SCIENCE

NEW SERIES
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FRIDAY, APRIL 17, 1942

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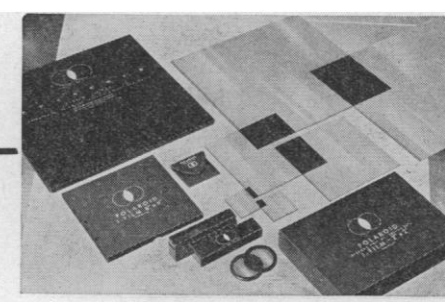

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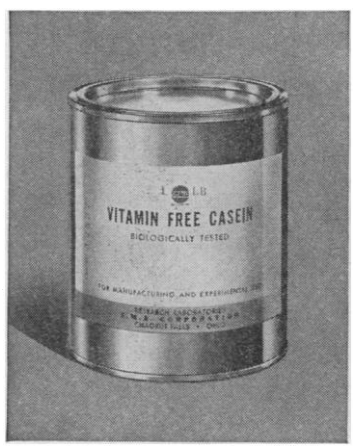

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1. ANSBACHER, S.: *Proc. Soc. Exp. Biol. & Med.*, 46:421:1941.
2. ANSBACHER, S., and LANDY, M.: Biotin and Scaly Dermatosis of the Chick. *Proc. Soc. Exp. Biol. & Med.*, 48:3:1941.

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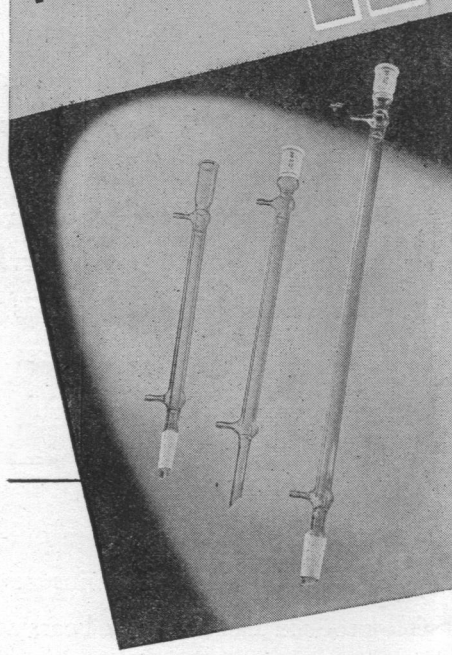

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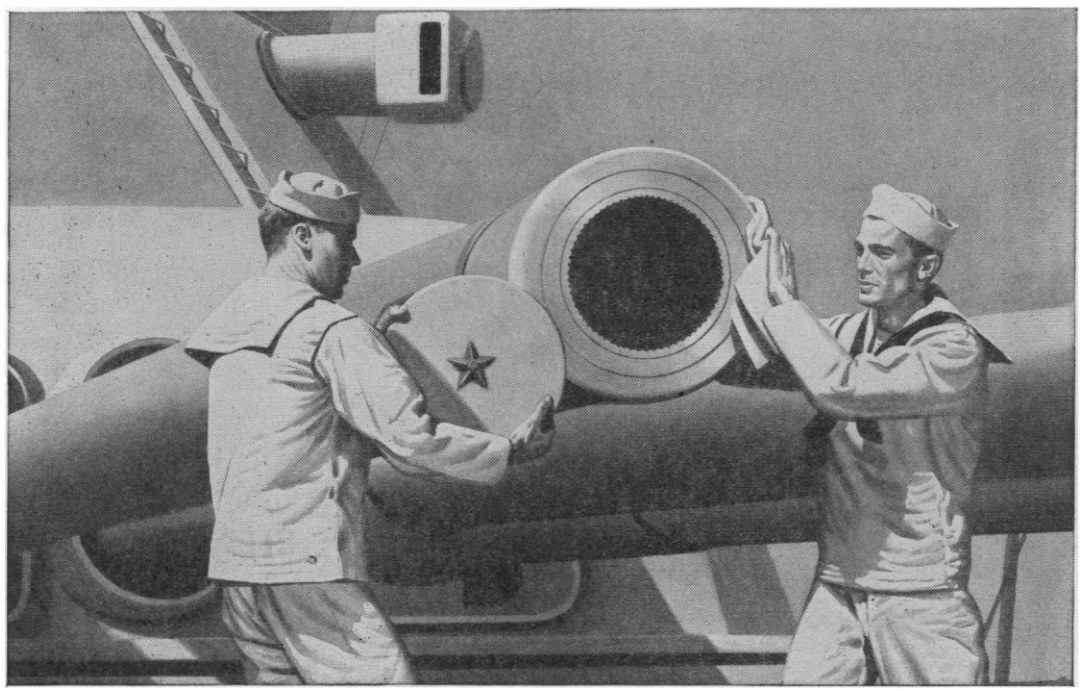

