General Practice**, Ruidoso. (H. L. Douglas, Box 767, Tatum, N.M.)

20-24. **International Diabetes Federation**, 5th congr., Toronto, Ont., Canada. (H. Best, Organizing Council, 477 Mt. Pleasant Rd., Toronto 7)

20-24. **Nuclear Radiation Effects**, technical conf., Seattle, Wash. (Inst. of Electrical and Electronics Engineers, Box A, Lenox Hill Station, New York, N.Y.)

20-24. **Semiconductor Physics**, intern. conf., Paris, France. (M. Balkanski, Laboratoire de Physique, Ecole Normale Supérieure, 24, rue Lhomond, Paris 5<sup>e</sup>)

20-25. **Catalysis**, 3rd intern. conf., Amsterdam, Netherlands. (D. M. Brouwer, c/o Badhuisweg 3, P.O. Box 3003, Amsterdam-N, Netherlands)

21-23. **Physiology and Experimental Psychology of Color Vision**, Ciba Foundation symp., London, England. (Ciba Foundation, 41 Portland Pl., London, W.1)

21-24. **American Malacological Union**, New Orleans, La. (M. C. Teskey, Rt. 2, Box 318, Marinette, Wis.)

21-28. **International Geographical Union**, 20th intern. congr., London, England. (T. H. Elkins, Royal Geographical Soc., Kensington Gore, London, S.W.7)

25-1. **Religion and Science**, 11th conf., Star Island, Portsmouth, N.H. (Religion and Science, 280 Newton St., Brookline, Mass. 02146)

26-29. **Photobiology**, 4th intern. congr., Oxford, England. (Blandford Site, Whiteknights Park, Reading, England)

26-31. **American Crystallographic As-**

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all these  
parameters**

- Load
- Displacement
- Hardness
- Spherical Radius
- Strain
- Surface Tension
- Pressure



ACTUAL SIZE

**\$150<sup>00</sup>**

(Inexpensive optional accessories are available.)

### The Basic Cell

The basic Universal Transducing Cell may be used as a load cell of  $\pm$ one ounce range or as a displacement gage of  $\pm$ 0.0015 inch range. Accuracy is  $\pm$ 0.15%.

### Accessories for Versatility

Inexpensive attachments are available to reduce the load range to 0.1 ounce or to extend it to 1, 10, 100 or more pounds. Other accessories extend the displacement range up to one inch.

From time to time additional attachments will be available to allow the measurement of many other physical parameters, such as hardness, spherical radius, strain, surface tension, pressure, etc.

### Principle of Operation

The Statham Universal Transducing Cell is basically an unbonded strain gage using the Statham patented Zero-length principle. Being unbonded, very little force or displacement is required to actuate the strain-sensitive filaments, and because of the unique Zero-length design, the filaments cannot be broken by over-travel. The cell can withstand any overload tolerable to its structural parts.

The bridge circuit is purely resistive and operates on direct current; no other transducing system is comparable in accuracy.

### Companion Readout System

A compact readout instrument, which provides a self-contained power supply, bridge balance, and amplifier, is available for use with the Statham Universal Transducing Cell.



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Los Angeles 64, California  
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soc., Bozeman, Mont. (B. Post, Brooklyn Polytechnic Inst., Brooklyn, N.Y.)

26-31. **Mineralogical Soc. of America**, Bozeman, Mont. (G. Switzer, MSA, U.S. Natl. Museum, Washington, D.C. 20560)

26-31. **Pharmacology**, Teachers' Seminar, Univ. of Connecticut, Storrs. (M. H. Malone, School of Pharmacy, Univ. of Connecticut, Storrs)

26-1. **Biochemistry**, 6th intern. congr., New York, N.Y. (R. A. Harte, 6th Intern. Biochemistry Congr., 9650 Wisconsin Ave., NW, Washington, D.C. 20014)

27-28. International **Cartographic Assoc.**, 2nd general assembly, London, England. (D. E. Imhof, Kartographisches Institut, Eidgenössische Technische Hochschule, Zurich, Switzerland)

27-30. Technical Assoc. of the **Pulp and Paper Industry**, engineering conf., Seattle, Wash. (TAPPI, 360 Lexington Ave., New York, N.Y. 10017)

27-31. American **Dietetic Assoc.**, 47th annual, Portland, Ore. (ADA, 620 N. Michigan Ave., Chicago, Ill. 60611)

27-21. **Engineering Foundation Research Confs.** Andover, N.H. (United Engineering Center, 345 E. 47 St., New York 17)

30-1. International Soc. for **Human and Animal Mycology**, 3rd, Edinburgh, Scotland. (R. Vanbreuseghem, Inst. of Tropical Medicine, 155 rue National, Antwerp, Belgium)

#### August

2-3. **Ophthalmic Biochemistry**, first intern. conf., Woods Hole, Mass. (S. Lerman, Univ. of Rochester, Rochester, N.Y.)

2-4. American Assoc. of **Colleges of Pharmacy**, New York, N.Y. (C. W. Bliven, 1507 M St., NW, Washington, D.C. 20005)

2-6. National **Medical Assoc.**, 69th annual, Washington, D.C. (Administrative Secretary, 520 W St., NW, Washington, D.C. 20001)

2-7. American **Pharmaceutical Assoc.**, 111th annual, New York, N.Y. (G. B. Griffenhagen, Div. of Communications, 2215 Constitution Ave., NW, Washington, D.C.)

2-8. **Applied Psychology**, 15th intern. conf., Ljubljana, Yugoslavia. (B. Petz, Inst. of Psychology of Zagreb, Djure Salaja b.b., Zagreb, Yugoslavia)

2-8. **Reactivity of Solids**, 5th intern. symp., Munich, Germany. (B. Stuke, Physikalische-Chemisches Institut, Sophienstr. 11, Munich)

3-5. Compounds of Interest in **Nuclear Reactor Technology**, intern. symp., Boulder, Colo. (J. T. Waber, Los Alamos Scientific Laboratories, P.O. Box 1663, Los Alamos, N.M. 87544)

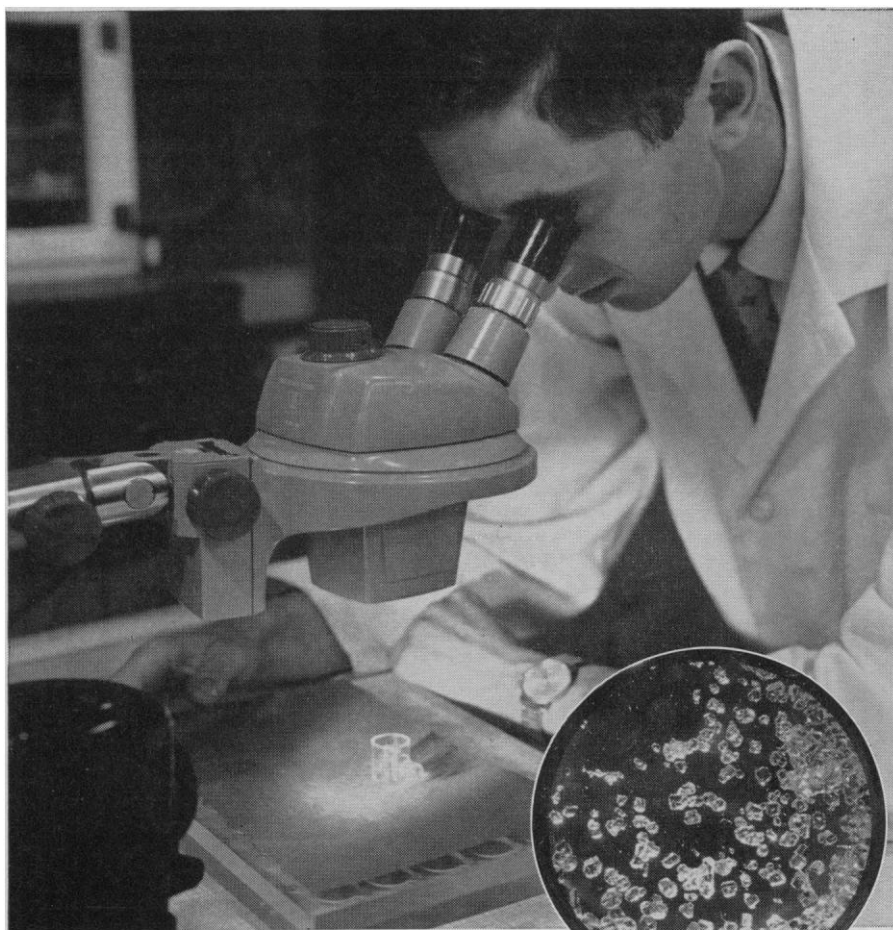
3-7. Instrument Soc. of America, **instrumentation conf.**, Geneva, N.Y. (H. S. Kindler, 530 William Penn Place, Pittsburgh, Pa.)

3-7. World Federation for **Mental Health**, 17th annual, Bern, Switzerland. (F. Cloutier, 1, rue Gevray, Geneva, Switzerland)

3-8. International **Years of the Quiet Sun**, regional symp., Buenos Aires, Argentina. (J. G. Roederer, Facultad de Ciencias, Perú 272, Buenos Aires)

