

Co., 2000 Second Ave., Detroit, Mich. 48226)

2-8. **Teratology**, workshop, Commission on Drug Safety, Gainesville, Fla. (D. C. Trexler, Commission on Drug Safety, 221 N. LaSalle St., Chicago, Ill. 60601)

2-11. **Scientific-Technical Documentation and Information**, intern. congr., Rome, Italy. (I. M. Lombardo, La Produttività, Viale Regina Margherita, 84d, Rome)

3-4. **Society of Rheology**, Claremont, Calif. (T. L. Smith, Stanford Research Inst., Menlo Park, Calif.)

3-4. **Perspectives in Virology IV**, Gustav Stern symp., New York, N.Y. (M. Pollard, Lobund Laboratory, Univ. of Notre Dame, Notre Dame, Ind.)

3-7. **Materials**, intern. conf., Philadelphia, Pa. (A. G. H. Dietz, Dept. of Building Engineering, Massachusetts Inst. of Technology, Cambridge)

3-6. **Philippine Acad. of General Practitioners**, Manila. (J. C. Denoga, 1850 Taft Ave., Manila)

4-6. **Society of the Plastics Industry**, conf. of the reinforced plastics div., Chicago, Ill. (W. C. Bird, SPI, 250 Park Ave., New York, N.Y. 10017)

4-6. **Cellular Biology of Myxovirus Infections**, CIBA Foundation symp., London, England. (CIBA Foundation, 41 Portland Pl., London, W.1)

5-7. **Military Electronics**, 1964 winter conv., Los Angeles, Calif. (Inst. of Electrical and Electronics Engineers, Box A, Lenox Hill Station, New York, N.Y. 10021)

5-8. **American College of Radiology**, natl. meeting, Tucson, Ariz. (American College of Radiology, 20 N. Wacker Dr., Chicago, Ill. 60606)

7-8. **Differentiation and Development**, symp., New York, N.Y. (New York Heart Assoc., 10 Columbus Circle, New York, N.Y. 10019)

9-11. **Entomological Soc. of America**, Southwestern Branch, Monterrey, Mex. (D. F. Martin, P.O. Box 1033, Brownsville, Tex. 78521)

10-14. **New Zealand Institution of Engineers**, conf., Wellington. (F. N. Stace, P.O. Box 3047, Wellington, N.Z.)

10-14. **Information Storage and Retrieval**, 6th, Washington, D.C. (American Univ., 1901 F St., NW, Washington, D.C. 20006)

12-16. **American College of Cardiology**, 13th annual, New Orleans, La. (P. Reichert, Empire State Bldg., New York, N.Y. 10001)