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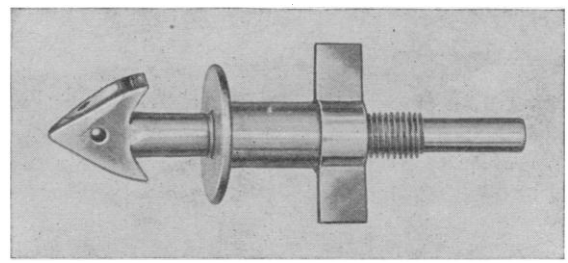

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VIRUS INFECTION OF THE MAMMALIAN FETUS[1]

By Dr. ERNEST W. GOODPASTURE

DEPARTMENT OF PATHOLOGY, VANDERBILT UNIVERSITY MEDICAL SCHOOL, NASHVILLE, TENN.

EXPERIENCE extending over a number of years with experimental inoculation of embryos of incubating hen-eggs has demonstrated a high degree of susceptibility of the developing avian cells and tissues to a number of infectious agents including viruses, bacteria, spirochaetes, fungi and protozoa. It is evident that this avian host in its embryonic stage is much more susceptible to several infections than are adult chickens and perhaps more so than the natural host of particular agents concerned.

Indicative of a greater susceptibility of chick embryos as compared with the adult hen or with a mammalian host is the wide dissemination of focal areas of infection within the body of the embryo inoculated in the chorioallantoic membrane with, for example, the viruses of vaccinia or herpes simplex, neither of which causes more than a mild local lesion in chickens, and ordinarily no conspicuous if any disseminated lesions in mammals. It is not to be inferred, however, that avian embryonic cells and tissues can be infected by any virus or other agent, for they possess toward some agents a complete refractiveness that is of the nature of natural immunity.

Experimenters who have utilized mammalian em-

[1] A lecture delivered before Section B–17 of the Symposia of the fiftieth anniversary of the University of Chicago, September 26, 1941.

and with 3 ears bent up vertically to serve as a three-point attachment for the clip. A piece of film clip (of suitable length and curvature to encircle snugly the inner valve of the Petri dish) is soldered to these three ears with its ends pointing outward and its lower edge just clearing the stage surface (Fig. 1, A).

In use, this holder, its frame firmly gripped in the fingers of the mechanical stage and its clip snugly clasping the periphery of the dish, will move even heavy agar-filled dishes around on the stage without lagging or jerking and with a smoothness and precision that permit work under high dry magnification.

Although this original type of holder in suitable sizes has proved adequate for most of our needs, various modifications have since been developed for special purposes. For the built-in mechanical stages of such microscopes as the Spencer research model the writer uses a holder essentially similar in construction but with its frame screwed to a beveled brass strip that fits into the stage slot in place of the usual slide-holding fingers (*cf.* Fig. 1, B). A somewhat different holder for built-in stages has been devised recently by Dr. Ernest Runyon, of Agnes Scott College, who, without knowing of the writer's appliance, independently has used the same essential principle. In Dr. Runyon's model the clip of clock spring is attached at one end to a small Bakelite block which is screwed to one of the slide-holding fingers of the mechanical stage (*cf.* Fig. 2, A).

