ments of the work for which the rod is intended; however, an angle of ninety degrees was found satisfactory for most general work.

THE USE OF THE ROD FOR TRANSILLUMINATION

The finished rod was supported by a burette clamp on a ring stand where it could then be adjusted to the desired position for operations. The light-delivering end of the rod should be placed in such a position that its surface is parallel to the surface of the microscope objective, this being necessary to produce a field of even illumination. The small tip can be inserted into incisions in live animals such as dogs, cats, rats and frogs for microscopic study of the living organs. For illumination of such tissues as frog or rat mesentery, a sixty-watt lamp placed at the large end of the rod gave sufficient light for observation. For illumination of structures containing pigment, such as liver, a light source of higher intensity will prove more satsifactory. When using the carbon arc for illumination over extended periods, it is necessary to place a water jacket around the large end of the rod to prevent the softening of the rod by the heat from the arc. Lucite rods have been found to give an even field of illumination at both high and low magnifications.

This illuminator may be also used as a very satisfactory substitute for the Abbe condenser and substage mirror of a microscope in general histological work. Sections thus illuminated stand out in brilliant definition. For all general histological sections, a "daylight" sixty-watt lamp gave ample light for oil immersion.

LEE S. FENT

KANSAS STATE COLLEGE

LANTERN SLIDES FROM TYPEWRITTEN MATERIAL

A METHOD of making lantern slides of tabular and text matter, which eliminates one step in the photographic process, is to type the data through white carbon paper on black paper. The ribbon indicator on the typewriter is set at the position for stencil cutting, to obtain as white an imprint as possible from the carbon paper. The material transferred as white on black paper is then photographed in ordinary daylight (artificial light does not give good results), Eastman contrast lantern slide plates being used as negatives. Each negative is bound with a cover glass as an ordinary lantern slide. This method results in slides that show black letters and figures on a white background and avoids the necessity of making positives after the negatives are made. Kymograph records on smoked paper can be mounted on black paper, the legends typed through the white carbon paper, and both the records and the legends will be reproduced photographically as black on white. Simple curves and diagrams can be traced through the white carbon paper onto the black paper. We have been unable to find a white typewriter ribbon on the market. For black paper we have found the "Black Antique Atlantic Cover" ($20 \times 26 - 65$) of the Cook-Vivian Company satisfactory and for white carbon paper the "Panama White Carbon" of the Manifold Supplies Company, both of Boston.

THORNE M. CARPENTER

NUTRITION LABORATORY,
CARNEGIE INSTITUTION OF WASHINGTON, BOSTON

BOOKS RECEIVED

Actualités Scientifiques et Industrielles: 653, Leçons de Métrologie, III, Mesure des Temps, Vitesses, Débits. Pp. 110. 93 figures. 30 fr. *654, Physique Théorique, XXIII, Application de la Méthode du Champ Self-Consistent aux Noyaux Atomiques.* Pp. 88. 25 fr. *655, Photochimie, II, The Determination of the Mechanism of Photochemical Reactions.* Pp. 71. 18 fr. *656, Photochimie, III, The Photochemistry of the Halogens.* Pp. 53. 20 fr. *658, Bibliothèque de la Société Philomathique de Paris, III, L'Activité Électrique de L'Écorce Cérébrale.* Pp. 46. 14 plates. 8 figures. 15 fr. *662, Biochimie de la Choline et de Ses Dérivés, I, Choline-Neurine.* Pp. 61. 15 fr. Hermann, Paris.

BATES, L. F. *Modern Magnetism.* Pp. ix + 340. 97 figures. Cambridge University Press, Macmillan. $4.50.

BEGHIN, P. *Le Fonds National de la Recherche Scientifique et L'Industrie.* Pp. ix + 408. 135 figures. Le Fonds, Bruxelles, Belgium.

CANELLA, MARIO F. *Orientamenti Della Moderna Biologia.* Pp. 141. Nicola Zanichelli, Bologna.

DALCQ, ALBERT M. *Form and Causality in Early Development.* Pp. 197. 64 figures. Cambridge University Press, Macmillan. $3.50.

GUSTAFSON, A. F. and others. *Conservation in the United States.* Pp. xi + 445. 232 figures. Comstock Publishing Co. $3.00.

HEINRICH, CARL. *The Cactus-Feeding Phycitinae: A Contribution Toward a Revision of the American Pyralidoid Moths of the Family Phycitidae; Vol. 86, No. 3053, Proceedings of the U. S. National Museum, 1939.* Pp. 331–413. 51 plates. Smithsonian Institution, Washington.

MCCURDY, JAMES H. and LEONARD A. LARSON. *The Physiology of Exercise; a Text-Book for Students of Physical Education.* Third edition, revised. Pp. 349. 2 figures. Lea and Febiger. $3.75.

MITCHELL, H. L. *The Growth and Nutrition of White Pine (Pinus Strobus L.) Seedlings in Cultures with Varying Nitrogen, Phosphorus, Potassium and Calcium.* Black Rock Forest Bulletin No. 9, Henry H. Tryon, Director. Pp. vi + 135. 22 figures. The Director, Cornwall-on-the-Hudson, New York. $1.50.

RICKETTS, EDWARD F. and JACK CALVIN. *Between Pacific Tides; An Account of the Habits and Habitats of Some Five Hundred of the Common, Conspicuous Seashore Invertebrates of the Pacific Coast between Sitka, Alaska, and Northern Mexico.* Pp. xxii + 320. 112 figures. 46 plates. Stanford University Press. $6.00.

TRUE, W. P. Editor. *Explorations and Field-Work of the Smithsonian Institution in 1938; Publication No. 3525.* Pp. 116. 122 figures. The Institution, Washington.

VASCONEZ, PABLO A. *Síntesis, Obras V.* Pp. 158. Editorial Labor, Quito, Ecuador.

WILLIS, L. G. *Bibliography of References to the Literature on the Minor Elements and their Relation to Plant and Animal Nutrition.* Third edition. Pp. 488. Chilean Nitrate Educational Bureau, New York.