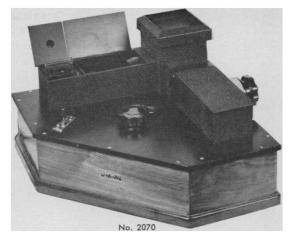
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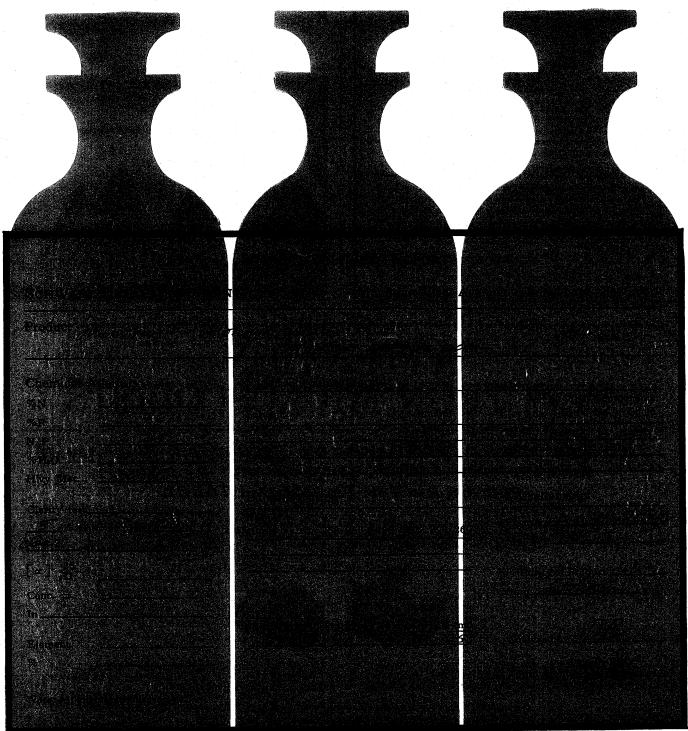
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Gas leak detector can detect and locate 0.001-inch (0.00254-cm) leaks in a pressure system from 2 to 10 ft (0.6 to 3 m) away, depending on the line pressure. This battery-powered, portable detector consists of a hand-held microphone which responds only to ultrasonic energy in the 35- to 45-kcy range, and transistor circuitry which converts these frequencies to ones in the audible range. The technician simply points the microphone at the various tubing, valves, and couplings comprising the system being checked. When a leak is detected, a speaker emits a hissing sound, the loudness of which depends on the proximity to the leaks. In this way a whole system can be checked in a short time. The Delcon Ultrasonic Translator Detector will operate for 1 year on a set of three mercury cells.—D.J.P. (Delcon Corp., Dept. S236, 943 Industrial Park, Palo Alto, Calif.)

Portable strip-chart recorder provides 19 full-scale ranges from 100 μv to 100 volts with zero displacement of ± 100 percent of scale and ten calibrated chart speeds from 1 inch (2.54 cm) per second to 1 inch per 10 minutes operated from the front panel. A jewel-tipped pen fed from a disposable ink cartridge writes on 6-inch (21.2-cm) paper with 0.5 sec for fullscale deflection. Accuracy is referenced to a double zener diode bridge to provide 0.25 percent of full scale or 1 μv, whichever is greater. Damping control on front panel can be adjusted to

prevent overshoot on full-scale or partial-scale step functions. Maximum source impedance for full formance is given as 25,000 ohm/mv of span on millivolt ranges and 10,000 ohms on all voltage spans. Weight is 20 lb (9 kg).—R.L.B. (Minneapolis-Honeywell-Philadelphia Div., Dept. S257, Wayne and Windrim Ave., Philadelphia, Pa. 19144)

Microcells for the analysis of extremely small samples are designed to be used with Beckman models B. DB, DK, and DU spectrophotometers. Two new micro-aperture flow cells permit continuous monitoring of small samples, sequential sampling studies of dynamic systems in which a continuous reaction occurs. Among the applications are spectroscopic detection of effluents in column chromatography and analyses in pediatric medicine. Two new liquid microcells, with capacities of 50 μ l and 60 μ l, are especially designed for collecting fractions from column chromatographs, thin-layer chromatographic spots, and electrophoresis and microelectrophoresis fractions. Suited for any application requiring a standard path length (10 mm) and a minimum volume of sample, all four cells have a wavelength range of 200 to 2500 m_{μ}.— D.J.P. (Beckman, Scientific and Process Instruments Div., Dept. \$252, 2500 Harbor Blvd., Fullerton, Calif. 92634).