3-10. **Anthropologists and Ethnologists**,

10 JULY 1964



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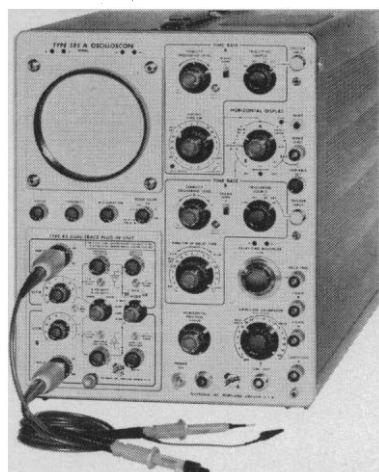
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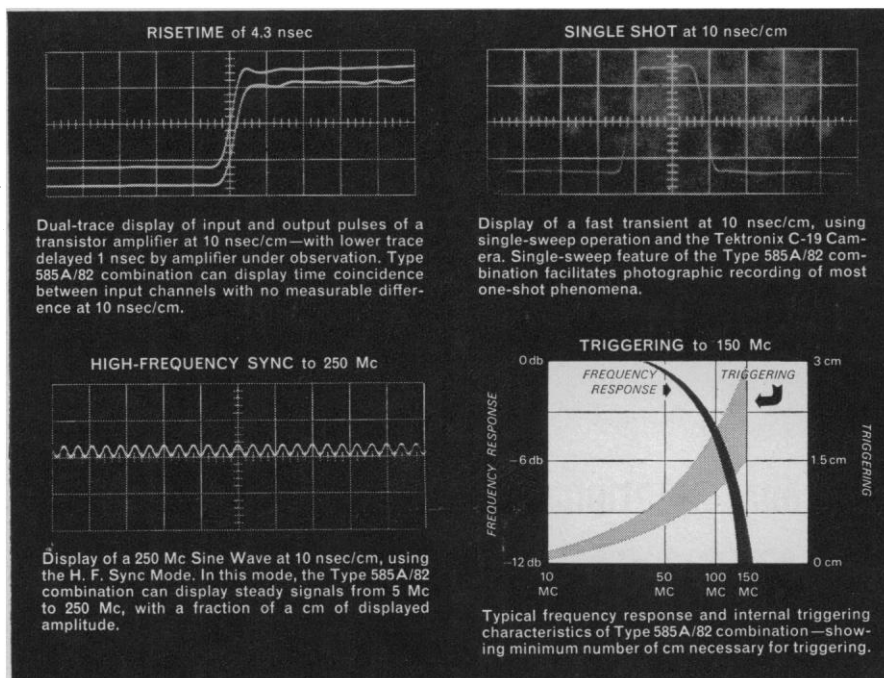
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7th world conf., Moscow, U.S.S.R. (American Anthropological Assoc., 1530 P St., NW, Washington, D.C. 20005)

3-12. **Botanical Congr.**, 10th intern., Edinburgh, Scotland. (Miss S. C. Penny, 5 Hope Park Sq., Edinburgh 8)

4-7. **Poultry Science Assoc.**, annual, Minneapolis, Minn. (E. L. Johnson, Dept. of Poultry Science, Univ. of Minnesota, St. Paul 55101)

4-17. **Methods of Hydrological Forecasting**, 3rd inter-regional seminar, World Meteorological Organization/UN Economic Commission for Asia and the Far East, Bangkok, Thailand. (WMO, Secretariat, Geneva, Switzerland)

5-7. **Sonic Investigations on Internal Damping in Solids**, symp., London, England (Administration Assistant, Institute of Physics and the Physical Society, 47 Belgrave Square, London, S.W.1)

5-12. **Atmospheric Radiation**, symp., World Meteorological Organization/Intern. Union of Geodesy and Geophysics, Leningrad, U.S.S.R. (Secretariat, WMO, Geneva, Switzerland)

5-15. **High Energy Physics**, 12th intern. conf., Dubna, U.S.S.R. (M. L. Goldberger, Commission on High Energy Nuclear Physics, IUPAC, Princeton Univ., Princeton, N.J. 08540)

6-11. **American Podiatry Assoc.**, New York, N.Y. (F. A. Kalbacher, American Podiatry Assoc., 3301 16th St., NW, Washington, D.C. 20010)

7-14. **Scientific Study on Mental Retardation**, intern. congr., Copenhagen, Denmark. (A. Dupont, Statens Andsvageforsorg, Nyropsgade 28.2, Copenhagen 5)

9-12. **Heat Transfer**, 7th natl. conf., Cleveland, Ohio. (W. Chenoweth, American Inst. of Chemical Engineers, 345 E. 47 St., New York 17)

9-13. **American Soc. of Animal Science**, Knoxville, Tenn. (J. E. Oldfield, Dept. of Animal Science, Oregon State Univ., Corvallis)

9-14. **South American Union of Engineers' Federations**, 10th conv., Rio de Janeiro, Brazil. (Federação Brasileira de Associações de Engenheiros, Caixa Postal 1229, Rio de Janeiro)

10-14. **Structural Developments in Inorganic Chemistry**, New Hampton, N.H. (W. G. Parks, Dept. of Chemistry, Univ. of Rhode Island, Kingston)

10-15. **Pan American Federation of Engineering Socs.**, 8th biennial conv., Caracas, Venezuela. (L. K. Wheelock, Engineers Joint Council, 345 E. 47 St., New York 10017)

11-14. **American Soc. for Pharmacology and Experimental Therapeutics**, San Francisco, Calif. (H. G. Mandel, George Washington Univ. Medical School, Washington, D.C. 20005)

12-14. **Ballistic Missile and Space Technology**, 9th symp., U.S. Naval Training Center, San Diego, Calif. (C. Morrow, Aerospace Corp., P.O. Box 95085, Los Angeles, Calif. 90045)

12-14. **Galaxies**, preliminary conf., Uppsala, Sweden. (T. Page, Van Vleck Observatory, Wesleyan Univ., Middletown, Conn. 06457)

12-14. **X-Ray Analysis Applications**, 13th annual conf., Denver, Colo. (W. G.

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Mueller, Metallurgy Div., Denver Research Inst., Denver 80210)

13-15. International Soc. for Horticultural Science, Edinburgh, Scotland. (G. de Bakker, Le v.d. Boschstraat 4, The Hague, Netherlands)

16-21. Histochemistry and Cytochemistry, intern. congr., Frankfurt am Main, Germany. (T. H. Schiebler, Anatomisches Institut der Universität, Koellikerstr. 6, 87 Würzburg, Germany)

16-23. Latin American Schools of Medicine, 4th conf., Pocos de Caldas, Brazil. (O. Versiani Caldeira, Univ. of Minas Gerais Medical School, Belo Horizonte, Minas Gerais, Brazil)

16-24. Human Economy, conf., Inst. of Paper Chemistry, Appleton, Wis. (A. N. McLeod, IPC, Appleton)

17-20. American Assoc. of Clinical Chemists, 16th natl., Boston, Mass. (F. F. Ronan, AACC, 19 Bay State Rd., Boston 15)

17-20. Natural Ultra Low Frequency Electromagnetic Fields, symp., Boulder, Colo. (W. H. Campbell, National Bureau of Standards, Boulder)

17-21. Combustion, 10th intern. symp., Cambridge, England. (Combustion Inst., 986 Union Trust Bldg., Pittsburgh 19, Pa.)

17-21. Cryogenic Engineering, conf., Philadelphia, Pa. (K. D. Timmerhaus, Engineering Research Center, Ketchum 129, Univ. of Colorado, Boulder)

17-21. Simulation in Space Technology, Blacksburg, Va. (F. J. Maher, Virginia Polytechnic Inst., Blacksburg)

17-22. International Astronomical Union, symp., Thessaloniki, Greece. (Maj. B. R. Agins, Air Force Office of Scientific Research, SRMA, Washington, D.C. 20333)

17-22. Cardiology, 4th European congr., Prague, Czechoslovakia. (H. Kafka, Karlovo nám. 32, Prague 2)

17-22. Endocrinology, 2nd intern. congr., London, England. (A. S. Mason, London Hospital, Whitechapel, London, E.1)

17-22. Social Psychiatry, 1st intern. congr., London, England. (J. Bierer, 7 Holycroft Ave., London, N.W.3)

17-28. Molecular Biophysics, intern. inst., Squaw Valley, Calif. (Prof. Weissbluth, Biophysics Laboratory, Stanford Univ., Stanford, Calif.)

18-20. International Assoc. of Milk and Food Sanitarians, Portland, Ore. (H. L. Thomasson, P.O. Box 437, Shelbyville, Ind.)

19-21. Physiology of Digestion in the Ruminant, 2nd intern. symp., Ames, Iowa. (R. W. Dougherty, Box 70, Ames)

20-21. National Council of Teachers of Mathematics, Minneapolis, Minn. (J. D. Gates, NCTM, 1201 16th St. NW, Washington, D.C. 20036)

22. American Inst. of Ultrasonics in Medicine, 9th annual, Boston, Mass. (W. J. Fry, Biophysical Research Laboratory, Univ. of Illinois, Urbana)

22-24. History of Astronomy, symp., Hamburg, Germany. (B. Sticker, Institut für Geschichte der Naturwissenschaften, Universität Hamburg, Hartnungstr. 5, 2 Hamburg 13, Germany)

22-28. American Soc. of Human Genetics, Boulder, Colo. (S. H. Boyer, Johns Hopkins Hospital, Baltimore, Md.)

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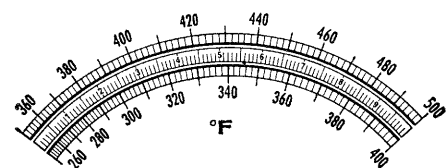


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23. American Assoc. of **Electromyography**, annual, Boston, Mass. (M. K. Newman, 16861 Wyoming Ave., Detroit, Mich. 48221)

23-26. American **Phytopathological Soc.**, Lafayette, Ind. (J. R. Shay, Purdue Univ., Lafayette)

23-26. **Soil Conservation Soc.** of America, 19th annual, Jackson, Miss. (SCS, 7515 Northeast Ankeny Rd., Ankeny, Iowa)

23-28. American Inst. of **Biological Sciences**, annual, Boulder, Colo. (AIBS, 2000 P St., NW, Washington, D.C. 20036)

The following societies will hold meetings in conjunction with the AIBS meeting:

American Bryological Society  
American Fern Society  
American Fisheries Society  
American Microscopical Society  
American Society for Horticultural Science

American Society of Human Genetics  
American Society of Parasitologists  
American Society of Plant Physiologists  
American Society of Plant Taxonomists  
American Society of Zoologists  
Biometric Society ENAR-WNAR  
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Genetics Society of America  
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Phycological Society of America  
Society for Industrial Microbiology  
Society for the Study of Development and Growth  
Society of Nematologists  
Society of Protozoologists  
Tomato Genetics Cooperative

23-28. American Congr. of **Physical Medicine and Rehabilitation**, Boston, Mass. (G. Gullickson, Jr., 30 N. Michigan, Chicago, Ill.)

23-28. **Conservation Education**, conf., Tacoma, Wash. (C. Boyce, Office of the Superintendent of Public Instruction, Olympia, Wash.)

24-26. American Inst. of **Aeronautics and Astronautics**, Los Angeles, Calif. (AIAA, 1290 Sixth Ave., New York, N.Y.)

