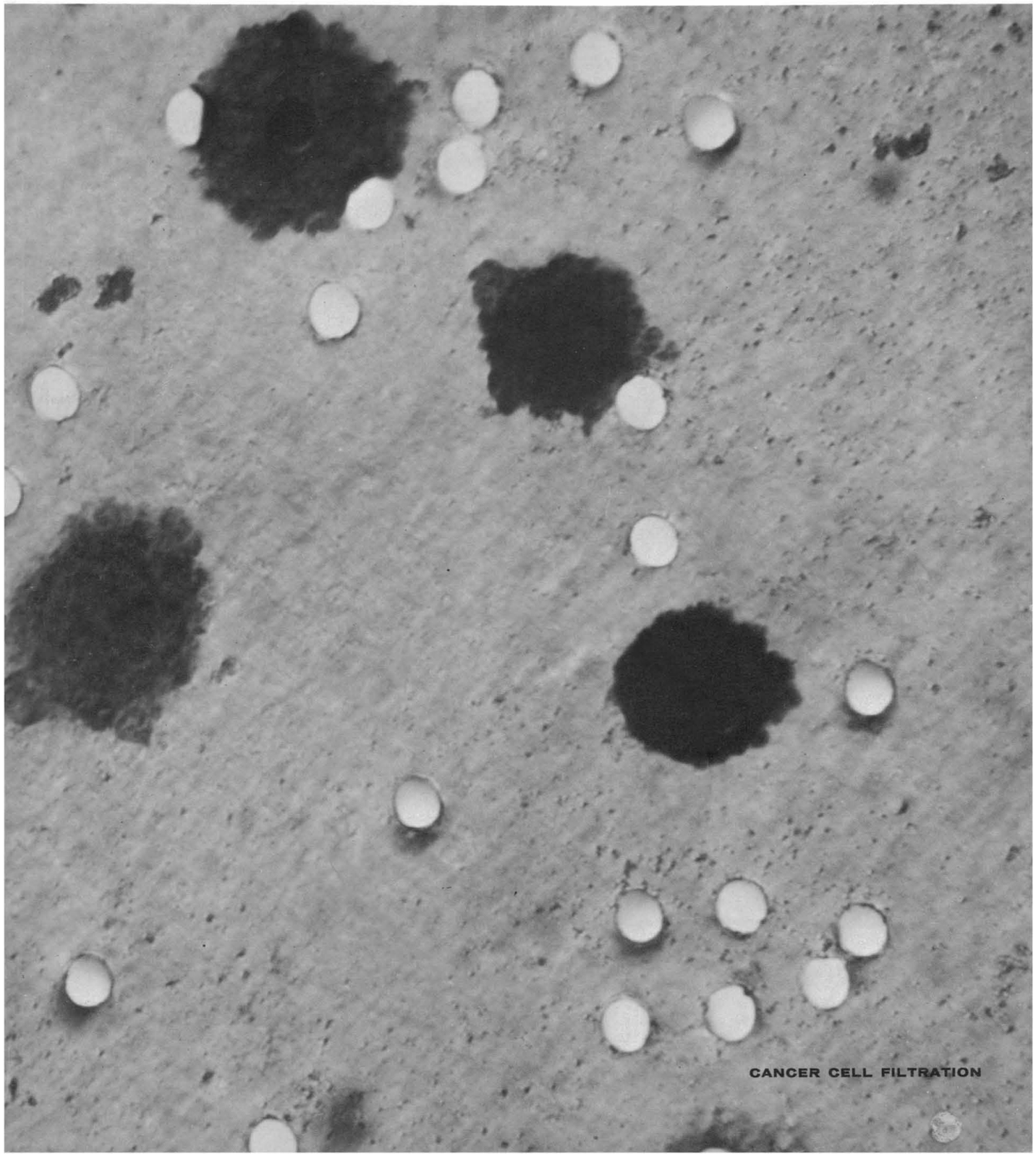
SCIENCE

23 July 1965
Vol. 149, No. 3682

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE



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And a wise choice—whichever your applications indicate would be most suitable. Both instruments operate up to 50,000 rpm; both are backed by Beckman's experience and cordial associations with investigators in the field.

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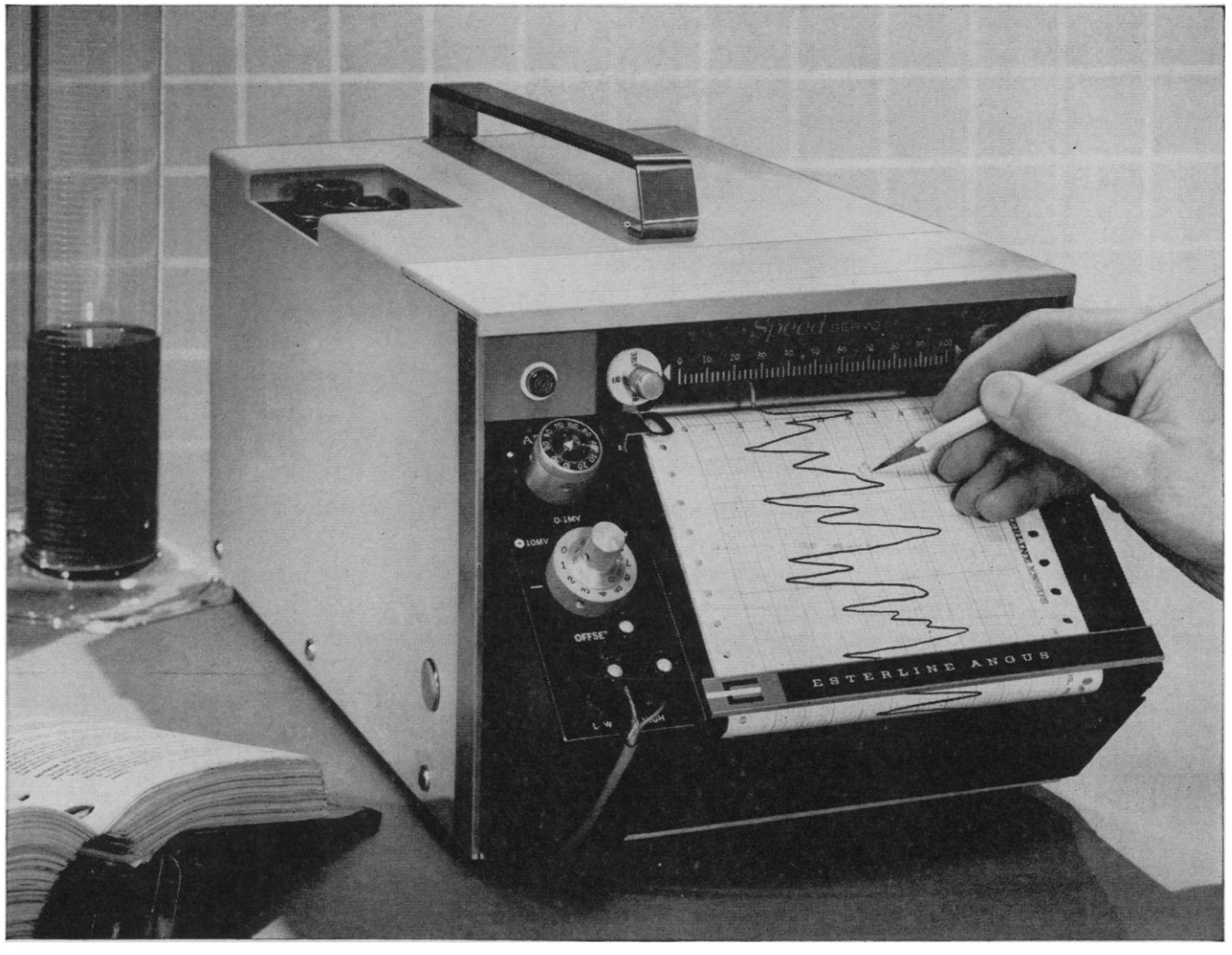

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Filtration of cancer cells by means of a plastic sieve. The holes have been etched to a diameter of 5 microns; holes of this size allow blood cells to pass through but catch most cancer cells. The cells have been stained and appear as irregular shapes. The fission-track holes are circular. See page 383. [General Electric Research Laboratory]

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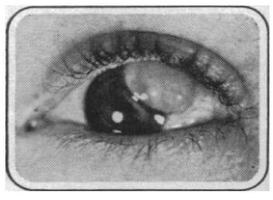
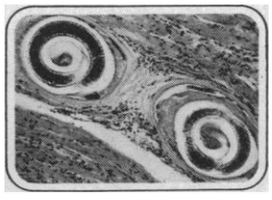
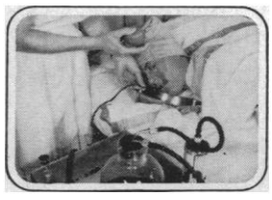
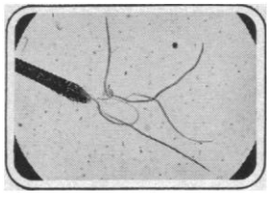

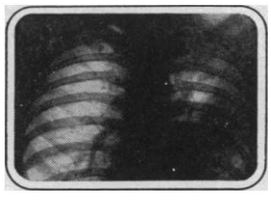
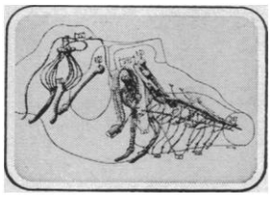

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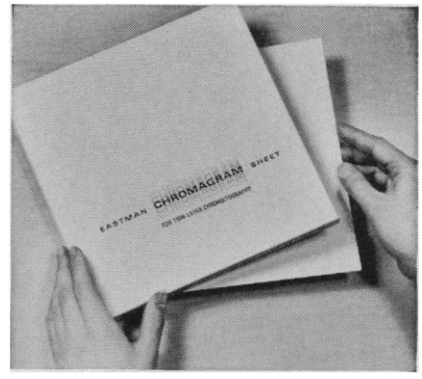
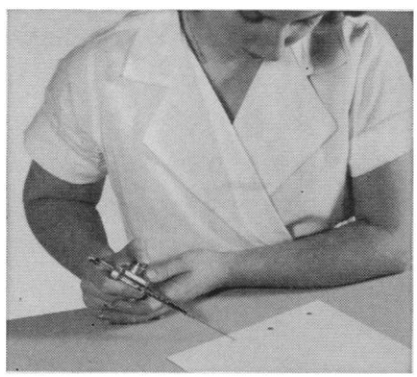
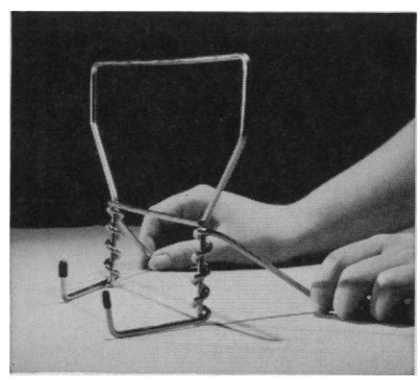


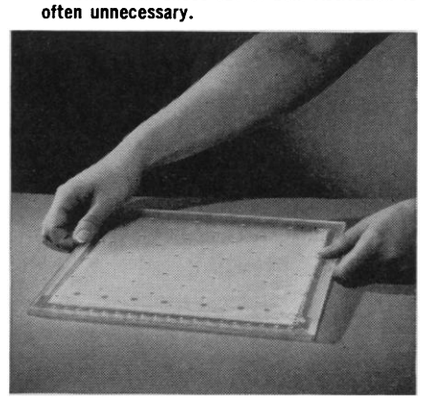
1 You don't coat plates any more for thin-layer chromatography. Simply take EASTMAN CHROMAGRAM Sheet out of box. Activation is often unnecessary.



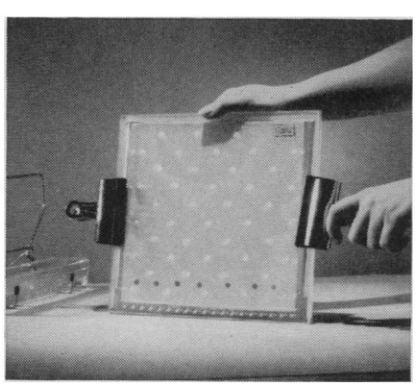
2 Spot it with mixture to be separated. It produces results as good as—or better than—results obtainable with glass plates.



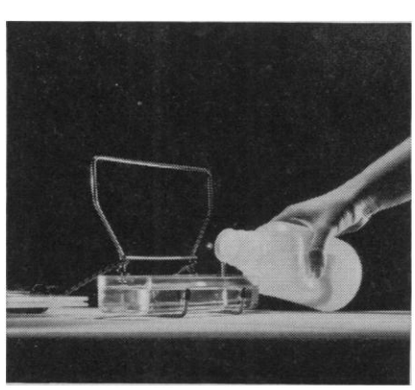
3 Fold out legs of easel. After sheet is developed, easel can also serve as convenient stand for sheet when sprayed with reagent.



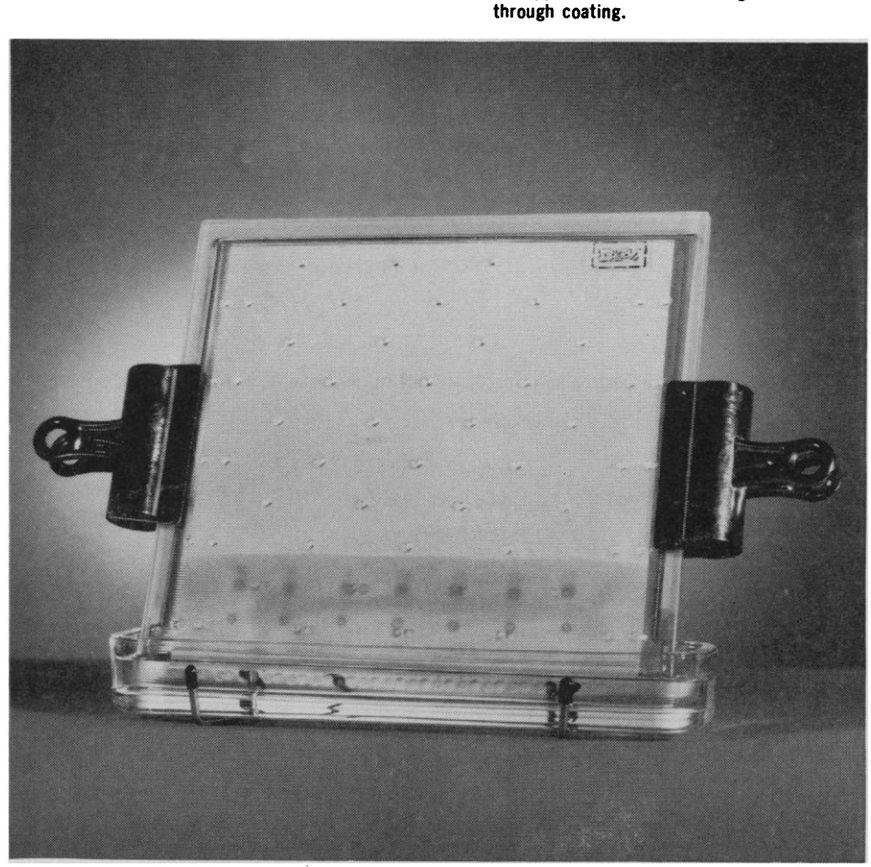
4 After spotting, place EASTMAN CHROMAGRAM Sheet between the two glass plates of the CHROMAGRAM Developing Apparatus, where it is supported without affecting solvent travel through coating.



5 Attach clips to sides of chamber to close them off. Bottom remains open to admit solvent.



6 Fill trough to mark with solvent. The small volume of space inside the chamber permits rapid saturation with solvent vapor.

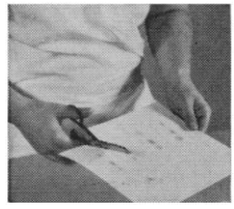


7 Separation now takes place with the speed, effectiveness, and repeatability inherent in the EASTMAN CHROMAGRAM System.

About EASTMAN CHROMAGRAM Developing Apparatus/ It consists of a chamber plate set of two identical plates, each 23 cm square, each made with bosses, ridges, and flats that work together; a solvent trough; an easel; a pair of spring clips.* No gasket is required.

Unlike large-volume developing chambers, EASTMAN CHROMAGRAM Developing Apparatus involves no pre-saturation, no lining with solvent-soaked filter paper. It takes up its modest amount of bench space only when in actual use.

About EASTMAN CHROMAGRAM Sheet/ It consists of inert poly(ethylene terephthalate) with an adsorbent layer of silica gel 100 microns thick. The silica gel is bound with polyvinyl alcohol. At 0.3 mm over-all, the sheet is not limp, yet thin enough to overcome storage problems. A box contains 20 sheets measuring 20 x 20 cm. You need no other sizes, since the sheet is easily cut into desired sizes or shapes. There are two types: (1) Type K301R Silica Gel with fluorescent indicator of lead-manganese-activated calcium silicate; (2) Type K301R2 Silica Gel *without* fluorescent indicator.



The EASTMAN CHROMAGRAM System provides fast, reproducible TLC with the simplicity of paper chromatography. Eliminated are such headaches as expensive, bulky coating equipment, breakage, and siliceous dust. The silica gel coating, manufactured and controlled by Kodak, has uniformity and isotropism far beyond the reach of manual application.

To put the EASTMAN CHROMAGRAM System to work for you,
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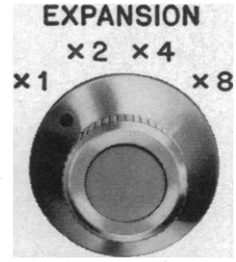

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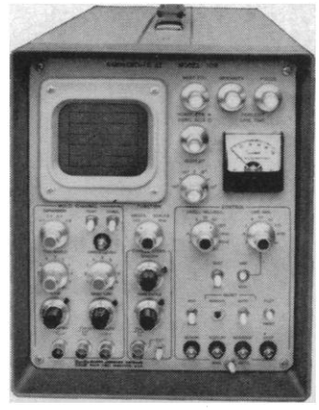

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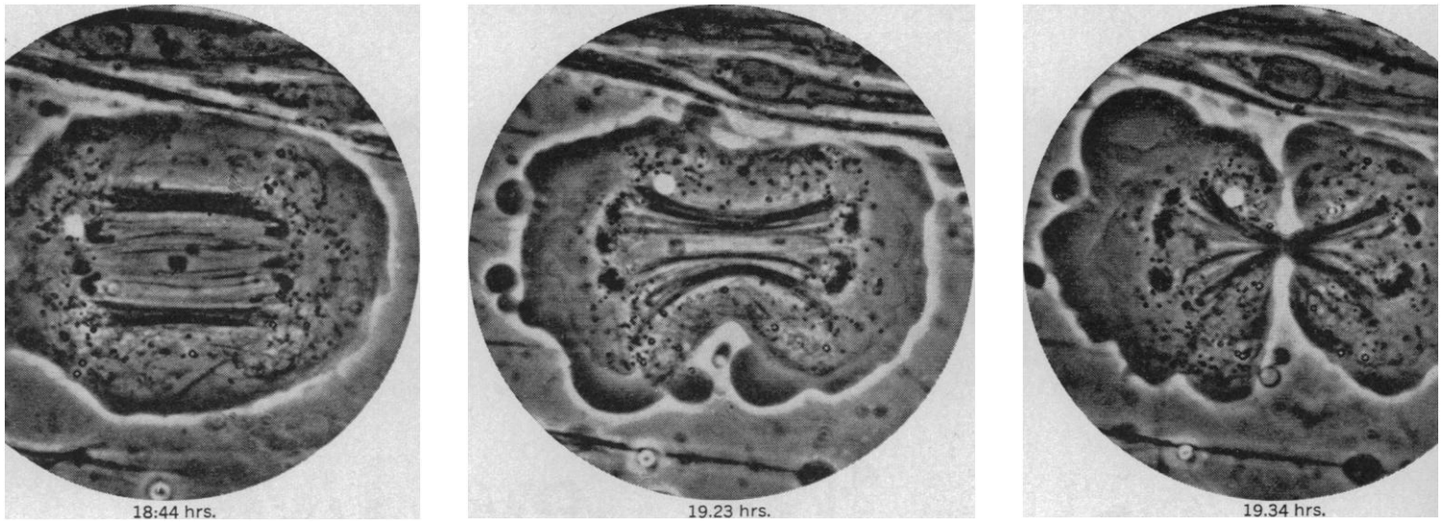

Anaphase: bivalents of homologous chromosome pairs moving to opposite poles during spermatogenesis in Pales ferruginea (Tipulidae).

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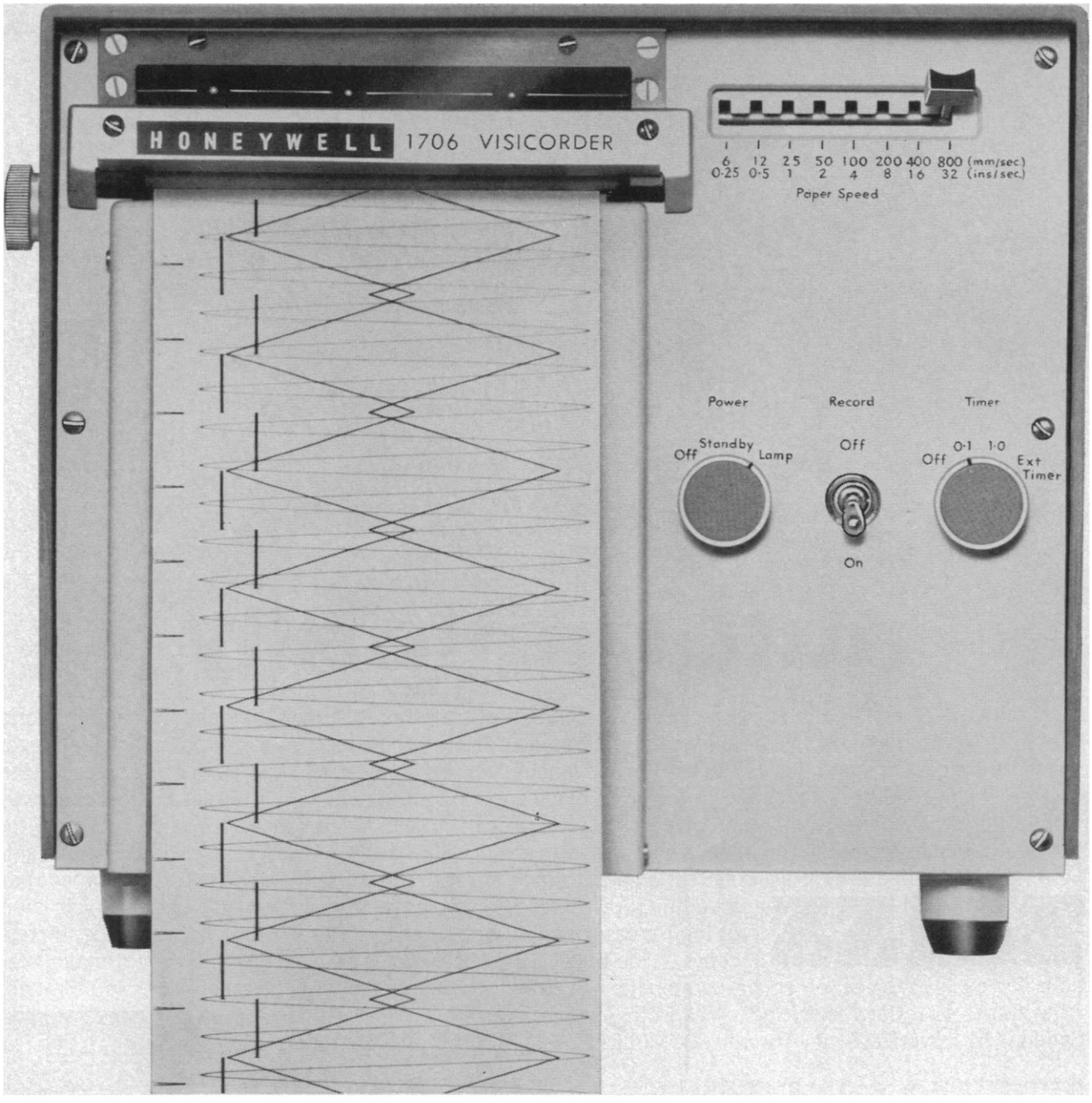

from DC to 13,000 cps, yet costs half as much as most pen-writing oscillographs!

