

## EFFICIENT LABORATORY LIGHTING

SEVERAL notes have appeared in SCIENCE the past few years relative to the development of glass through which a proper spectroscopic correction could be secured for microscopic purposes. There are also on the market various microscope lamps designed to furnish a corrected artificial light for laboratory study.

These devices, though very satisfactory for small advanced classes, are in many ways undesirable for large classes of elementary students, and sitting, as they usually do, on the laboratory table, are more or less subject to breakage when used by large numbers of students.

The dark winter days during a part of the school year made it imperative that the large classes in agricultural botany at Oregon Agricultural College be provided with a light which would yield relative daylight values with temporary mounts and stained prepared sections. This has been attained most efficiently by the use of the General Electric Company's Ivanhoe Truetint Unit No. 748, known as the "Noon Sunlight" grade. This is a large, apparently blue shade, designed to cover the high-power nitrogen-filled Mazda lamp. Experience has shown that one of these units suspended two feet above the laboratory table and equipped with a one-hundred-watt bulb gives a superior light for four students. In this way, forty students at one time are being handled with ease on dark days, the illumination being ample even for the high-power dry or the oil immersion objectives.

The cost of the entire installation is approximately the same for four men as that of the usual microscope lamp designed for one person. To secure a fixture which would be near the table without obstructing it for laboratory work, the shade holders were suspended by nickel chains from the ceiling over the center of each table. The lack of rigidity of the fixture thus equipped is of special advantage in the elimination of breakage.

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## SCIENTIFIC BOOKS

*The Elements of the Science of Nutrition.* Third Edition. By GRAHAM LUSK. Philadelphia, W. B. Saunders Co., 1917. Pp. 641.

It is sometimes said that the sciences and the fine arts are international in the broadest sense of the word; they do not recognize national boundaries or racial limitations. Nevertheless a nation may well be concerned about the accomplishments of its citizens in the pursuit of knowledge. "Knowledge once won," Gowland Hopkins has recently written in a commendable essay on medicine and experimental science, "is of no country; it is the common guerdon of mankind; but he who cares nothing as to where it grows seems to lack an element of patriotism."

From this standpoint American science need not be dissatisfied with the contributions which the workers in this country have made to the study of nutrition in the past decade. Lusk's "Science of Nutrition," which has established itself as a stimulating and comprehensive text-book, discloses the names of more than one hundred American investigators whose labors have helped, probably in larger measure than those of any other country, to bring new facts and permit new viewpoints in nutrition during the interval that has elapsed since the earlier (1909) edition of the book. Its size has been expanded from 400 to 600 pages not by the mere accretion of incidental observations but by the addition of carefully considered novelties which the later development seems to warrant as worthy of consideration.

The style and mode of treatment of the problems of nutrition remain essentially unchanged in the new edition. The historical method has been followed in a way that can not fail to interest those who are more familiar with the subject-matter, and that ought to enthuse the beginner. There is something almost inspiring in following the story from its beginnings in the days of Lavoisier down to the ingenious contrivances for respiration study and calorimetry so highly developed in the university laboratories and research in-