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PEACETIME VALUES FROM A WAR TECHNOLOGY¹

By Dr. GUSTAV EGLOFF

DIRECTOR OF RESEARCH, UNIVERSAL OIL PRODUCTS COMPANY, CHICAGO, AND
PRESIDENT, AMERICAN INSTITUTE OF CHEMISTS

INTRODUCTION

IN a world at war one gets the impression that all forces are solely for destruction. When war ends, the new technology will more quickly, efficiently and effectively convert the war effort to the pursuits of peace with an amazing speed. With the tremendous increase in research and development, the commercialization of processes has occurred which would have taken years under normal conditions to reach fruition. Out of the welter of the war effort, values will flow that will increase man's effective span of life with greater satisfaction for living.

Science has already prolonged and saved man's life

¹ Presented at the Wartime Marketing Conference, American Management Association, Drake Hotel, Chicago, January 14, 1943.

through germ-killing chemicals, new anesthetics and synthetic vitamins. Through scientific and technical research our food supply has increased in quantity and quality. Synthetic textiles have provided us with more beautiful, durable and sanitary clothing. Plastics will revolutionize the building arts, for the trend is to supplant many house-building and house-furnishing materials with plastics as soon as they can be released for civilian use. Plastics together with new and more efficient fuels will also play a dominant part in our transportation systems.

Let us look at the transportation situation first. The petroleum industry will play a controlling part in this. Airplanes hurtling through the air at over five hundred miles an hour carrying a thousand or more passengers will make all parts of the world less than twenty-four

SCIENTIFIC APPARATUS AND LABORATORY METHODS

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

IN the flow switch previously described by me¹ 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.

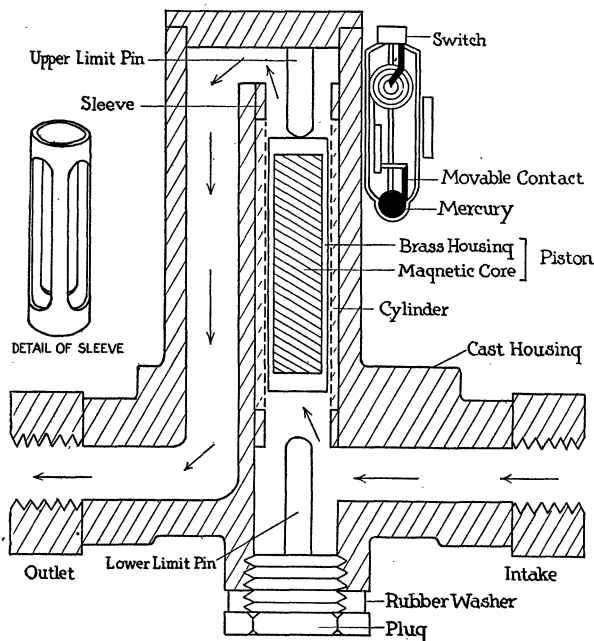


FIG. 1.

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

PAUL C. HODGES

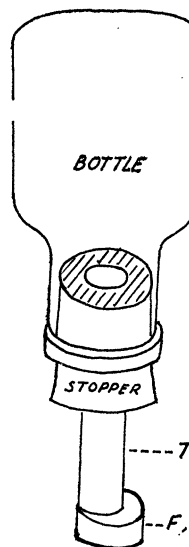
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A LARGE FEEDER FOR SMALL CAGES IN AVIAN MALARIA STUDIES

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.

¹ 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"



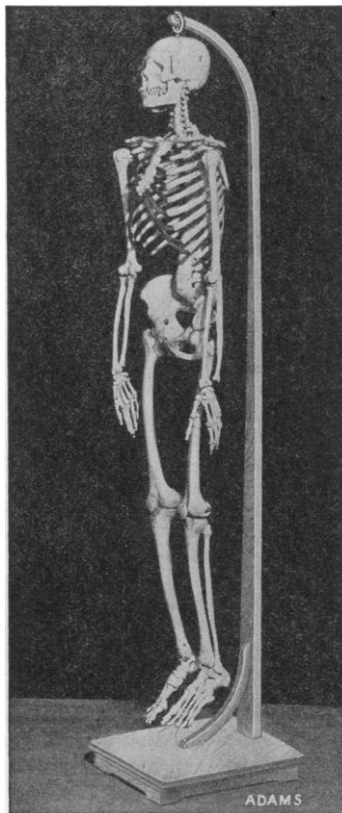
allows sufficient space between its wall and that of the tube so the bird can readily but with restriction pick out the seeds.

ROBERT K. OTA
HARRY BECKMAN

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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.



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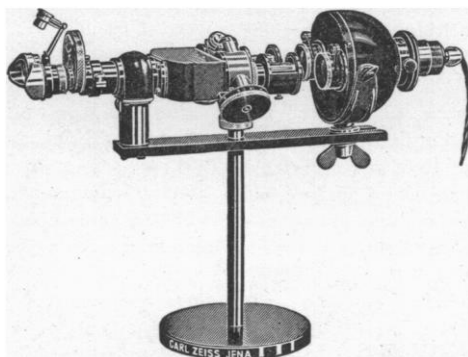
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