24-26. Society for **Cryobiology**, annual, Washington, D.C. (V. P. Perry, Tissue Bank Dept., U.S. Naval Medical School, National Naval Medical Center, Bethesda, Md. 20014)

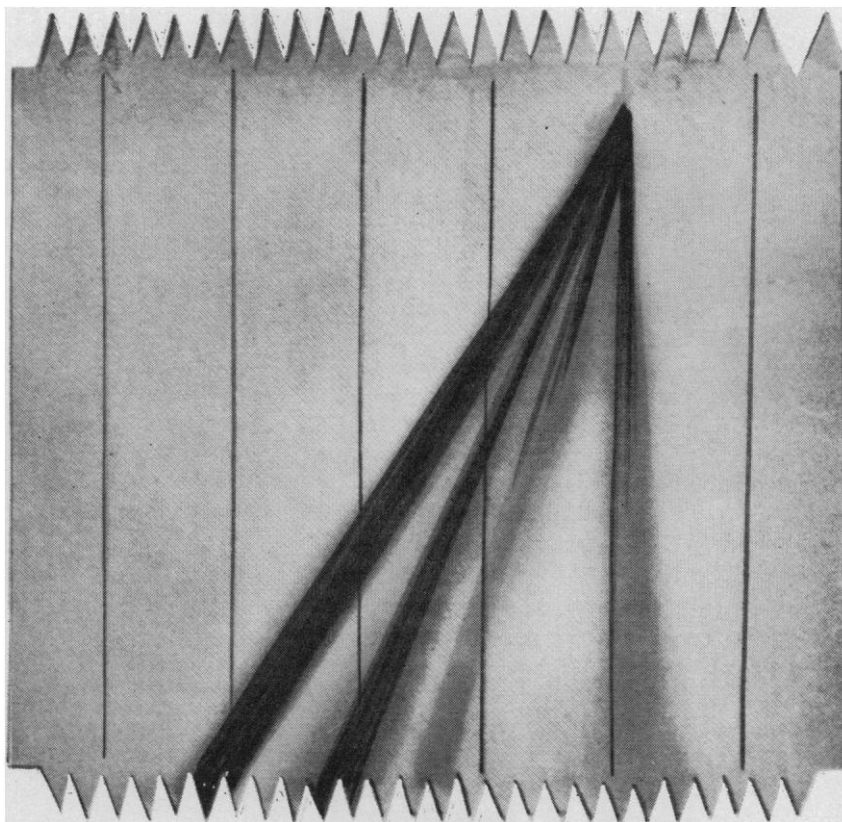
24-26. **Education in the Nuclear Power Era**, conf., Gatlinburg, Tenn. (M. L. Nelson, Education Div., Oak Ridge Natl. Laboratory, P.O. Box 117, Oak Ridge, Tenn.)

24-26. **Mathematical Assoc.** of America, summer meeting, Univ. of Massachusetts, Amherst. (H. M. Gehman, Univ. of Buffalo, Buffalo 14, N.Y.)

24-27. **Biological Photographic Assoc.**, annual, New York, N.Y. (C. H. Weiss, 81 Bedford St., New York 14)

24-27. American **Hospital Assoc.**, Chicago, Ill. (E. L. Crosby, 840 N. Lake Shore Dr., Chicago 11)

24-27. **Toxicology and Occupational Medicine**, 4th inter-American conf., Miami Beach, Fla. (W. Machle, Univ. of

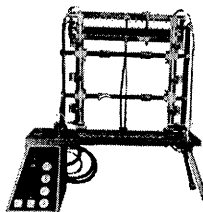


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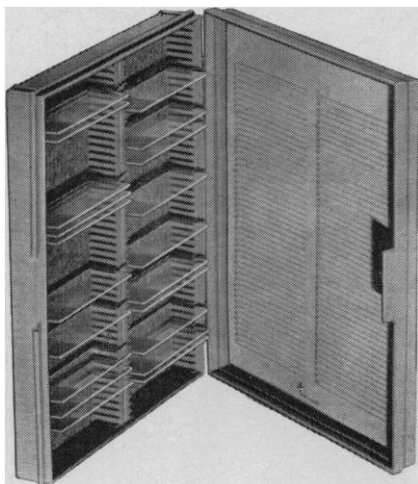


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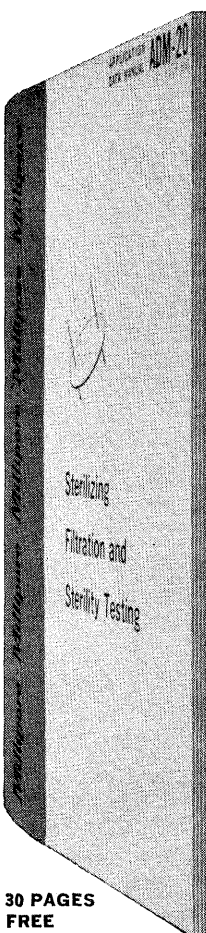
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24-28. Astrodynamics Guidance and Control, conf., Los Angeles, Calif. (K. Watanabe, 4731 B Engineering Building III, University of California, Los Angeles 24)

24-28. American Astronautical Soc., military space applications symp., Stanford, Calif. (AAS, 516 Fifth Ave., New York, N.Y.)

24-28. Society for Industrial and Applied Mathematics, Amherst, Mass. (W. S. Dorn, T. J. Watson Research Center, I.B.M., P.O. Box 218, Yorktown Heights, N.Y.)

24-28. Scandinavian Mathematical Congr., Copenhagen, Denmark. (Secretariat, The Congress, c/o Mathematical Inst., H. C. Ørsted Inst., Universitetsparken 5, Copenhagen Ø)

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24-28. Preventive Cardiology, first intern. conf., Burlington, Vt., (W. Raab, Preventive Heart Reconditioning Foundation, 206 Summit St., Burlington, Vt.)

24-28. Water Pollution Research, 2nd intern. conf., Tokyo, Japan. (Water Pollution Control Federation, 4435 Wisconsin Ave., Washington, D.C. 20016)

24-29. Psychotherapy, 6th intern. congr., London, England. (F. Pannell, The Congress, 11 Whitehall Ct., London, S.W.1)

24-29. Preparation and Biomedical Application of Labeled Molecules, Venice, Italy. (C. Colombini, Center of Nuclear Chemistry, Univ. of Padova, Via Loredan 6, Padova, Italy)

24-3. International Assoc. of Agricultural Economists, 12th triennial conf., Lyons, France. (French Organization Committee of the Conference, 4, rue de Lafayette, Paris 16°, France)

25-27. Association for Computing Machinery, 19th annual, Philadelphia, Pa. (H. S. Bright, Philco Computers, Willow Grove, Pa.)

25-28. Western Electronics Show and Conv. (WESCON), Inst. of Electrical and Electronics Engineers, summer meeting, Los Angeles, Calif. (R. R. Bennett, Suite 1920, 3600 Wilshire Blvd., Los Angeles)

25-29. Audiology, 7th intern. congr., Copenhagen, Denmark. (H. W. Ewertsen, c/o State Hearing Centre, 7 D. Tvaergade, Copenhagen K)

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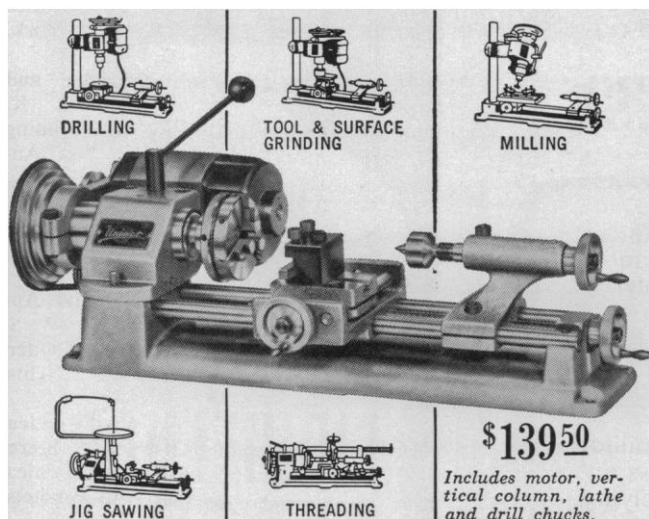
26-2. British Association for the Advancement of Science, 126th annual, Southampton, England. (BAAS, 3 Sanctuary Bldgs., London, S.W.1, England)

26-2. Logic, Methodology, and Philosophy of Science, intern. conf., Jerusalem, Israel. (Y. Bar-Hillel, Hebrew Univ., Jerusalem)

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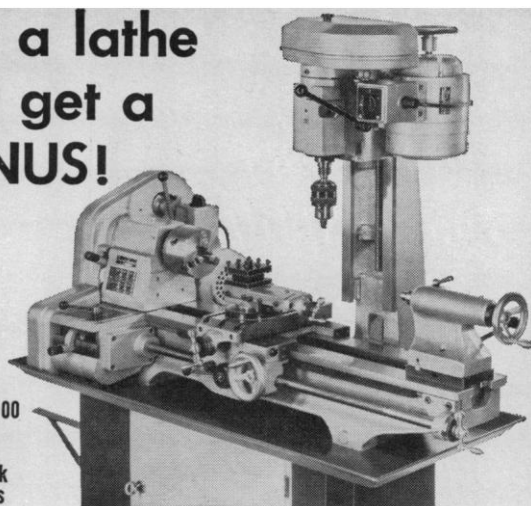
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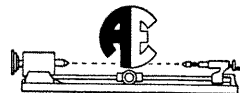
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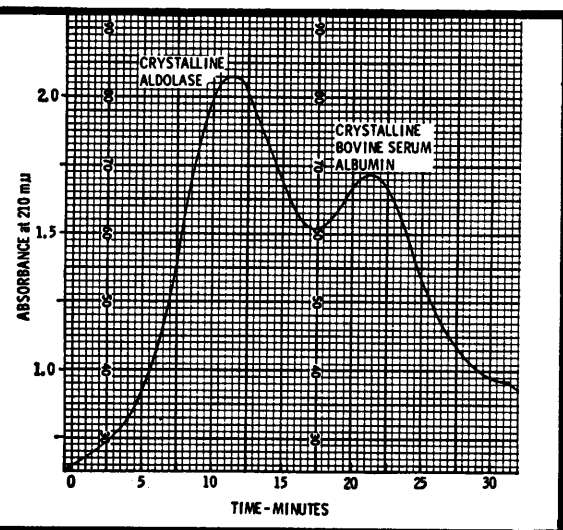