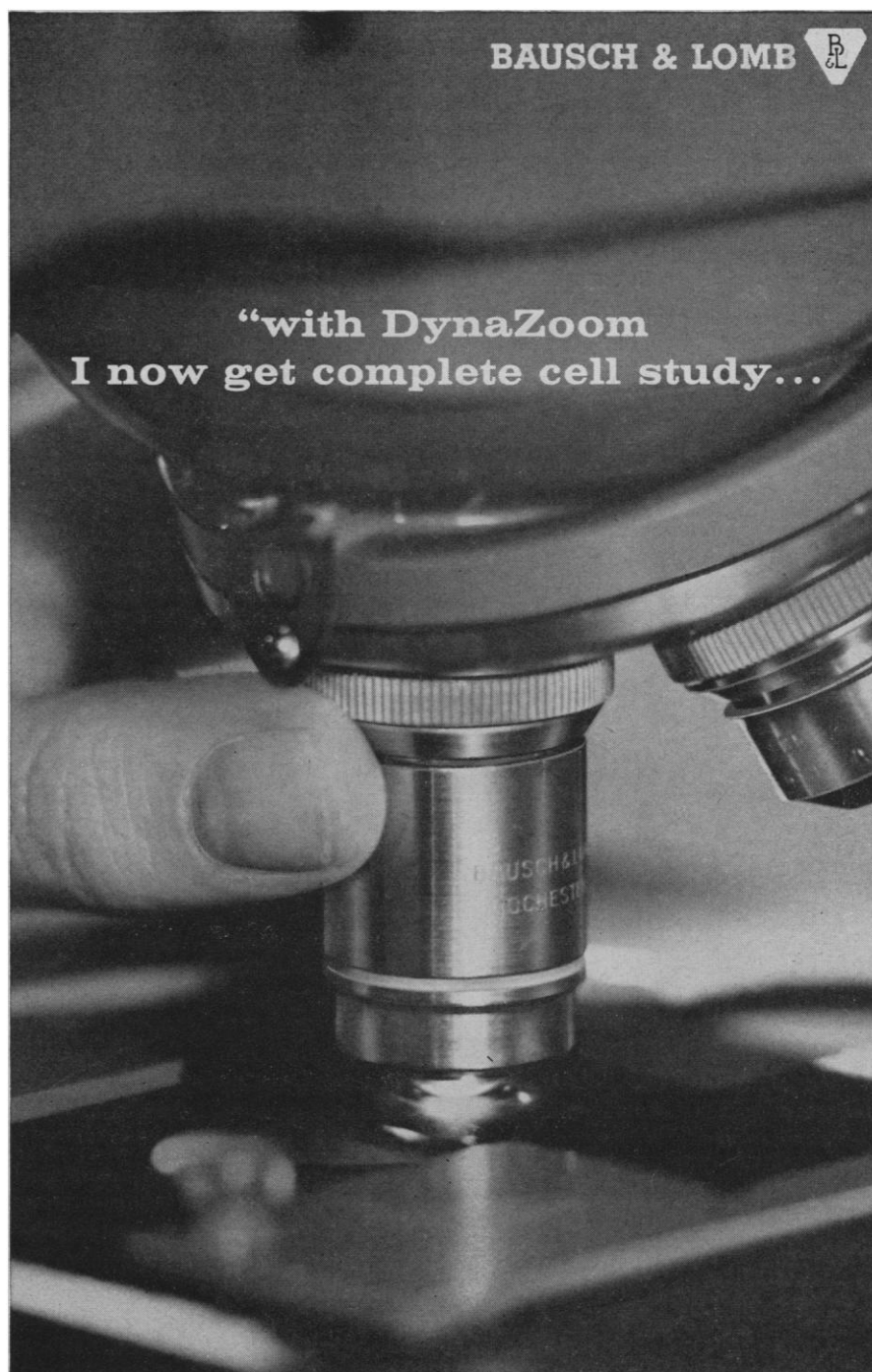
13-14. **Texas Industrial Pharmacy Seminar**, Austin. (L. R. Parker, Pharmacy Extension Service, Univ. of Texas, Austin)

13-15. **Golden Gate Metals conf.**, San Francisco, Calif. (Golden Gate Chapter, American Soc. of Metals, 1605 Solano Ave., Berkeley 7, Calif.)

15-16. **Atomic Energy**, Japanese natl. symp., Tokyo. (Atomic Energy Soc. of Japan c/o Atomic Energy Research Inst., 1-1 Shiba-tamura-cho, Minato-ku, Tokyo)

16-20. **American Inst. of Mining, Metallurgical and Petroleum Engineers**, annual, New York, N.Y. (R. W. Shearman, The Society, 345 E. 47 St., New York, N.Y. 10021)