If you're recording dynamic data, why settle for the limitations of a pen-writing oscillograph?

The new Model 1706 not only does everything any pen-writing oscillograph will do, but it also gives you three times the trace excursion and 130 times the frequency response. If your present recording equipment hasn't kept pace with your needs, the Honeywell 1706 may be the recorder you've been waiting for—especially if your instrumentation budget is limited.

Or, perhaps you've recently expanded your lab facilities and would like to supplement your more sophisticated recording equipment with an instrument that can be used virtually anywhere, at any time, and by anyone.

The 1706 fills the bill perfectly. Here's how it compares with a typical pen-writing oscillograph:

	1706	Typical Penwriter
Frequency Response	DC-13,000 cps	DC-100 cps
Trace Excursion	120mm (full width of paper)	40mm
Trace Overlap?	Yes	No

And the 1706 does all this at about half the cost of the pen-writing machine!

It employs the Visicorder principle of ultra-violet recording, producing immediately readable permanent records on paper 4¾" wide. Up to six channels of data at frequencies from DC to 13,000 cps may be recorded simultaneously.

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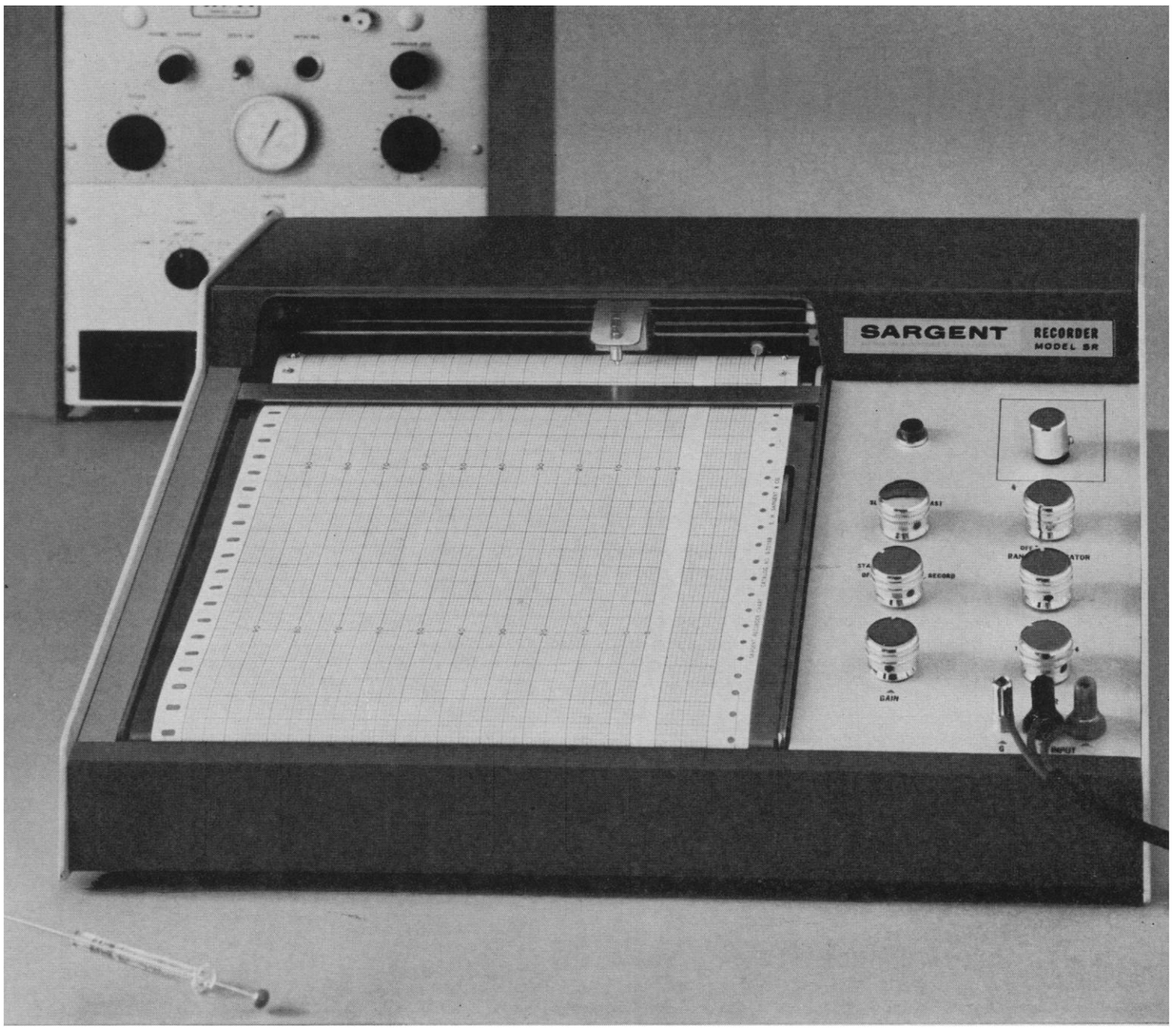

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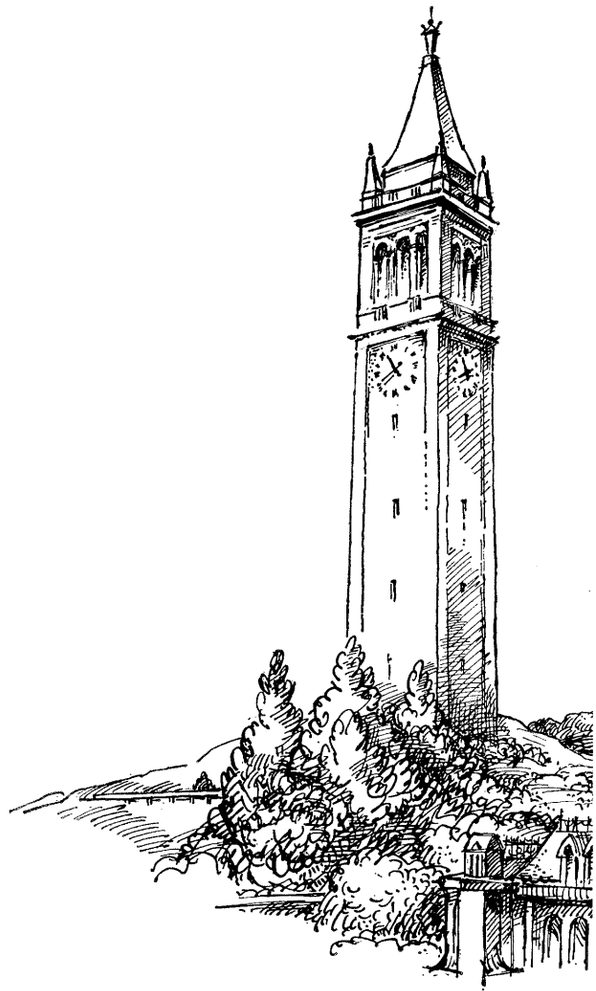

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For more details on all of the above facilities and services, see page 454 of this issue.

The hotel, motel, and residence hall sleeping accommodations are for your convenience in making your room reservation in Berkeley. **Please use the coupon below and send it and any necessary deposit directly to the AAAS Housing Bureau in Berkeley.** Give a definite date and estimated hour of arrival, and also your probable date of departure. The Housing Bureau will make the assignment and promptly send you a confirmation.

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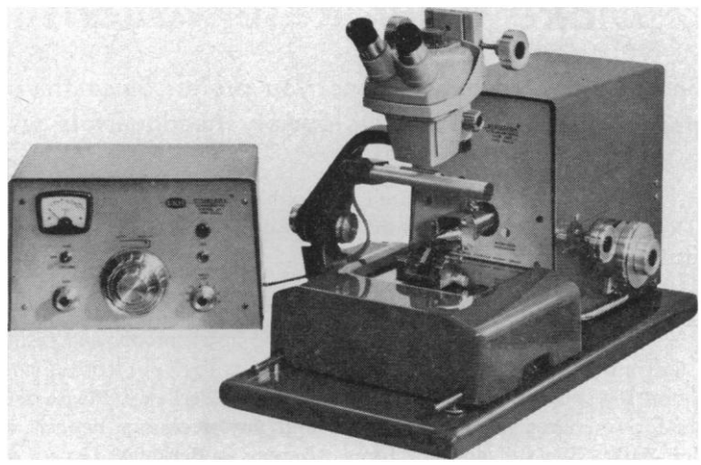

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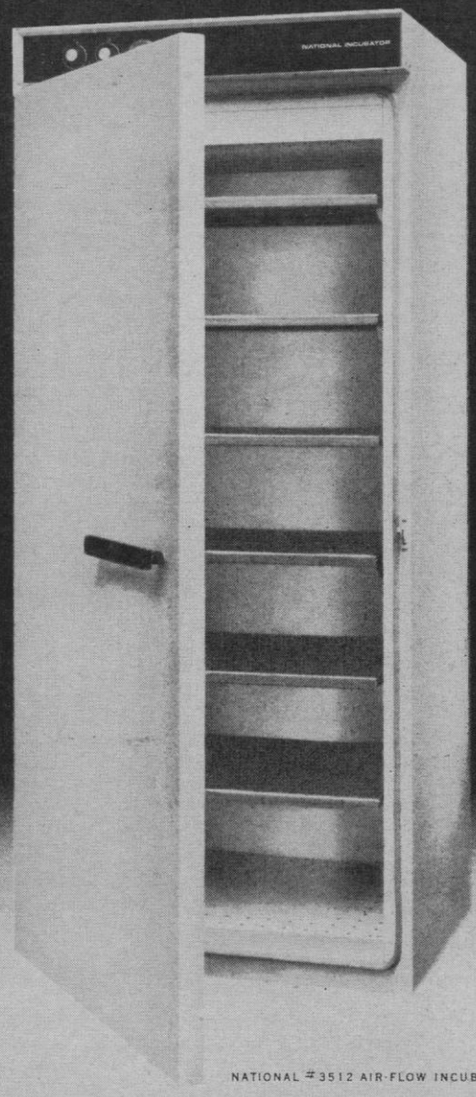

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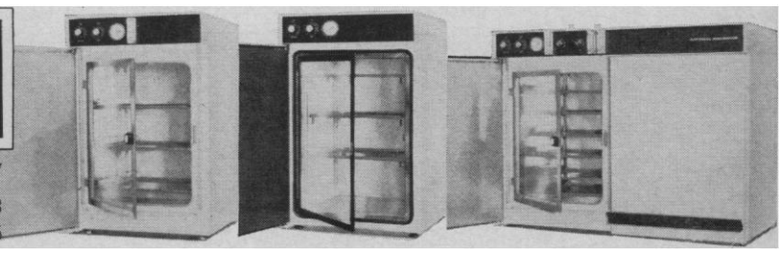

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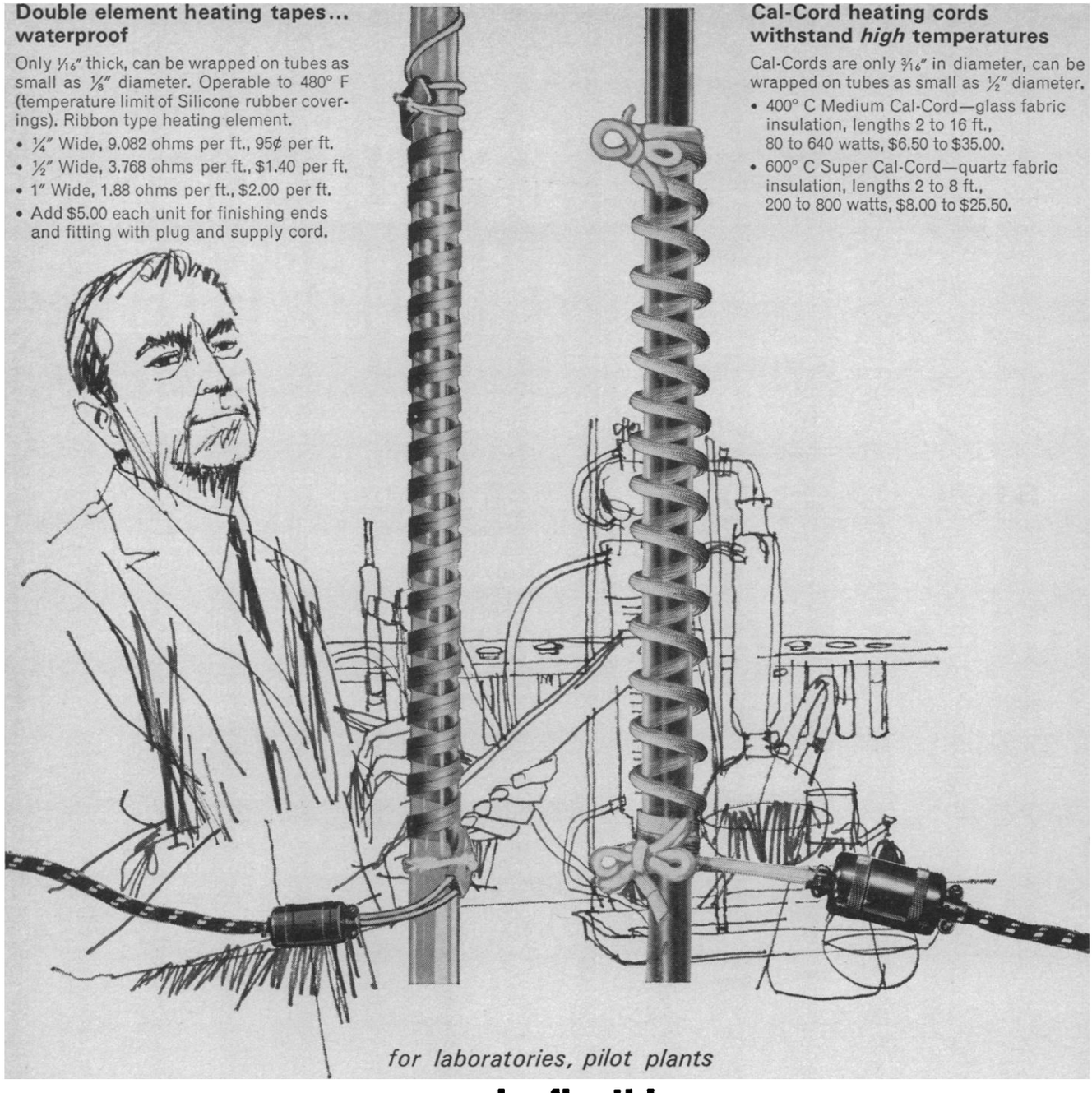

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First, he can detect transient free radicals in the course of a reaction. He can then identify the free radical by obtaining information concerning the molecular environment of the unpaired electron. In addition, he can make a quantitative measurement of the free radical concentration; and finally, measure this concentration as a function of time.

EPR
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STOICHIOMETRY OF A FREE RADICAL REACTION

The stoichiometry of a reaction involving a free radical intermediate can only be determined if the concentration of the intermediate can be quantitatively measured. The lifetime of most free radical intermediates is generally too short to allow accurate concentration measurements by standard techniques. However, quantitative measurements of these radicals can be made by EPR when used in conjunction with liquid flow systems.

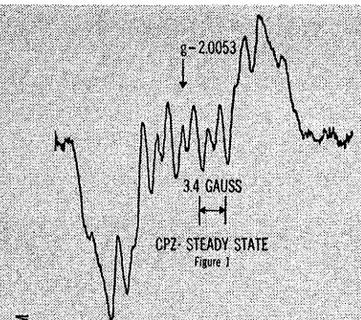

Figure 1

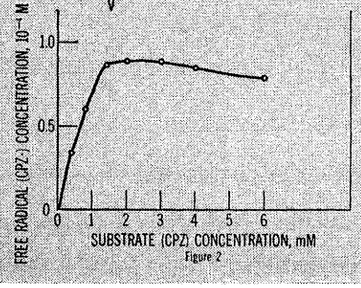

Figure 2

Figure 1 is the steady state EPR spectrum of the free radical obtained from the enzymic oxidation of chlorpromazine (CPZ) by peroxidase-H_2O_2.† A plot of the free radical concentration (CPZ·) as a function of the substrate concentration (CPZ) is shown in Figure 2. At a particular substrate concentration a free radical concentration is reached which does not increase with increasing substrate. The enzyme concentration has a similar effect on the free radical concentration, i.e. no further increase for enzyme concentration above 10^{-7} M.

As illustrated in Figure 2, the accumulated free radical concentration is very nearly twice the concentration of hydrogen peroxide and the stoichiometry of the reaction is established as:

$$2\ CPZ + H_2O_2 \xrightarrow{HRP^*} 2CPZ\cdot + (2H_2O)$$

This result is consistent with previous observations of the peroxidose reaction.‡

† L. H. Piette, G. Bulow & Isao Yamazaki, in print.
‡ I. Yamazaki, & L. H. Piette, Biochem. Biophys., 41, 416, (1952).
*Horseradish peroxidase.

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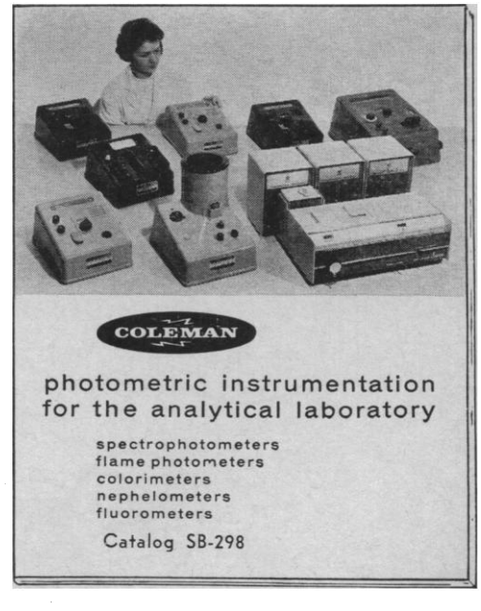

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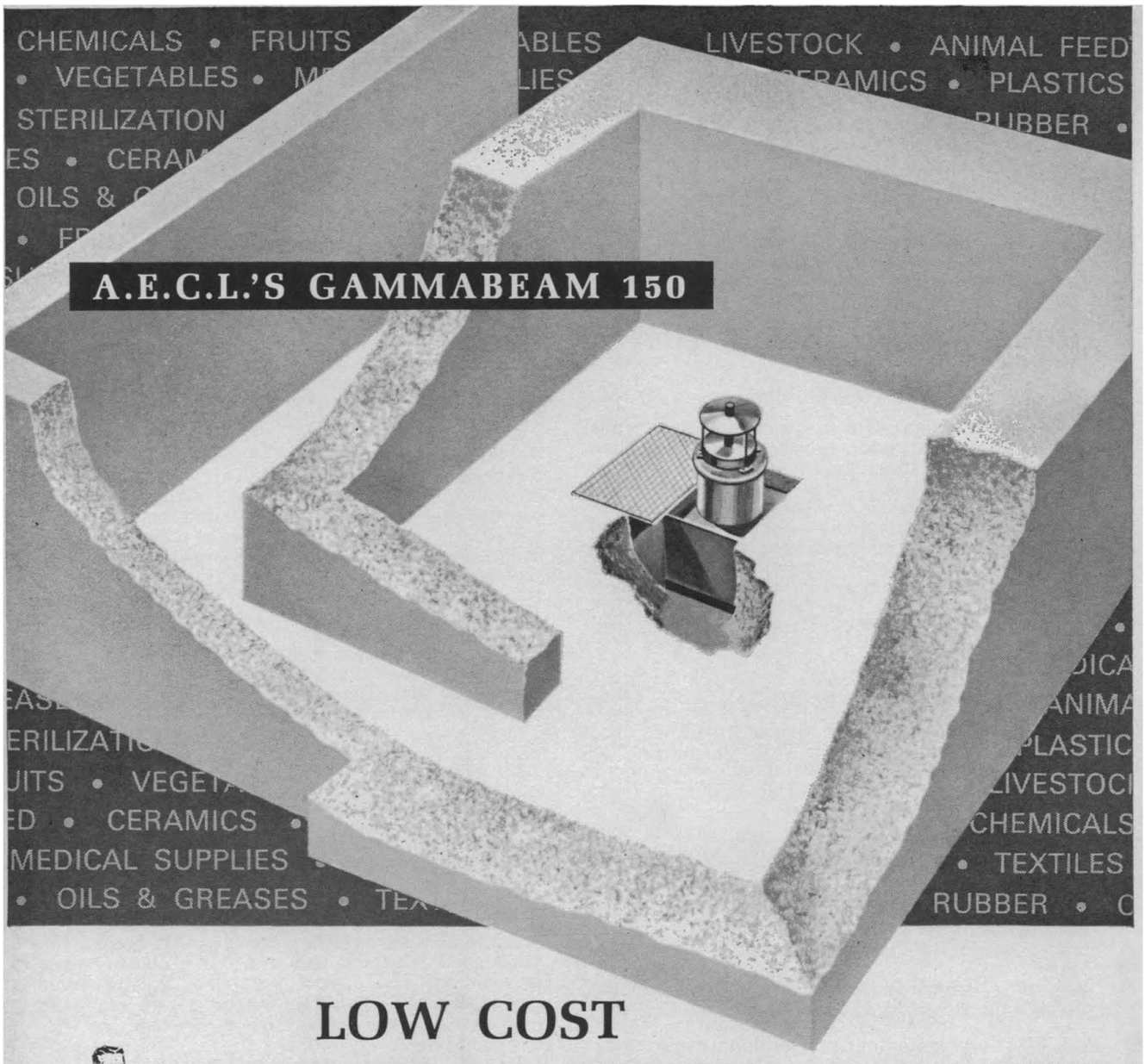

