sections and nine appendices. A few example exercises are given at the end of many sections, together with answers in most instances. The references given are not voluminous in number, but apparently quite adequate for the purpose. Only the more aggressive students will find need or opportunity for use of them.

Indeed, the book should prove a welcome addition to any library which wishes to have an excellent source-book on light, including a somewhat novel treatment of this elderly but still virile subject.

Urner Liddel
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Everyday Physics. By Ole A. Nelson and John G. Winans. 614 pp. Ginn and Company, Boston, Massachusetts, 1952. $4.36.

There is a mirthless, standing joke among teachers of college physics to the effect that it is difficult to tell which students have studied physics in high school and which have not—except that the latter usually show signs of knowing more physics! An examination of the present book may reveal one of the reasons.

The publisher's brochure promises "a *new* and *different* kind of physics book that approaches physics from the *practical* side." This it seeks to do by using familiar machines and household devices ("What a boy or girls learn here about such things as an electric motor or gas range will be helpful throughout life"). With this, no one can quarrel. After all, with school systems demanding that courses be "student centered" and "geared to real life situations", a book having such aims would seem ideal. But a closer look behind the scenes of the slick, handsome, copiously illustrated production left this reviewer (notoriously no conservative in such matters) with the impression that a course for which this book might be suitable would be some new kind of dilute socio-technology, but certainly not physics.

"To understand physics as this book teaches it, the student doesn't need to work a great many problems." True, the textbooks of past decades tended to overdo the type of problem that amounted to mere numerical substitution, but the few quantitative questions to be found in the Nelson-Winans book deal with nothing more basic than computing the cost of operating a radio set or figuring out how many years it takes for an automatic stoker to pay for itself.

"Many illustrations facilitate grasp of principles." Some of the halftones, picked at random, show a "strike" in bowling, a "well arranged bathroom", a fire-alarm box (exterior), an airplane sailing into the dusk, a man fishing (full page cut), and a streamlined young woman standing in front of a streamlined car.

In the index, Newton is listed only under the Laws of Motion, which merit a scant two pages of text. A short excerpt from this passage is illuminating: "Mass can be measured by its resistance to a change of motion. Without the aid of friction or mechanical advantage, it would be impossible for you to move an object which weighed more than you. Your most heroic force on the object would be met with an equal but opposite force of the object on you." Other index entries include "Chronotherm", "Humidiguide", and "Washing machine, buying of". Einstein, Galileo, Maxwell, Kelvin do not appear.

In preparing a textbook intended to introduce a branch of science to a boy or girl of sixteen or seventeen, one would wish to avoid becoming too abstruse or recondite, but in the experience of the reviewer, this is a much more readily condoned fault than looseness or slovenliness of statement. A number of writers have succeeded in demonstrating that there need be no antagonism between clarity and accuracy in the exposition of scientific material; it is sometimes cruelly hard work, to be sure, but it pays off. The authors of the book under consideration might easily have avoided defining torque as "a force which produces rotation", or the coulomb as a "unit used to express quantity of electric current". And what does it do to a student's appreciation of logic when he reads that "when we recall that an eye suffering from astigmatism produces images that are not clear at all points, we realize that a lens without this defect must produce clear images"? The astigmatic image is obviously not the only thing that is unclear here.

Textbooks, if they are to serve their purpose, must change with the changing times, particularly in a field where the subject itself is so heavily responsible for the developments that characterize the age in which we live. Still, no serious science educator can be blamed if he rebels at teaching physics from a combination of the Boy Scout Manual, Consumers' Guide, and the Sears-Roebuck catalog.

Ira M. Freeman
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Annual Review of Physical Chemistry. Volume III. Edited by G. K. Rollefson and R. E. Powell. 416 pp. Annual Reviews, Inc., Stanford, California, 1952. $6.00.

This is the third in a series of annual reviews of the important area of subject matter common to physics and chemistry sponsored by a group whose similar ventures in biochemistry have survived for 21 years. They have also edited and published annual reviews for 24 years in physiology, for 6 years in microbiology and for 3 years in medicine, plant physiology, psychology, and physical chemistry.

The review contains 19 chapters, each having a title sufficiently broad to cover the entire field yet permitting the reviewer to dwell at length if he chooses on some especially important area. The editors, in fact, encourage the natural variations resulting from the interests of the various authors to whom reviews are assigned. As indicated in the preface, the combination of reviews for two or three years will provide a well-balanced survey.

Although all of the reviews are prepared primarily for the chemist, the physicist might be more interested in the following: quantum theory, theory of molecular structure and valance, by C. A. Coulson; radioactivity and nuclear theory, by M. G. Mayer; isotopes, by J.