then oxygen added to the nitrous oxide in quantities just sufficient to prevent the appearance of cyanosis, and analgesia with trichloroethylene is introduced. The amount of oxygen required is that which will just prevent cyanosis. It is on this latter point that disagreement will occur. The color of the patient is the sole criterion of the presence or absence of an undesirable level of anoxia. It would appear that the undergraduate dental student will be left without suitable criteria of hypoxia in the anemic patient if the only evidence of inadequate oxygenation is to be cyanosis. The authors include an excellent chapter on intravenous anesthesia, and one on anesthesia in children. With the exception noted, this book should be of value to the undergraduate dental student and to practitioners who do not have extensive experience in this specialized field of anesthetic administration.

Francis M. Grem, M.D.

Pulmonary Emphysema. Edited by Alvan L. Barach, M.D., Clinical Professor of Medicine, Columbia University College of Physicians and Surgeons, and Hylan A. Bickerman, M.D., Assistant Clinical Professor of Medicine, Columbia University College of Physicians and Surgeons, New York. Cloth. $10.00. Pp. 545, with 141 illustrations. The Williams & Wilkins Co., Baltimore, Maryland, 1959.

This is an authoritative and comprehensive reference book on pulmonary emphysema truly encyclopedic in its coverage. The authors have as contributors 18 well-known authorities who have carried out pertinent and timely investigations of the physiologic and therapeutic aspects of the disease. Each writer was permitted to express his views in detail, even if it resulted in some duplication of material. This completeness of thought is appreciated by the busy practitioner because each chapter is essentially a monograph on a particular aspect of pulmonary emphysema.

The volume is not a mere collection of monographs, however, for the authors have skillfully combined the various chapters into a unified book that progresses logically from Chapter 1, "Pathogenetic and Allied Influences in Chronic Pulmonary Emphysema," which serves as an introduction by Dr. Barach, to Chapter 18, the epilogue, "Comments on Preceding Chapters," also by Dr. Barach.

Pathogenetic, pathologic, physiologic and pharmacologic considerations are discussed in addition to the therapeutic and diagnostic procedures employed for various types of pulmonary emphysema. A judicious and restrained use of case reports is evident throughout the text and adds much to the interest of the reader. Reproductions of roentgenograms, graphs and diagrams are clear and well chosen. Only a sufficient number of illustrations are included to clarify the text; they do not dominate the book. The bibliography is extensive and should be of considerable value to the research worker.

Every anesthesiologist should be familiar with this reference work.

William O. McQueston, M.D.


This volume is an atlas of surgical operations involving the entire field of thoracic surgery. The authors' stated purpose is to present details of operative technique in a clear manner and to discuss the physiologic mechanisms which must be thoroughly understood by those who undertake thoracic surgical procedures. The authors express a desire to present material with clarity and simplicity, sufficient that students at any level of training may understand how various operations are performed.

Subject matter of this book begins with a brief discussion of principles of physiology of normal respiration and some alterations in respiration which occur coincident with thoracic disease, thoracic trauma, and thoracic surgery. Diagnostic procedures are alluded to
brieﬂy. Following this introductory phase, the wide scope of thoracic surgery is covered as individual operative procedures with a mention of indications, contraindications, preoperative preparation, and postoperative complications and their management.

Written material is presented in an ampliﬁed outline form. Illustrations are numerous and consist of full page plates, many of which contain more than one ﬁgure. These illustrations are concerned with either principles of treatment or anatomic details of surgical procedures, and are clear and well labelled. No bibliography is included.

The experience of this reviewer makes it inappropriate to comment upon accuracy and validity of the treatment of thoracic surgical procedures as presented. As a separate subject, anesthesia is not speciﬁcally discussed, but many references to problems encountered in anesthetic practice are mentioned, such as, blood loss, relief of pain following chest injuries, evaluation of position for thoracotomy, inadequate respiration during thoracic surgery. Surgical techniques are thoroughly presented at the expense of physiological principles underlying management of thoracic surgery. As a result some perhaps questionable statements are made. For example, “... oxygen should be administered for at least a few hours postoperatively in order to assure maximum oxygenation during a period when respiration may still be depressed and gas exchange partially blocked by residual secretions in the peripheral respiratory passages.” It might be argued that oxygen therapy in these situations might merely mask the difﬁculty which exists. If oxygen is to be used it should be accompanied by adequate respiratory volume, which may necessitate tracheobronchial cleansing. It is also mentioned that “... carbon dioxide retention causes an elevation of blood pressure.” This is stated without equivocation. It is also stated that the usual cause of anoxia is bronchial occlusion due to tracheobronchial secretions during thoracic surgery. This statement is made without comparison or evidence that this is more common than other causes of hypoxia. The authors, however, constantly stress the importance of considering the physiology involved in thoracic surgery and its important role in the management of patients.

There appears to be an absence of emphasis on such problems as (1) effect of depressant drugs upon patients with severe respiratory disease and/or large amounts of respiratory secretions, and (2) problems of spillage of material from one area of the thorax into healthy lung occurring either in empyema, abscess, or patients with blown bronchial stumps. Considerable emphasis is placed on postoperative complications.

The main addition to this second edition is in the area of cardiovascular surgery. A wide variety of surgical lesions are discussed and their surgical repair illustrated. The discussion of the principles of hypothermia and extracorporeal circulation are extremely brief and superficial, with general management of these patients minimally emphasized in relation to the emphasis placed upon surgical techniques.

It would appear that this book serves well in fulﬁlling the authors’ desire for an “atlas of thoracic surgical operations.” It contains little other material which would further inform physicians practicing anesthesia.

WILLIAM K. HAMILTON, M.D.


This book is compiled from a symposium held in December 1956, to summarize the ﬁrst ﬁve years of work of the Scientiﬁc Research Institute for Experimental and Surgical Apparatus and Instruments (1951–1955).

The early chapters outline the basic trends in designing suturing apparatus and points out problems involved, including structure of both tissues and materials from which instruments may be made. Deﬁnite and acceptable progress has been made with lung artery and vein angiography apparatus, and with bronchial stump suturing. Tantalum staples have