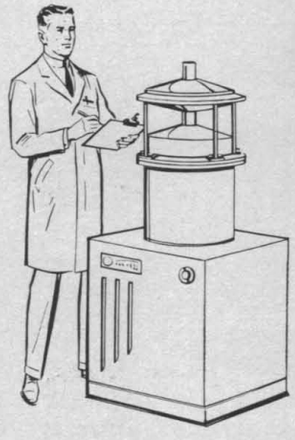

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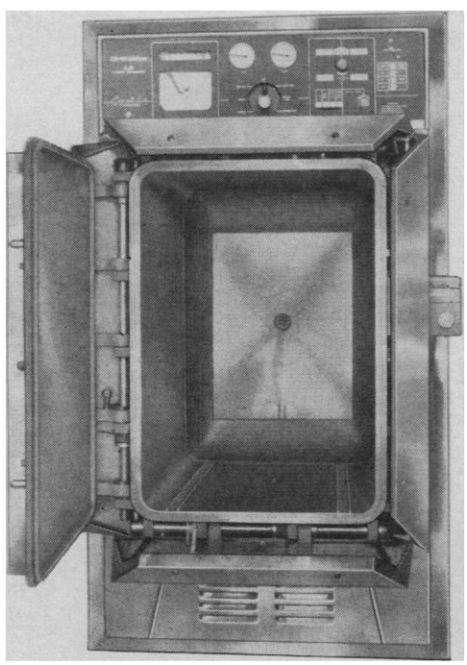

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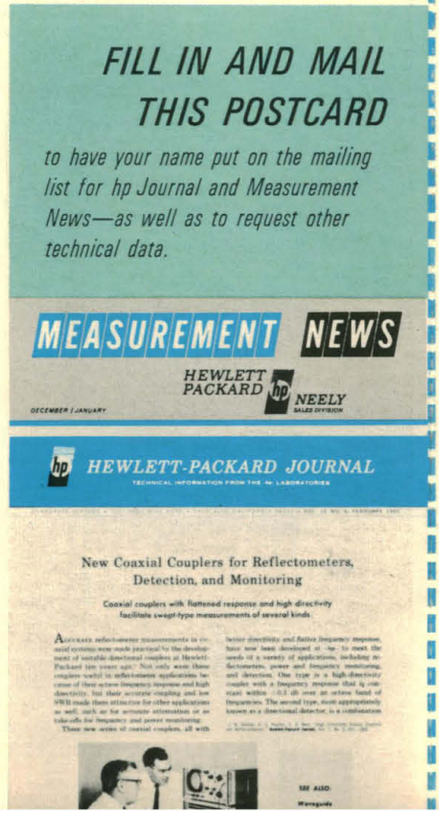

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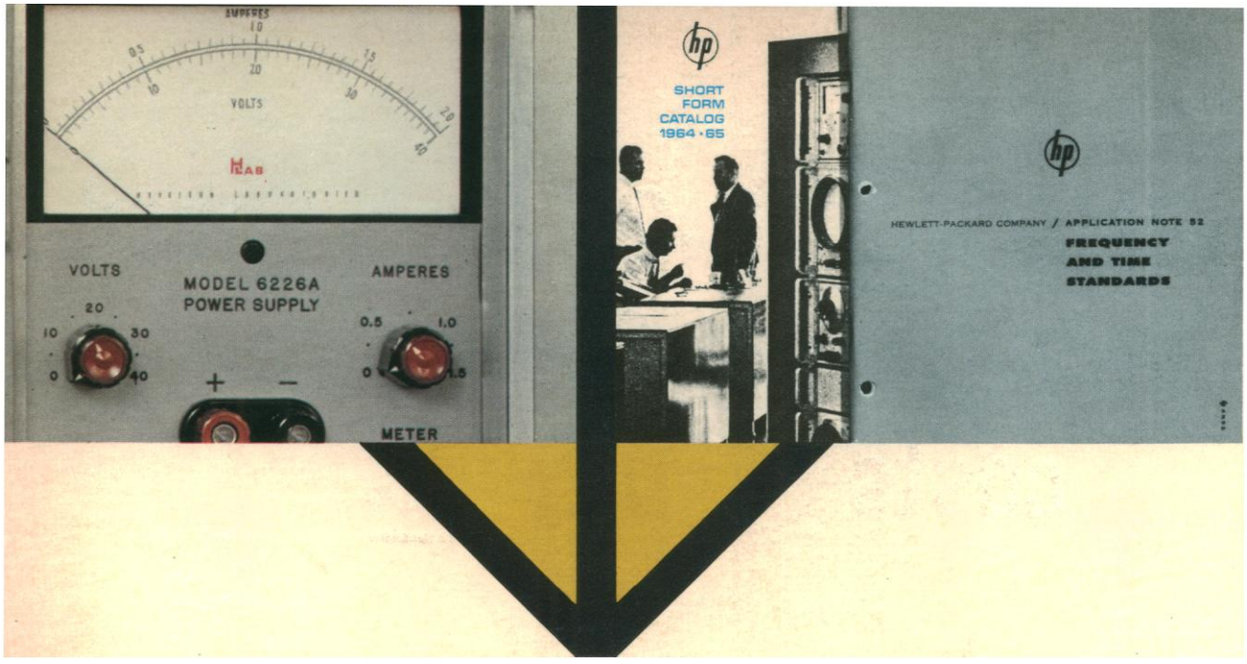

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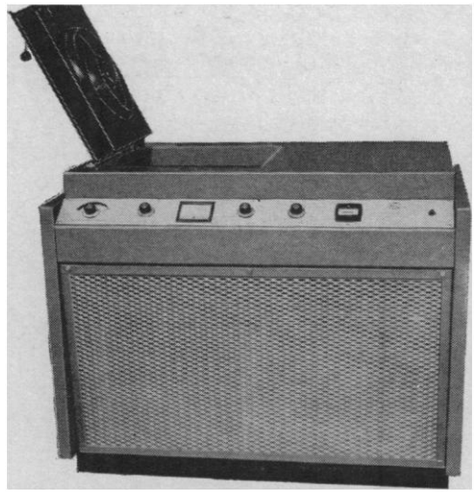

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July, 1965

FISHER PRODUCT REPORT

News about instruments, apparatus and reagent chemicals that make your work quicker, surer, safer and easier.

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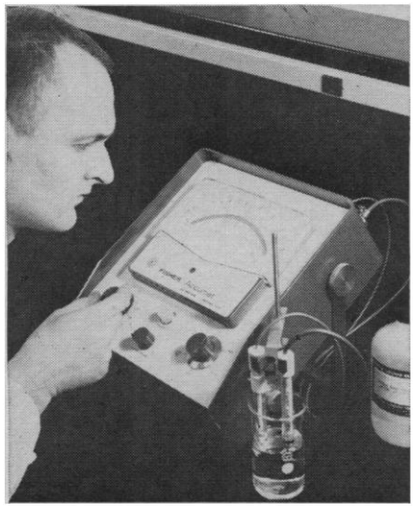
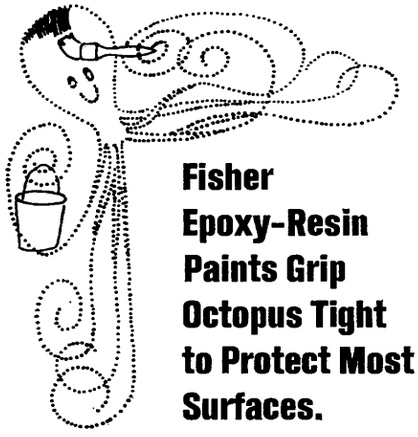
It plays detective whenever you turn the switch to "Test." If the needle registers between pH 12.5 and 13.5, your problem lies with the electrodes, sample or buffer. If the needle falls somewhere else, the Accumet 210 is at fault, for which we blush. But this won't happen often. Quick to warm up and extremely stable, the Accumet 210 reads pH with an accuracy better than ±0.05 unit and a reproducibility of ±0.02 unit. The 7-in. mirrored scale, from which the pH can be read to the nearest 0.02 unit over the full pH 0-14 range, also has two millivolt ranges: 0 to ±700 mv and 0 to ±1400. The Accumet 210 is portable, operating on batteries or on regular AC power. It can also be adapted to micro titrations. Our Accumet 210 bulletin details more of the features not found in other pH meters in its price range. Price of the basic instrument is $330. (a) ☐





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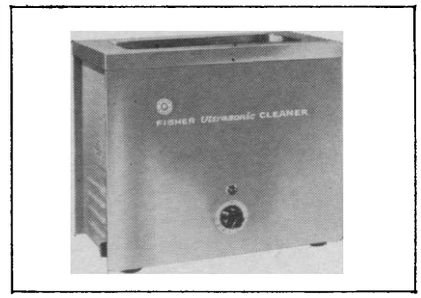

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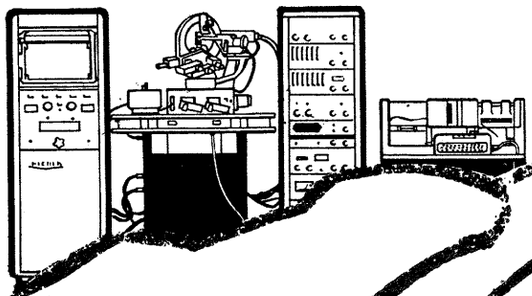

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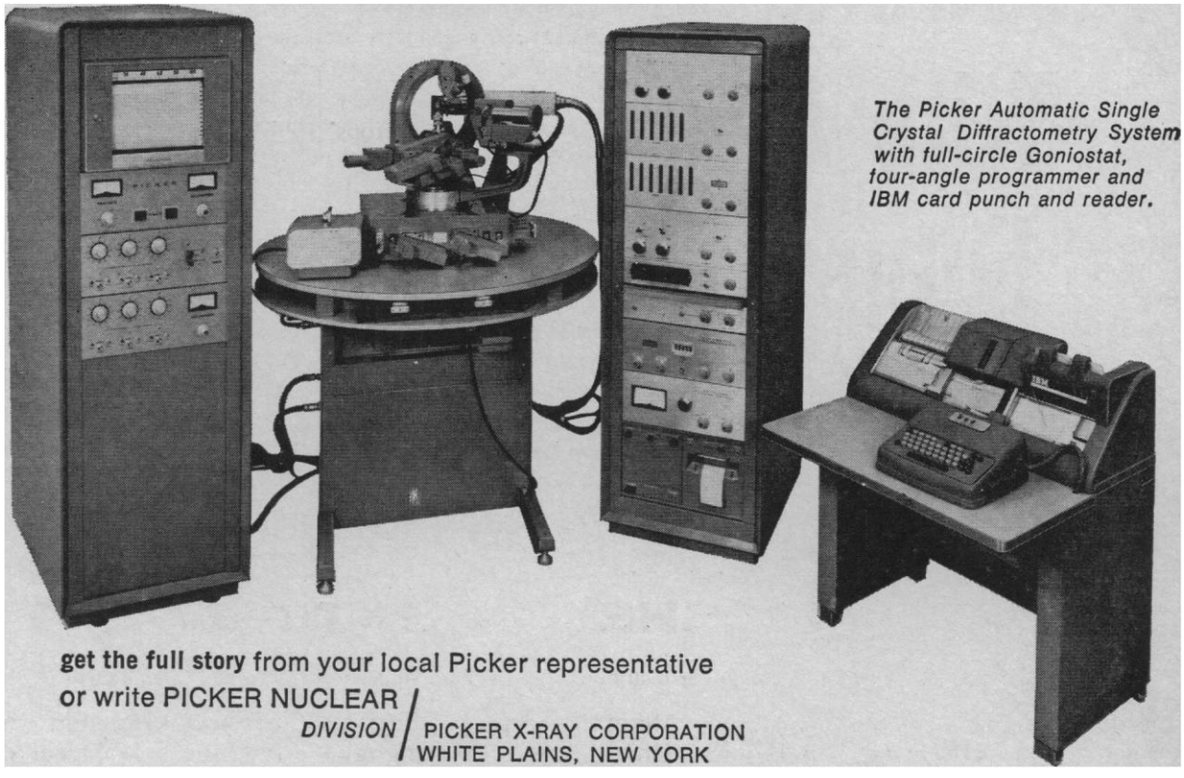

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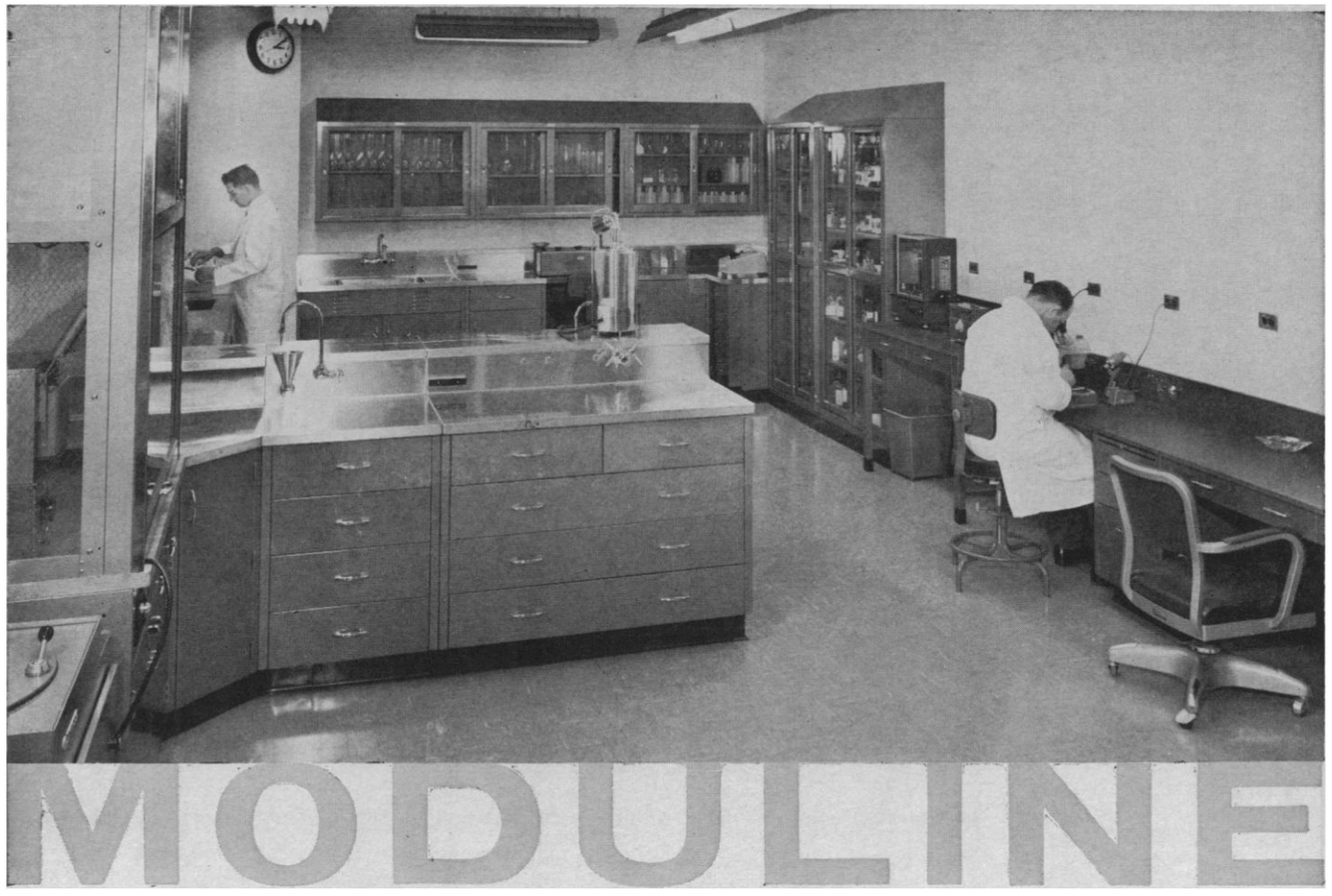

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European Association for Animal Production Publication No. 11.
Proceedings of the 3rd Symposium held at Troon, Scotland

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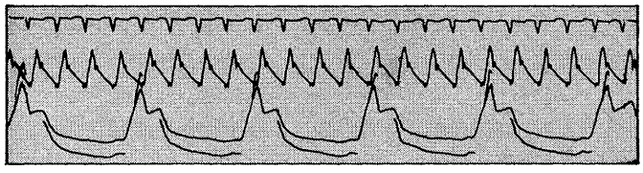

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Peak values, axis crossings, ratios of successive differences, and other characteristics of analog signals are measured in real time. Incoming signals are monitored for events of interest, using complex programmed detection criteria. In a typical biomedical application, the result is a 100-to-1 reduction in the bulk of magnetic tape output records.

$$A(n,w)=\int_0^T W(t)F(n,t)\cos(wt)dt$$
$$B(n,w)=\int_0^T W(t)F(n,t)\sin(wt)dt$$

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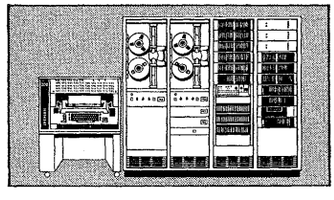
Parallel hybrid multiplication and summing, 2 microsecond 30-bit digital storage, and a flexible instruction format providing efficient list processing combine to make the AMBILOG 200 powerful in statistical signal analysis techniques such as Fourier transformation, auto and cross correlation, power spectrum density analysis, and generation of histograms of amplitude spectra.



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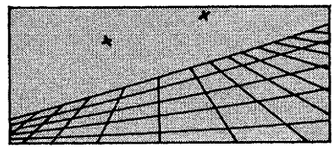

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Multiple analog outputs facilitate close man-machine relationships in systems involving visual displays. Points of an image stored in memory are rotated through three space angles and projected on a CRT at a 50 Kc rate. Co-ordinate transformation is accomplished simultaneously with digital-to-analog conversion.

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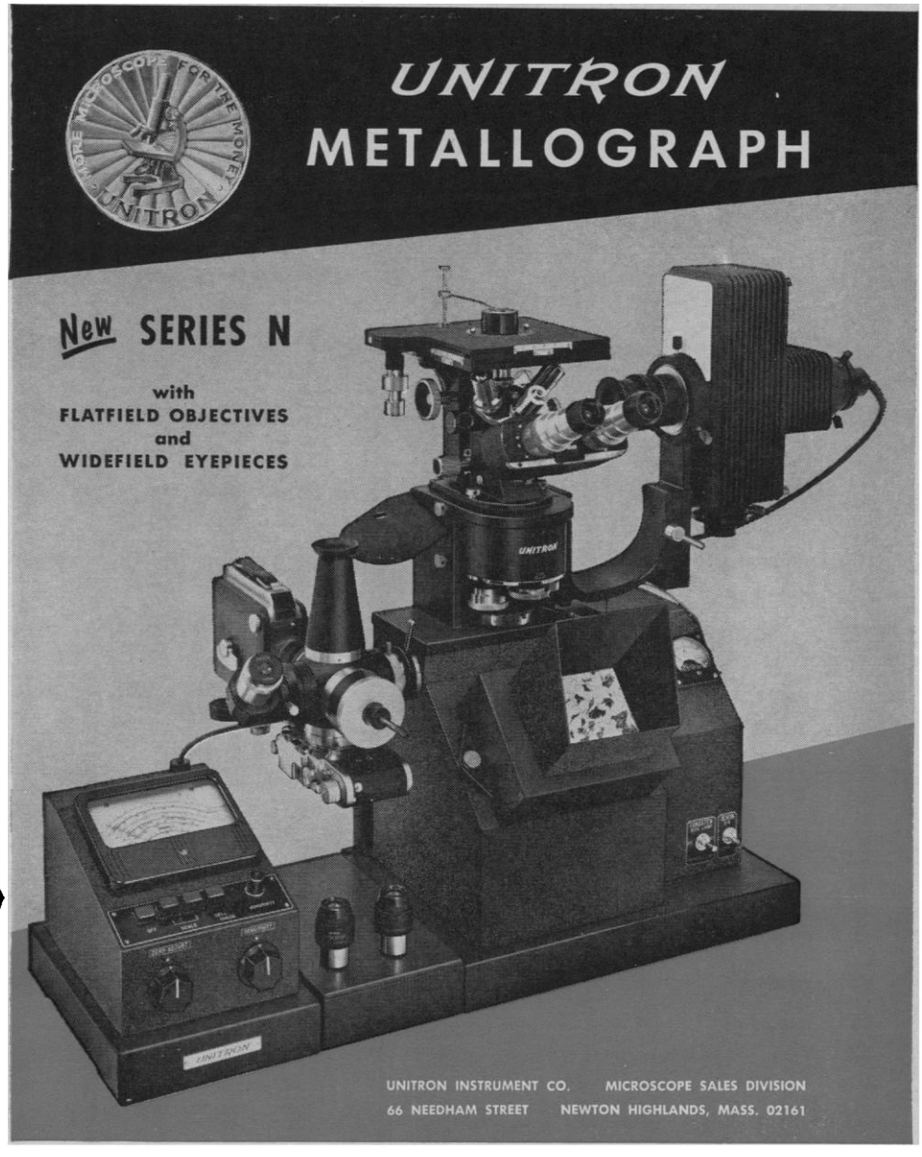