Frequency marker system, an accessory to the Perkin-Elmer model 521 infrared spectrophotometer, is designed to provide for the accurate measurement of band positions or small frequency shifts, and for instrument calibration. Accuracy of the marker system is better than 0.02 cm⁻¹. With the accessory, an operator may determine frequencies of absorption bands within ±0.1 cm⁻¹ over the entire range of the model 521 (4000 to 250 cm⁻¹, 2.5 to 40 μ). In addition, the user may apply the marker system to the measurement of small band shifts resulting from a chemical or physical reaction or phase changes or to establish optimum scanning speed for the frequency accuracy desired. Fiducial lines are produced on the spectral curve at frequency intervals selected by the operator, at 0.2, 0.5, 1, 2, 5, and 10 cm⁻¹. In addition, the operator may select the length, 0 to 2 cm, and direction, up-scale or down-scale, of the fiducial marks. Marks falling at frequencies divisible by 10 are approximately doubled in length. The frequency marks are also produced on the slave recording and their length on both recordings is independent of the degree of ordinate expansion.-D.J.P. (Instrument Marketing Div., Perkin-Elmer Corp., Dept. S258, Main Ave., Norwalk, Conn.)

Flame attachment for the Bausch and Lomb Spectronic 505 spectrophotometer permits rapid, accurate, qualitative and quantitative flame analyses of up to 35 chemical elements in hundreds of compounds. A wavelength range of 200 m_{μ} to 800 m_{μ} and high resolution for positive separation of adjacent peaks are provided by the basic spectrophotometer. The attachment provides vertical (up to 50 mm) and horizontal (up to 10 mm) adjustment of the flame. This enables the operator to position the flame for maximum sensitivity, depending on the element being tested. Vertical and horizontal adjustment knobs are calibrated. When the ideal position for any element has been obtained, the operator can note the calibrations to use in future testing for that element. To insure utmost accuracy, an auxiliary lens system is provided which projects an image of the flame onto a ground glass screen for

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,

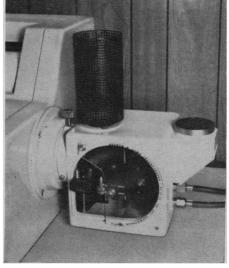
Bethesda 14, Md. (medical electronics and biomedical laboratory equipment).

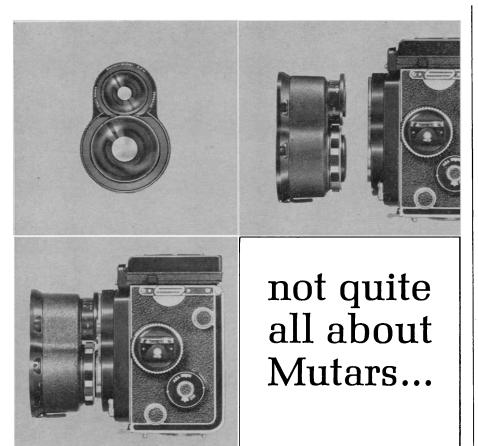
Joshua Stern (J.S.), Basic Instrumentation Section, National Bureau of Standards, Washington 25, D.C. (physics, computing, electronics, and nuclear equipment).

and nuclear equipment).

The information reported here is obtained from manufacturers and from other sources considered to be reliable. Neither Science nor the writers assume responsibility for the accuracy of the information.

Address inquiries to the manufacturer, mentioning Science and the department number.





A complete description of the new Rollei-Mutar quick change lenses would be in very small type in a space this size. But we have available a very interesting article about the two new Mutars written by Dr. Hans Sauer of Carl Zeiss. Rollei owners and those considering the purchase of a 2½" x 2½" camera will find it an absorbing and comprehensive treatment.

Dr. Sauer describes the history of accessory lens systems. He tells how Rollei-Mutars instantly change the focal length of the basic Rollei by .7x (wide-angle) or 1.5x (telephoto) as quickly as you would change a filter. And he tells how this is done without sacrificing any of the great features of the Rollei. He notes, for instance, that unlike other systems, the Mutars do not require smaller apertures for satisfactory image definition, but provide highest resolution at apertures f/5.6 through f/22.