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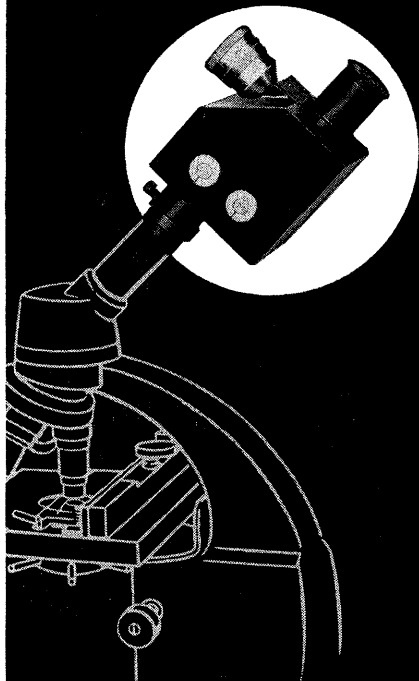
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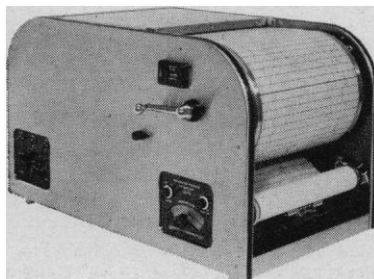
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27-28. **Activation Analysis**, Glasgow, Scotland. (J. M. A. Lenihan, Western Regional Hospital Board, 9 W. Greham St., Glasgow, C.4)

27-29. Pacific Slope **Biochemical Conf.**, San Francisco, Calif. (M. P. Gordon, Dept. of Biochemistry, Univ. of Washington, Seattle 98105)

27-29. **Reactive Intermediates in Organic Chemistry**, symp., Quebec City, P.Q., Canada. (C. R. Engel, Faculté des Sciences, Université Laval, Quebec City)

28-3. **Neurology**, 8th intern. congr., Vienna, Austria. (H. Hoff, Medizinische Fakultät, Neurologische und Psychiatrische Abteilung, Vienna 9)

29. **Gravity Research Foundation**, annual, New Boston, N.H. (The Foundation, Gravity Village, New Boston)

29-5. International **Epidemiological Assoc.**, 4th intern. meeting, Princeton, N.J. (L. Breslow, Div. of Preventive Medical Services, California Dept. of Public Health, 2151 Berkeley Way, Berkeley 95704)

30-2. Electronic Properties and Applications of **Solid-Solid Interfaces**, Boston, Mass. (F. S. Gardner, Office of Naval Research, 495 Summer St., Boston, Mass. 02110)

30-3. **Illuminating Engineering Soc.**, Miami Beach, Fla. (A. D. Hinckley, IES, 345 E. 47 St., New York 10017)

30-4. American **Chemical Soc.**, fall natl. meeting, Chicago, Ill. (A. H. Emery, 1155 16th St., NW, Washington, D.C.)

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30-4. American **Ornithologists' Union**, Lawrence, Kan. (L. H. Walkinshaw, 1703 Wolverine Tower, Battle Creek, Mich.)

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30-5. **Cell Biology**, 11th intern. congr., Providence, R.I. (J. W. Wilson, Dept. of Biology, Brown Univ., Providence)

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31-2. **Electric Propulsion**, 4th conf., Philadelphia, Pa. (J. M. Sellen, Jr., Physical Research Div., TRW/Space Technology Laboratories, One Space Park, Redondo Beach, Calif.)

31-3. American **Psychopathological Assoc.**, Birmingham, Ala. (Secretary, APA, 503 Medical Arts Bldg., Wilmington, Del.)

31-3. American **Sociological Assoc.**, 59th annual, Montreal, Canada. (G. M. Sykes, 1755 Massachusetts Ave., NW, Washington, D.C. 20036)

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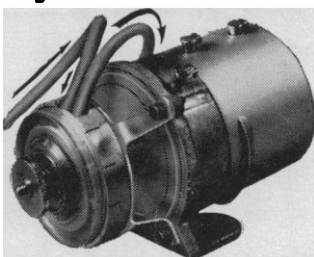
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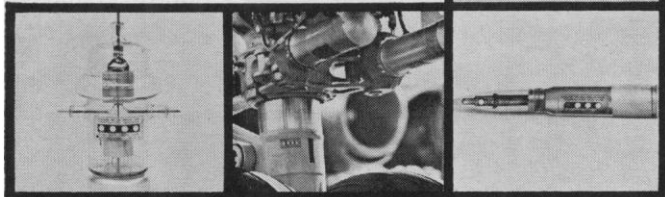
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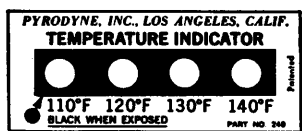
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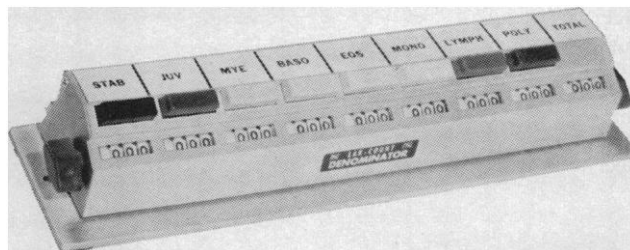


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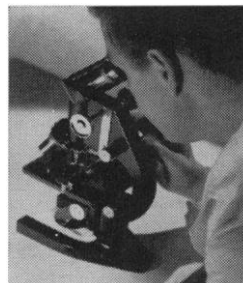
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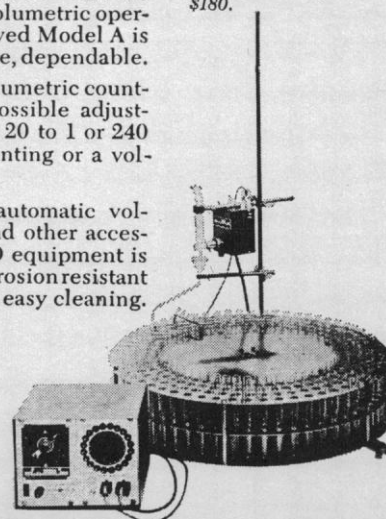
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31-4. **British Assoc. of Paediatric Surgeons**, 11th congr., Rotterdam, Netherlands. (Secretariat, c/o Holland Organizing Centre, 16, Lange Voorhout, The Hague, Netherlands)

31-9. **Peaceful Uses of Atomic Energy**, 3rd intern. conf., Geneva, Switzerland. (J. Gaunt, United Kingdom Atomic Energy Agency, 11 Charles II St., London, S.W.1, England)

31-9. **Soil Science**, intern. congr., Bucharest, Rumania. (N. Giosan, Comite Roumain d'Organisation, The Congress, Bucharest 33)

#### September

1-4. **AAAS, Alaska Div.**, College. (G. Dahlgren, Dept. of Chemistry, Univ. of Alaska, College)

1-4. **Aerospace Power Systems**, 3rd biennial conf., Philadelphia, Pa. (American Inst. of Aeronautics and Astronautics, 2 E. 64 St., New York, N.Y. 10021)

1-4. **Gas**, 9th intern. conf., The Hague, Netherlands. (R. H. Touwaide, General Secretary, Intern. Gas Union, 4, Avenue Palmerston, Brussels, Belgium)

1-5. **Biological Standardization**, 9th intern. congr., Lisbon, Portugal. (C. de Oliveira, c/o Inst. Bacteriologico Camara Pestana, Rua do Instituto Bacteriologico, Lisbon)

1-5. **Nuclear Magnetic Resonance and Relaxation in Solids**, intern. conf., Louvain, Belgium. (L. Van Gerven, Naamsestraat 61, Louvain)

1-8. **Photographic and Spectroscopic Optics**, conf., Tokyo and Kyoto, Japan. (H. Kubota, Science Council of Japan, Ueno Park, Tokyo)

2-4. **Structure and Properties of Coordination Compounds**, Bratislava, Czechoslovakia. (Czechoslovak Chemical Soc., Hradcanske nam. 12, Prague 1)

3-5. **Czechoslovak Orthopedic Congr.**, Prague. (M. Jaros, Libuslna 5, Prague 2)

3-8. **International Soc. of Blood Transfusion**, 10th biennial congr., Stockholm, Sweden. (C. Högman, P.O. Box 434, Stockholm 1)

4-5. **Great Basin Anthropological Conf.**, Reno, Nev. (W. L. d'Azevedo, Desert Research Inst., Univ. of Nevada, Reno)

4-6. **Gout and Uric Lithiasis**, intern. congr., Evian, France. (R. J. Réveillaud, 4 Boulevard de la Bastille, Paris 12)

4-6. **Parapsychological Assoc.**, 7th annual, Oxford, England. (K. R. Rao, 6847 College Station, Durham, N.C.)

4-6. **American Philosophical Assoc.**, Pacific Div., Seattle, Wash. (L. E. Hahn, Dept. of Philosophy, Southern Illinois Univ., Carbondale)

4-9. **American Psychological Assoc.**, Los Angeles, Calif. (A. H. Brayfield, 1333 16th St. NW, Washington, D.C.)

6. **Spacesuits and Human Performance**, symp., Soc. of Engineering Psychologists, Los Angeles, Calif. (N. M. Molesko, 4918 Castana Ave., Lakewood, Calif.)

6-7. **International Acad. of the History of Medicine**, Basel, Switzerland. (N. Poynter, c/o Wellcome Historical Medical Library, 183 Houston Rd., London, N.W.1, England)

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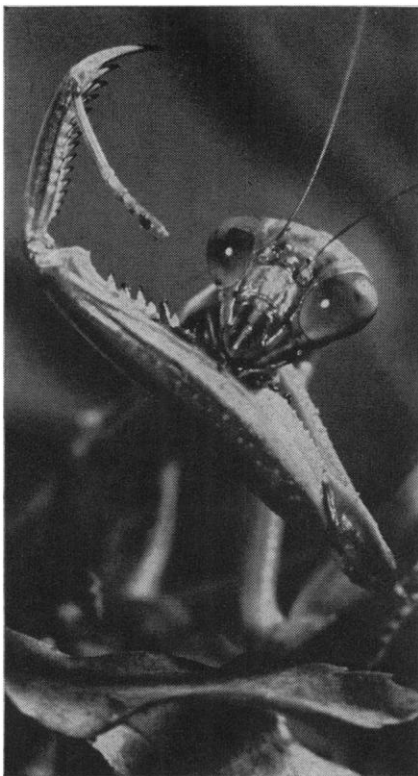
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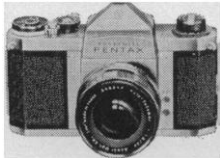
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6-11. **Physical Medicine**, 4th intern. congr., Paris, France. (J. P. Held, French Natl. Soc. of Physical Medicine, 15, rue de l'Ecole de Medicine, Paris 6°)

6-13. **Animal Reproduction and Artificial Insemination**, 5th intern. congr., Trento, Italy. (T. Bonadonna, Via Monte Ortigara 35, Trento)

7-9. **Psychometric Soc.**, Los Angeles, Calif. (W. G. Mollenkopf, Procter and Gamble, P.O. Box 599, Cincinnati 1, Ohio)