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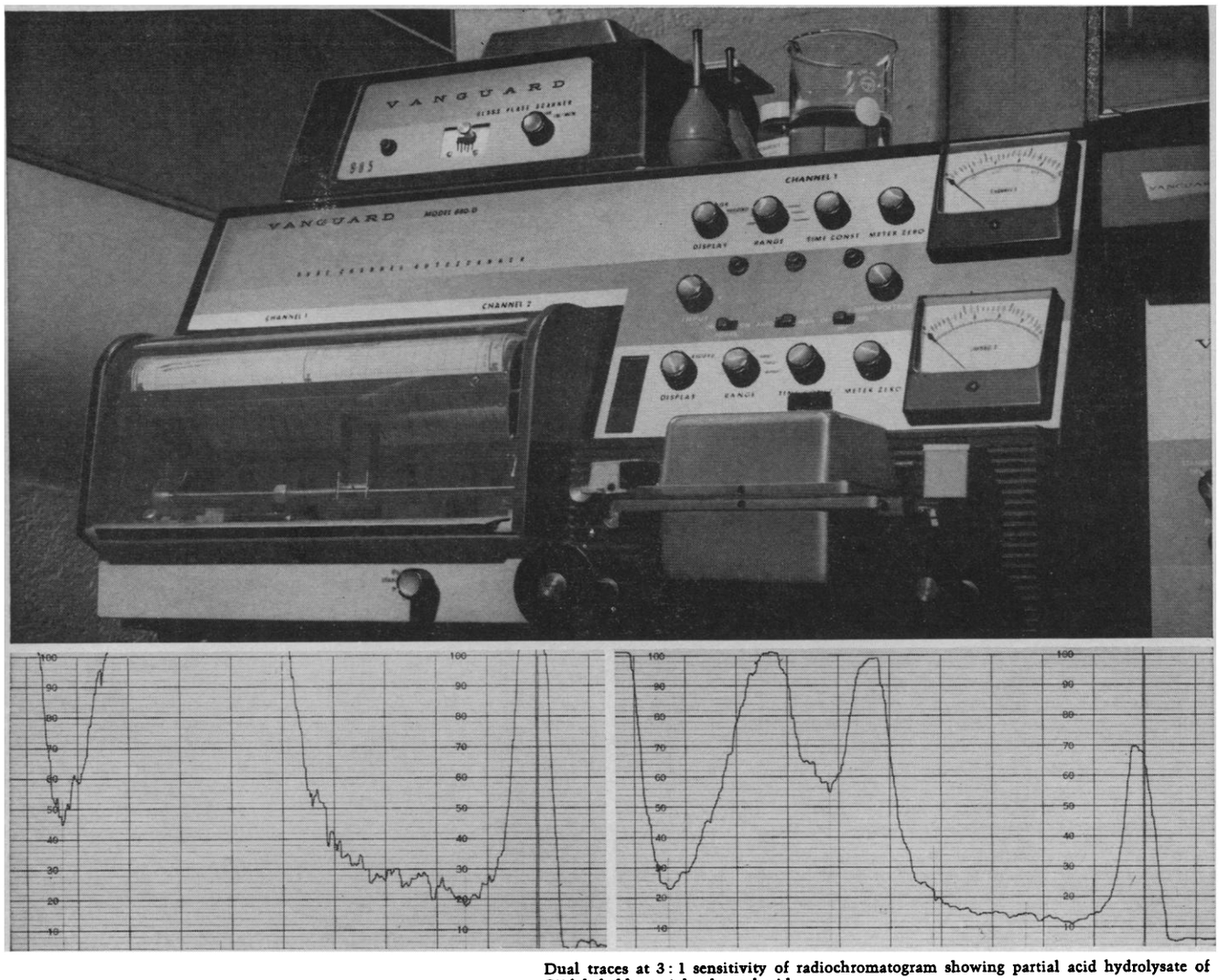

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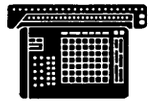
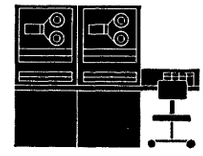


and this is too big for the job



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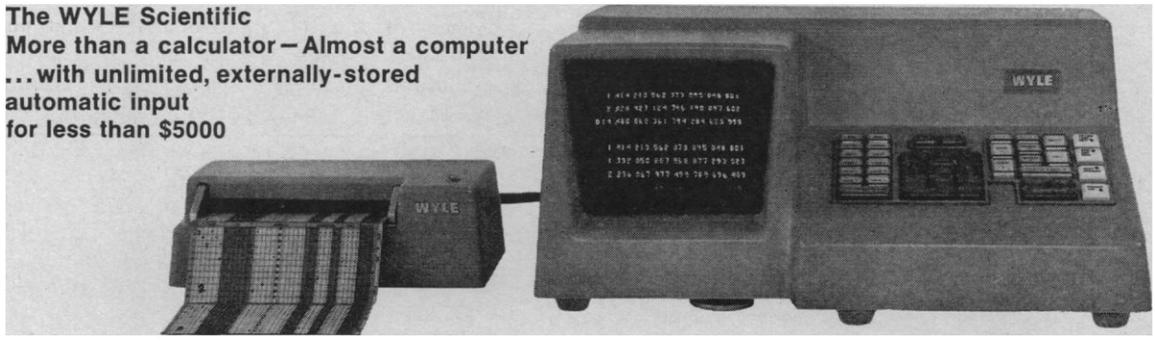

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the WYLE *Scientific* offers almost unlimited application in the solution of complex scientific, engineering, and statistical problems. Yet it is easier to operate than a calculator; takes up about the same desk space as an electric typewriter; solves problems with speed approaching that of a computer; operates with the quiet, and reliability of all-solid-state electronics. And its cost amortizes over a three-year period at less than $1 per working hour.

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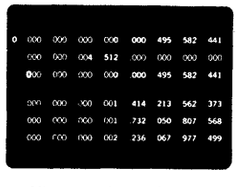

All parts of a problem are visible. The contents not only of the three active arithmetic registers, but also of the three storage registers are displayed at all times. Numbers entered from the keyboard are seen as they are entered and can be verified before use.

Transcription errors are eliminated through complete versatility of transfer from any register to any other without loss of desired data.

All registers handle 24-digit numbers to provide extreme numerical precision.

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Cost of the *Scientific*, complete with automatic input reader, is less than $5000. This cost amortizes over a three-year period at less than $1 per working hour.

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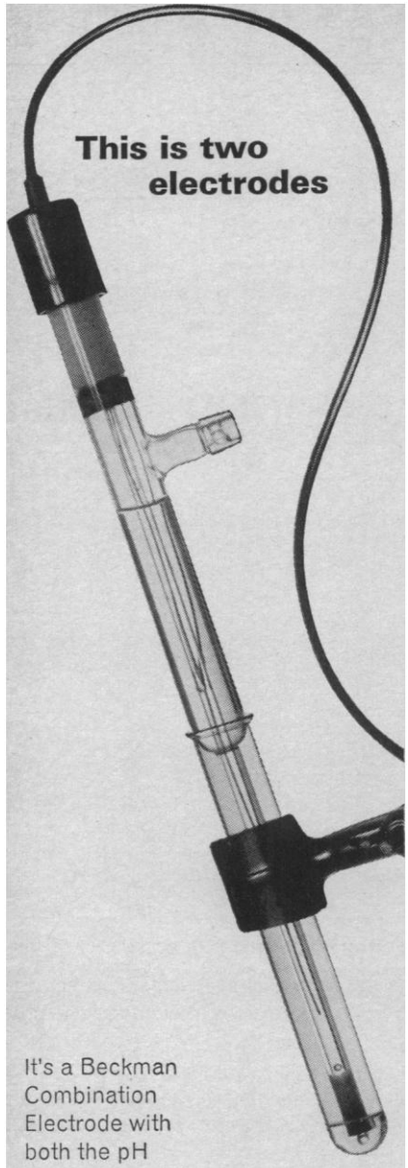

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year" for comparisons is 1960, not 1952–54, data from which are cited by Negus and Gould. However, this makes little difference so far as the data are concerned. In mature males 8 to 9 kg represents a 25-percent decline in total body weight from maximum weights or conversely a 44-percent increase over the weights at the time of the die-off—hardly an insignificant change, especially when there were adequate stores of fat in the usual depots, abundant for the time of year. These weight differences represented differences in the size of the animals, therefore reflected effects on somatic growth, not gain or loss of fat or other labile tissue mass.

With regard to the last point, we have recently learned that, owing to an editorial error, the illustrative photograph in our original paper (*3*) was one taken in 1959, not in 1958 as there indicated. The statement in the legend is, however, valid. Photographs taken in several years are available to illustrate our statement that the deer were not emaciated or suffering from a deficient food supply.

The earlier conclusions of Flyger and Warren (*4*) cited by Negus and Gould were based on superficial gross inspection without benefit of subsequent histological studies or of the sample collected and studied in 1960. To complicate matters, many of the dead deer were in advanced stages of autolysis, and all were autolyzed to some degree. We did not collect tissue from any dead deer, as we thought that in even the most recently dead animals autolytic changes were sufficient to impair reliable interpretation. Therefore we arranged to shoot a sample on our second visit during the die-off.

A second publication (*5*) presents strong presumptive evidence implicating potassium deficiency, secondary to prolonged hyperadrenalcorticalism, in the death of these deer. The deer feed extensively on submergent or emergent plants surrounding the island, of which there is a great supply, and the "ice barrier" existed for approximately 10 days in February, whereas the die-off began in January and continued through March. We cannot say that climate did not play an augmentive role in the die-off, but circumstantial evidence would tend to rule it out as an important factor. No die-off occurred in the years before or has occurred since, despite recurrent episodes of climatic adversity. However, we can state with assurance that the die-off was not caused by an inadequate intake of food, unless the deer died of malnutrition in the presence of adequate fat and liver glycogen stores and without emaciation.

We made observations, although not detailed ones, of social rank. Our supposition regarding social rank was based on the differential death of adult females and young of both sexes, and on reports in the literature on social rank in deer of several species (see *6*).

In support of our conclusions, Welch has shown a good relationship between adrenal change and population density in white-tailed deer (*7*).

In sum, it seems to us that the evidence provided by detailed autopsies and histological studies must assume greater validity than superficial gross examination. It would be difficult, if not impossible, to explain the appearance of renal glomerular disease well before the die-off on the basis of malnutrition; the presence of adequate fat stores in deer dying supposedly of malnutrition; the fact that the deer were stunted 3 years prior to the die-off and growth increased promptly afterwards; the chronic adrenal enlargement for 3 years preceding the die-off; the absence of indications of emaciation in the deer that was staggering and obviously dying (with hemorrhages in the adrenal zona glomerulosa); and, finally, the evidence, albeit presumptive, of potassium deficiency.

We expect variability and have never claimed that only endocrine mechanisms are capable of limiting population growth. We agree with Negus and Gould that further experimentation must provide the ultimate answers.

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Pennsylvania State University,
University Park

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2. N. C. Negus, E. Gould, R. I. Chipman, *Tulane Studies Zool.* **8**, 95 (1961).
3. J. J. Christian, V. Flyger, D. E. Davis, *Chesapeake Sci.* **1**, 79 (1960).
4. V. Flyger and J. Warren, *Proc. Ann. Conf. Southeastern Assoc. Game and Fish Comm.* **12**, 209 (1958).
5. J. J. Christian, *Wildlife Diseases No. 37* (1964).
6. See, for example, C. Kabat, N. E. Collias, R. C. Guettinger. *Wisconsin Conserv. Dept. Tech. Wildlife Bull. No. 7* (1953).
7. B. L. Welch, *Proc. 1st Natl. Deer Disease Symp.* (Univ. of Georgia Press, Athens, 1962).

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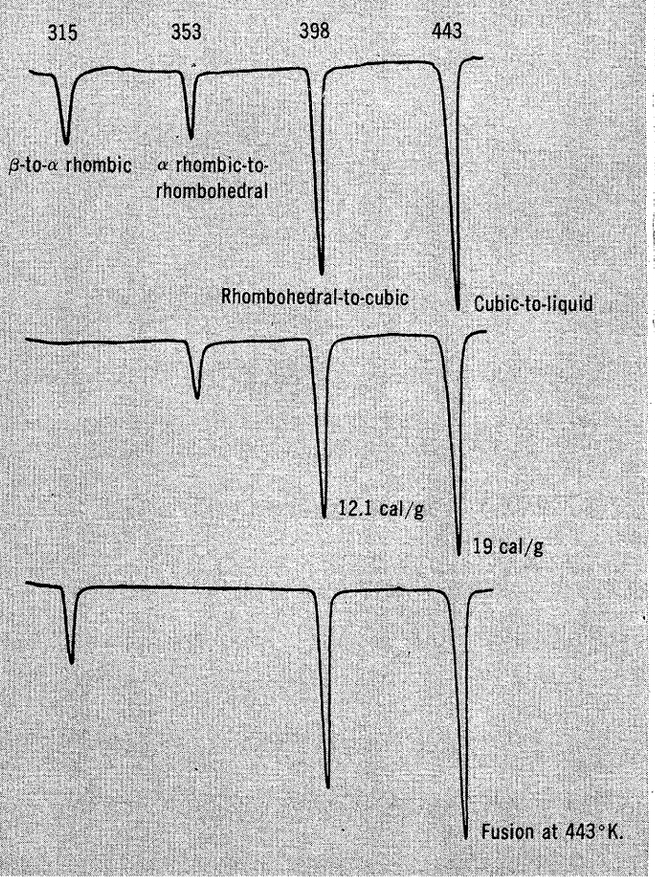
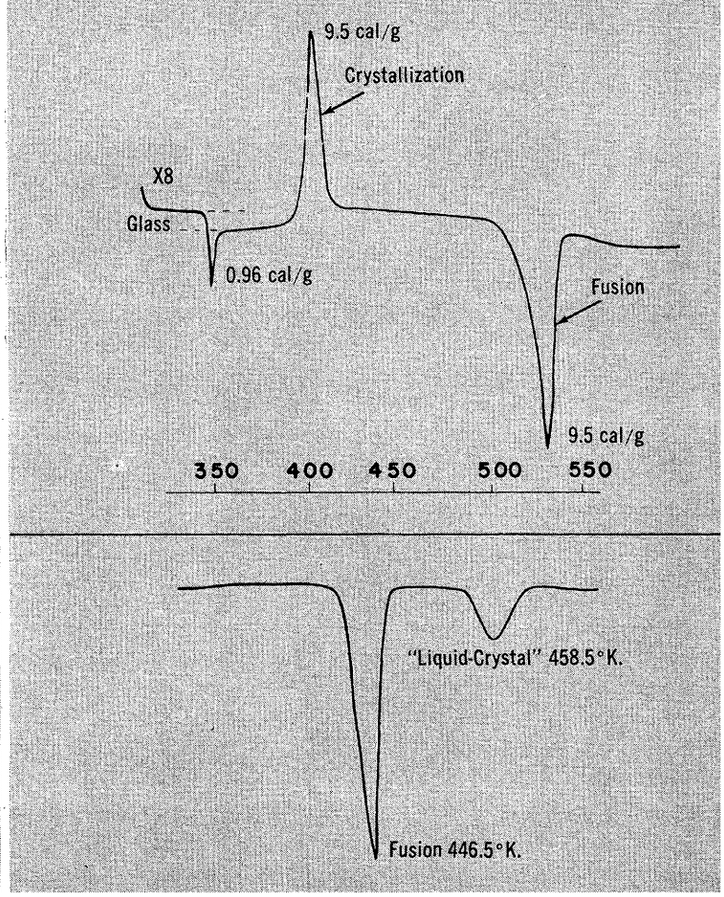
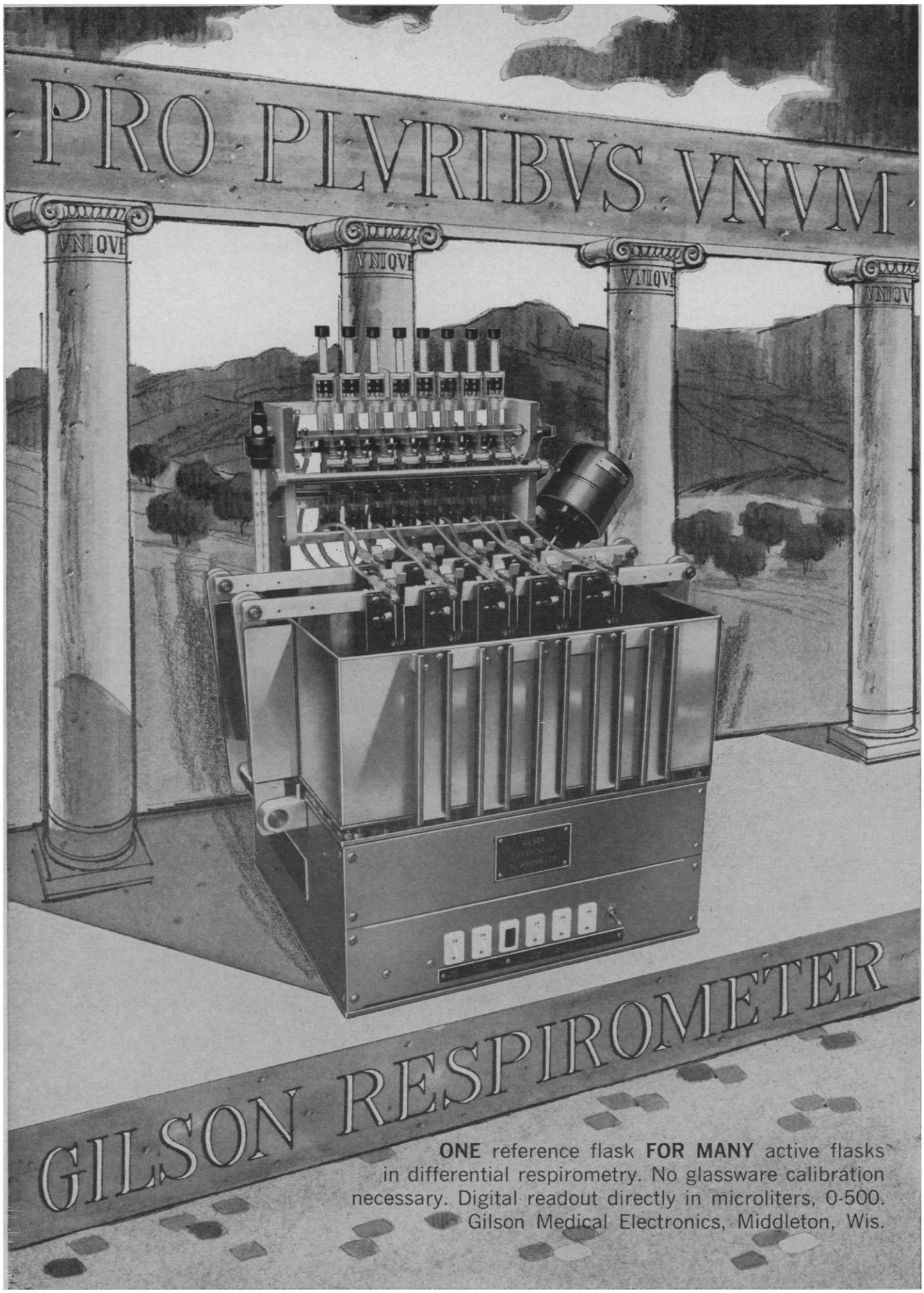


Top chart is thermogram of polyethylene terephtalate. Peak areas correspond to transition energies as shown. Bottom run is anisaldazine.





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Public Understanding of Science

President Johnson recently asked his policymakers for "imagination and innovation" in developing plans for the second phase of the Great Society. He requested that the annual budget reviews be turned into a study of *program needs* rather than a mere estimate of budgetary dollar totals.

Budgets can suggest very interesting questions about program needs. The National Science Foundation, in its current budget, allots $400,000 to furthering public understanding of science. Examination shows that this item has increased only slightly since it first appeared in the budget in 1959. Meanwhile, the total budget for the Foundation, which includes funds for basic research, for graduate fellowships, and for improving science curricula, amounts to about $430 million, an increase of some 600 percent over 1959.

These figures raise two questions. Do they indicate that the need for popular communication about science has *not* increased with the growth in scientific knowledge and its widespread applications? Or, instead, do the figures reveal a gap in federal thinking and planning in this sphere?

On the question of whether the public need has increased, one can cite some obvious facts. Scientific knowledge is doubling roughly every 10 years, and, concurrently, the time between discovery and application is decreasing. This rapid advance is not only continually reordering the known facts of physical reality but is giving birth to new problems—such as improper use of pesticides, the threats of automation, the question of smoking and health, the choice of new science curricula for the schools, and the danger of automobile-exhaust pollutants.

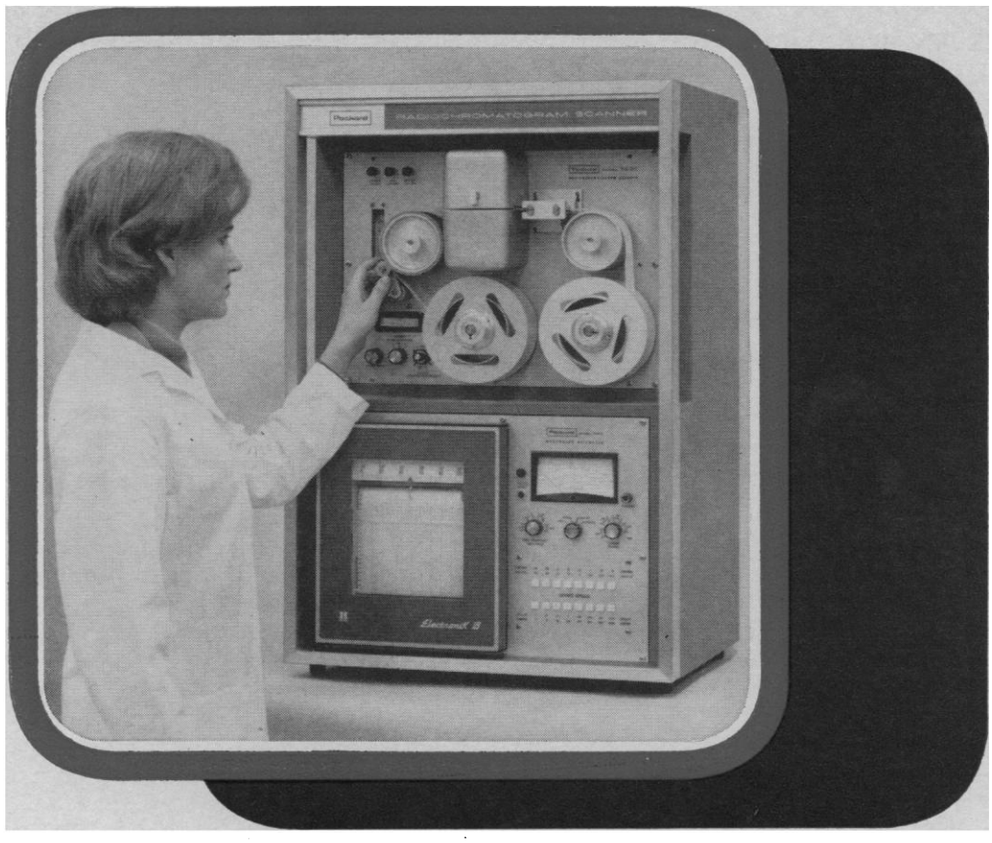
Individual laymen have no one, except perhaps the more responsible representatives of the mass media, to whom to turn for the holistic point of view that the citizen needs. Add to this situation the fact that the high-school- or college-educated citizen of today, aged 40, scarcely heard of or imagined during his years in school any of the scientific-social problems he faces as an adult.

These facts, and the NSF budget figures cited, point to a gap in national thinking and planning. There is remarkably little formal assumption of responsibility by government agencies for informing and educating the public about problems, and solutions, to which scientific research gives rise.

In considering the above statement, one must make a clear distinction between publicity and public information, on the one hand, and public education on the other. The support of one's own program is justifiable and must be a legitimate prerogative of any agency or organization. At the same time, the responsibility for public education is a horse of another color. There is a crying need for programs set up with the sole purpose of providing basic education in the facts behind public issues involving science, as seen from an overall point of view.

