

to the living matter in the psychical areas of the brain, these react on the cerebral centre or centres for speech, and, in turn, these "play upon the nuclei of the nerves supplying the muscles of the vocal apparatus."

In supporting this thesis Major Macnamara shows a wide acquaintance with contemporary biology—indeed, to such an extent is this the case that the book can well be recommended as an introduction to this department of science. The only criticism that may be offered is that there is rather a redundancy of statement, and not infrequently an exposition of matters that are not quite pertinent to the subject in hand. As examples we may take the references to current speculations in physics, to Ehrlich's chain-theory, to the description of karyokinetic phenomena and the changes in the early ovum, and to the exposition of new and abstruse notions about reflex activity. No doubt the author has desired to take a wide and philosophic view of the whole subject, even at the risk of introducing matter somewhat irrelevant. Still, conciseness is a virtue worthy of cultivation. This is an excellent additional volume to the "International Scientific Series." The illustrations have been carefully chosen, and there is a good index.

J. G. M.

*Exercising in Bed.* By Sanford Bennett. Pp. 268. (San Francisco: The Edward Hilton Co., 1907.) Price 1.25 dollars.

In the introduction to this book, the author explains that he had been a delicate child and had led a sedentary office life, so that at the age of fifty he was dyspeptic, his muscular system was flabby, he was prematurely old! By adopting the system of exercises detailed in the book, he claims that at sixty-seven he is a strong, healthy man, and has regained youthful vigour, and certainly the photographs reproduced illustrating his condition before and after treatment show a very marked contrast.

The author is an enthusiast, but the book is written in a moderate spirit which disposes to the acceptance of his views. He rightly claims that the functions of the body can only be carried on if they be used and exercised. Thus a gland or muscle condemned to inactivity atrophies; it is a physiological law that a certain degree of activity is necessary for the physiological integrity of an organ or tissue. In consequence various methods of physical culture are much in vogue, and are of considerable service in the development of the body and preservation of health, but tend to be unpopular owing to the time necessary to devote to them, and the individual who loves his bed cannot, or will not, rise early enough to carry them out. Mr. Bennett, however, declares that all the necessary exercises can be carried out while in bed, and we think he is right, and a quarter or half-hour may be well spent in healthy exercise without disturbing the ordinary routine. In some ways, in fact, the method has an advantage, as many muscles can be better exercised when lying than when standing, and in those who are getting on in years, perhaps with weak heart and diseased arteries, there is far less likelihood of over-strain. Combined with various movements, massage or rubbing of the muscles is advocated, and is very desirable.

A series of exercises is detailed in the book, illustrated in every case with photographs, by which the muscular system of all parts of the body may be exercised and developed, and most of them can be carried out without any extraneous apparatus. We have no doubt that the exercises suggested, if carried out, would be of considerable benefit, even if they did not actually rejuvenate or restore good looks, as the author claims.

R. T. H.

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*Cement Laboratory Manual.* By Prof. L. A. Waterbury. Pp. vii+122. (New York: J. Wiley and Sons; London: Chapman and Hall, Ltd., 1908.) Price 4s. 6d. net.

THIS is a book for the use of students who are learning the various physical methods of testing cement. In the main it consists of instructions for working out a series of "problems" by the learner during a course of laboratory tuition, as practised in the University of Illinois. The work is arranged much on the lines familiar to students of electricity at Finsbury under the late Prof. Ayrton, the operators working in classes with given apparatus and materials, and being furnished with directions how to carry out the experiments, how to record the results, and how to interpret them.

For comparison of the results with what would be required in actual practice two useful appendices are given. One contains the report of a committee of the American Society of Civil Engineers on the question of uniform tests for cement; the other is a report upon standard specifications for cement, by a committee of the American Society for Testing Materials.

Determinations of the degree of fineness, specific gravity, plasticity, soundness, time of setting, and tensile strength of cements are the chief experiments set out. These are regarded as suitable for class teaching, and a student who works carefully through the exercises should gain considerable insight into what is required in judging the values of cements by laboratory tests. The author, however, rightly points out that a considerable amount of practice, much more than is afforded by the laboratory course, is necessary to obtain uniformly satisfactory results.

Theoretical matters are not dealt with in the book. There are illustrations of the chief pieces of apparatus, and also some trivial pictures—a mason's trowel, a set of scales and weights, and similar things—which are a mere waste of space.

C. S.

*"Saint" Gilbert: the Story of Gilbert White and Selborne.* By J. C. Wright. Pp. 90. (London: Elliot Stock, n.d.) Price 2s. 6d.

THIS little book bears a most unfortunate title, for whatever may have been the virtues of Gilbert White, he was in no proper sense of the word a saint. He was an honest, excellent Englishman, with a "curious" intellect and a generous disposition, but assuredly not more saintly than a thousand others. Mr. Wright says in his preface that "it is permissible to regard him as the patron saint of the little village where he spent the greater part of his life." That is well enough, for it suggests no saintliness; but "Saint Gilbert" is most unhappy. The book consists of 85 small pages, largely made up of quotations from White himself and those who have recently written about him. It will do no harm, and may perhaps do some good; and that is perhaps all that need be said about it. The eight photographs which illustrate it are unusually good, and so are the tail-pieces at the end of the chapters.

*Les Zoocécidies des Plantes d'Europe et du Bassin de la Méditerranée.* Tome i. By C. Houard. Pp. 569; 1365 figures, 2 plates, and 4 portraits. (Paris: Hermann, 1908.) Price for both volumes, 40 francs.

DR. HOUARD deserves congratulation on the successful accomplishment of his task of giving a systematic account of the European galls. Of recent years there has been great activity in the study of galls, which are of equal theoretical and practical interest, and this scholarly and well-arranged catalogue, brought up to date, will be widely welcomed. It is an admirable piece of work. The author gives terse descriptions of