rather, it is an encyclopedia of 3700 entries, illustrated with more than 300 pictures. The whole book is an index; there is no need for a separate one. A bibliography of 9 pages is included.

A copy of this book on every farmer's bookshelf would go far toward bolstering the health and productivity of America's livestock.

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Prism and Lens Making. 2nd ed. F. Twyman. London: Hilger and Watts, 1952. (U. S. distrib.: Jarrell-Ash, Boston.) 629 pp. $11.25.

The first edition of this book was published in 1945 and went through three impressions. The present edition has been considerably enlarged and improved. The restriction of the first edition to the methods employed in the famous optical shops of Adam Hilger has been abandoned, and the new edition discusses contributions of other firms as well. Furthermore, several sections have been added covering new fields of development advanced during the past decade.

Most of the book has been written by F. Twyman himself, who devoted his whole life to the solution of practical problems in precision optics. Although the book is intended to serve mainly for the information of optical glassworkers, it is of great interest and value to all scientists who employ optical precision instruments in their research.

The book contains a wealth of expert information about such topics as the nature of grinding, tools and materials, optical glasses, including the new glasses developed in the research laboratory of Eastman Kodak Co., and the artificial crystalline materials for infrared research. Two fascinating chapters deal with testing of optical work and with the application of interferometric methods for testing and correcting lenses and prisms. The last technical chapter treats problems encountered in the making of large objectives and mirrors. Here one also finds notes on the 200-inch mirror on Mount Palomar. The text is elucidated by 260 excellent figures and tables.

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The Evolution of Chemistry: A History of Its Ideas, Methods, and Materials. Eduard Farber. New York: Ronald Press, 1952. 349 pp. Illus. $6.00.

"Science looks forward," as Dr. Farber points out in this excellent book, and so many a promising young chemist, diligently pursuing the discipline, finds no time to look backwards. He makes a grave, but understandable, mistake.

It is wholesome to remember the difficulties and handicaps that the pioneers overcame in laying the solid foundations upon which we build today so swiftly and so proudly. But quite aside from this encouragement to a becoming modesty, a comprehensive grounding in the philosophy of chemistry helps us mightily to develop powers of correlation and generalization. Without these two, no chemist rises to the greatest heights in laboratory or schoolroom, in plant or front office.

Dr. Farber has written no text of chemical history, but a most useful and stimulating book for supplementary reading. His theme of how one thought inspires another, one fact points to another, is admirably sustained and aptly illustrated. He fits together the jigsaw of chemical progress into a splendidly composed, easily comprehended picture. I should like to have the economic environment in which the great chemical discoveries were made delineated more clearly and to have had those discoveries carried through more often to their commercial applications. This is, I suspect, but evidence of my own interests.

Of this I am certain—no one after two years of chemistry (needed to read this volume intelligently) and before reaching the ripe age of forty (when life begins) can read this book without becoming Dr. Farber's everlasting debtor.

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Scientific Book Register

Metal Data. Rev. ed. of *Metals and Alloys Data Book.* Samuel L. Hoyt. New York: Reinhold, 1952. 526 pp. Illus. $10.00.

Indiana Scientists: A Biographical Directory and an Analysis. Stephen Sargent Visher *et al.* Indianapolis: Indiana Academy of Science, c/o The State Library, 1951. 286 pp.

Work Measurement: New Principles and Procedures. Adam Abruzzi. New York: Columbia Univ. Press, 1952. 290 pp. $6.00.

High Speed Photography: Its Principles and Applications. George A. Jones. New York: Wiley, 1952. 311 pp. Illus. $6.50.

Automation: The Advent of the Automatic Factory. John Diebold. New York–Toronto: Van Nostrand, 1952. 181 pp. $3.00.

A Television Policy for Education. Proceedings of the Television Programs Institute held under the auspices of the American Council on Education at Pennsylvania State College, April 21–24, 1952. Carroll V. Newsom, Ed. Washington, D. C.: American Council on Education, 1952. 266 pp. Illus. $3.50.

Soluble Silicates: Their Properties and Uses. Vol. 2, ***Technology.*** American Chemical Society Monograph #116. James G. Vail, with assistance of John H. Wills. New York: Reinhold, 1952. 669 pp. Illus. $15.00.

Ferroelectricity. Investigations in Physics, Study No. 1. Eugene Wigner and Robert Hofstadter, Eds. E. T. Jaynes. Princeton, N. J.: Princeton Univ. Press; London: Geoffrey Cumberlege, Oxford Univ. Press, 1953. 137 pp. Illus. $2.00.

Conformal Mapping. L. Bieberbach; trans. from 4th ed. of *Einführung in die Konforme Abbildung* by F. Steinhardt. New York: Chelsea, 1953. 234 pp. Illus. $2.25.