The National Science Foundation should respond to President Johnson's request for imagination and innovation by accepting substantial responsibility for the basic science education of the adult public. In accepting such responsibility, NSF should propose a greatly expanded version of its present public-understanding-of-science program. Just as the nation plows back a certain percentage of the gross national product to basic research, so it should invest a certain percentage of the R & D budget in public understanding of science, to help society contend with some of the social problems that the applications of R & D cause.

—E. G. SHERBURNE, JR.



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Forthcoming Events

August

1–5. American Soc. of **Animal Science,** Michigan State Univ., East Lansing. (J. E. Oldfield, Dept. of Animal Science, Oregon State Univ., Corvallis)

1–8. **Chemistry,** 9th Latin American congr., San Juan, P.R. (Secretary, 9th Latin American Chemical Congr., Box 2647, Rio Piedras, P.R.)

2–4. Society for **Cryobiology,** 2nd annual, Madison, Wis. (G. Rapatz, American Foundation of Biological Research, RFD 1, Madison 53716)

2–5. **Comparative Endocrinologists,** 3rd European conf., Copenhagen, Denmark. (C. Barker-Jørgensen, Universitets Zoofysiologiske Laboratorium Juliane Maries Vej 32, Copenhagen Ø)

2–6. **High Pressure,** intern. conf., Saône et Loire, France. (B. Vodar, Centre National de la Recherche Scientifique, B.P. 30, Bellevue, Seine et Oise, France)

2–6. **Instrumentation Science,** 2nd research conf., Instrument Soc. of America, Geneva, N.Y. (K. B. Schnelle, Jr., ISA, 539 William Penn Pl., Pittsburgh, Pa.)

3–7. **Acta Endocrinologica,** 5th congr., Hamburg, Germany. (A. Jores, 2 Medizinische Klinik, Eppendorfer Krankenhaus, Hamburg 20)

3–7. **Poultry Science** Assoc., Univ. of Georgia, Athens. (C. B. Ryan, Texas A&M Univ., College Station 77843)

4–6. **Space and Ballistic Missile Technology,** 10th symp., U.S. Naval Training Center, San Diego, Calif. (C. T. Morrow, Aerospace Corp., Box 95085, Los Angeles, Calif. 90045)

4–7. **Genetics,** G. Mendel memorial symp., Brno, Czechoslovakia. (M. Sosna, G. Mendel Memorial Symp., Na cvicisti 2, Prague 6, Czechoslovakia)

6–8. Particle-Berkeley and Podium-Berkeley, 3rd annual **student research** symp., Berkeley, Calif. (Box 937, Berkeley 94701)

8–11. **Heat Transfer,** 8th natl. conf., Los Angeles, Calif. (K. O. Beatti, Jr., Dept. of Chemical Engineering, North Carolina State College, Raleigh)

8–14. **Anatomists,** 8th intern. conf., Wiesbaden, Germany. (M. Watzka, Anatomisches Institut der Universität, Mainz, West Germany)

8–27. **Fracture Mechanics,** workshop, Denver Research Inst., Denver, Colo. (D. L. Wells, University Technology Corp., P.O. Box 7, Dayton, Ohio 45449)

9–11. **Mutation Process,** symp., Prague, Czechoslovakia. (M. Sosna, Na cvicisti 2, Prague 6)

9–13. **Meteor Orbits and Dust,** intern. symp. (invitation only), Cambridge, Mass. (G. S. Hawkins, Smithsonian Astrophysical Observatory, 60 Garden St., Cambridge 02138)

9–15. Nordic **Entomology** Congr., Oslo, Norway. (Norwegian Natl. Travel Office, 290 Madison Ave., New York 10017)

9–20. **Electromagnetic Measurements and Standards,** Natl. Bureau of Standards, Boulder, Colo. (Bureau of Continuation Education, University Memorial Center, Univ. of Colorado, Boulder)

10–20. **Theory of Groups,** intern. conf., Intern. Mathematical Union, Canberra, Australia. (L. G. Kovacs, Dept. of Mathematics, Australian Natl. Univ. Inst. of Advanced Studies, Box 4, G.P.O., Canberra)

11–13. **Calorimetry,** 20th conf., Ames, Iowa. (R. Hultgren, Univ. of California, Berkeley)

11–15. European **Malacological** Union, 2nd congr., Copenhagen, Denmark. (G. Høpner Peterson, c/o Zoologisk Museum, 5 Afdeling, Universitetsparken 15, Copenhagen)

12–21. **Veterinary Education,** 2nd intern., Copenhagen, Denmark. (Inter. Agency Liaison Branch, Office of the Director General, Food and Agriculture Organization, Via delle Terme di Caracalla, Rome, Italy)

14–20. Australian **Medical** Assoc., 2nd medical congr., Perth, Western Australia. (O. R. Corr, 8 King's Park Rd., West Perth, Western Australia)

14–20. **Molecular Spectroscopy,** 8th European congr., Copenhagen, Denmark. (The Congress, Universitetsparken 5, København Ø, Denmark)

14–6. **Digital Computers** for College Teachers of Science, Mathematics, and Engineering, Univ. of Southwestern Louisiana, Lafayette. (J. R. Oliver, Box 133, USL Station, Lafayette 70506)

14–19 Sept. International Assoc. for **Quaternary Research,** 7th congr., Boulder and Denver, Colo. Field conf., *14–29 Aug.* and *5–19 Sept.*; general assembly, *30 Aug.–5 Sept.* (G. M. Richmond, Room 2462, Bldg. 25, Denver Federal Center, Denver 80225)

15–20. American Inst. of **Biological Sciences,** Urbana, Ill. (AIBS, 3900 Wisconsin Ave., NW, Washington, D.C. 20016)

The following societies will meet in conjunction with the AIBS. Unless otherwise indicated, the local chairmen are at the University of Illinois, Urbana.

American **Bryological** Soc. (G. N. Jones, Dept. of Botany)

American **Fern** Soc. (G. N. Jones, Dept. of Botany)

American **Fisheries** Soc. (G. Bennett, Aquatic Biology Section)

American **Genetic** Assoc. (S. Price, Room 210 S. Bldg., Plant Industry Station, Beltsville, Md.)

American **Microscopical** Soc. (L. J. Thomas, Dept. of Zoology)

American Soc. for **Horticultural Science.** (C. J. Birkeland, Dept. of Horticulture)

American Soc. of **Limnology and Oceanography.** (W. Larrimore, Illinois Natural History Survey, Urbana)

American Soc. of **Plant Physiologists** (J. B. Hanson, Dept. of Agronomy)

American Soc. of **Plant Taxonomists.** (W. Payne, Dept. of Botany)

American Soc. of **Zoologists.** (L. Ingle, Dept. of Zoology)

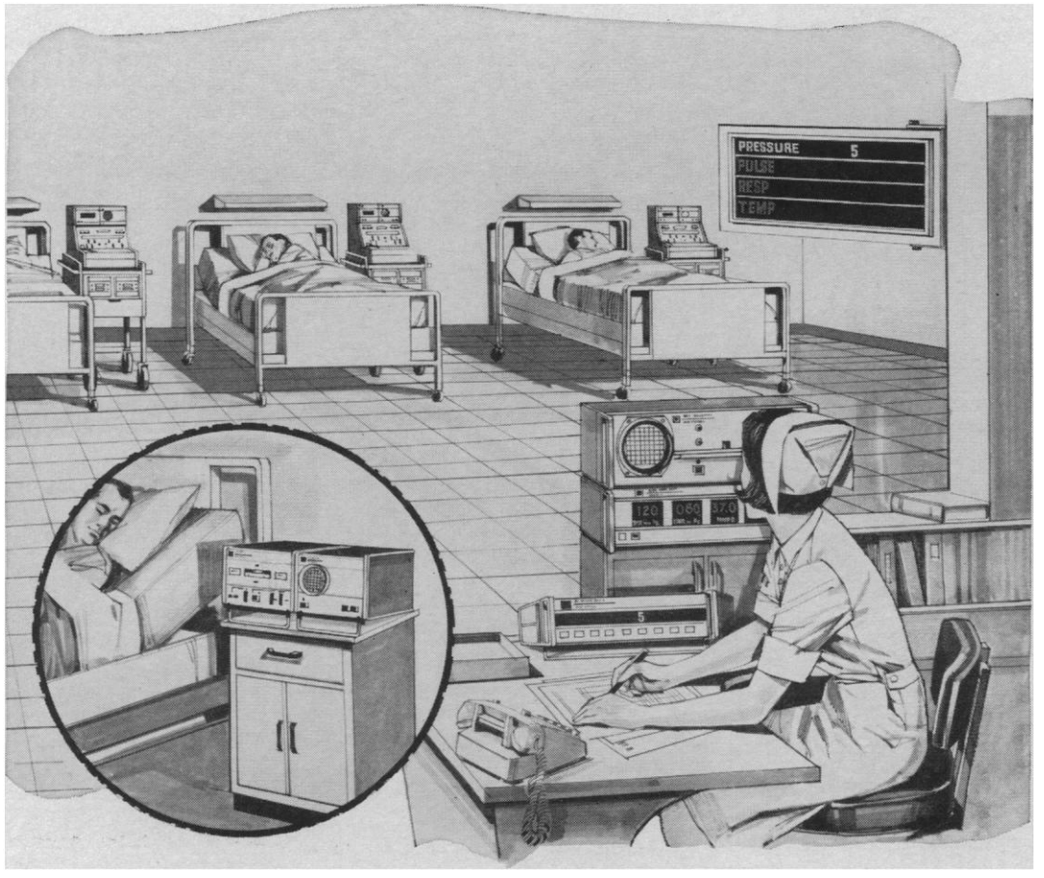
Animal Behavior Soc. (G. P. Waldbauer, Dept. of Entomology)

Botanical Soc. of America. (D. J. Paolillo, Dept. of Botany, 302 Natural History Bldg.)

Ecological Soc. of America. (L. C. Bliss, Dept. of Botany)

Mycological Soc. of America. (D. P. Rogers, Dept. of Botany)

National Assoc. of **Biology Teachers.** (H. Weaver, Dept. of Recreation and Municipal Park Administration)



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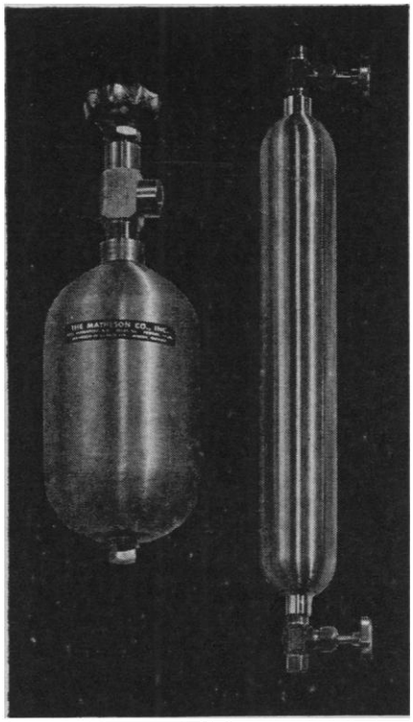

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Society of **Nematologists**. (D. P. Taylor, 106 Horticulture Field Laboratory)

Tomato Genetics Cooperative. (A. Thompson, Dept. of Horticulture)

15–20. **Energetics**, American Soc. of Mechanical Engineers, conf., Rochester, N.Y. (ASME, 345 E. 47 St., New York)

15–21. **Ophthalmology**, 8th Pan American congr., Rio de Janeiro, Brazil. (W. D. Estrada, Praca Cardea, Arcoverde 25, Copacabana, Rio de Janeiro)

16–18. **Guidance and Control**, conf., Minneapolis, Minn. (D. L. Mellen, Mail Station 677, Military Products Group, Aeronautical Div., Honeywell, Inc., Minneapolis 55440)

16–20. Australian–New Zealand Assoc. for the **Advancement of Science**, Univ. of Tasmania, Hobart, Tasmania, Australia. (K. D. Nicolls, Div. of Soils, CSIRO, Stowell Ave., Hobart)

16–20. **Liquid Crystals**, conf., Kent State Univ., Kent, Ohio. (G. H. Brown, Dept. of Chemistry, Kent State Univ., Kent)

16–20. American Soc. for **Pharmacology and Experimental Therapeutics**, fall meeting, Univ. of Pennsylvania, Philadelphia. (E. B. Cook, 9650 Wisconsin Ave., Washington, D.C. 20014)

16–21. Electron Diffraction and the Nature of **Defects in Crystals**, intern. conf., Melbourne, Australia. (R. I. Garrod, Astronautical Research Laboratories, Box 4331, G.P.O., Melbourne)

16–3. **Kinematical and Chemical History of the Galaxy**, NATO inst., Sussex, England. (R. Wooley, Herstmonceaux Castle, Sussex)

16–3. **Radiation** Trapped in the Earth's Magnetic Field, NATO institute, Bergen, Norway. (B. M. McCormac, Geophysics Div., IIT Research Inst., 10 W. 35 St., Chicago, Ill. 60515)

17–20. **Anesthesiology**, symp., Czechoslovak Medical Soc., Prague. (J. Hoder, Unemocnice 2, Prague 2)

17–20. **Atmospheric Pollution**, 2nd Clean Air Conf., Sydney, Australia. (J. L. Sullivan, New South Wales Dept. of Health, P.O. Box 31, George St. North Post Office, Sydney)

17–27. **Infrared Spectroscopy**, 16th annual inst., Fisk Univ., Nashville, Tenn. (Director, Fisk Infrared Inst., Fisk Univ., Nashville 8)

18–20. American **Astronautical** Soc., natl. meeting, San Francisco, Calif. (J. N. Nielsen, P.O. Box 642, Los Altos, Calif.)

18–25. Upper **Atmosphere Chemistry** Circulation and Aerosols, symp., Intern. Assoc. of Meteorology and Atmospheric Physics, Visby, Sweden. (The Association, Commission of Atmospheric Chemistry and Radioactivity, c/o Natl. Center for Atmospheric Research, Boulder, Colo.)

20–21. American Inst. of **Ultrasonics in Medicine**, 1st Pan American meeting, Lima, Peru. (C. Bustamante Ruiz, Dept. of Physical Medicine and Rehabilitation, Hospital Obrero, Lima)

21. American Assoc. of **Electromyography and Electrodiagnosis**, annual, Philadelphia, Pa. (M. K. Newman, 16861 Wyoming Ave., Detroit, Mich. 48221)

21. **Spectroscopy**, 5th, Intern. Union of Pure and Applied Physics commission, Copenhagen, Denmark. (W. Price, Dept. of Physics, Kings College, Univ. of London, London, W.C.2, England)

21–25. **Insect Endocrinology**, symp., Prague, Czechoslovakia. (F. Hrabal, Foreign Relations Dept., Czechoslovak Acad. of Sciences, Narodni tr. 3, Prague 1)

22–25. **Soil Conservation** Soc. of America, Philadelphia, Pa. (H. W. Pritchard, 7515 Ankeny Rd., Ankeny, Iowa)

22–27. **Medical Electronics and Biomedical Engineering**, Tokyo, Japan. (K. Suhara, Japan Soc. of Medical Electronics and Biological Engineering, Old Toden Bldg., 1-1 Shiba-tamura-cho, Minato-ku, Tokyo)

22–27. **Microchemical Techniques**, intern. symp., Pennsylvania State Univ., University Park. (H. Francis, Jr., Pennsalt Chemicals Corp., 900 First Ave., King of Prussia, Pa.)

22–27. American Acad. of **Physical Medicine and Rehabilitation**, Philadelphia, Pa. (M. K. Newman, 16861 Wyoming Ave., Detroit, Mich. 48221)

22–28. Physiology of Giant **Algal Cell**, conf., Australian Acad. of Science, Canberra, Australia. (The Academy, Gordon St., Canberra)

22–28. **Industrial Research**, 16th annual conf., Tuxedo, N.Y. (R. T. Livingston, School of Engineering and Applied Science, Columbia Univ., New York, N.Y.)

22–28. **Lunar Geology**, intern. field conf., Bend, Ore. (L. Staples, Dept. of Geology, Univ. of Oregon, Eugene)

23–25. **Cryogenic Engineering**, conf., Houston, Tex. (K. D. Timmerhaus, Engineering Research Center, Univ. of Colorado, Boulder 80304)

23–25. American Soc. of **Human Genetics**, Seattle, Wash. (J. B. Graham, Dept. of Pathology, Univ. of North Carolina, Chapel Hill)

23–25. **Plant Phenolics** Group of North America, annual, Albany, Calif. (V. C. Runeckles, Imperial Tobacco Co. of Canada, P.O. Box 6500, Montreal, Quebec)

23–26. **Clay Minerals** Soc., 2nd annual, Univ. of California, Berkeley. (J. A. Pask, Dept. of Mineral Technology, Univ. of California, Berkeley 94720)

23–26. **Quantum Chemistry**, Physical Chemistry Div., Chemical Inst. of Canada, Edmonton, Alta. (The Institute, 48 Rideau St., Ottawa 2, Ont.)

23–27. Control Procedures in **Drug Production**, seminar, Univ. of Wisconsin, Madison. (W. Blockstein, Extension Services in Pharmacy, Univ. of Wisconsin, Madison)

23–27. **Neurological Surgery**, 3rd intern. congr., Copenhagen, Denmark. (DIS Congress Service, Sankt Peders Straide 19, Copenhagen K)

23–27. American **Ornithologists** Union, Ohio State Univ., Columbus. (R. Mewaldt, San Jose State Teachers College, San Jose, Calif.)

23–27. **Space**, 5th annual conf., Virginia Polytechnic Inst., Blacksburg. (M. L. Col-

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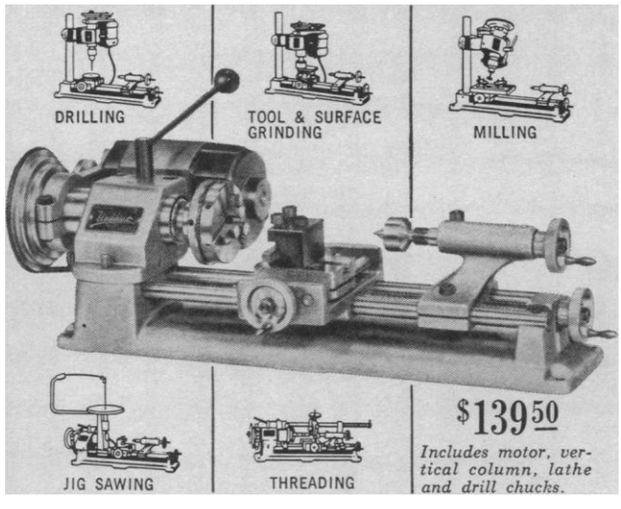

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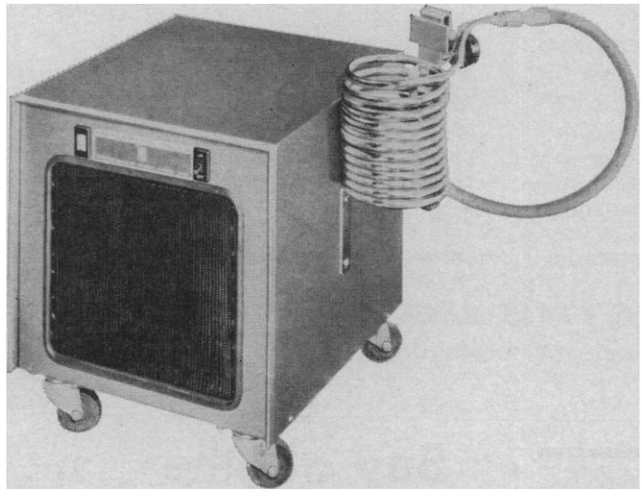

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23–28. American **Physiological** Soc., Univ. of California, Los Angeles. (R. G. Daggs, 9650 Wisconsin Ave., Washington, D.C. 20014)

23–29. European Soc. of **Haematology**, 10th congr., Strasbourg, France. (R. Waitz, Faculté de Médecine, Inst. d'Hématologie, 1, Pl. de l'Hôpital, Strasbourg, Bas-Rhin, France)

23–29. **Logopaedics and Phoniatrics**, 13th intern. congr., Vienna, Austria. (Mrs. A. M. Jorg, Vienna Acad. of Medicine, Alserstr. 4, Vienna 9)

23–30. **Limnology**, 16th intern. congr., Warsaw, Poland. (G. E. Hutchinson, Yale Univ., New Haven, Conn.)

24–26. Association for **Computing Machinery**, 20th natl. conf., Cleveland, Ohio. (G. J. Moshos, P.O. Box 4741, Cleveland)

24–26/28–29. **History of Science**, 11th intern. congr., Warsaw and Krakow, Poland. (W. Voisé, Inst. of the History of Science and Technology, Polish Acad. of Sciences, Nowy Swiat 72, Room 19, Warsaw 1)

24–27. Western **Electronic** Conv. (WESCON), San Francisco, Calif. (E. L. Rogers, Wescon, Suite 203, 780 Welch Rd., Palo Alto, Calif.)

24–27. **Pharmaceutical Sciences**, 25th intern. congr., Prague, Czechoslovakia. (Pharmaceutical Section, Czechoslovak Medical Soc., J. E. Purknye, U Elektry 8, Prague)

24–28. **Electron Microscope** Soc., 23rd annual, New York, N.Y. (L. Ross, Anatomy Dept., Cornell Univ. Medical College, 1300 York Ave., New York)

25–27. **Gas Dynamics**, 6th biennial conf., Evanston, Ill. (A. B. Cambel, Gas Dynamics Symp., Northwestern Univ., Evanston 60201)

25–27. **Thymus**, Ciba Foundation symp., Melbourne, Australia. (Ciba, 41, Portland Place, London, W.1, England)

25–27. **X-Ray Analysis**, 14th annual conf., Denver, Colo. (Metallurgy Div., Denver Research Inst., Univ. of Denver, Denver 80210)

25–28. Systems Engineering for **Control System Design**, Tokyo, Japan. (H. M. Paynter, Mechanical Engineering Dept., Massachusetts Inst. of Technology, Cambridge 39)

25–28. **Photochemistry**, intern. conf., Tokyo, Japan. (I. Tanada, Laboratory of Physical Chemistry, Tokyo Inst. of Technology, Ookayama, Meguro-ku, Tokyo)

25–28. International **Phycological** Soc., Halifax, N.S., Canada. (E. G. Young, Natl. Research Council of Canada, Halifax)

25–28. **Seaweed**, 5th intern. symp., Halifax, N.S., Canada. (E. G. Young, Natl. Research Council of Canada, Halifax)

26–28. **Helium Superfluidity**, symp., St. Andrews, Scotland. (J. F. Allen, St. Andrews Univ., St. Andrews)

26–28. **Neurovirulence**, symp., Munich, Germany. (Permanent Section of Microbiological Standardization, Intern. Assoc. of Microbiological Societies, Inst. d'Hygiène, Geneva, Switzerland)

26–28. National Council of **Teachers of Mathematics**, Vancouver, B.C., Canada. (J. D. Gates, 1201 16th St., NW, Washington, D.C. 20036)

29–2. American Assoc. of **Clinical**

Chemists, 17th natl., Chicago, Ill. (M. E. Hanke, 8424 Rhodes Ave., Chicago)

29–2. **Illuminating Engineering** Soc., New York, N.Y. (A. D. Hinckley, 345 East 47 St., New York 10017)

29–3. AAAS, Laurentian **Hormone** Conf., Mont Tremblant, Quebec, Canada. (J. C. Foss, Laurentian Hormone Conf., 222 Maple Ave., Shrewsbury, Mass.)

