be made as early as possible in the day (*i.e.*, on awakening, before the first meal). The portion of the book devoted to the leucocyte-counts in cases of pulmonary tuberculosis occupies 120 of the total 217 pages, and one of the most important conclusions arrived at is that there is no invariable relation between the intensity of the pulmonary disease and the number of leucocytes in the circulating blood; the number, therefore, gives us no more definite information in this respect than does the mere height of the opsonic index. Moreover, the question of mixed infection has, of course, to be considered. Several plates of leucocyte-curves in healthy and tuberculous persons are included.

F. PARKES WEBER, M.D.

THE THERAPEUTICS OF THE SEA-VOYAGE.¹

This learned work of Dr. Friedrich does not profess to be more than a review of the literature of the subject from revised and verified references. In the preface and the concluding pages the author gives unequivocal proof of the faith which is in him as a champion of sea-travel for the sake of health; but they are the only platform which he has reserved for himself, and he vanishes from the scene to make room for the many authorities whose views are recounted without any editorial comment. These are given in their continuous succession from Gilchrist (1756) to the present day; and, including some earlier writers, the list runs up to 260 names. Chronological sequence, pure and simple, is the elementary plan adopted in the arrangement of this vast material. There is a conspicuous absence of either sections or chapters, and we look in vain for any systematic account of the practical aspects of sea-voyages in connexion with nosology, geography, or season. In presence of this solid bulk of 325 pages, destitute of a single heading to page or paragraph, we feel as though under sentence to share the author's penalty, and to have to read through the entire series of records, without partiality or selection. Our only chance of escape is a resort to the index; but we are disappointed to find that such important subjects as Hay Fever, Bronchitis, Catarrh, Pneumonia, Malaria, Scrofula, and many others, have failed to be included in the *Sach-Register*. In spite of these serious drawbacks, we heartily welcome the book as a unique historical summary of the subject, and as a mine of information which will prove of the greatest use to the professional student of medical literature.

WILLIAM EWART, M.D.

ESSAYS ON PULMONARY TUBERCULOSIS.²

Dr. Crichton's brochure seeks to give the results of the most recent researches on the underlying condition in pulmonary tuberculosis. He concludes that the disease is due to a paresis of the sympathetic nervous system, as shown by loss of "tone." He discusses first the apparent antagonism between gout—where there is increased blood-pressure—

¹ "Die Seereisen zu Heil- und Erholungszwecken, ihre Geschichte und Literatur" ["Sea-voyages for Purposes of Cure and Recovery, their History and Literature]. By Sanitätsrat Dr. Edmund Friedrich, of Dresden. Berlin: Verlag von Vogel and Kreienbrink. 1906.

² "Pulmonary Tuberculosis: Its Predisposition, Environment, and Treatment." By David Crichton, L.R.C.S.E., L.R.C.P.E., L.F.P.S.G. Pp. 68. Dundee: John Leng and Co., Ltd. 1907.

and tuberculosis, and argues that there is in the pretuberculous state and in tuberculosis a general want of "tone," as shown by the flabbiness of the muscular, circulatory, and nervous systems. There certainly appears much in favour of this view (though the chapter on the previous health of the consumptive is not convincing). Doubtless much in the way of prevention, as well as in arrest, of consumption might be attained by acting on the suggestions of the author—viz., deep breathing, graduated muscular exercises, auto-suggestion, etc. Unfortunately, Dr. Crichton does not give us any practical illustrations in justification of his views. GEORGE A. CRACE-CALVERT, M.B.

OILS IN THE TREATMENT OF CONSUMPTION.

Dr. J. W. Wells has done well to record the interesting results of his experiments,¹ conducted in the Public Health Laboratories of the Manchester University, regarding the comparative value of cod-liver oil and cod-liver oil emulsion with glycerine and hypophosphites of lime and soda in tuberculosis. The animals selected were pigs, and the experiments were divided into four stages: (1) Preliminary stage—observation under ordinary conditions to select healthy pigs. (2) Effects of oil and emulsion on some of the animals. (3) Effects of tuberculous infection upon pigs taking oil and emulsion as compared with effect on pigs with ordinary diet. (4) Post-mortem examinations, specially noting the character of local lesions; state of lymphatic glands, kidneys, liver, spleen, and general state of carcass; also the presence or absence of tubercle bacilli. The experiments demonstrated—(1) That cod-liver oil added to the diet of pigs led to more rapid gain of weight and better nourishment. (2) That the same amount of oil, given in form of emulsion, led to an even more rapid gain in weight, and therefore the emulsion is much more efficacious than simple oil. (3) That the foregoing is true both in tuberculous and non-tuberculous pigs. (4) That pigs with tuberculosis continued to increase in weight for a long time when Scott's Emulsion of Cod-liver Oil was added to the diet; that the lesions showed signs of possible recovery and the presence of tubercle bacilli was difficult to demonstrate. The author concludes that the emulsion is a much more useful therapeutic agent than cod-liver oil. The work was carried out under the supervision of Professor Sheridan Délepine, and therefore merits careful consideration.

Dr. T. B. Keyes' monograph² consists of six essays. After giving a history of phthisis, it is shown that experience seems to prove that "tuberculosis has best been controlled by building up nutrition," and that this is best met by the administration of fats and oils. It is held that the pretuberculous condition is caused primarily from the non-eating and non-digestion of fatty foods. Oil injected into the tissues, it is contended, enters the circulation and increases the number and activity of the blood-cells, thus increasing the resistance of the body and enabling it to ward off disease. The author holds that oils may

¹ "A Comparative Study of the Influence of Cod-liver Oil and Cod-liver Oil Emulsion upon the Nutrition of Normal and Tuberculous Pigs." By J. W. Wells, M.D., D.P.H., F.C.S. Pp. 83. Manchester: The University Press. 1907. Price 2s. 6d. net.

² "Six Essays on the Cure of Consumption with Subcutaneous Injections of Oils." By Thomas Bassett Keyes, M.D. Reprint. Chicago. 1907.