

definition, and a number of statements are made which the reader must take on faith. In several instances the treatment is too sketchy to be of any practical value; thus two pages are allotted to photometry, half a page to thick lenses (in spite of their technical importance), five pages to radioactivity, and twenty-three to sound. Nevertheless, if these blemishes are allowed for, it may be granted that the book is clearly and interestingly written, well got up, and likely to excite and retain the interest of the reader; but to take full advantage of its good qualities the student must not come to it as a beginner.

(4) Prof. Dessau's book, the second volume of a large text-book of physics, is admirable in its elegance, clearness, and choice of matter. The chapters on thick lenses and optical instruments may especially be mentioned as models of conciseness and lucidity. (Why is it that modern methods of determining refractive indices receive no mention in English books on physics other than those on physical chemistry?) But surely a book of 600 pp. should have an index!

EVOLUTIONARY MEDICINE.

- (1) *Evolution and Disease*. By Dr. J. T. C. Nash. Pp. viii+73. (Bristol: John Wright and Sons, Ltd.; London: Simpkin, Marshall, Hamilton, Kent and Co., Ltd., 1915.) Price 3s. 6d. net.
- (2) *The Vicious Circles of Neurasthenia and their Treatment*. By Dr. J. B. Hurry. Pp. xv+90. (London: J. and A. Churchill, 1915.) Price 3s. 6d. net.

(1) IN this work Dr. Nash first traces the history of certain epidemic diseases, in particular the Black Death, during the Middle Ages in Great Britain. An interesting chapter deals with the medieval psychopathic epidemics, such as the dancing mania. Much of this has necessarily appeared elsewhere, but it is none the less convenient to have the scattered literature of the subject thus briefly epitomised. The reader will probably turn with most interest to the chapters dealing with evolution and disease—in particular with the evolution and mutations of disease germs. As regards diphtheria, for example, the author states that diphtheroid organisms in throat swabs are uncommon except in cases of definite sore throat or in "contacts" with diphtheria or sore throat, that genuine cases of diphtheria with typical diphtheria bacilli often show later only diphtheroid bacilli in the throat swabs, and that some streptococci, some torulæ, the Klebs-Löffler bacillus, Hofmann's bacillus, and certain other diphtheroid bacilli, have a common ancestral origin, and concludes that the fact that bacteria and protozoa can be profoundly affected by en-

vironment is abundantly established, and evolution in relation to the germ cannot be gainsaid.

A topical interest is introduced in the final chapter on war as a factor in the evolution of epidemics.

(2) Dr. Hurry describes with considerable skill the vicious circles associated with that protean disorder known as neurasthenia. As an instance of a "vicious circle," that in connection with the heart may be quoted:—

"The sequence of events is somewhat as follows: The fear of organic heart disease leads to auto-suggested sensations in the cardiac region, followed by disturbance of the cardiac action, such as rapid heart, occasional extra beats with palpitation, and an intermittent pulse. The associated sensations then arouse distress and terror, which in their turn further disturb the cardiac action. Such attacks are especially common at night, and may be caused by nightmare, and the operation of this Circle may reduce the neurasthenic person to a condition of utter misery. Even fatal syncope may result."

It will thus be seen that the neurasthenic condition becomes evolved, as it were, given some factor which serves to start it and set in train the "vicious circle."

As regards treatment, while the principles are, it is true, indicated, the physician who desires real guidance will find little to help him, and we think that this part of the book might be usefully extended.

R. T. H.

OUR BOOKSHELF.

Heating and Ventilating Buildings. By Prof. R. C. Carpenter. Pp. xiv+598. Sixth Edition. (New York: J. Wiley and Sons, Inc.; London: Chapman and Hall, Ltd., 1915.) Price 15s. net.

DURING the twenty years since this book was first published there have been many changes in methods of heating and ventilation. The present edition has been enlarged considerably by the addition of matter necessary to make it an up-to-date treatise on the subject. The author, who is well known as the professor of experimental engineering at the Cornell University, has dealt with the principles in a scientific manner, and has placed the various practical rules as far as possible on a rational foundation, at the same time avoiding the use of complicated mathematics. The earlier chapters are taken up with the properties of heat, the flow of water, steam and air, and the boilers and fittings required for steam and hot-water heaters. The remainder of the book contains thoroughly well illustrated descriptions of modern heating systems and includes gravity steam-heating, pump return steam-heating, hot-water and hot-air systems. There are also sections dealing with mechanical ventilators, heating with electricity,