29–10. **Forest Hydrology**, intern. symp., Pennsylvania State Univ., University Park. (W. E. Sopper, School of Forestry, Pennsylvania State Univ., University Park)

30–31. **Past and Future of Science**, symp., Krakow, Poland. (B. Suchodolski, Polish Acad. of Sciences, Palace of Culture and Sciences, Warsaw)

30–1. **Antennas and Propagation**, intern. symp., Washington, D.C. (R. J. Adams, Code 5330, U.S. Naval Research Laboratory, Washington 20390)

30–1. Applied **Mechanics**, West Coast conf., Univ. of California, Los Angeles. (P. M. Naghdi, Div. of Applied Mechanics, Univ. of California, Berkeley 94720)

30–1. **Rare Earth Research**, 5th conf., Iowa State Univ., Ames. (S. Legvold, Dept. of Physics, Iowa State Univ., Ames)

30–1. **Structural Dynamics and Aeroelasticity**, conf., Boston, Mass. (F. C. Hung, Space Information Systems Div., North American Aviation, Inc., Downey, Calif.)

30–2. **Fluorine Chemistry**, 3rd intern. symp., Munich, Germany. (F. Weygand, Inst. für Organische Chemie, Technische Hochschule München, Arcisstr. 21, 8 Munich 2)

30–2. **Mathematical** Assoc. of America, 46th summer, Cornell Univ., Ithaca, N.Y. (H. M. Gehman, State University of New York at Buffalo, Buffalo 14214)

30–2. **Regional Science** Assoc., 5th European congr., Krakow, Poland. (H. Wood, Dept. of Regional Science, Univ. of Pennsylvania, Philadelphia 19104)

30–2. American **Sociological** Assoc., Chicago, Ill. (G. M. Sykes, ASA, 1755 Massachusetts Ave., NW, Washington, D.C.)

30–3. **Neuropathology**, 5th intern. congr., Zurich, Switzerland. (O. T. Bailey, 912 S. Wood St., Chicago, Ill. 60612)

30–3. **Nuclear Materials Management**, intern. symp., Vienna, Austria. (J. H. Kane, Div. of Special Projects, U.S. Atomic Energy Commission, Washington, D.C.)

30–3. Society for Applied **Spectroscopy**, 4th natl., Denver, Colo. (M. W. Skougstad, 215 Hewitt Bldg., Denver 80202)

30–4. **Ionization Phenomena** in Gases, 7th intern. conf., Belgrade, Yugoslavia. (Organizing Committee, Studentski trg. 16/C/IV, P.O.B. 699, Belgrade)

30–4. **Macromolecular Chemistry**, intern. symp., Prague, Czechoslovakia. (O. Wichterle, 1888 Petriny, Prague 6)

30–4. **Organometallic Chemistry**, 2nd intern. symp., Madison, Wis. (R. West, Dept. of Chemistry, Univ. of Wisconsin, Madison)

30–10. **Population**, 2nd world conf., Belgrade, Yugoslavia. (United Nations Population Commission, United Nations, New York)

30–10. International Inst. of **Refrigeration**, symp., Prague and other cities, Czechoslovakia. (Organizing Committee, Prague 5-Smíchov, Ostrovského 34, Czechoslovakia)

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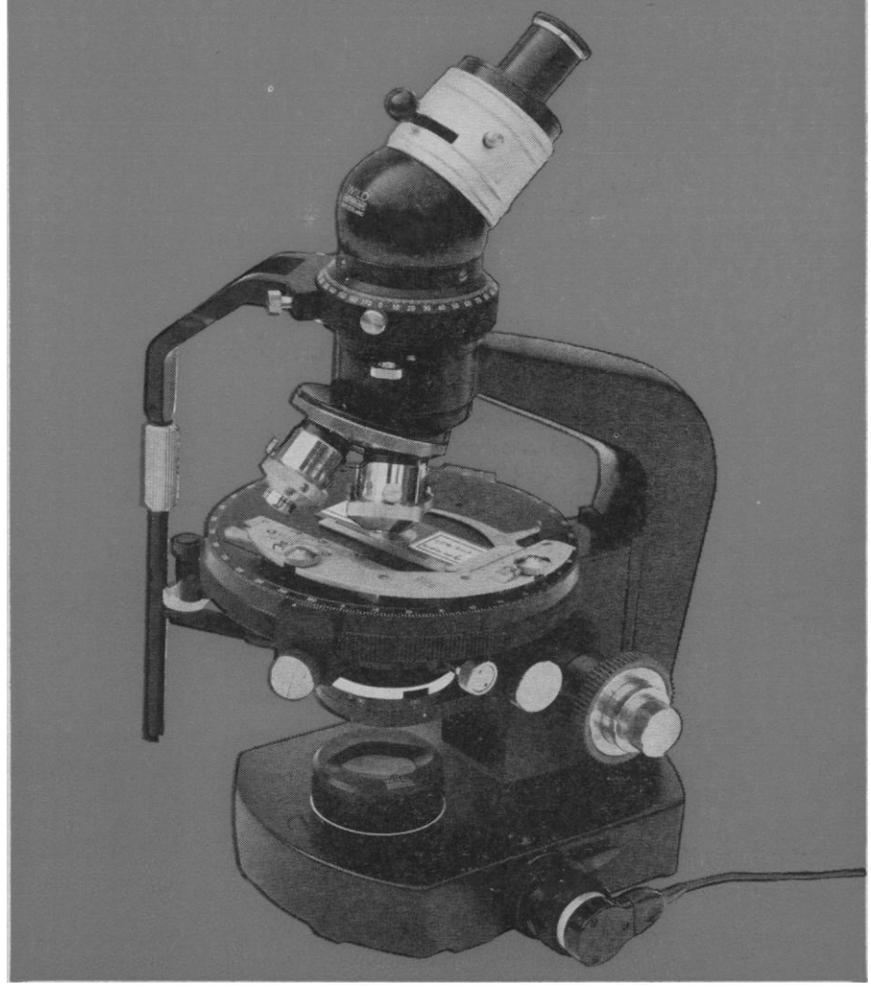

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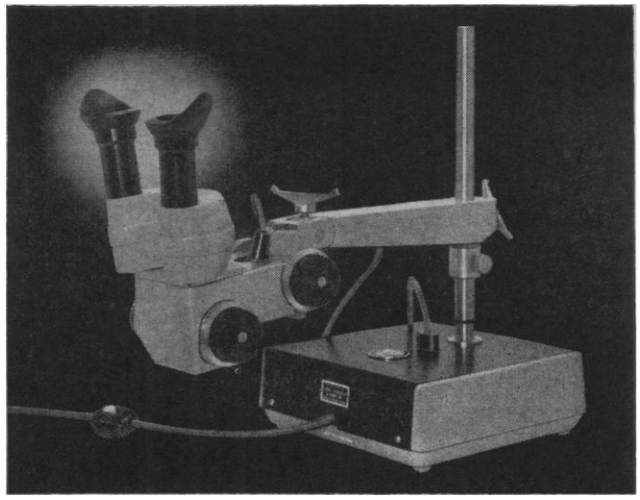

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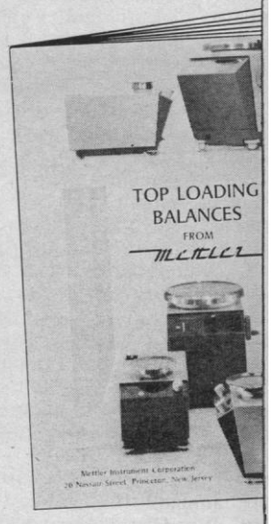

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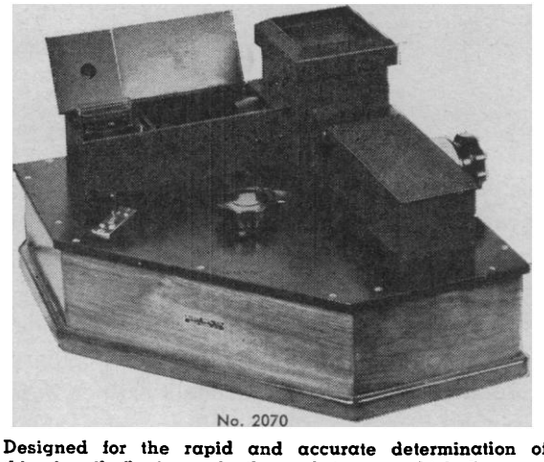

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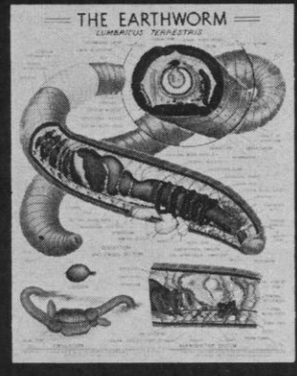

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31–11. **Information Theory**, Statistical Decision Functions and Random Processes, 4th conf., Prague, Czechoslovakia. (F. Hrabal, Foreign Relations Dept., Czechoslovak Acad. of Sciences, Narodni tr. 3, Prague 1)

September

1–3. American **Geophysical** Union, 5th western natl. mtg., Dallas, Tex. (AGU, 1145 19th St., NW, Washington, D.C.)

1–3. **Metallurgists**, 4th annual conf., Ottawa, Ont. (Canadian Inst. of Mining and Metallurgy, 906 Drummond Bldg., 117 St. Catherine St., W., Montreal, Que.)

1–3. Biomedical Aspects of **Shock and Vibration Technology**, symp., Denver, Colo. (E. R. Wilson, 5745 S. Huron St., Littleton, Colo. 80120)

1–4. **Aeronautics**, 6th European congr., Munich, Germany. (Wissenschaftliche Gesellschaft für Luft und Raumfahrt, Martinstr. 40–42, 5 Cologne)

1–4. International Assoc. of **Gerontology**, European Clinical section, 4th congr., San Remo, Italy. (A. Zilli, Viale Morgagin 85, Florence, Italy)

1–4. **Immunological Methods**, symp., Chantilly, France. (R. H. Regamey, Intern. Assoc. of Microbiological Societies, Inst. d'Hygiene, 1200 Geneva, Switzerland)

1–4. Society of General **Physiologists**, 20th annual, Marine Biological Laboratory, Woods Hole, Mass. (R. Milkman, Dept. of Zoology, Syracuse Univ., Syracuse, N.Y. 13210)

1–5. **Regional Science** Assoc., 5th European congr., Warsaw, Poland. (H. Wood, Dept. of Regional Science, Univ. of Pennsylvania, Philadelphia 19104)

1–8. **History of Pharmacy**, intern. congr., London, England. (A. L. Short, Pharmaceutical Soc. of Great Britain, 17 Bloomsbury Sq., London W.C.1)

1–9. **Physiological Sciences**, 23rd intern. congr., Tokyo, Japan. (G. Kato, Dept. of Physiology, Keio Univ. School of Medicine, Shinjuku-ku, Tokyo)

1–14. **Cosmical Gas Dynamics**, 5th symp., Nice, France. (M. Roy, Intern. Union of Theoretical and Applied Mechanics, 55, boul. Malesherbes, Paris 8)

1–17. **Algebraic Number Theory**, instructional conf., Brighton, England. (R. R. Laxton, Mathematics Div., Physics Bldg., Univ. of Sussex, Brighton)

2–4. American **Physical** Soc., Honolulu, Hawaii. (K. K. Darrow, The Society, Columbia Univ., New York 10027)

2–5. International Medical Assoc. for the Study of **Living Conditions and Health**, 4th world congr., Karlovy Vary, Czechoslovakia. (Secretariat, Apolinárská 18, Prague 2)

2–9. German **Mineralogical** Soc., 43rd, Hanover, Germany. (F. Buschendorf, Mineralogisches Inst., Technische Hochschule Hanover, Welfengarten 1, 3 Hanover)

3–7. American **Psychological** Assoc., 73rd annual, Chicago, Ill. (The Association, 17th and Rhode Island Ave., NW, Washington, D.C.)

5–7. **Water Pollution**, 3rd intern. conf., Munich, Germany. (B. B. Berger, P.O. Box 1907, Washington, D.C.)

5–8. Federation of French-Speaking Societies of **Gynaecology and Obstetrics**, 21st congr., Lausanne, Switzerland. (P. Bloch, Hopital Cantonal, Lausanne)

5–8. **Mathematics**, 7th Canadian congr., Quebec, Canada. (The Congress, 985 Sherbrook St. W., Montreal, Que.)

5–9. **Allergology**, 6th European congr., Stockholm, Sweden. (S. Kraepelien, Sachs Children's Hospital, Stockholm)

5–9. **Biochemistry of Lipids**, 9th intern. congr., Noordwijk, Netherlands. (J. Boldingh, Unilever Research Laboratorium, Mercatorweg 2, Vlaardingen, Netherlands)

5–9. **Luminescence**, symp., Munich, Germany. (N. Riehl, Arcisstr. 21, 8 München, Germany)

5–9. International League Against **Rheumatism**, 11th congr., Buenos Aires, Argentina. (A Caruso, Juncal 1875, Planta Baja, Depto. 2, Buenos Aires)

5–9. Physics and Chemistry of **Scintillators**, intern. luminescence symp., Munich, Germany. (H. Kallman, Radiation and Solid State Laboratory, Dept. of Physics, New York Univ., New York 3)

5–10. International Committee of **Electrochemical Thermodynamics and Kinetics**, 16th mtg., Budapest, Hungary. (S. Lengyel, ELTE Fizikai-Kemial es Radiologiai Tanszek, Puskin u. 11–13, Budapest 8)

5–10. **Electromyography**, intern. mtg., Vienna. (K. Pateisky, Universitats Nervenklinik, 14 Lazarettgasse, Vienna 9)

5–10. **Neurology**, 8th intern. congr., Vienna, Austria. (Congress Office, Vienna Academy of Medicine, Alserstr. 4, Vienna 9)

5–10. Ecology of **Soil Bacteria**, symp., Liverpool, England. (N. A. Burges, Univ. of Liverpool, Hartley Botanical Laboratories, Liverpool)

5–12. **Electroencephalography and Clinical Neurophysiology**, 6th intern. congr., Vienna, Austria. (M. A. B. Brazier, Brain Research Inst., Univ. of California Medical Center, Los Angeles 24)

5–14. **Fertility and Sterility**, 5th intern. congr., Madrid, Spain. (J. Ascenzo Aabello, Parque Meliton Porras, 161, Miraflores, Lima, Peru)

6–9. **Organosilicon Chemistry**, intern. symp., Prague, Czechoslovakia. (Inst. of Chemical Process Fundamentals, Prague-Suchodol 2)

6–9. **Thermal Analysis**, first intern. conf., Aberdeen, Scotland. (C. B. Murphy, Bldg. 5, General Electric Co., 1 River Rd., Schenectady, N.Y.)

6–10. **Embryology**, 7th intern. conf., Edinburgh, Scotland. (A. S. G. Curtis, Dept. of Zoology, University College London, Gower St., London W.C.1, England)

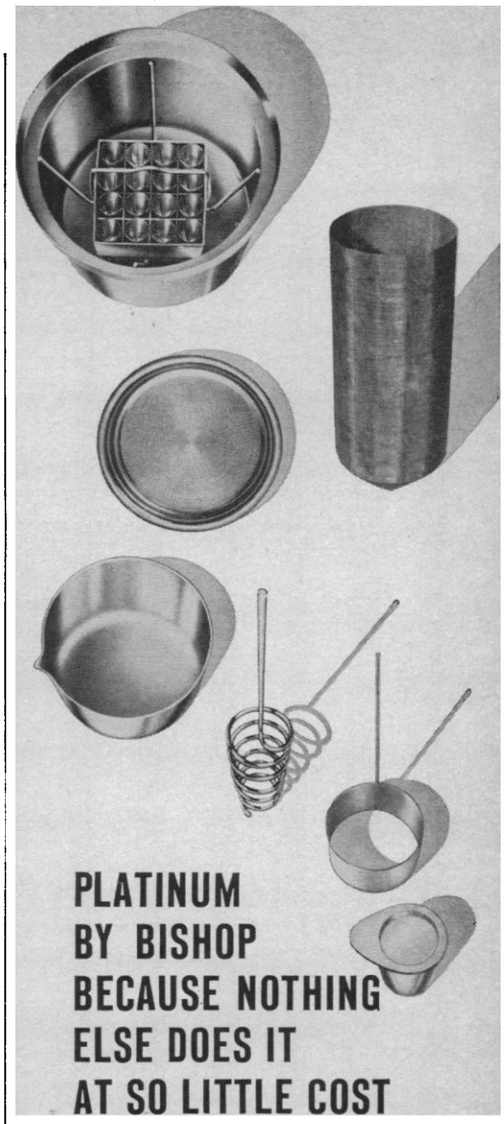
6–10. **Plasma Physics and Controlled Nuclear Fusion Research**, 2nd conf., Abingdon, England. (H. H. Storhaug, Div. of Scientific and Technical Information, Intern. Atomic Energy Agency, Kärntner Ring 11, Vienna 1, Austria)

6–10. European Organization for **Quality Control**, 9th conf., Rotterdam, Netherlands. (Secretariat, Weena 700, Rotterdam 3)

6–10. International Union of Directors of **Zoological Gardens**, annual, Berlin, Germany. (E. M. Lang, Zoologischer Garten, Basel, Switzerland)

6–11. **Electromagnetic Distance Measurement**, symp., London, England. (R. C. A. Edge, Field Survey, Ordnance Survey, Leatherhead Rd., Chessington, Surrey)

6–11. **Electromagnetic Wave Theory**, In-



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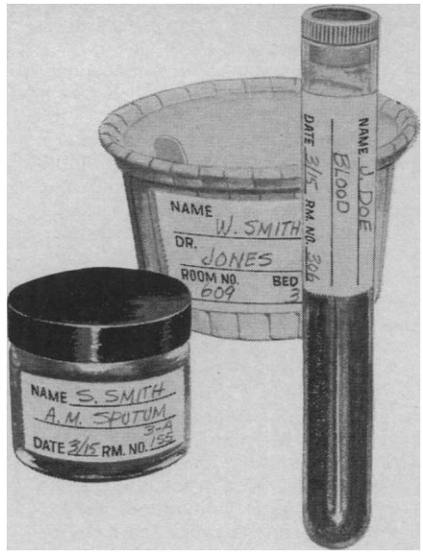

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tern. Scientific Radio Union, symp., Delft, Netherlands. (R. Timman, Technological Univ., Julianalaan 132, Delft)

6–11. **Polarization Phenomena of Nucleons**, 2nd intern. conf., Karlsruhe, Germany. (H. Schopper, Institut für Experimentelle Kernphysik, Kernforschungszentrum Karlsruhe, Postfach 947, 75 Karlsruhe)

6–11. Basic Problems in **Thin Film Physics**, intern. symp., Clausthal-Göttingen, Germany. (R. Nossek, Physikalisches Institut, Technische Hochschule, Clausthal)

6–12. International Soc. for Research on **Nutrition and Vital Substances**, Salzburg, Austria. (H. A. Schweigart, The Society, Bemeroderstr., 61, Hanover-Kirchrode, Germany)

6–12. **Photosynthesis**, Western European conf., Zeist, Netherlands. (J. C. Goedheer, Physica Inst., State Univ., Bijlhouwerstraat 6, Utrecht, Netherlands)

6–17. **Cosmic Rays**, 9th intern. conf., London, England. (C. J. Hatton, Physics Dept., Leeds Univ., Leeds 2, England)

6–17. **Equatorial Aeronomy**, 2nd intern. symp., Brazilian Space Commission, São José dos Campos, Brazil. (F. de Mendonca, Comissão Nacional de Atividades Espaciaia, São José dos Campos)

6–17. **Laboratory Animal Husbandry**, symp., Dublin, Ireland. (M. L. Conalty, Medical Research Council Laboratories, Trinity College, Dublin 2)

7–9. **Electronic Materials**, conf., San Francisco, Calif. (American Inst. of Mining, Metallurgical and Petroleum Engineers, 345 E. 47 St., New York 17)

7–9. Internal **Friction** in Solids, conf., Manchester, England. (G. M. Leak, Dept. of Metallurgy, Univ. of Manchester, Manchester 13)

7–9. **Minerals**, Soc. of Mining Engineers fall mtg., Phoenix, Ariz. (American Inst. of Mining, Metallurgical and Petroleum Engineers, 345 E. 47 St., New York 17)

7–9. Biology of **Parasites of Veterinary Importance**, World Assoc. for the Advancement of Veterinary Parasitology, 2nd intern. conf., Univ. of Pennsylvania, Philadelphia. (S. M. Gaafar, Dept. of Veterinary Microbiology, Pathology, and Public Health, Purdue Univ., Lafayette, Ind.)

7–10. **Virus and Vector on Perennial Hosts**, intern. conf., Davis, Calif. (B. Hewitt, Dept. of Plant Pathology, Univ. of California, Davis 95616)

7–14. **Acoustics**, 5th intern. congr., Liége, Belgium. (J. Frenkiel, 33 rue St.-Gilles, Liége)

8–10. **Automation** in Analytical Chemistry, intern. symp., New York, N.Y. (E. C. Whitehead, Technicon, Research Park, Chauncey, N.Y.)