3 JANUARY 1964



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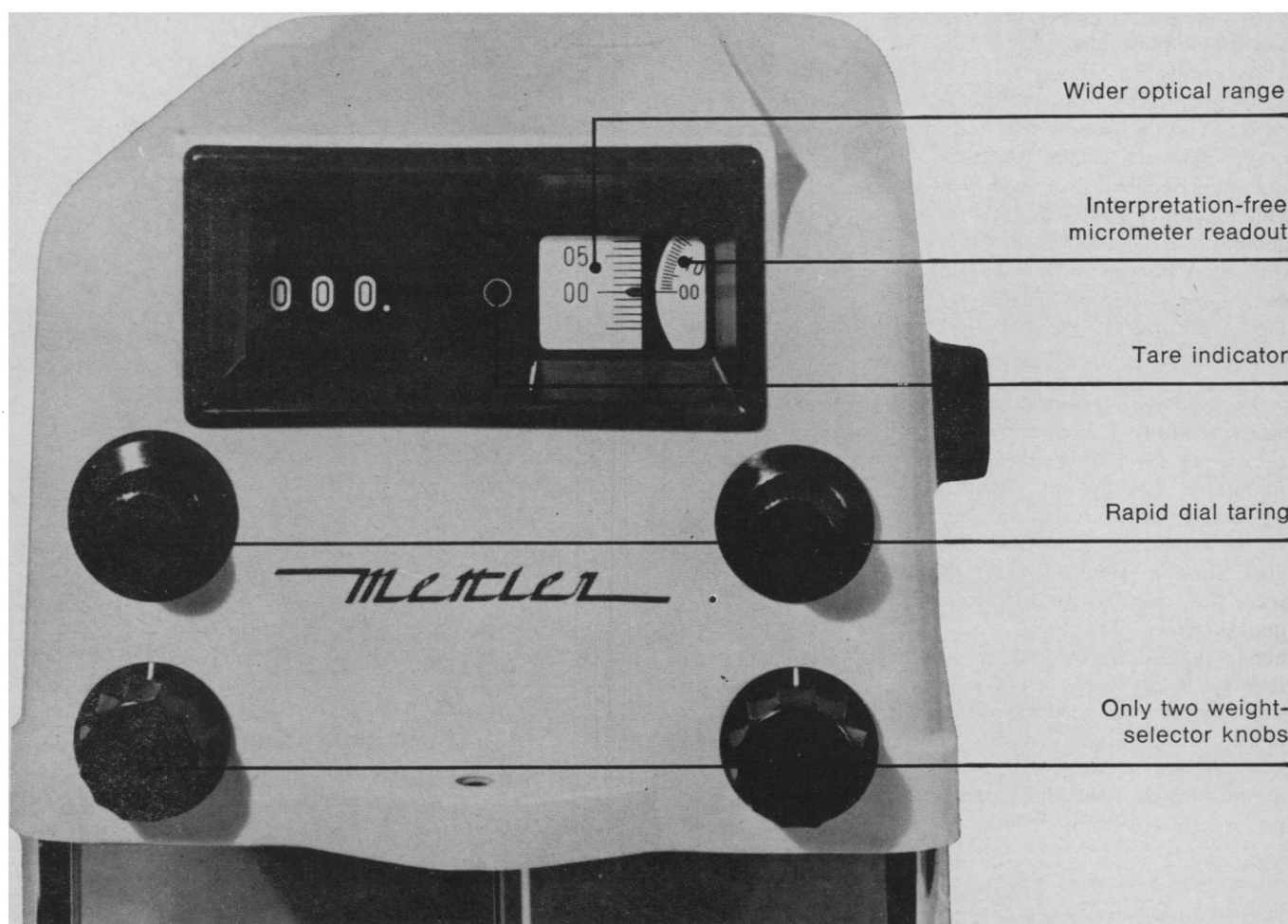
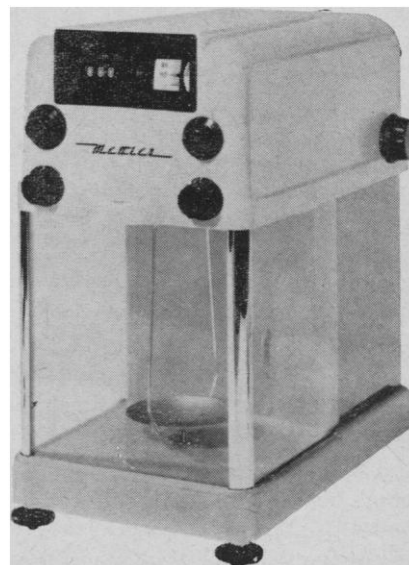
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Twelve-page **technical bulletin on lasers** is entitled *Optical Properties of Lasers as Compared to Conventional Radiators*. The bulletin discusses such characteristics of radiation sources as spatial coherence, temporal coherence, and surface brightness. Continuous-wave helium-neon gas laser sources are quantitatively compared with noncoherent light sources and it is shown that for many applications the use of a laser will yield an increase of many orders of magnitude in useful intensity. Various applications and experiments are explored, including optical data processing, interferometric illumination,