7-10. **High-Energy Electrons**, symp., European Assoc. of Radiology, Montreux, Switzerland. (P. L. Cova, Casa di Cura S. Ambrogio, Via Faravalli 16, Milan, Italy)

7-11. **Coordination Chemistry**, 8th intern. conf., Vienna, Austria. (V. Gutmann, Verein Österreichischer Chemiker, 1 Eschenbachgasse 9, Vienna 1)

7-11. **Magnetism**, intern. conf., Nottingham, England. (Deputy Secretary, Inst. of Physics and the Physical Soc., 47 Belgrave Sq., London, S.W.1, England)

7-11. **Microwaves, Circuit Theory, and Information Theory**, intern. conf, Tokyo, Japan. (K. Morita, Inst. of Electrical Communication Engineers of Japan, 2-8 Fujimicho, Chiyoda-ku, Tokyo, Japan)

7-12. **Astronautics**, 15th intern. congr., Warsaw, Poland. (Intern. Astronautical Federation, 250 rue St. Jacques, Paris 5°, France)

7-12. **Laurentian Hormone Conf.**, Bolton Landing, N.Y. (J. C. Foss, 222 Maple Ave., Shrewsbury, Mass. 01545)

7-12. **Odontological Federation of Central America and Panama**, 7th congr., Guatemala City, Guatemala. (E. Estrada H., Apartado Postal 513, Guatemala City)

7-12. **Pharmaceutical Sciences**, 24th intern. congr., Amsterdam, Netherlands. (Congress Secretariat, 4 Sint Agnietenstraat, Amsterdam-C)

7-12. **Surface Active Substances**, 4th intern. congr., Brussels, Belgium. (Secretary General, The Congress, 49, Square Marie-Louis, Brussels 4)

7-19. **Photogrammetry**, 10th intern. congr., Lisbon, Portugal. (A. Paes Clemente, Intern. Soc. for Photogrammetry, c/o Instituto Geografico e Cadastral, Praça da Estrela, Lisbon)

8-10. **Gas Chromatography**, 5th intern. symp., Brighton, England. (Organizing Office, 61 New Cavendish St., London, W.1, England)

8-10. **Nonsteroidal, Antiinflammatory Drugs**, intern. symp., Milan, Italy. (S. Garattini, Istituto di Ricerche Farmacologiche "Mario Negri," Via Eritrea 62, Milan)

9-11. **Applied Spectroscopy and Analytical Chemistry**, 11th symp., Ottawa, Ontario, Canada. (Chemical Inst. of Canada, 48 Rideau St., Ottawa 2)

9-11. **Kinetics of Pyrolytic Reactions**, Ottawa, Ontario, Canada. (K. J. Laidler, Dept. of Chemistry, Univ. of Ottawa, Ottawa 2)

9-11. **European Organization for Quality Control**, 8th conf., Baden-Baden, Germany. (Secretariat, Weena 700, Rotterdam 3, Netherlands)

9-11. **International College of Surgeons**, North American Federation, congr., Chicago, Ill. (Secretariat, 1516 Lake Shore Dr., Chicago 60610)

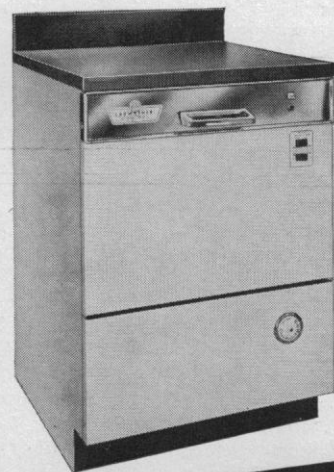
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9-12. **Society of General Physiologists**, Woods Hole, Mass. (R. Milkman, Dept. of Zoology, Syracuse Univ., Syracuse, N.Y. 13210)

9-12. **American Political Science Assoc.**, annual, Chicago, Ill. (The Association, 1726 Massachusetts Ave., NW, Washington, D.C. 20036)

10-13. **General Practice**, 6th intern. congr., Salzburg, Austria. (K. Engelmeier, Intern. College of Medical Practice, Lange Str. 21a, 474 Oelde, Germany)

11-12. **Diseases Common to Animals and Man**, annual West-Northcentral conf., Omaha, Nebr. (N. G. Miller, College of Medicine, Univ. of Nebraska, Omaha 5)

11-12. **Scandinavian Neurosurgical Soc.**, 18th annual, Oslo, Norway. (K. Kristiansen, Neurosurgery Dept., Ulleval Sykehus, Oslo)

11-14. **German Soc. of Metallurgy and Mining**, general assembly, Hanover. (Gesellschaft Deutscher Metallhütten und Bergleute, Paul-Ernststr. 10, Clausthal-Zellerfeld, Germany)

13-16. **Electrical Insulation**, conf., New York, N.Y. (J. Lenkey, Anaconda Wire and Cable Co., 605 Third Ave., New York, N.Y. 10016)

13-16. **American Fisheries Soc.**, Atlantic City, N.J. (E. A. Seaman, 1404 New York Ave., Washington, D.C.)

13-17. **Power**, World conf., Lausanne, Switzerland. (U.S. Natl. Committee, World Power Conf., c/o Engineers Joint Council, 345 E. 47 St., New York 10017)

14-15. **Chromatography**, 3rd intern. symp., Brussels, Belgium. (Belgian Soc. of Pharmaceutical Sciences, rue Archimede 11, Brussels 4)

14-15. **Nutrition**, Canadian-U.S. conf., Toronto, Ont., Canada. (J. M. R. Beveridge, Dept. of Biochemistry, Queen's Univ., Kingston, Ont.)

14-16. **Military Electronics (MIL-ECON 8)**, intern. conf., Inst. of Electrical and Electronics Engineers, Washington, D.C. (H. M. O'Bryan, Bendix Corp., 1730 K St., NW., Washington, D.C. 20006)

14-17. **International Assoc. of Milk and Food Sanitarians**, Hartford, Conn. (H. L. Thomasson, P.O. Box 437, Shelbyville, Ind.)

14-18. **Aeronautical Research and Development**, NATO advisory group, 14th general assembly, Lisbon, Portugal. (The Assembly, 64, rue de Varenne, Paris 7<sup>e</sup>, France)

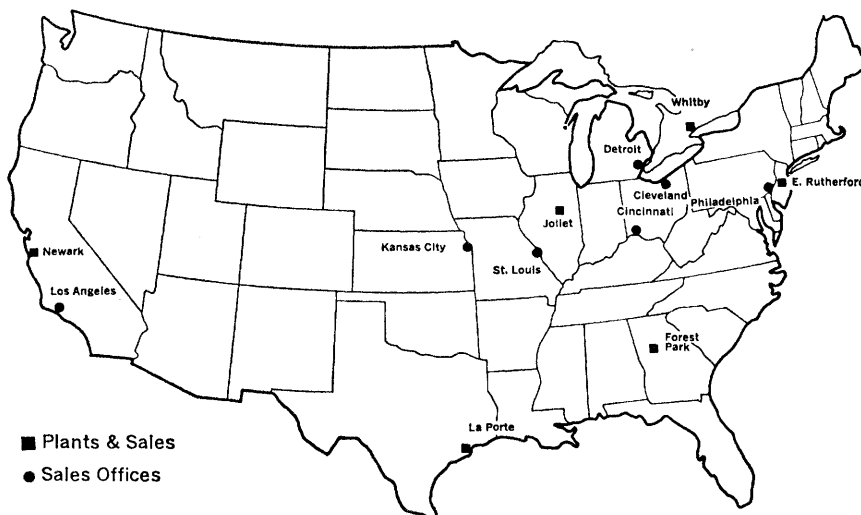
14-18. **Analogue Computation**, 4th intern., Brighton, England. (E. L. Harder, Westinghouse Electric Corp., East Pittsburgh, Pa.)

14-18. **Aviation and Space Medicine**, intern. congr., Dublin, Ireland. (S. O'Quigley, Aer Lingus—Irish International Airlines, Dublin Airport, Dublin, Ireland)

14-18. **Mass Spectrometry**, intern. conf., Paris, France. (Secretariat, Groupement pour l'Avancement des Méthodes Spectrographiques, 1, rue Gaston-Boissier, Paris 15<sup>e</sup>)

14-18. **Microwave Tubes**, 5th intern. congr., Paris, France. (Secretariat, B.P. no. 20, Bagneux, Seine, France)

14-18. **Operational Research and the Social Sciences**, intern. conf., Cambridge, England. (Operational Research Soc., 64 Cannon St., London E.C.4, England)



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14-18. **Radio Meteorology**, world conf., Boulder, Colo. (J. W. Herbstreit, Central Radio Propagation Laboratory, National Bureau of Standards, Boulder 80301)

14-18. **Weather Radar**, 11th conf., Boulder, Colo. (J. W. Herbstreit, Central Radio Propagation Laboratory, National Bureau of Standards Boulder Research Laboratories, Boulder)

14-19. **Ceramics**, 9th intern. congr., Brussels, Belgium. (European Assoc. for Ceramics, 13, rue des Poissoniers, Brussels 1)

14-19. **Instruments and Measurements**, 6th intern. conf., Stockholm, Sweden. (RESO Cong. Service, Stockholm 1)

15-17. **Armed Forces Management Assoc.**, 11th natl. conf., Detroit, Mich. (The Association, P.O. Box 7603, Washington, D.C.)

15-17. **Luminescence**, conf., Hull, Yorkshire, England. (G. F. J. Garlick, Physics Dept., Univ. of Hull, Hull)

15-17. **Chemical Reaction Engineering**, 3rd European symp., Amsterdam, Netherlands. (J. G. van de Vusse, c/o Kon. Shell Laboratorium, Badhuisweg 3, Amsterdam)

15-18. **Nuclear Photography**, intern. conf., Geneva, Switzerland. (Scientific Conf. Secretariat, European Organization for Nuclear Research, Geneva 23)

15-19. **Industrial Chemistry**, 35th intern. congr. Warsaw, Poland. (Secretariat, Rydgiera 8, Warsaw 86)

16-18. **American Assoc. of Medical Clinics**, annual, Bal Harbour, Fla. (The Association, Box 58, Charlottesville, Va.)

17-18. **Computing**, 7th annual Northwest conf., Seattle, Wash. (R. K. Smith, Northwest Computing Assoc., Box 836, Seahurst, Wash.)