8–10. **Biochemistry of Copper**, intern. symp., Harriman, N.Y. (J. Peisach, Dept. of Pharmacology, Albert Einstein College of Medicine, Yeshiva Univ., New York 61)

8–10. **Genetics** Soc. of America, Colorado State Univ., Fort Collins. (R. P. Wagner, Univ. of Texas, Austin)

8–10. **Magnet Technology**, intern. symp., Stanford Univ., Stanford, Calif. (R. H. Moulton, Jr., Stanford Linear Accelerator Center, P.O. Box 4349, Stanford Univ., Stanford)

8–10. International Organization for **Medical Physics**, first intern. conf., Harrogate, England. (Secretary, United King-

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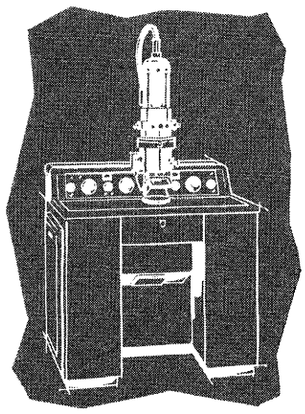

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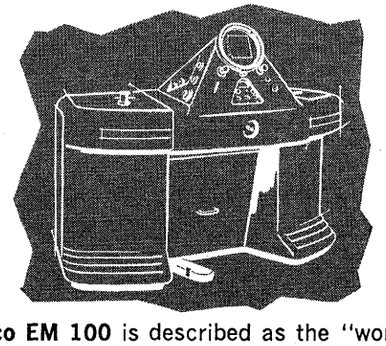

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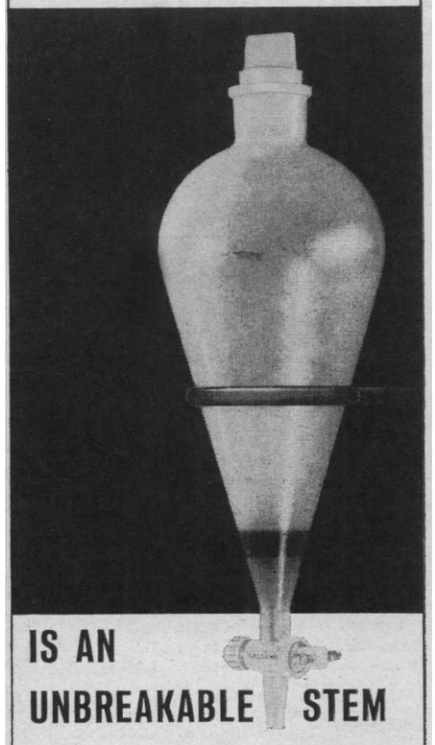

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8–10. **X-Ray Optics and Microanalysis**, 4th intern. conf., Orsay, France. (Mr. Deschamps, Dept. of Physics, Institute de Recherches de la Siderurgie Française, St.-Germain-en-Laye, France)

8–11. **Biological Systems** at the Molecular Level, Naples, Italy. (R. C. Williams, Virus Laboratory, Univ. of California, Berkeley 94720)

8–11. Biometric Soc., eastern North America region, Philadelphia, Pa. (E. L. LeClerg, 6804 40th Ave., University Park, Hyattsville, Md.)

8–11. Prevention of **Dental Caries**, symp., Prague, Czechoslovakia. (J. Kostlan, Vinohradska 48, Prague 2)

8–11. American **Political Science** Assoc., Washington, D.C. (E. M. Kirkpatrick, 1726 Massachusetts Ave., NW, Washington)

8–11. American **Statistical** Assoc., Philadelphia, Pa. (D. C. Riley, Univ. of Rochester, Rochester, N.Y.)

8–14. Ecology of **Aphic Parathyses**, symp., Prague, Czechoslovakia. (F. Hrabal, Foreign Relations Dept., Czechoslovak Academy of Sciences, Narodni tr. 3, Prague 1)

8–15. **Nematology**, 8th intern. symp., Antibes, France. (M. P. Ritter, Station de Recherches sur les Nematodes, 123 boul. du Cap, Antibes, Alpes-Maritimes, France)

8–15. **Soil Mechanics**, 6th intern. conf., Montreal, Canada. (M. K. Ward, Natl. Research Council, Ottawa 2, Ontario)

9–11. French-speaking **Anatomopathologists**, 3rd congr., Quebec, Canada. (R. Ganeau, Dept. of Pathology, Hopital du Saint-Sacrement, 150, Chemin Ste.-Foy, Quebec 6)

9–11. **Industrial Electronics and Control Instrumentation**, conf., Philadelphia, Pa. (L. Winner, 152 W. 42 St., New York 25)

9–11. **Parapsychological** Assoc., 8th annual conv., New York, N.Y. (J. G. Pratt, Box 152, Univ. of Virginia Hospital, Charlottesville)

9–11. **Phlebology**, 2nd intern. congr., Wiesbaden, Germany. (H. L. Biegeleisen, Phlebology Soc. of America, 155 E. 72 St., New York 10021)

9–12. Canadian **Agricultural Chemicals** Assoc., 13th annual, Banff, Alberta, Canada. (CACA, 3405 Code des Neiges Rd., Montreal 25, Que.)

9–12. Mass Spectrometry, Euchem conf., Sarlat, France. (Gesellschaft Deutscher Chemiker, Postfach 9075, 6 Frankfurt am Main, Germany)

9–13. Association of European **Anesthetists**, congr., Athens, Greece. (P. Maestracci, Centre de Transfusion Sanguine, Rue Delille, Nice, France)

9–13. International Soc. for **Clinical Electroretinography**, 4th symp., Tokyo, Japan. (A. Nakajama, Dept. of Ophthalmology, Juntendo Univ., Tokyo)

9–14. **Econometric** Soc., world congr., Rome, Italy. (L. R. Klein, Univ. of Pennsylvania, Philadelphia 19104)

10. **Manned Space Stations**, intern. symp., Munich, Germany. (German Soc. for Rocket Technology and Travel, Neuensteiner str. 19, Stuttgart-Zuffenhausen, Germany)

10–12. **Comparative Neurophysiology**, symp., Tokyo, Japan. (Yasuji Katsuki, Tokyo Medical and Dental Univ., 3-Chome, Yusima, Bunkyo-ku, Tokyo)

10–12. Structure and Function of the **Limbic System**, symp., Hakone, Japan. (T. Tokizane, Inst. of Brain Research, Univ. of Tokyo, Hongo, Tokyo, Japan)

11–12. **Brain Edema**, symp., Vienna, Austria. (F. Seitelberger, World Fed. of Neurology, Schwarzspanierstr. 17, Vienna)

11–18. International **Cardiovascular** Soc., 7th congr., Philadelphia, Pa. (R. A. Deterling, Jr., 171 Harrison Ave., Boston, Mass. 02111)

11–18. **Plant Environment** in Glasshouses, symp., Bedfordshire, England. (Secretariat, P.O. Box 38, Wageningen, Netherlands)

11–18. International Soc. of **Surgery**, 21st congr., Philadelphia, Pa. (P. Martin, 43, rue des Champs-Elysees, Brussels 5, Belgium)

11–26. **Chemistry in Industry and Agriculture**, intern. conf., Moscow, USSR. (Central Office of Information, Reference Div., London, England)

12–15. International Assoc. of **Milk, Food, and Environmental Sanitarians**, Hartford, Conn. (H. L. Thomasson, P.O. Box 437, Shelbyville, Ind.)

12–17. International **Aeronautic** Fed., 58th annual general conf., Munich, Germany. (Natl. Aeronautic Federation, 1025 Connecticut Ave., NW, Washington, D.C., 20036)

12–17. American **Chemical** Soc., 150th annual, Atlantic City, N.J. (B. S. Baker, Inst. of Gas Technology, 3424 S. State St., Chicago, Ill. 60616)

12–17. **Fracture**, intern. conf., Sendai, Japan. (T. Yokobori, Dept. of Mechanical Engineering, Tohoku Univ., Sendai)

12–17. **Highspeed Photography**, 7th intern. conf., Zurich, Switzerland. (K. Pfister, Secretariat, Postfach 189, 8033 Zurich)

12–18. **Astronautics**, 16th intern. congr., Athens, Greece. (A. L. Jaumotte, Inst. de Mécanique Appliquée, Univ. Libre de Bruxelles, 50, av. F. D. Roosevelt, Brussels, Belgium)

12–18. **Radiology**, 10th Brazilian congr., first Portuguese-Brazilian congr., Rio de Janeiro, Brazil. (A. Arantes Pereira, Av. Churchill 97, S/508, Rio de Janeiro)

12–19. Mechanisms of **Viral Carcinogenesis**, symp., Rehovoth, Israel. (Weizman Inst., Rehovoth)

12–25. **Speleology**, 4th intern. congr., Ljubljana and other cities, Yugoslavia. (W. Bohinec Titova 17a, Ljubljana)

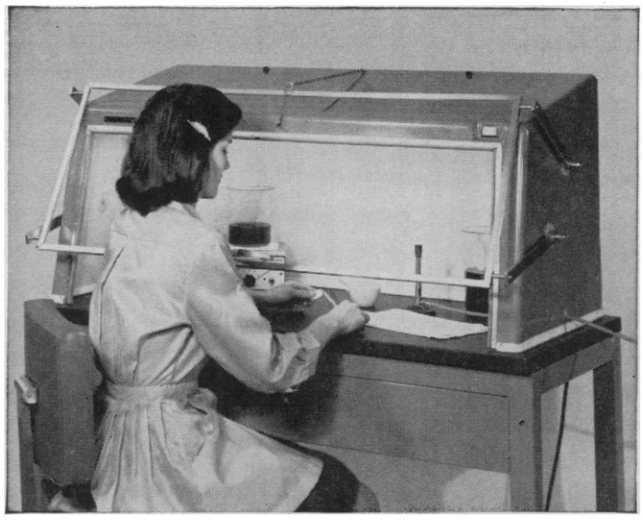
13–15. **Drugs Affecting Lipid Metabolism**, 2nd intern. symp., Milan, Italy. (R. Paoletti, Inst. of Pharmacology, Univ. of Milan, Via Andrea del Sarto 21, Milan)

13–15. Mechanism and Control of **Gastric Secretion**, Univ. of Alberta, Edmonton, Alta., Canada. (Gastric Secretion Symp. Committee, Rm. C148, Univ. Hospital, Edmonton)

13–15. Association of French-speaking **Pediatricians**, 20th congr., Nancy, France. (Prof. Pierson, Hospital General, Nancy)

13–16. **Cancer**, Latin American congr., Bogota, Colombia. (A. Buendia-Ferro, Avenida 1ª no. 9-85, Bogota)

13–16. Optical Properties and Electronic Structure of **Metals and Alloys**, intern. colloquium, Paris, France. (F. Abelès,



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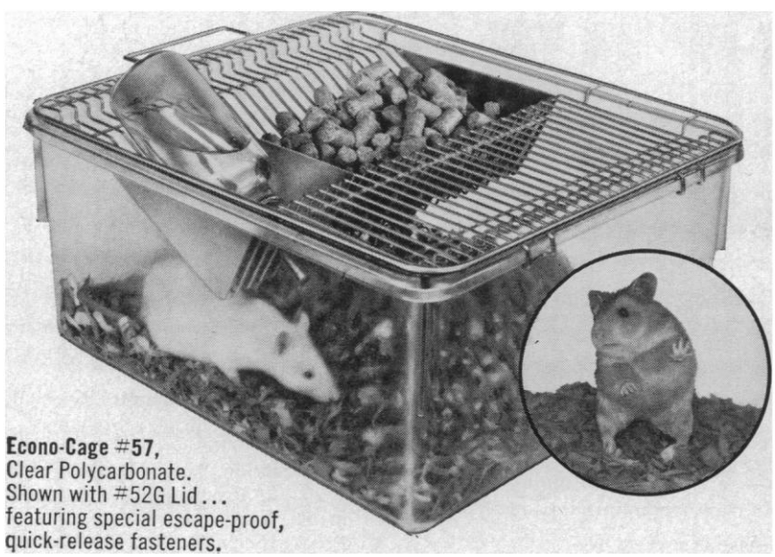

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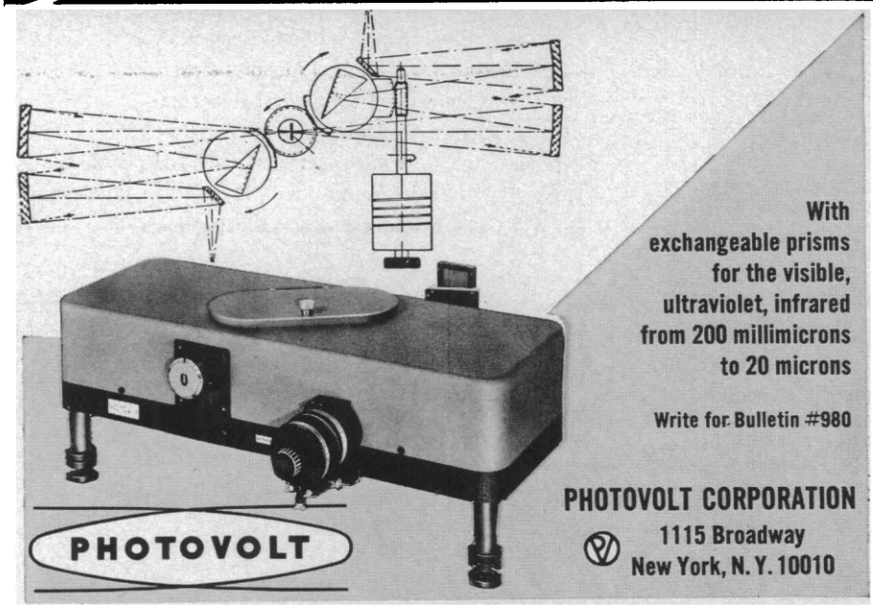

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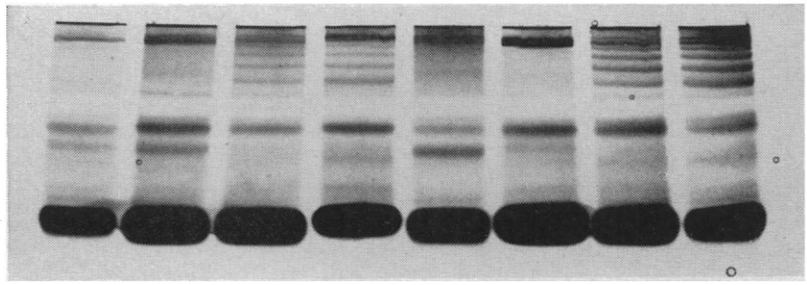

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13–16. **Natural Mammalian Hibernation**, 3rd intern. symp., Univ. of Toronto, Ontario, Canada. (E. South, Jr., Dept. of Physiology, Colorado State Univ., Fort Collins, Colo.)

13–17. **Environmental Physiology**, symp., Tokyo, Japan. (A. Nixon, Fed. of American Societies for Experimental Biology, 9650 Wisconsin Ave., Bethesda, Md. 20014)

13–17. Microwave Behavior of **Ferrimagnetics and Plasmas**, intern. conf., London, England. (P. J. B. Clarricoats, IEE, Savoy Pl., London W.C.2)

13–17. **Mother-Infant Interaction**, symp., CIBA Foundation, London, England. (CIBA, 41 Portland Pl., London W.1)

13–18. Society of German **Chemists**, general assembly, Bonn, Germany. (The Society, Postfach 9075, 6 Frankfurt am Main, Germany)

13–18. International **Gravimetric Commission**, mtg., Paris, France. (P. Tardi, Intern. Assoc. of Geodesy, 19 rue Auber, Paris 93)

13–18. Electroanalysis of **Organic and Inorganic Substances**, German Chemical Soc., Bonn, Germany. (W. Pfab, Homburg str. 10, 67 Ludwigshafen, Germany)

13–18. French Speaking **Psychiatrists and Neurologists**, 63rd congr., Lausanne, Switzerland. (P. Warot, 10 rue d'Esquermes, Lille, France)

14–16. **Faraday Soc.**, mtg., Bristol, England. (The Society, 6 Gray's Inn Sq., London W.C.1)

14–17. Theory of **Self-adaptive Control Systems**, intern. symp., Teddington, England. (R. W. Wilde, Dept. of Electrical Engineering, Imperial College of Science and Technology, Exhibition Rd., London S.W.7)

14–20. **Hydrogeologists**, intern. congr., Hanover, Germany. (G. Castany, Intern. Assoc. of Hydrogeologists, 74, rue de la Federation, Paris 15, France)

14–20. International **Statistical** Inst., 35th session, Belgrade, Yugoslavia. (The Institute, 2 Oostdiunlann, The Hague, Netherlands)

15–17. **Nuclear and Particle Physics**, conf., Univ. of Liverpool, England. (Inst. of Physics and the Physical Soc., 47 Belgrave Sq., London S.W.1)

15–17. **Regional Science** Assoc., 2nd Far East congr., Tokyo, Japan. (G. Konno, Faculty of Economics, Univ. of Tokyo)

15–17. **Urban Planning** Information Systems and Programs, Chicago, Ill. (American Soc. of Planning Officials, 1313 E. 60 St., Chicago 60637)

15–18. **Bacteriophagy**, 2nd intern. symp., Bucharest, Rumania. (Secretariat, Str. Progresului 10, Bucharest)

16–17. **Astrodynamics** Specialist conf., Monterey, Calif. (V. Szebehely, Celestial Mechanics Research Center, Box 2034 Yale Station, New Haven, Conn. 06520)

16–17. Production of **Automation Elements**, conf., Esztergom, Hungary. (L. Prockl, Scientific Soc. of Mechanical Engineers, Szabadsag ter 17, Budapest 5)

16–18. **Marine Microbiology**, symp., Soc. for General Microbiology, Aberdeen, Scotland. (J. Shewan, Torry Research Station, Dept. of Scientific and Industrial Research, 135 Abbey Rd., Aberdeen)

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16–19. American **Medical Writers** Assoc., Detroit, Mich. (J. E. Bryan, 2000 P St., NW, Washington, D.C. 20036)

17. Southern **California** Acad. of Science, Los Angeles County Museum, Los Angeles. (C. Rozaire, Los Angeles County Museum, 900 Exposition Blvd., Los Angeles 90007)

17–18. **Dialysis and Transplant**, 2nd intern. conf., Newcastle, England. (W. Drukker, Dept. of Medicine, Queen Wilhelmina Hospital, Amsterdam W., Netherlands)

17–18. British **Tissue Culture** Assoc., Manchester, England. (L. M. Franks, Imperial Cancer Research Fund, Lincoln's Inn Fields, London W.C.2)

18–19. **Minnesota** Acad. of Science, Grand Rapids. (V. E. Anderson, 6 Zoology, Univ. of Minnesota, Minneapolis 55455)

18–21. International Soc. of **Radiographers and Radiological Technicians**, 3rd world congr., Rome, Italy. (E. R. Hutchinson, 159 Gabalfa Ave., Cardiff, Wales)

19–22. **Odontology**, 5th Latin American congr., Buenos Aires, Argentina. (A. F. Alvarez, Argentine Odontological Assoc., Junin 959, Buenos Aires)

19–22. **Power**, natl. conf., Albany, N.Y. (Inst. of Electrical and Electronics Engineers, Box A, Lenox Hill Station, New York 10021)

19–23. **Cerebral Palsy**, Mediterranean symp., Rome, Italy. (Intern. Soc. for Rehabilitation of the Disabled, 701 First Ave., New York 10017)

19–25. Greek **Chemists** Assoc., 3rd intern meeting, Athens. (Dr. Parissakis, Technical Univ. of Athens, 42 Patission St., Athens)

19–25. **Elementary Particles**, 3rd intern. conf., Oxford, England. (R. C. Pepperell, Rutherford High Energy Laboratory, Chilton, Didcot, England)

19–25. **Immediate Separation and Chromatography**, intern., Athens, Greece. (G. Parissakis, Technical Univ. of Athens, Odos 28 Octovriou 42, Athens)

19–25. World **Medical** Assoc., 19th general assembly, London, England. (H. S. Gear, 10 Columbus Circle, New York 10019)

20. **Organic Solid State**, 3rd annual symp., Franklin Inst., Philadelphia, Pa. (M. M. Labes, Franklin Inst. Research Laboratories, Philadelphia 19103)

20. **Photo-Electronic Image Devices** as Aids to Scientific Observation, symp., London, England. (G. V. McGee, Dept. of Physics, Imperial College of Science and Technology, South Kensington, London S.W.7)

20–22. **Glacier Mapping**, symp., Ottawa, Ont., Canada. (Intern. Assoc. of Scientific Hydrology, 61 rue des Ronces, Gentbrugge, Belgium)

20–24. **Biochemistry**, 8th Latin meeting, Lisbon, Portugal. (S. F. Gomes da Costa, Laboratorio de Quimica Fisiologica, Faculdade de Medicina, Hospital de Santa Maria, Lisbon)

20–24. **Burn Research**, intern. congr., Edinburgh, Scotland. (A. Sutherland,

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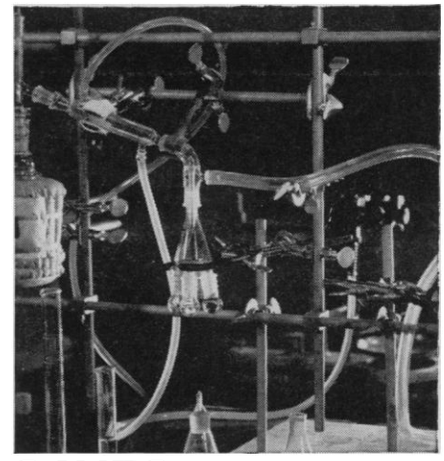

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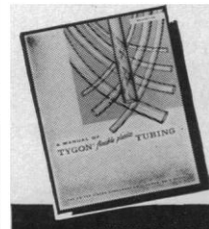

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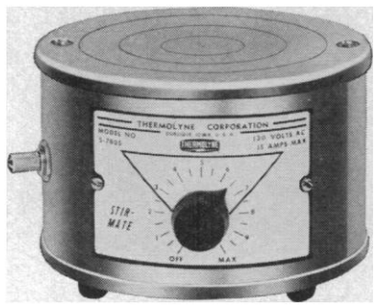

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20–24. **Fundamental Research,** 3rd intern. symp., Cambridge, England. (H. W. Emerton, Reed Paper Group Ltd., Research and Development Centre, Aylesford, Maidstone, Kent, England)

20–24. International Council of Societies of **Industrial Design,** 4th general assembly and congr., Vienna, Austria. (Mrs. D. des Cressonieres, 70 Coudenberg, Brussels, Belgium)

20–24. **Thermionic Electrical Power Generation,** intern. conf., London, England. (Inst. of Electrical Engineers, Savoy Pl., London W.C.2)

20–27. Comparative and Cellular **Pathology of Epilepsy,** symp., Liblice, Czechoslovakia. (F. Hrabal, Foreign Relations Dept., Czechoslovak Academy of Sciences, Narodni tr. 3, Prague 1)

21–23. **Chemurgic** conf., Columbus, Ohio. (J. Ticknor, Chemurgic Council, 350 Fifth Ave., New York, N.Y.)

21–23. **Fiber** Soc., 25th mtg., Boston, Mass. (Box 625, Princeton, N.J.)

21–23. **Magnetism,** European conf., Vienna, Austria. (Verein Deutscher Eisenhüttenleute, Breit Str. 27, Düsseldorf, Germany)

21–23. **Plasma Electromagnetics of Hypersonic Flight,** 3rd symp., Boston and Bedford, Mass. (A. Cahill, Air Force Cambridge Research Laboratories, L. G. Hanscom Field, Bedford, Mass. 01731)

21–23. **Touch, Heat, and Pain,** CIBA symp., London, England. (CIBA, 41 Portland Pl., London W.1)

21–25. Propagation Factors in **Space Communication,** symp., Rome, Italy, (Lt. Col. E. F. Dukes, Advisory Group for Aeronautical Research and Development, 64 rue de Varenne, Paris 7, France)

22–24. Practice of **Gas Chromatography,** 4th annual mtg., St. Louis, Mo. (N. Brenner, Perkin-Elmer Corp., Main Ave., Norwalk, Conn.)