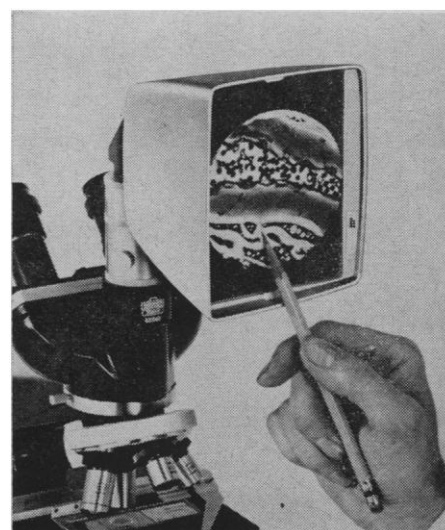
optical heterodyning, and background filtering.—J.S. (Spectra-Physics, Inc., Dept. S136, 1255 Terra Bella Ave., Mountain View, Calif.)

Vacuum deposition rate control system (model DRC) is designed for use with the manufacturer's model DTM-2 deposit thickness monitor to provide improved automatic control of vacuum deposition operations. The rate control instrument extracts the deposit thickness signal from the thickness monitor, differentiates it, compares the differential with a predetermined desired rate of deposition, and provides an output signal for control of a variety of power supplies that determine rate of evaporation. The range of rate extends from 1 to 30 angstrom/sec of gold and from 3 to 90 Å/sec of aluminum or SiO. In addition to its rate control function, the instrument also provides mechanisms for a source preheat cycle, a preheat hold cycle, automatic switches and relays for mechanization of shuttering systems, and coordination of automatic vacuum control systems.—J.S. (Sloan Instrument Corp., Dept. 133, 331 N. Milpas St., Santa Barbara, Calif.)

Statistical digital voltmeter (model SV3) automatically classifies input data in the form of voltage signals. Results are tabulated by the instrument and presented in the form of an electromechanical bar graph on the front panel of the instrument. The display may be photographed or traced onto paper that may be inserted into the readout area. A 19-class display is provided, each class being represented by a bar of light that grows in proportion to the number of voltage signals falling within the particular range category. Up to 100 samples may be entered in each class. By adding auxiliary flip-flops and control logic units, the capacity of each channel may be expanded to 200 samples. Sampling speed is five entries per second and accuracy

is said to be ± 0.01 percent. In operation, the voltmeter section of the instrument compares each incoming signal from each sample with a four-digit center value, previously selected on the front panel of the instrument, and enters each result automatically into the appropriate class readout. Channel width is adjustable and a vertical scale and horizontal rulings on the bars allow the operator to determine the number of readings in each channel directly from the illuminated histogram. Reset is by manual push button and is accomplished within 10 sec. Electrical output signals are provided for operation of auxiliary sorting or recording devices. Voltage range is ± 999.9 volts d-c. A converter and a preamplifier may be used for measuring a-c signals or low-level d-c signals. The four-digit panel control permits midpoint settings and range and polarity setting within ranges $\pm 9.999/99.99/999.9$ volts. Class sizes are 1, 2, 5, 10, 20, 50, 100, 200, 500 mv on the 10-volt range. These are multiplied by factors of ten for each range increase. The readout chart measures 8.5 by 11 inches.—J.S. (Non-Linear Systems, Inc., Dept S123, Del Mar, Calif.)

