items such as power plants, elevators, lighting systems, etc., are to be dealt with in subsequent volumes.

The present book without doubt contains the best and most complete information of any book so far published in connection with heating and ventilation. The authors have drawn upon all available sources of information and have grouped this into such form that it is ready for quick reference. The method of using the different formulas is well explained by means of various examples and it is to be noted that practically all examples are those dealt with in actual practice. In a great many cases all the calculations required in the complete design of a system for a particular building are made and explained. Very little space has been devoted to electrical heating and other questions which at present are of merely theoretical interest and the whole book is arranged to deal with the practical problems which are met with every day. Particular care has been taken in grouping the information and credit has been freely given in the text to the sources from which all information has been obtained. The illustrations in most cases are drawn to scale and are typical working drawings and much superior to the usual type of drawings found in books of this type. They are also very numerous and all points brought out in the text are well illustrated, thus making the book comparatively easy to follow. This book also contains a great deal of original information, particularly that giving tests on different types of boilers and radiators. Up to the present time, the books published dealing with heating and ventilation have been either very elementary or have only dealt with one phase of the question so that practically all published information had to be gathered from papers read before engineering societies and from short articles.

The authors have therefore given to heating engineers a pocket book quite as valuable along this line as Kent's pocket book is to mechanical engineers.

The first and second chapters deal with the properties of steam, water and air which are required in dealing with the science of heating and ventilation. Chapter 3 gives information regarding the heat transmission of various types of building construction and consists of information collected from various sources and placed in a form ready for reference. The next chapter gives information regarding the standard types of radiation at present in use as well as data regarding the heating effect of radiators under different conditions. The next chapters deal with fuels and boilers. The question of fuels is gone into very fully as well as various methods of testing both fuels and flue gases. Under the head of boilers is given a number of tests and comparison of different types but the question of smokeless combustion is not dealt with as fully as might be desired, in view of the present widespread interest in the elimination of smoke nuisance in cities. The chapters dealing with steam and hot water heating are quite complete and in addition to the usual information, describe the different appliances and systems on the market, giving cuts and general dimensions as well as typical arrangements and design of systems. The question of friction in hot water systems is dealt with thoroughly and charts and formulas given and explained. Forced hot water and vacuum steam systems for large plants are dealt with later in the book.

In the latter part of the book is given some excellent reference information regarding pipe sizes, valves, fittings and also valuable data on pipe hangers and supports, a good deal of which has not been published before.

Six chapters are devoted to hot air heating, covering furnace heating, indirect heating, forced blast heating and air washing. This part of the book is well written and contains much valuable information required in dealing with hot air heating, and sufficient information to solve any problems arising in this connection. The question of friction in air ducts is carefully dealt with and formulas and charts are given which are required to design a balanced system.

Numerous plans of buildings are shown in order to deal fully with the problems involved and the design of systems for these buildings is shown together with all calculations required. Suitable designs of fans as well as their proper location and connections to the duct system are described and shown as well as methods for fan testing. The chapter dealing with air conditioning contains the latest data on this important subject, including a table giving the properties of mixtures of air and saturated water vapor as well as a psychrometric chart worked up by one of the authors.

Spon's Electrical Pocket-Book. By Walter H. Molesworth. Published by E. and F. N. Spon, Limited, London; Spon and Chamberlain, New York. 488 pages, 325 illustrations, 6¾ x 4¼ ins., cloth. Price, $1.75 net. (Reviewed by Alfred S. L. Barnes, Hydro-Electric Power Commission of Ontario, Toronto.)

The preface sets forth that this book is written for practical engineers who may seek for general information, tables and formulæ on electrical subjects. It is a handy and useful compilation covering, for its size, a very considerable range of data, mainly electrical, of which a good portion will be of general utility anywhere. So far as this country is concerned, however, there are several sections which would be of little use, *e.g.*, the British Home Office Regulations, the British Board of Trade Regulations, the Rules of the Institution of Electrical Engineers, the sections on tramways and railways and the British standardization rules for electrical machinery. The book is convenient in size and the information is arranged in suitable sequence and there is a copious index at the end consisting of some 20 pages.

Stresses in Structures. By A. H. Heller, C.E., late professor of structural engineering, Ohio State University. Third edition, 1916, revised by his successor, Clyde T. Nanis, Mem.Am.Soc.C.E. Published by John Wiley & Sons, Inc., New York City; Canadian selling agents, Renouf Publishing Co., Montreal. 374 pages, 230 diagrams, 6 x 9 ins., cloth. Price, $2.75 net. (Reviewed by A. H. Harkness, Harkness & Oxley, consulting engineers, Toronto.)

The first edition of this work was the publication of the manuscript used by the author for his lectures in the university. This third edition has been revised and the explanations expanded so as to make the work more easily read by the beginner. It follows that the book has been written from the standpoint of a lecturer who wished to produce a text book for his students rather than a reference book for the profession of engineering. As a text book to be read in conjunction with a course of lectures it would be very useful. The student who wished to use the book for self instruction would probably find it too condensed to enable him to follow it readily. He would, moreover, require a good grounding in mathematics to be able to do so at all. The busy engineer who wishes to refresh his memory, or to get information on some of the subjects covered in the book, will be able to do so with a minimum amount of reading.