22–24. Canadian **High Polymer Forum,** 13th, Ottawa, Ont. (D. M. Wiles, Div. of Applied Chemistry, National Research Council, Ottawa)

22–24. **Military Electronics,** conf. (MIL-E-CON 9), Washington, D.C. (L. H. King, Atlantic Research Corp., Shirley Hwy. at Edsall Rd., Alexandria, Va.)

22–24. American Soc. of **Photogrammetry,** 30th semiannual conv., Wright-Patterson AFB, Ohio. (A. J. Cannon, Research and Technology Div., Wright-Patterson AFB)

22–25. Committee of European **Acarologists,** symp., Milan, Italy. (G. Mathys, Stations Federales d'Essais Agricoles, Lausanne, Switzerland)

22–25. **Amblyopia Exanopsia,** intern. symp., Liége, Belgium. (R. Weekers, Clinique Opthalmologique, Universite de Liége, 66 blvd. de la Constitution, Liege)

22–25. British Assoc. for **Cancer Research,** annual, Dublin, Ireland. (J. G. Bennerre, Courtauld Inst., Middlesex Hospital, London W.1, England)

22–26. **Paläontologische Gesellschaft,** mtg., Zurich, Switzerland. (E. Kuhn-Schnyder, Paläontologisches Institut d. Univ. Zurich, Künstlergasse 16, 8006, Zurich)

22–28. **Radiology,** 11th intern. congr., Rome, Italy. (Secretariat, Via Reno 21, Rome)

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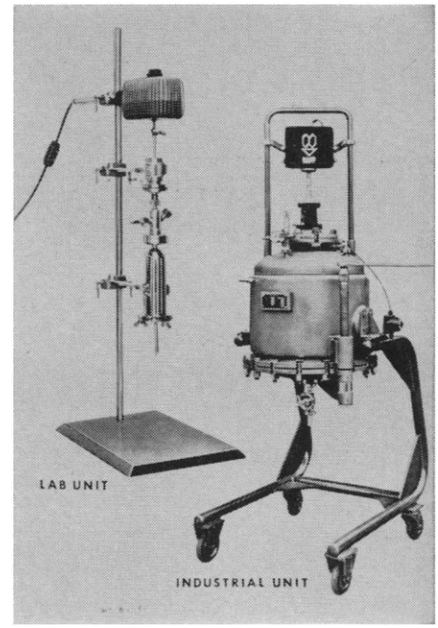

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23–25. French **Medical** Congr., Paris. France. (M. Bricaire, 40 rue Scheffer, Paris 16)

23–25. Society of the **Plastics** Industry, New England sect., 21st annual, Groton, Conn. (The Society, 250 Park Ave., New York 10017)

23–26. **Mycology**, tripartite conf., Germany, Austria, Switzerland; Klagenfurt, Austria. (Ostrian Mycology Soc., Postfach 200, Vienna 1)

23–28. **Electronics and Vacuum Physics**, 3rd Czechoslovak conf., Prague, Czechoslovakia. (Organizing Committee, Ke Karlovu 5, Dept. of Electronics and Vacuum Physics, Prague 2)

24–25. **Communications**, 13th conf., Cedar Rapids, Iowa. (Inst. of Electrical and Electronics Engineers, Box A, Lenox Hill Station, New York 21)

25–30. International Soc. of **Nephrology**, 3rd intern. congr., Washington, D.C. (Secretariat, 9650 Wisconsin Ave., Washington, D.C. 20014)

26–29. American Inst. of **Chemical Engineers**, 57th natl., Minneapolis, Minn. (AIChE, 345 E. 47 St., New York 10017)

27. Society for **Pediatric Radiology**, Washington, D.C. (J. L. Gwinn, Children's Hospital, 4614 Sunset Blvd., Los Angeles, Calif.)

27–29. Chemistry of the **Solvent Extraction of Metals**, intern. conf., Atomic Energy Research Establishment, Harwell, England. (F. K. Pyne, B. 329, Harwell)

27–1. **Community Oral Health**, hemispheric conf., San Juan, P.R. (N. O. Harris, School of Dentistry, Univ. of Puerto Rico, San Juan 00905)

27–1. **Urology**, French congr., Paris, France. (J. Michon, French Assoc. of Urology, 47, boul. des Invalides, Paris 7)

28. Society of Austrian **Chemists**, general assembly, Graz, Austria. (The Society, Eschenbachgasse 9, Vienna 1)

28–29. **Electric Heating**, 7th biennial conf., Cleveland, Ohio. (A. F. Leatherman, Battelle Memorial Inst., 505 King Ave., Columbus, Ohio 43201)

28–30. German Soc. for **Documentation**, 17th annual, Constance, Germany. (The Society, Schubertstr. 1, Frankfurt am Main, Germany)

28–30. Physics and **Nondestructive Testing**, symp., Dayton, Ohio. (D. W. J. McGonnagle, IIT Research Inst., 10 W. 35 St., Chicago, Ill. 60616)

28–30. Industrial and Commercial **Power Systems**, conf., Buffalo, N.Y. (J. A. Hart, Allison Div., General Motors Corp., Box 894, Indianapolis 6, Ind.)

28–1. **Experimental Mechanics**, 2nd intern. congr., Washington, D.C. (J. L. Jones, Soc. for Experimental Stress Analysis, 21 Bridge Sq., Westport, Conn. 06880)

28–1. Society for **Experimental Stress Analysis**, Washington, D.C. (B. E. Rossi, 21 Bridge Sq., Westport, Conn.)

28–1. **Inhaled Particles and Vapors**, Cambridge, England. (J. S. McLintock, Medical Service, Natl. Coal Board, Hobart House, Grosvenor Pl., London S.W.1)

28–1. **Medical Electronics**, European symp., Brighton, England. (J. Pearce, 4 Mill St., London W.1)

28–2. **Hyperpure Materials** in Science and Technology, Inst. for Applied Physics of Hyperpure Materials, Dresden, Germany. (The Institute, Dresden A 20, Winterbergstr. 28, East Germany)

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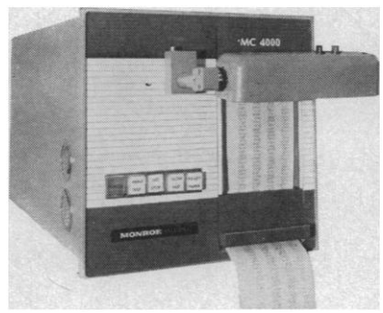

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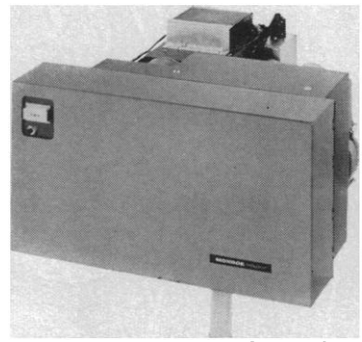

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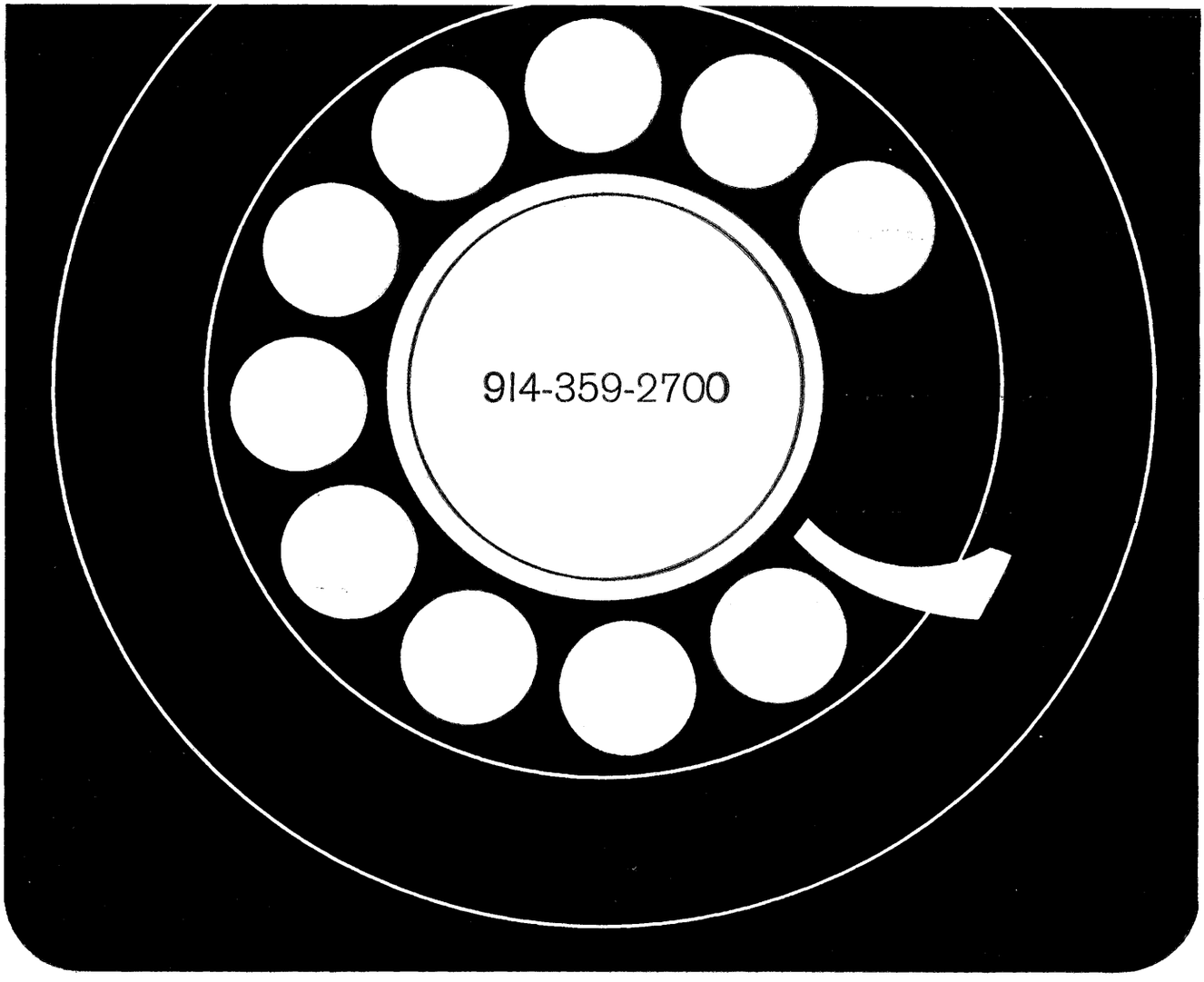

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NEW BOOKS

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Aspects Anatomo-Fonctionnels de la Physiologie du Sommeil. Colloquium (Lyon), September 1963. M. Jouvet, Ed. Editions du Centre National de la Recherche Scientifique, Paris, 1965. 657 pp. Illus.

Atlas of Histology. Sam J. Piliero, Myron S. Jacobs, and Saul Wischnitzer. Lippincott, Philadelphia, 1965. 415 pp. Illus. $7.50.

Bacteriology Illustrated. R. R. Gillies and T. C. Dodds. Williams and Wilkins, Baltimore, 1965. 171 pp. Illus. $9.75.

Basic Biochemistry. Max E. Rafelson, Jr., and Stephen B. Binkley. Macmillan, New York, 1965. 364 pp. Illus. Paper, $6.50; cloth, $8.50.

Basic Concepts of Ecology. Clifford B. Knight. Macmillan, New York, 1965. 480 pp. Illus. $8.50.

Beziehungen zwischen den physikalisch-chemischen Eigenschaften und der Wirkung von Lokalanästhetica. Jakob Büchi and Xavier Perlin. Cantor, Württ., Germany, 1962. 284 pp. Illus.

Biochemistry of the Amino Acids. vols. 1 and 2. Alton Meister. Academic Press, New York, ed. 2, 1965. vol. 1, 737 pp., $22; vol. 2, 516 pp., $20. Illus. $38 set.

Biological Rhythm Research. A. Sollberger. Elsevier, New York, 1965. 481 pp. Illus. $25.

Biological Rhythms. Alain Reinberg and Jean Ghata. Translated from the French edition (Paris) by C. J. Cameron. Walker, New York, 1964. 152 pp. Illus. $3.50.

Brain Function. vol. 2, *RNA and Brain Function Memory and Learning.* Proceedings of the second conference, 1962. Mary A. B. Brazier, Ed. Univ. of California Press, Berkeley, 1964. 376 pp. Illus. $10. UCLA Forum in Medical Sciences Series, vol. 2, edited by Victor E. Hall. Fourteen papers contributed by M. W. Nirenberg, H. Hydén, S. L. Palay, W. Hild, J. V. Luco, E. R. John, F. Morrell, L. Weiskrantz, W. R. Adey, W. Feindel, M. A. B. Brazier, M. Victor, O. E. Reynolds, and A. B. Kogan.

Calcified Tissues. Proceedings, Second European Symposium (Liége, Belgium), March and April 1964. L. J. Richelle and M. J. Dallemagne, Eds. Collection des Colloques de l'Université de Liége, Liége, Belgium, 1965. 487 pp. Illus. Forty-two papers in English, French, or German. The volume is a record of the proceedings of a symposium organized in March 1964 by the University of Liége. The symposium afforded some 105 European and American scientists, including 10 from the United States, an opportunity to discuss recent work on bone and tooth research.

Cell Culture in the Study of Bacterial Disease. Morris Solotorovsky, Ed. Rutgers Univ. Press, New Brunswick, N.J., 1965. 129 pp. Illus. Paper, $4. Thirteen papers presented at the annual research conference (1963) sponsored by the Bureau of Biological Research, Rutgers University.

Cellular Radiation Biology. Papers presented at the 18th Annual Symposium on Fundamental Cancer Research (Austin, Texas), 1964. Williams and Wilkins, Baltimore, 1965. 630 pp. Illus. $16. Thirty-seven papers on the following topics: Radiation effects on macromolecules (4 papers); Radiation effects on replication T. Woodburne. Oxford Univ. Press, New cal structures in radiation phenomena (4 papers); Modification of radiation response (4 papers); Radiosensitivity in the replication cycle of cells and the relation of fractionation in radiotherapy (10 papers); and Responses in mammalian cells and the implications for radiotherapy of cancer (10 papers). The volume also includes the Bertner Foundation Award Lecture: "Radiation biology and cancer" by L. H. Gray.

Cytologic Studies on Phloem (*Univ. Calif. Publs. Bot.* **36**, No. 3). Katherine Esau and Vernon I. Cheadle. Univ. of California Press, Berkeley, 1965. 92 pp. Illus. Paper, $2.50.

Drugs and Enzymes. Papers presented at the Second International Pharmacological Meeting (Prague). Bernard B. Brodie and James R. Gillette, Eds. Pergamon, New York, 1965. 516 pp. Illus. $15. Forty-one papers on the following topics: Relationship between biochemical effects of drugs in vitro and their pharmacological effect in vivo (20 papers), and Biochemical mechanisms of drug toxicity (21 papers).

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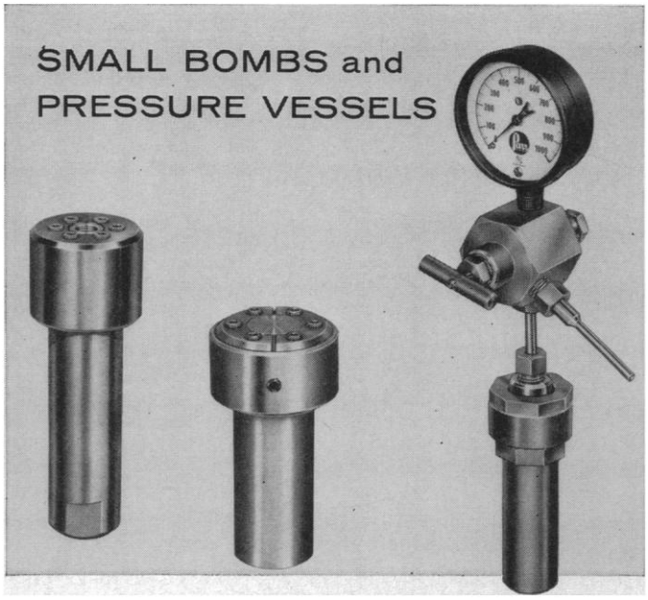

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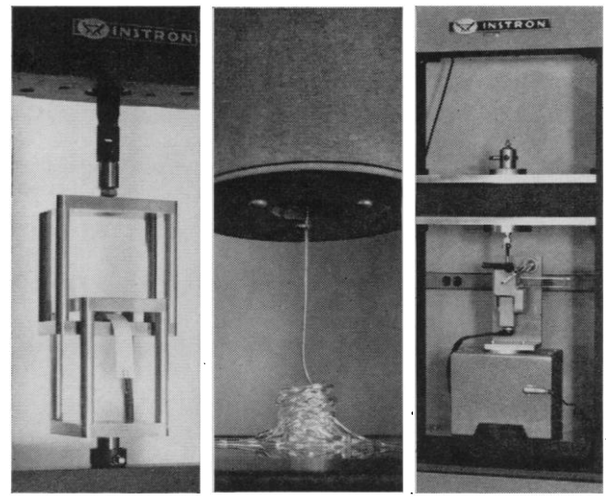

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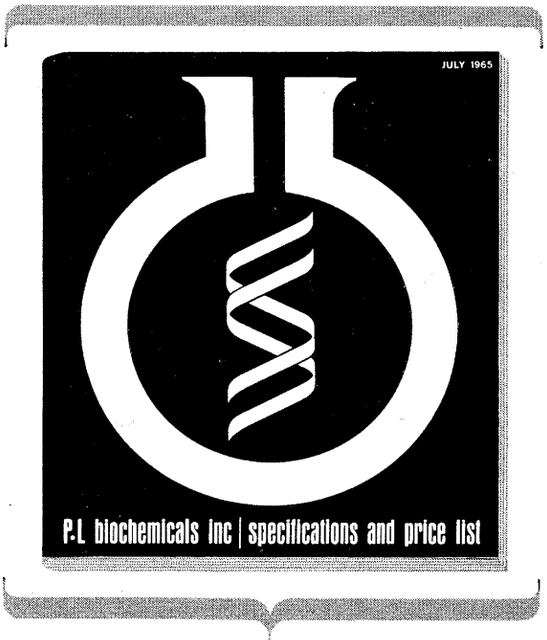

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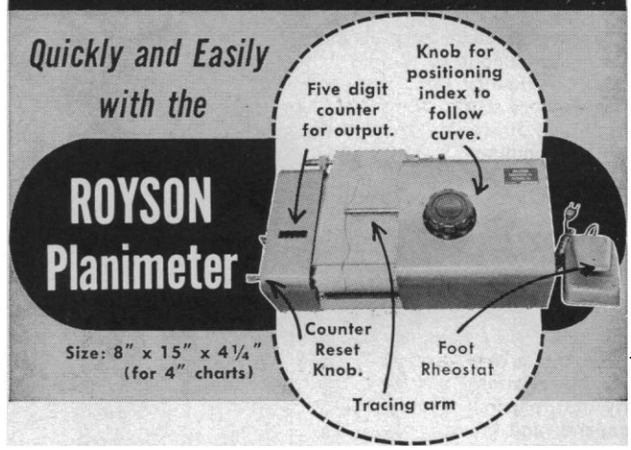

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Genetics and the Epidemiology of Chronic Diseases. A symposium (Ann Arbor, Mich.), June 1963, sponsored by U.S. Public Health Service, Univ. of Michigan Medical School, and Univ. of Michigan School of Public Health. U.S. Dept. of Health, Education, and Welfare, Washington, D.C., 1965. 403 pp. Illus. Paper, $1.50 (order from Superintendent of Documents, Washington, D.C.). Twenty-five papers on the following topics: Basic genetic and epidemiological principles (7 papers); The evaluation of genetic factors in selected illustrative diseases (3 papers); Problems in the experimental design of epidemiological studies (3 papers); Current epidemiological problems (2 papers); Longevity and coronary artery disease (3 papers); Regional variations in morbidity and mortality (3 papers); Malignant diseases (3 papers); and Genetic counseling (1 paper).

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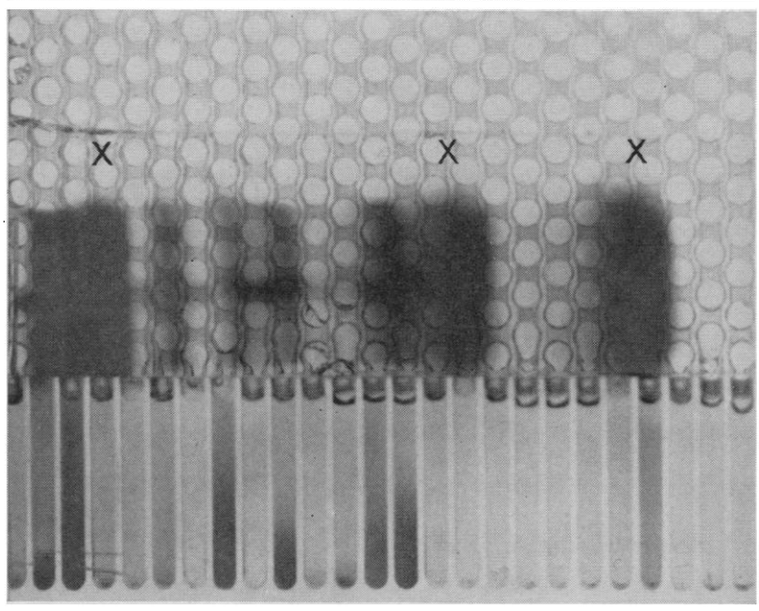

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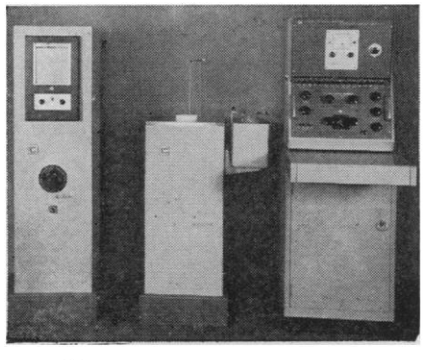

by D. B. Roodyn: "Histochemical localization of enzyme activities by substrate film methods: Ribonucleases, deoxyribonucleases, proteases, amylase, and hyaluronidase" by R. Daoust; "Cytoplasmic deoxyribonucleic acid" by P. B. Gahan and J. Chayen; "Malignant transformation of cells in vitro" by Katherine K. Sanford: "Deuterium isotope effects in cytology" by E. Flaumenhaft, S. Bose, H. L. Crespi, and J. J. Katz; and "The use of heavy metal salts as electron stains" by C. Richard Zobel and Michael Beer.

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