Try both Rollei-Mutars at your Rollei Honeywell dealer's! Check them both on your camera. No camera? Your Rollei Honeywell dealer can correct that very quickly. Meanwhile, drop a line to Jerry Poole for your own copy of Dr. Sauer's article. Address: Honeywell (209), Denver, Colorado 80217.

Honeywell PHOTOGRAPHIC PRODUCTS

alignment of the flame with the entrance slit of the monochromator. The flame accessory can be attached to the Spectronic 505 in a matter of seconds. A single centering screw quickly positions the accessory. A glass reservoir, mounted outside the attachment for easy filling, feeds samples directly to the flame. Capillary tubing below the reservoir controls flow so that the sample will reach the flame more evenly. For versatility, six interchangeable types of burners can be used with the flame attachment, and the attachment performs efficiently with either acetylene or hydrogen. A protective window is provided to keep the condenser of the Spectronic 505 safe from the flame. This window is mounted for easy cleaning. A safety shield on top of the flame accessory keeps the operator safe from direct contact with the flame.—D.J.P. (Bausch & Lomb, Dept. S261, Rochester, N.Y. 14602)

Laboratory glassware kits contain the 15 pieces of corrosion-resistant ware necessary for the experiments required by the 13 most commonly used college workbooks. The kits are designed for elementary, general, and advanced organic chemistry, organic preparations, general biochemistry, qualitative organic analysis, and graduate research. Each kit contains a manual which includes drawings that enable students to set up the apparatus required for a particular experiment. The ware is packaged in a chemicalresisting box with a polystyrene form which firmly holds the components. The box fits into standard laboratory workbench drawers. The basic kit can be used for preparation, reflux, and distillations of quantities from 1.5 to 450 ml. The Pyrex brand components have standard 24/40 ground joints, eliminating the need for corks and stoppers. The kits are available in two models. The basic kit has three onenecked boiling flasks of 100-, 250-, and 500-ml capacities, two connecting tube adaptors, two distilling tube adaptors, a hollow stopper, a tube reaction vessel, a condenser and condenser column, a graduated funnel with glass stopcock, adaptor outlet, a drying tube, and a thermometer. In the other kit all parts are the same except a threenecked 250-ml flask and a fluorocarbon stopcock replace the one-necked flask and glass stopcock.—D.J.P. (Corning Glass Works, Dept. S260, Corning, N.Y.)



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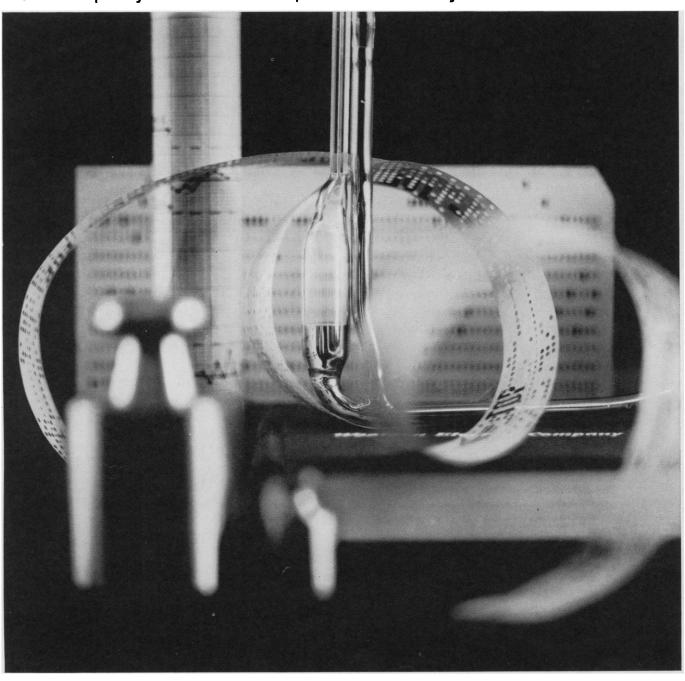
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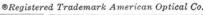
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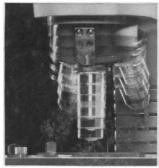
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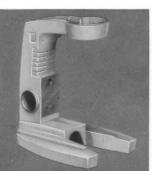


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