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

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

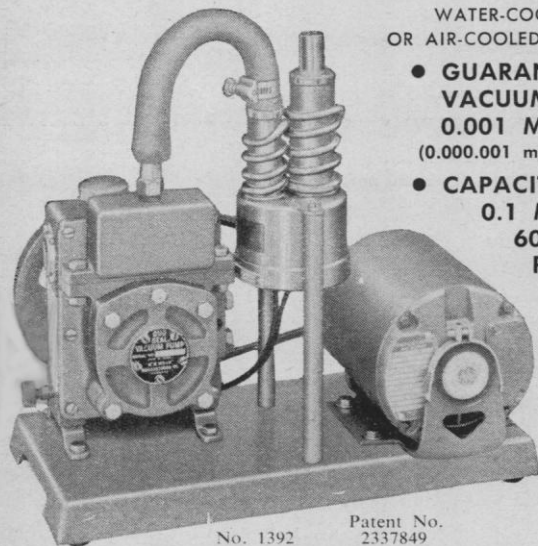
Joshua Stern (J.S.), Basic Instrumentation Section, National Bureau of Standards, Washington 25, D.C. (physics, computing, electronics, and nuclear equipment).

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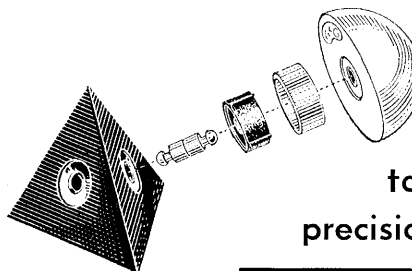
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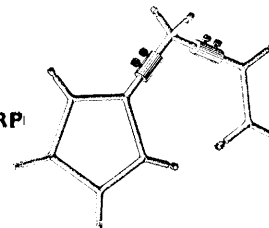
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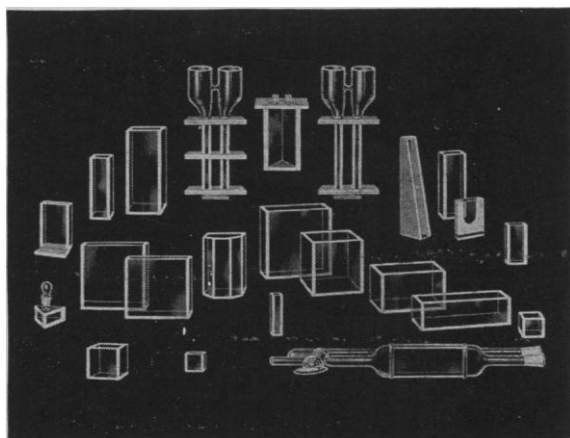
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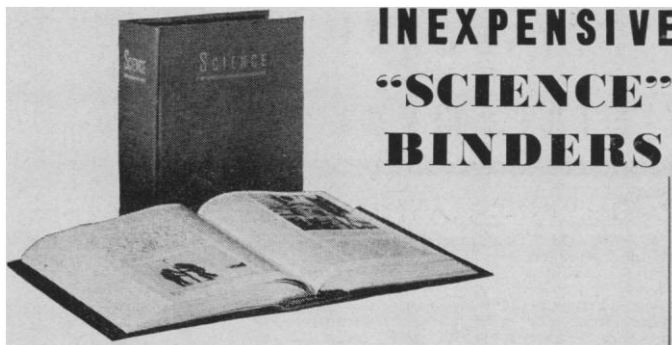
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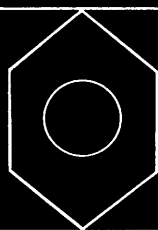
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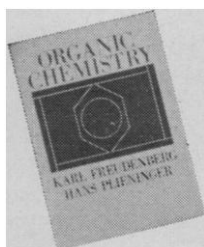


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Edited by: R. F. Sognaes.