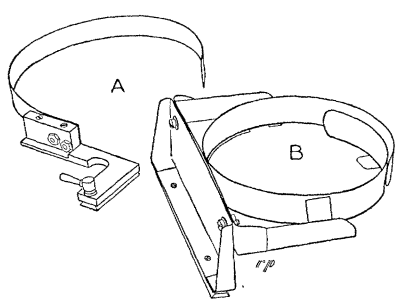

FIG. 2

For holding the uncovered lower valve of a Petri dish upside down so that danger of contamination is minimized during operations on pure cultures growing on nutrient agar the writer uses a holder that supports the valve at a height (about 1 inch) sufficient to permit working with mechanically manipulated needles or pipettes. In this model (Fig. 2, B) the spring clip grips the dish especially tightly and is provided with four lugs projecting slightly from its lower edge so that the dish, although easily inserted, can not fall out. The frame, which extends farther around the dish for greater firmness, is supported by a rigid upright whose beveled base fits the slot of the built-in mechanical stage.

Since these holders have proved helpful in our work, it is hoped that the foregoing description may extend their usefulness to other laboratories.

WILLIAM H. WESTON

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THE USE OF DRIED PLASMA FOR THE COAGULASE TEST

THE coagulase test has become an outstanding test for the identification of pathogenic staphylococci.[1,2,3,4,5,6,7] Experiments recently conducted have shown that the test can be satisfactorily carried out, using plasma dried by the cryochem process. Using rabbit plasma (1 per cent. sodium citrate) dried in a modified cryochem apparatus constructed in these laboratories, coagulase tests have been run on a series of coagulase negative and positive staphylococci supplied by Dr. W. N. Plastridge and Dr. J. M. Murphy. Controls were run on each culture, using fresh undried plasma. The technique of Fish[7] was used. Plasma (dried or fresh) was diluted tenfold with physiological saline and inoculated with a large loopful of overnight growths of staphylococci. Perfect agreement between the results with fresh and previously dried plasma has been obtained, clotting having occurred with the strains studied within six hours.

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The method should facilitate the work of clinical and mobile laboratories.

EDWARD J. FOLEY

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1 G. H. Chapman, C. Berens, A. Peters and L. Curcio, *Jour. Bact.*, 28: 343, 1934.
2 R. Cruickshank, *Jour. Path. and Bact.*, 45: 295, 1937.
3 S. T. Cowan, *Jour. Path. and Bact.*, 46: 31, 1938.
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6 R. W. Fairbrother, *Jour. Path. and Bact.*, 50: 83, 1940.
7 A. Fish, *Brit. Jour. Exp. Path.*, 21: 31, 1940.

BOOKS RECEIVED

DRINKER, CECIL K. *Lane Medical Lectures: The Lymphatic System.* Illustrated. Pp. 235. Stanford University Press. $2.25.

Handbook of Civilian Protection. Prepared by the Civilian Defense Council. Illustrated. Pp. xviii + 184. Whittlesey House. $1.25.

Science and Man. Essays. Edited by RUTH NANDA ANSHEN. Pp. viii + 494. Harcourt, Brace. $4.00.

TAYLOR, CLARA MAE. *Food Values in Shares and Weights.* Pp. xi + 92. Macmillan. $1.50.

WILSON, NETTA W. and S. A. WEISMAN. *Modern Medicine: Its Progress and Opportunities.* Pp. vi + 218. George W. Stewart, $2.00.

