abandon the use of fresh brain, even though Souter, Kark and Taylor[2] have recently described a satisfactory way for preserving thromboplastin extract by means of the lyophile procedure of Flosdorf and Mudd.

Thromboplastic activity is destroyed by oxidation. If dried rabbit brain be allowed to remain in contact with air, it slowly turns yellow and a concomitant loss of potency occurs. By storing the reagent in an evacuated tube, oxidation is prevented and the activity is retained apparently indefinitely. As an example, a preparation made on March 3, 1938, was tested on June 6, 1939, and found it clotted human plasma in 11½ seconds. The unused portion of the sample was resealed under vacuum and tested on June 24, 1940. Again clotting occurred in 11½ seconds.

Thromboplastin possesses a relative but not an absolute species specificity. Rabbit thromboplastin appears to be specific for the plasma of man, dog, cat, horse and cow, but not for the plasma of the guinea pig or for birds. It is interesting to note that repeated search has failed to find any better source for thromboplastin than rabbit brain.

ARMAND J. QUICK
MARQUETTE UNIVERSITY SCHOOL OF MEDICINE

A STOPCOCK LUBRICANT FOR USE WITH SOLVENTS, ACIDS OR ALKALIES

DURING the past few years the writer has done considerable work with solvents such as carbon disulfide, petroleum ether, acetone and other similar solvents in separatory funnels and burettes.

Many different compounds have been used as stopcock lubricants. Some of these are good for certain solutions but unsatisfactory for others.

About two years ago while searching for a satisfactory stopcock lubricant for use with carbon disulfide the writer tried some powdered graphite which was on the shelf in the laboratory. It has proved to be a valuable substance for use as a lubricant where the ordinary compounds are dissolved away.

Graphite is insoluble in all ordinary solvents and is not affected by acids or alkalies. It does not allow the stopcock to bind and it gives a very satisfactory seal. Only a very small amount should be used. A stopcock once coated usually lasts a long time.

P. W. ROHRBAUGH
CALIFORNIA FRUIT GROWERS EXCHANGE,
ONTARIO, CALIFORNIA

SHADOWGRAPH RECORDING OF AVENA COLEOPTILE CURVATURES

GROWING oats in battery jars, in place of specialized seed holders, for the Went coleoptile assay method for auxin, seems to have a number of distinct advantages. When this technique is employed, shadowgraph records may be conveniently taken with the aid of an easily constructed device described below and figured in the accompanying drawing.

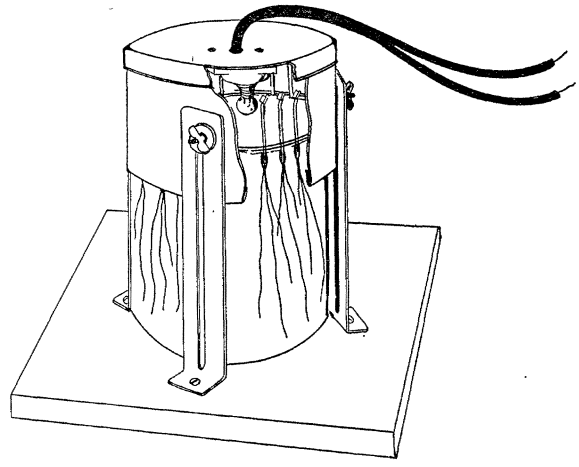

FIG. 1.

A copper cylinder 4″ in diameter and 3″ in height is made movable up and down along slots in three copper legs attached securely to a base board. The cylinder may be held in any position by means of winged nuts that tighten against the legs on screws attached to the cylinder. The lower rim of the cylinder is curled up on the inside to support a strip of photographic paper. Covering the cylinder is a copper lid, in the center of which is placed a small single filament flashlight bulb operating on two dry cells.

We have used this set-up with battery jars 3⅞″ in diameter and 5″ in height in which 20 to 25 oats are able to grow uniformly. Satisfactory results have been obtained with both single and double exposures of the reacting coleoptiles.

HARRY G. ALBAUM
SAMUEL KAISER

BROOKLYN COLLEGE

[2] A. W. Souter, R. Kark and F. H. L. Taylor, SCIENCE, 91: 532, 1940.

BOOKS RECEIVED

ARENSBERG, CONRAD M. and SOLON T. KIMBALL. *Family and Community in Ireland.* Pp. xxix + 322. Illustrated. Harvard University Press. $3.50.

BEAVER, WILLIAM C. *Fundamentals of Biology.* Second edition. Pp. 889. 301 figures. Mosby. $4.00.

Frank Howard Lahey Birthday Volume, June 1, 1940. Pp. xiv + 466. Illustrated. Charles C. Thomas.

PARSONS, R. H. *The Early Days of the Power-Station Industry.* Pp. x + 217. 24 plates. 5 figures. Cambridge University Press, Macmillan. $3.50.

PLUMMER, WILBUR C. and RALPH A. YOUNG. *Sales Finance Companies and Their Credit Practices.* Pp. xxiii + 298. National Bureau of Economic Research. $3.00.

PRESCOTT, SAMUEL C. and CECIL G. DUNN. *Industrial Microbiology,* Pp. x + 541. 60 figures. McGraw-Hill. $5.00.