17-18. **Engineering Management**, conf., Cleveland, Ohio. (Inst. of Electrical and Electronics Engineers, Box A, Lenox Hill Station, New York, N.Y. 10021)

17-19. **Cancer**, 5th natl. conf., Philadelphia, Pa. (American Cancer Soc., 219 E. 42 St., New York, N.Y. 10017)

17-19. **British Assoc. of Urological Surgeons**, annual, Sheffield, England. (Joint Secretariat, 47 Lincoln's Inn Fields, London, W.C.2, England)

17-20. **Science Education**, intern. conf., Banff, Alberta, Canada. (S. Trieger, Faculty of Education, Univ. of Alberta, Edmonton, Canada)

18. **Hungarian Chemical Soc.** Tihany. (M. T. Beck, Szabadsag ter 17, Budapest 5, Hungary)

19-26. **Gynecology and Obstetrics**, 4th world congr., Buenos Aires, Argentina. (R. Lede, Primera Catedra de Ginecología, Hospital de Clínicas, Córdoba 2149, Buenos Aires)

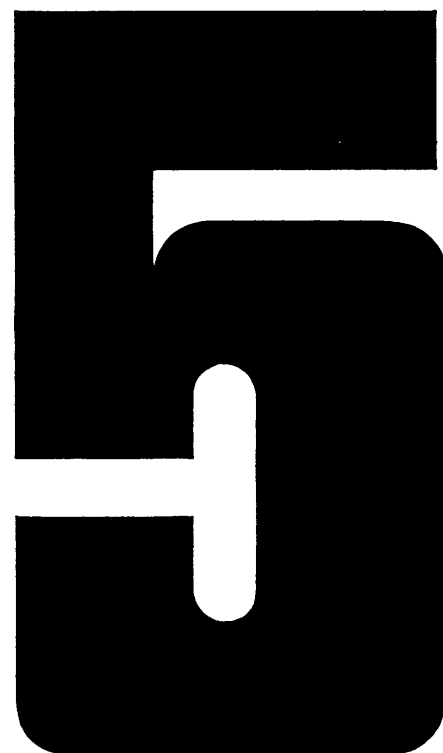
19-27. **Scientific Films Assoc.**, 18th intern. congr., Athens, Greece. (SFA, 38, Avenue des Ternes, Paris 17<sup>e</sup>, France)

20-23. **Ceramic-Metal Systems**, American Ceramic Soc., French Lick, Ind. (ACS, 4055 North High St., Columbus, Ohio 43214)

20-23. **American Inst. of Chemical Engineers**, Las Vegas, Nev. (F. J. Van Antwerpen, 345 E. 47 St., New York, N.Y. 10017)

20-24. **American Soc. of Oral Surgeons**, Chicago, Ill. (E. W. Gilgan, 119 North Michigan Ave., Chicago 11)

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20-25. **Neuroradiology**, 7th symp., New York, N.Y. (J. M. Taveras, Neurological Inst., Columbia-Presbyterian Medical Center, New York, N.Y. 10032)

20-26. **Anaesthesiology**, 3rd world congr., São Paulo, Brazil. (L. Rodrigues Alves, Caixa Postal 330, São Paulo)

21-24. **Agricultural Engineering**, intern. congr., Lausanne, Switzerland. (P. Regamey, Etat de Vaud, 14. Cite-Devant, Lausanne)

21-24. German Soc. for **Psychology**, 24th congr., Vienna, Austria. (J. Rohrer, Deutsche Gesellschaft für Psychologie, Am Hof 1e, 5300 Bonn, Germany)

21-25. **Animal Care Panel**, 15th annual New York, N.Y. (ACP, P.O. Box 1028, Joliet, Ill. 60434)

21-26. **Documentation**, 30th intern. conf., The Hague, Netherlands. (Intern. Federation for Documentation, 7 Hofweg, The Hague)

21-26. **Electrochemical Thermodynamics and Kinetics**, intern., London, England. (M. Fleischmann, Dept. of Physical Chemistry, Univ. of Newcastle upon Tyne, England)

21-26. **Parasitology**, 1st intern. congr., Rome, Italy. (A. Corradetti, Istituto di Parassitologia, Citta Universitaria, Rome)

22-24. **Many-Body Problems in Physics and Chemistry**, conf., Manchester, England. (Administration Assistant, Inst. of Physics and the Physical Soc., 47 Belgrave Sq., London, S.W.1, England)

22-25. **Middle East Neurological Soc.**, Ankara, Turkey. (N. Avman, c/o Hacettepe Tip Fakültesi, Ankara)

22-25. **Soil Micromorphology**, 2nd intern., Arnhem, Netherlands. (A. Jongerius, Stichting voor Bodenmartering, Postbus 10, Bennekom, Netherlands)

22-28. **Radiology**, 11th intern. congr. Rome, Italy. (L. Turano, Istituto de Radiologia, Univ. of Rome, Rome)

23-26. **British Assoc. for Cancer Research**, annual, Edinburgh, Scotland. (J. G. Bennette, Courtauld Inst., Middlesex Hospital, London, W.1, England)

23-26. **Viral Diseases of Poikilothermic vertebrates**, New York, N.Y. (S. P. Snieszko, Eastern Fish Disease Laboratory, Leestown, P.O. Kearneyville, W.Va 25430)

24-27. **American Medical Writers' Assoc.**, annual, Philadelphia, Pa. (AMWA, 2000 P St., NW, Washington, D.C.)

25-26. **Communications**, 3rd Canadian symp., Montreal, Quebec. (F. G. R. Warren, P.O. Box 802, Station B, Montreal)

27-30. **Society of American Foresters**, 64th annual, Denver, Colo. (SAF, Mills Bldg., Washington, D.C. 20006)

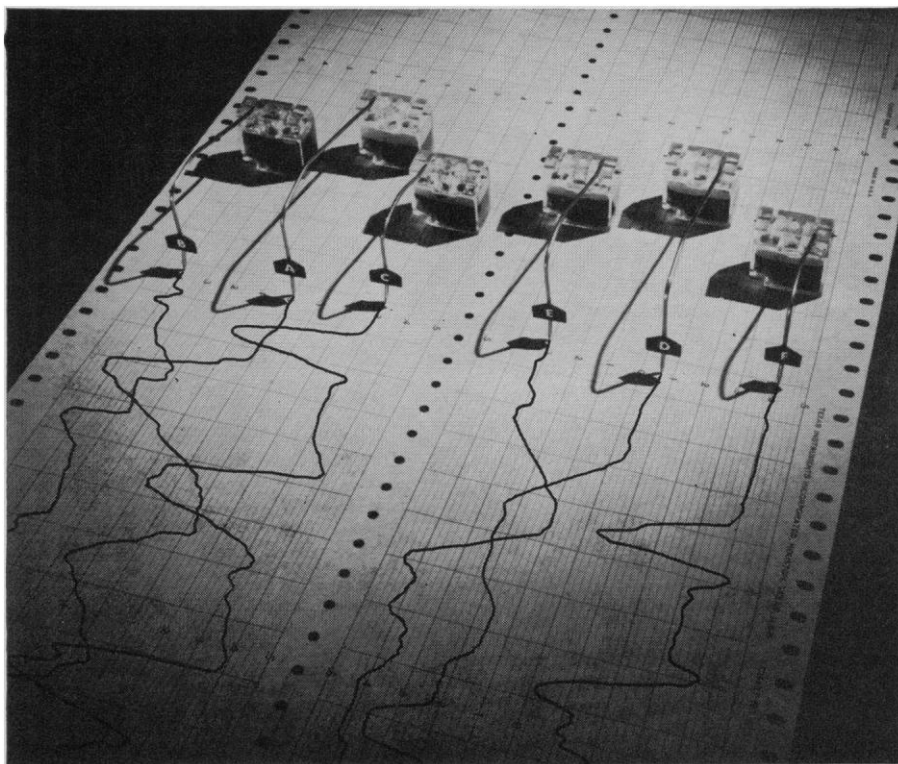
27-1. **Water Pollution Control Federation**, 37th annual, Bal Harbour, Fla. (WPCF, 3900 Wisconsin Ave., Washington, D.C. 20016)

27-2. **Society of Motion Picture and Television Engineers**, 96th technical conf., New York, N.Y. (SMPTE, 619 W. 54 St., New York, N.Y. 10019)

28-30. **Circuit and System Theory**, conf., Monticello, Ill. (W. R. Perkins, Dept. of Electrical Engineering, Univ. of Illinois, Urbana)

28-2. **Society for Applied Spectroscopy**, 3rd natl. conf., Cleveland, Ohio. (E. Yeager, Dept. of Chemistry, Western Reserve Univ., Cleveland 44106)