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Insect Transmission of Plant Diseases

By JULIAN G. LEACH, West Virginia University. *McGraw-Hill Publications in the Agricultural Sciences.* 615 pages, 6 x 9. $6.00

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By OSKAR A. JOHANNSEN and FERDINAND H. BUTT, Cornell University. *McGraw-Hill Publications in the Zoological Sciences.* 462 pages, 6 x 9. $5.00

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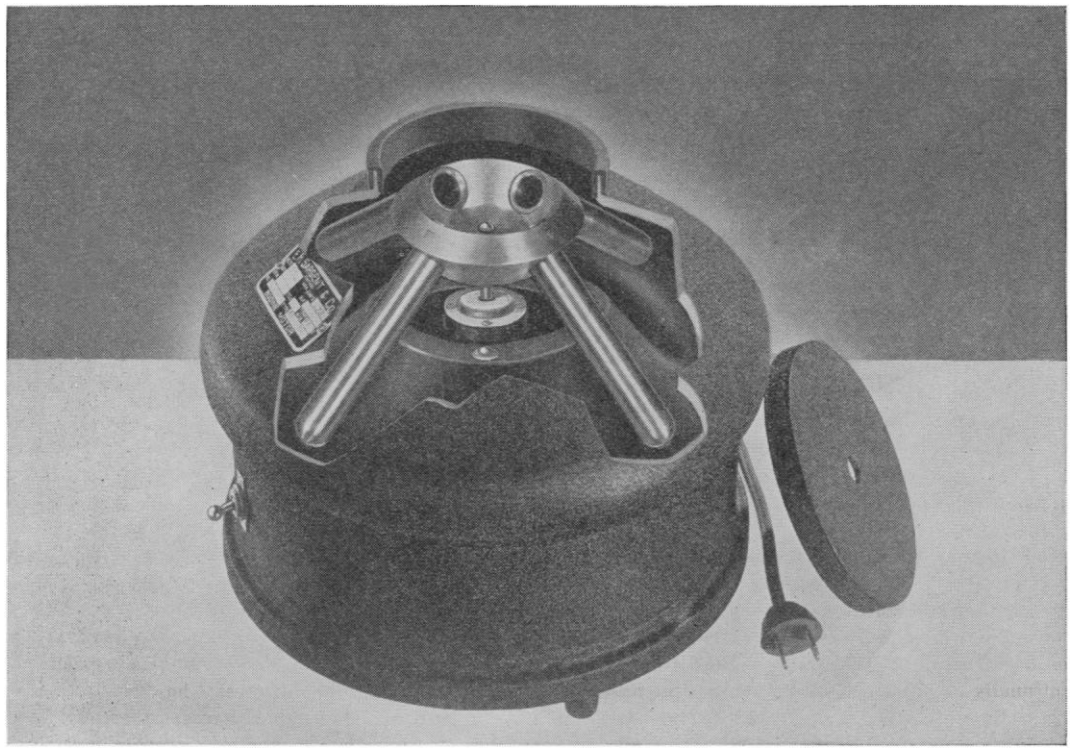

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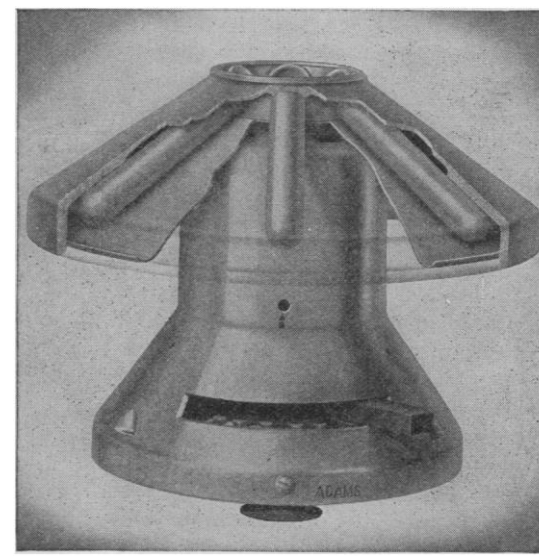

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