

## SCIENTIFIC APPARATUS AND LABORATORY METHODS

### IMPROVED MAGNETIC FLOW SWITCH FOR USE WITH WATER-COOLED X-RAY TUBES

IN the flow switch previously described by me<sup>1</sup> the fit between the piston and the cylinder has a very small tolerance. If the clearance is too great, water may leak through from the intake port to the outlet port without lifting the piston; whereas if it is too small, mud, sand or other foreign matter may lodge in the upper part of the cylinder, fouling the piston so that it fails to drop when the flow of water ceases.

To overcome this difficulty the flow switch has been redesigned. In the new design the fit between piston and cylinder has a large tolerance and the water passing around the piston and through the cylinder constantly flushes the space between them, preventing the lodgment of foreign matter.

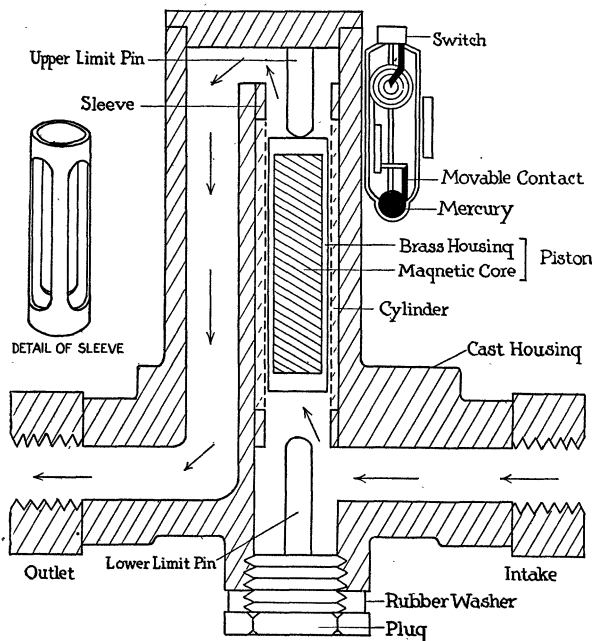


FIG. 1.

Fig. 1 shows the changes in the piston-cylinder assembly. The electrical and magnetic features are unchanged.

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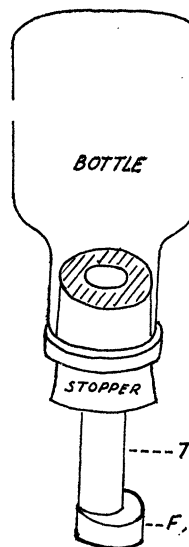
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### A LARGE FEEDER FOR SMALL CAGES IN AVIAN MALARIA STUDIES

THIS feeder (see sketch) allows access to a relatively large supply of clean seeds, enough to last one canary several days or weeks, depending on the size of the seed container.

<sup>1</sup> Paul C. Hodges, *SCIENCE*, 94: 424, October 31, 1941.

Particular considerations are that the diameter of tube "T" be wide enough and with its lower end high enough from the bottom of the feed cup to allow for easy passage of seeds; and that the feed cup "F"



allows sufficient space between its wall and that of the tube so the bird can readily but with restriction pick out the seeds.

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### BOOKS RECEIVED

- A Collection of Articles and Essays on the Great Russian Poet A. S. Pushkin.* Illustrated. Pp. 187. Mezhdunarodnaja Kniga.
- ADELMANN, HOWARD B. *The Embryological Treatises of Hieronymus Fabricius of Aquapendente.* Illustrated. Pp. xxiii + 883. Cornell University Press. \$12.00.
- CHRISTENSEN, CLYDE M. *Common Edible Mushrooms.* Pp. x + 124. University of Minnesota Press. \$2.50.
- HAGAN, WILLIAM ARTHUR. *The Infectious Diseases of Domestic Animals.* Illustrated. Pp. xxvii + 665. Comstock Publishing Company. \$6.00.
- MERRIAM, JOHN C. *The Garment of God.* Pp. xii + 162. Charles Scribner's Sons. \$2.00.
- RAPAPORT, DAVID. *Emotions and Memory.* Pp. ix + 282. Williams and Wilkins. \$3.00.
- STRONG, RICHARD P. *Stitt's Diagnosis, Prevention and Treatment of Tropical Diseases.* Sixth Edition. Two Volumes. Illustrated. Pp. 1826. The Blakiston Company. \$21.00.
- TAYLOR, LLOYD W., WILLIAM W. WATSON and CARL E. HOWE. *General Physics for the Laboratory.* Revised edition. Illustrated. Pp. vii + 107. Ginn and Company. \$2.00.
- WALTZ, GEORGE H. *Jules Verne, The Biography of an Imagination.* Pp. 223. Henry Holt and Company. \$2.50.
- WRANGHAM, D. A. *The Theory and Practice of Heat Engines.* Illustrated. Pp. xii + 756. Macmillan. \$10.50.