10 JULY 1964



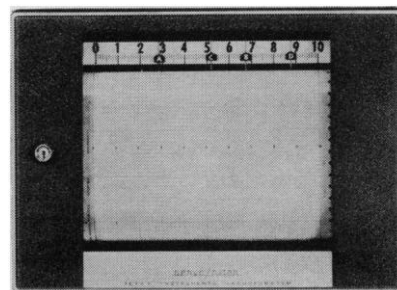
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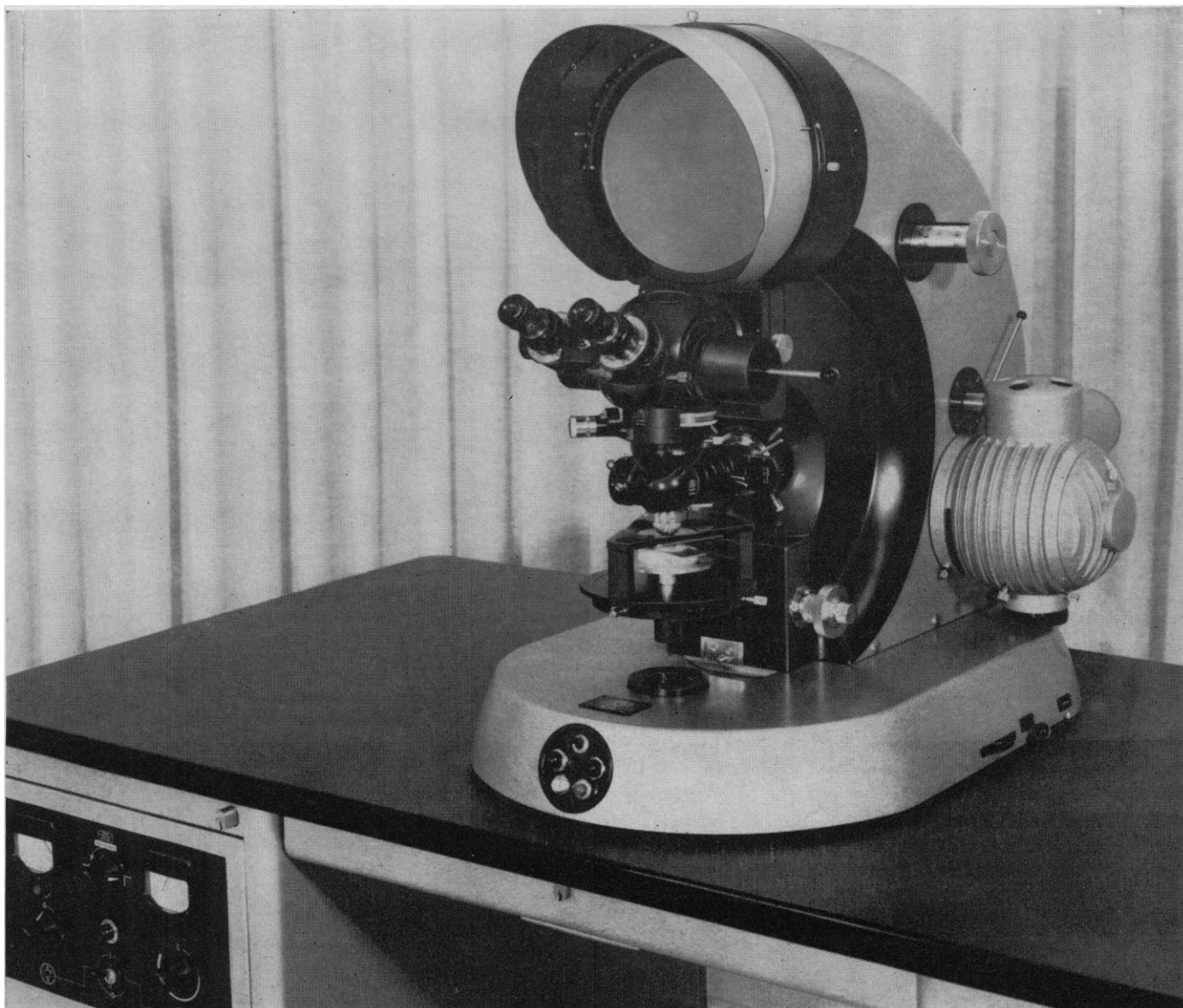


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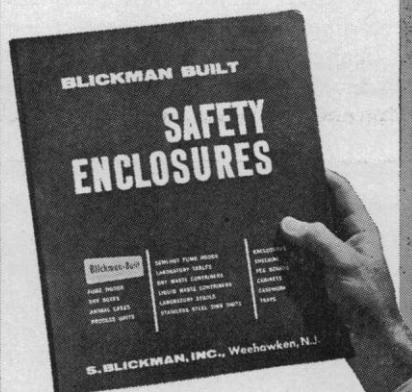
The material in this section is prepared by the following contributing writers:

Robert L. Bowman (R.L.B.), with the assistance of Denis J. Prager (D.J.P.), Laboratory of Technical Development, National Heart Institute, Bethesda 14, Md. (medical electronics and biomedical laboratory equipment).

Joshua Stern (J.S.), Basic Instrumentation Section, National Bureau of Standards, Washington 25, D.C. (physics, computing, electronics, and nuclear equipment).

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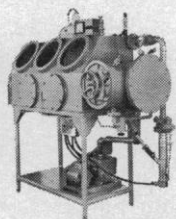
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**Advances in Nuclear Science and Technology.** vol. 2. Ernest J. Henley and Herbert Kouts, Eds. Academic Press, New York, 1964. 388 pp. Illus. \$14. Six papers: "Reactor transfer functions," Cesar Sastre; "Heat exchangers in nuclear power plants," George T. Lewis, Jr., Michael Zizza, and Paul DeRienzo; "The formation of free radicals in polymers by radiation, their reactions and reactivities," M. G. Ormerod; "Measurements of reactor parameters in subcritical and critical assemblies," Irving Kaplan; "Scattering of thermal neutrons from solids and their thermalization near equilibrium," L. S. Kothari and V. P. Duggal, and "Some aspects of the use of digital computers in nuclear reactor design," Bernard W. Roos and Ward C. Sangren.

**Advances in Structure Research by Diffraction Methods.** vol. 1. R. Brill, Ed. Vieweg, Braunschweig, Germany; Interscience (Wiley), New York, 1964. 227 pp. Illus. \$13.50. Six papers: "The determination of crystal structures by neutron-diffraction measurements," G. E. Bacon; "Fourier synthesis of potential in electron diffraction structure analysis and its applications to the study of hydrogen atoms," B. K. Vainshtein; "The determination of phase angles," J. Karle; "Die thermische Untergrundstreuung und ihre Anwendung zur Strukturuntersuchung von Molekülen in Kristallen," W. Hoppe; "Allgemeine Gesichtspunkte für die Deutung diffuser Interferenzen von fehlgeordneten Kristallen," H. Jagodzinski, and "Antisymmetry, colour symmetry and degenerate symmetry," A. Niggli.

**Alicyclic Compounds.** Douglas Lloyd. Elsevier, New York, 1964. 181 pp. Illus. \$6.50. A textbook aimed at the "honours undergraduate student or the non-specialist postgraduate."

**Analysis in Function Space.** Proceedings of a conference (Dedham, Mass.), June 1963. William Ted Martin and Irving Segal, Eds. M.I.T. Press, Cambridge, Mass., 1964. 224 pp. Illus. \$6.

**Analytical Chemistry of Niobium and Tantalum.** Ross W. Moshier. Pergamon, London; Macmillan, New York, 1964. 284 pp. Illus. \$12.75.

**Applied Physics.** Herman W. Pollack. Prentice-Hall, Englewood Cliffs, N.J., 1964. 784 pp. Illus. \$13.25.

**Chemistry: A Physical Approach.** William F. Sheehan. Allyn and Bacon, Boston, 1964. 615 pp. Illus. \$8.75.

**Chemistry and Technology of Explosives.** vol. 1. Tadeusz Urbański. Translated from the Polish edition by Irena Jęczalikowa and Sylvia Laverton. Pergamon, London; Macmillan, New York, 1964. 651 pp. Illus. \$15.

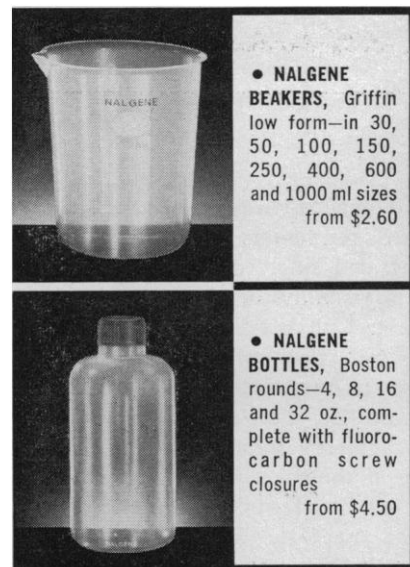
**Chemistry in Premixed Flames.** C. P. Fenimore. Pergamon, London; Macmillan, New York, 1964. 129 pp. Illus. \$5.

**Chimica Generale e Inorganica.** Giuseppe Bruni. Tamburini Editore, Milan, Italy, ed. 12, 1964. 748 pp. Illus. L. 7,000.

