

vacuum pump powered with an electric motor is available to produce the decompression the apparatus can be used on the hospital wards for clinical investigation. If used in the laboratory for animal experimentation a filter pump, as shown in the figure, connected to the water line will be found quite satisfactory. A small vacuum tank may be included in the system to take care of any changes in pressure due to pressure changes in the water line.

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A SIMPLIFIED ALL-PURPOSE GRAVITY WRITING LEVER

SINCE describing an inexpensive gravity writing lever for respiratory tambours¹ we have simplified and extended the usefulness of the apparatus. The principle of a carrier holding a writing arm in such a manner that gravity will cause this arm to contact the drum is the same as previously described. The difference is that the carrier has been made smaller and lighter in weight and thus applicable to heart and muscle levers. The simplified carrier is made from the ordinary aluminum writing arm wire. It is illustrated in the figure and is easily made as follows:

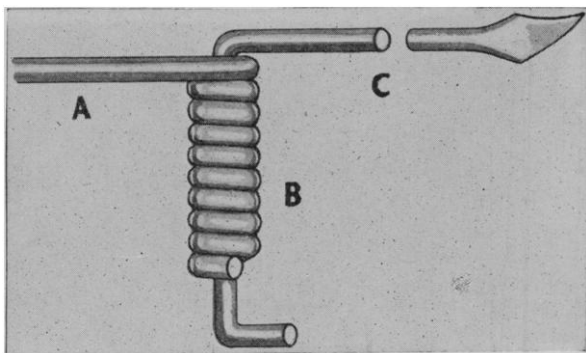


FIG. 1.

A close spiral about one-half inch in length is wound at one end of a four- or five-inch piece of the wire. The spiral is then bent at a right angle to the rest of the wire (A). About three-fourths inch of a second wire (C) is bent to nearly a right angle. The short arm of this right angle is inserted longitudinally through the spiral and its protruding end bent to hold it in place. Joined in this fashion the spiral and the short arm of the second wire make a hinge (B) which permits the long arm of the wire (C) to act with gravity and fall against the drum. The straight arm of the first wire (A) is inserted in the spindle in the usual manner. The sensitivity of the lever may be

varied by the amount of tilt given the hinge (B) and by changes in the weight and length of the second wire (C). This lever is as satisfactory as many complicated models now on the market and can be made by students in a few minutes from their old levers.

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A SIMPLE TIMING DEVICE FOR SPEAKERS

EVERY one attending conventions, such as those of our scientific associations, has been impressed by the necessity of controlling the time used by the speakers on crowded programs. One speaker running much over the 12, 15 or 30 minutes of time allotted to him may considerably disrupt a morning or afternoon program. The chairman naturally hesitates out of courtesy to the speaker brusquely to interrupt him and may merely announce "Time" or sharply tap with a pencil when his time is up. This introduces a personal element which may be irritating to some.

While presiding over the recent meetings of the North Dakota Academy of Science I used a photographic interval timer clock which several speakers afterwards commended. The speakers were allotted 15 minutes and I announced several times that the clock would be set to "tinkle" at 13 minutes, allowing two minutes to finish. When the speaker commenced to talk the clock was set and was thereafter ignored. No further personal element was interjected and the alarm went off impersonally for all. The "tinkle" was subdued by placing the clock under a hat.

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BOOKS RECEIVED

- FALES, HAROLD A. and FREDERIC KENNY. *Inorganic Qualitative Analysis*. Illustrated. Pp. ix + 237. D. Appleton-Century. \$2.65.
- HAYS, F. A. and G. T. KLEIN. *Poultry Breeding Applied*. Illustrated. Pp. 192. Poultry-Dairy Publishing Co.
- HEALD, FREDERICK D. *Introduction to Plant Pathology*. Illustrated. Pp. xii + 603. McGraw-Hill Book Co. \$4.00.
- JEAN, FRANK CONVERT and OTHERS. *Man and His Physical Universe*. Illustrated. Pp. viii + 607. Ginn and Company. \$3.25.
- LINDSAY, ROBERT BRUCE. *Handbook of Elementary Physics*. Illustrated. Pp. xv + 382. The Dryden Press. \$2.25.
- RUPPERT, KARL and JOHN H. DENISON, JR. *Archaeological Reconnaissance in Campeche, Quintana Roo, and Peten*. Illustrated. Pp. vii + 156. Carnegie Institution of Washington. \$4.25, paper cover; \$4.75, cloth binding.
- SCHMIDT, CARL L. A. *Addendum to the Chemistry of the Amino Acids and Proteins*. Illustrated. Pp. xii + 1290. Charles C Thomas. \$5.00.
- SHERMAN, HENRY C. *The Science of Nutrition*. Pp. x + 253. Columbia University Press. \$2.75.
- STILES, KARL A. *Laboratory Explorations in General Zoology*. Illustrated. Pp. x + 265. Macmillan. \$2.50.
- WINSLOW, CHARLES-EDWARD A. *The Conquest of Epidemic Disease*. Pp. xii + 411. Princeton University. \$4.50.

¹ SCIENCE, 96: 590, 1942.