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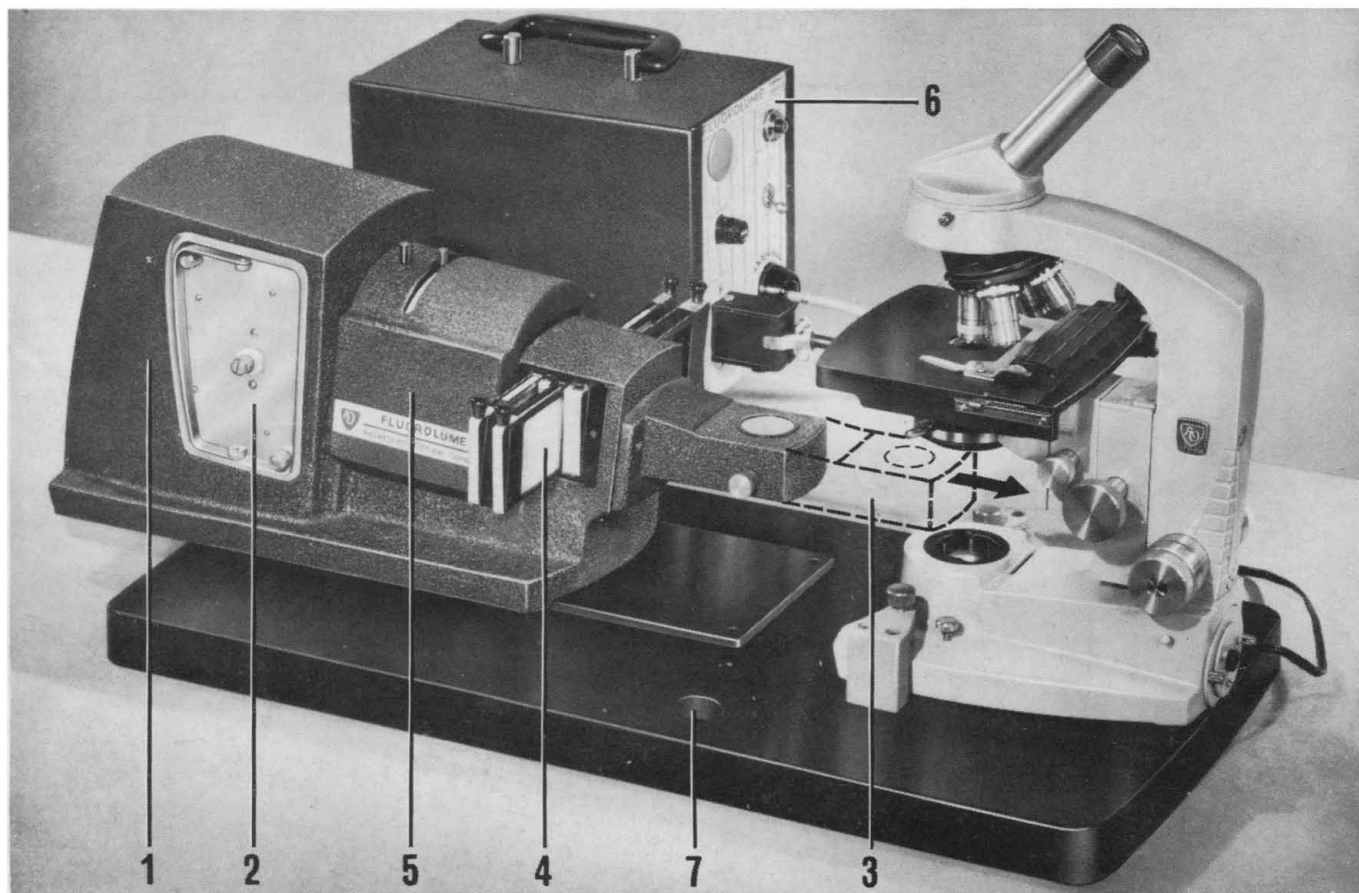
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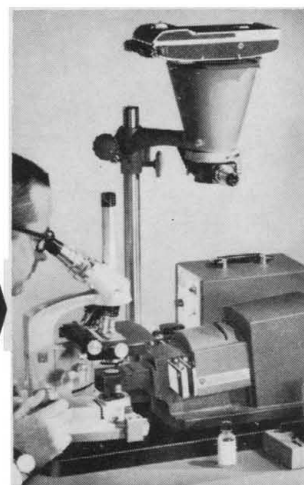
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