**Collision Phenomena in Ionized Gases.** Earl W. McDaniel. Wiley, New York, 1964. 797 pp. Illus. \$17.50.

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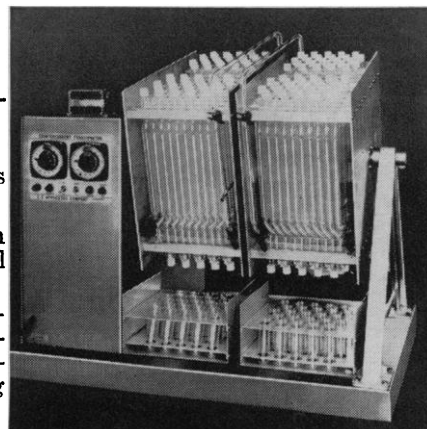
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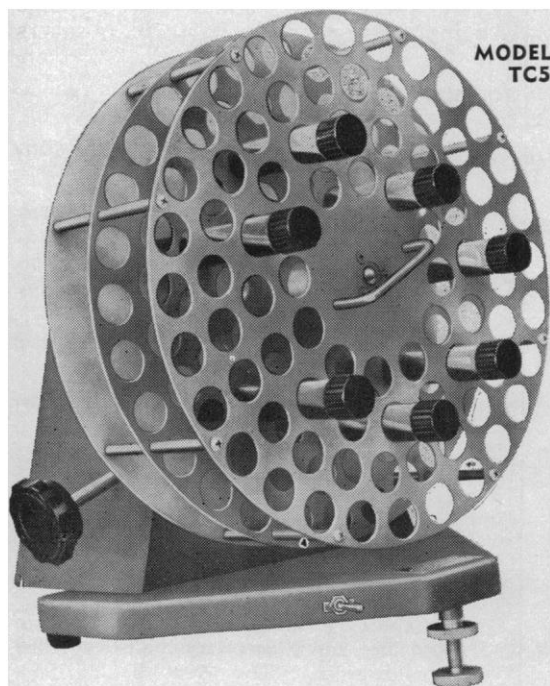
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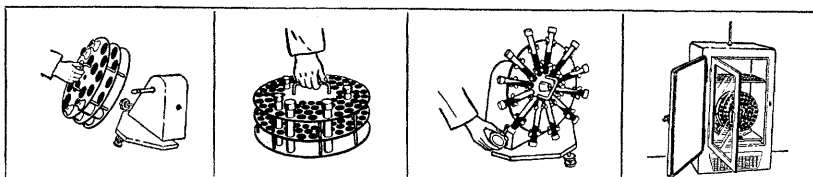
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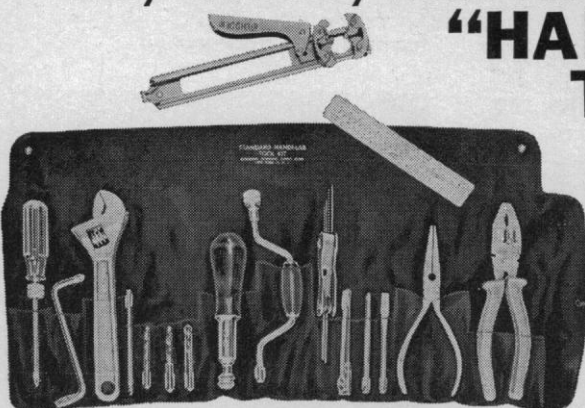
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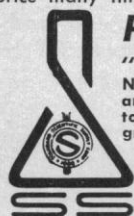
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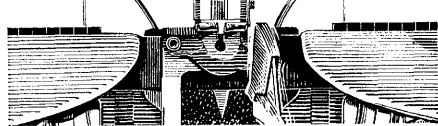
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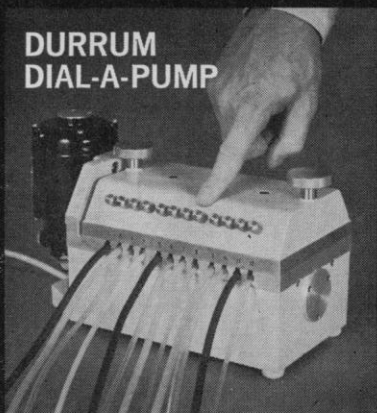
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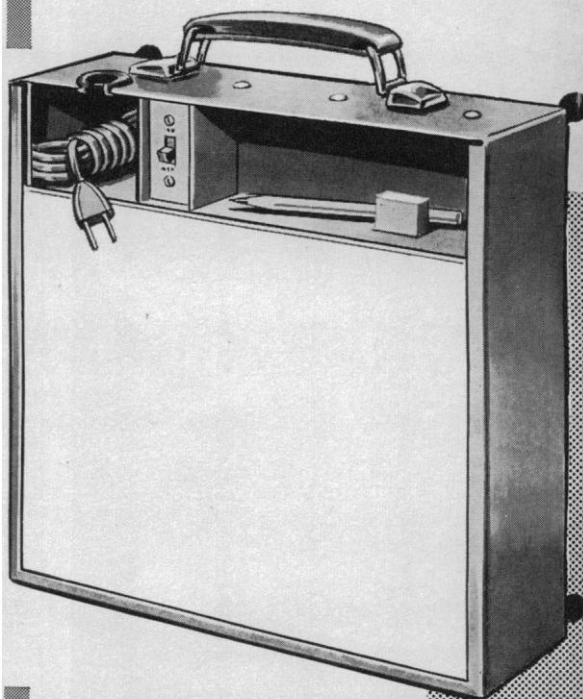
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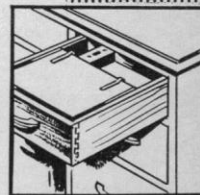
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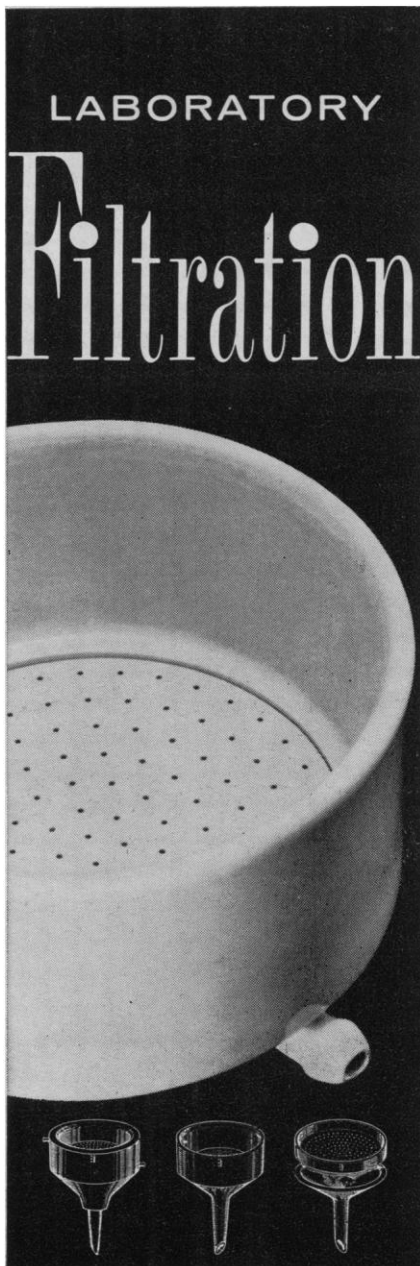


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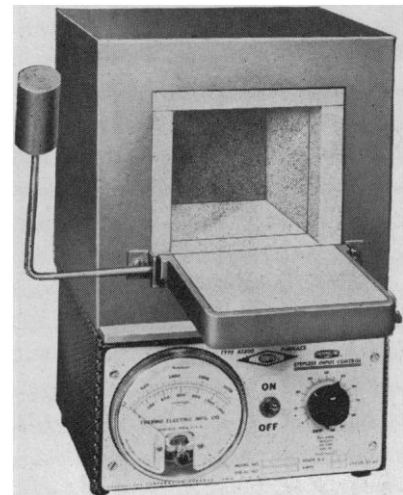
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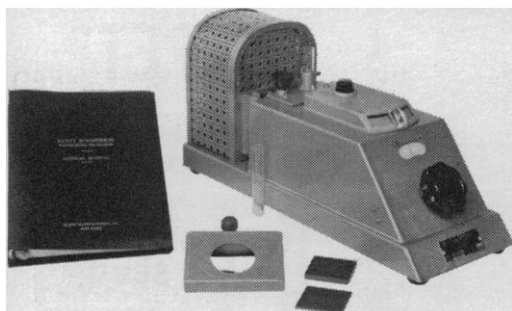
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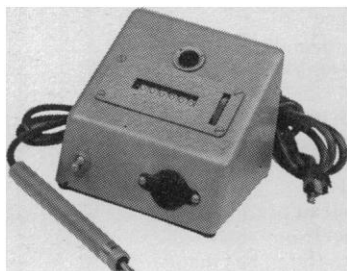


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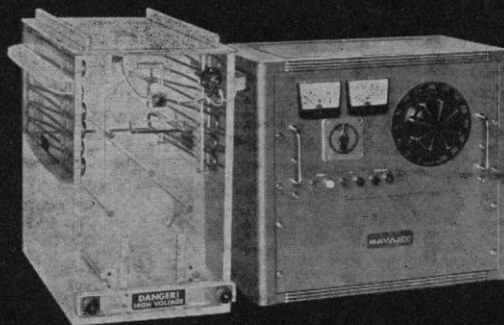
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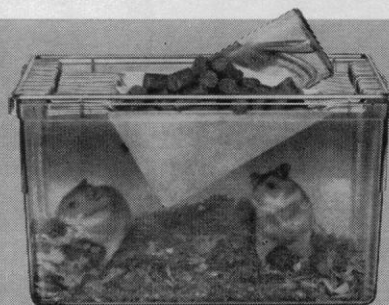
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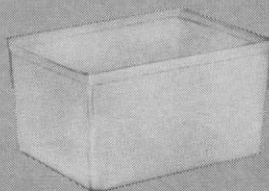
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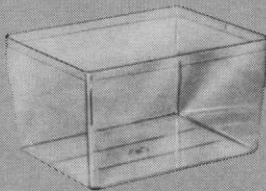


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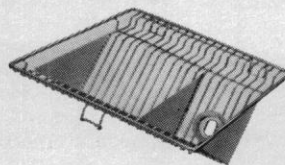
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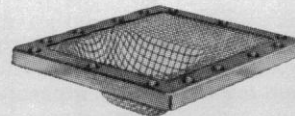


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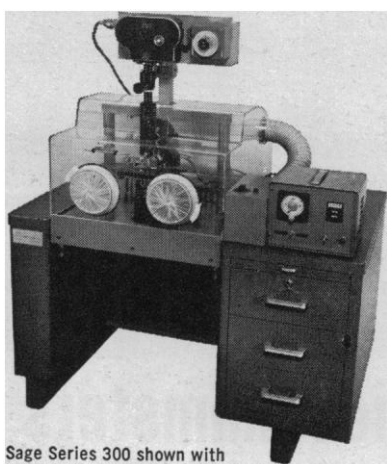
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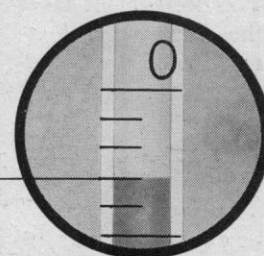
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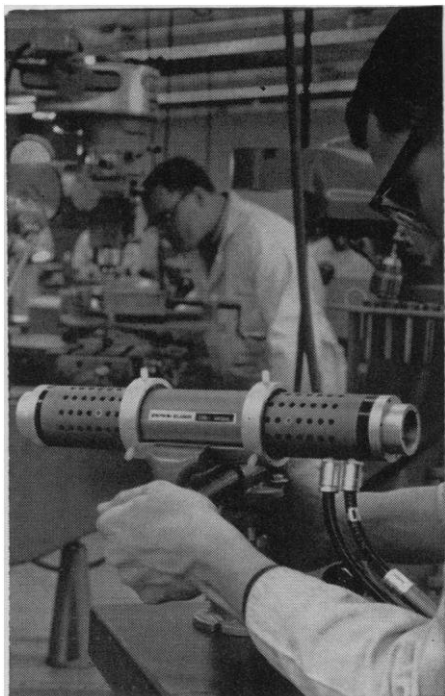
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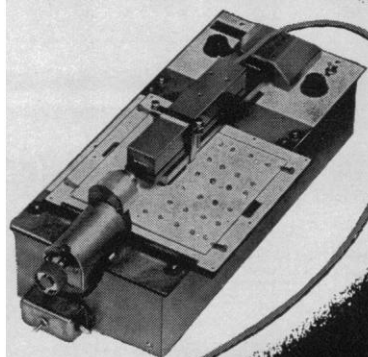
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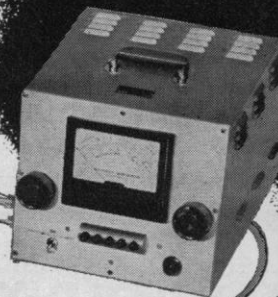
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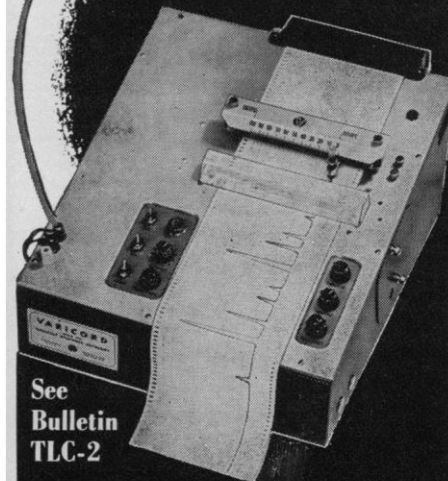
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