

The author is interesting on the folk-lore of war and the signification of soldiers' songs. These he must admit are for the most part crude and childish, but possess the merit of dispelling sadness and relieving psychic tension, and tend to elevate the patriotic spirit. He quotes figures to prove that the infantry invariably bear the brunt of the battle and most truly are the representatives of their nation. When it comes to the final assault they are the principal factor in victory. Each nation has its own innate characteristics, and therefore each army its own methods of fighting, so that the slavish imitation of another nation's methods should be severely deprecated. The feats accomplished by the infantry are due to strict laws and to the correlation between the nation and the army; thus a people in possession of good infantry can achieve a durable success, and this can be established only on a love of national independence. Modern war, therefore, has accentuated and not diminished the importance of individuality in battle. The ultimate argument in war is not the cannon, but the man.

In the last few pages of the book the author gives a short though useful account of the effects of war upon the soldier's nervous system. His conclusion is that "war insanity" in the strict sense is either non-existent or extremely rare. War simply brings into evidence, in those individuals already predisposed, the classical symptoms of the various insanities with which we are familiar in civil life. This opinion is now universally accepted.

The author has devoted most study in this direction to the psychoneuroses caused by profound emotion—for example, "shell shock"—and emphasises their similarity with those found to occur after earthquakes and other disasters. Violent emotion tends to produce fear, which in a normal person may be unaccompanied by a morbid mental disturbance. In the predisposed, however, the violent emotion of fear determines symptoms of "shock," some elements of which are fixed for a longer or shorter time by auto-suggestion. The author does not accept the view that emotional and "shock" symptoms are separable.

The book is an extremely able study and well worthy of perusal. One cannot, however, avoid criticising the unusually close spacing. This, possibly, is due to measures of economy.

#### OZONE AS A HYGIENIC AGENT.

*Ozone: Its Manufacture, Properties, and Uses.*  
By Dr. A. Vosmaer. Pp xii + 197. (London: Constable and Co., Ltd., 1916.) Price 10s. 6d. net.

IN comparatively recent years the production of ozone, or rather of air containing a small percentage of ozone, on an industrial scale has reached a considerable degree of development, chiefly on account of its application to the sterilisation of drinking water. In a less degree ozonised air has been applied to the deodorisation of the air of public buildings, underground railways, etc.

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These technical developments are associated mainly with the names of the Siemens and Halske, Abraham-Marmier, Otto, and General Electric Companies.

As regards European works employing ozonised air for the purification of drinking water, Dr. Vosmaer gives a list of forty-nine installations, treating *in summo* nearly eighty-five million gallons of water per day of twenty-four hours. Of these the largest are at Paris, Petrograd, Nice, Villefranche, Lunéville, Lorient, Florence, Chartres, Saint-Servan, Laval, Compiègne, Constanza, and Wiesbaden.

Parts i. and ii. of the present work deal with the chemistry of ozone, the electrical discharge in gases, the different types of technical ozonisers and their output and efficiency. Part iii. is concerned with the uses of ozone, and part iv. contains a list of American patents bearing on ozone and a bibliography of papers and books.

Although it is undeniable that the book contains a good deal of useful information, and is written by an author practically familiar with the subject, it must be admitted that its scientific *niveau* is not high. Even when we come to the more technical part, where the author is obviously more at home, there is very little of that thorough quantitative information which is requisite for the scientific designer of plant. A number of diagrams, photographs of plant, and curves are given, but the treatment of the subject is distinctly sketchy and superficial, and does not convey the impression that the author possesses a real scientific knowledge of the chemical, electrical, and engineering principles relating to his subject. Viewed, however, as a semi-technical, semi-popular account of the manufacture and uses of ozone (which is, perhaps, all that the author intended it to be), the book is certainly interesting, and will, no doubt, be of use to readers unacquainted with the subject.

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#### OUR BOOKSHELF.

*Cellulose: An Outline of the Chemistry of the Structural Elements of Plants with Reference to their Natural History and Industrial Uses.*  
By Cross and Bevan. New impression, with Supplement. Pp. xviii + 348. (London: Longmans, Green, and Co., 1918.) Price 14s. net.

THIS well-known monograph by authors actively engaged in original investigation on many matters connected with the cellulose group is written in a manner stimulating to all workers in this field. The new impression is chiefly remarkable for a supplementary chapter of twenty pages, the greater portion of which is composed of the authors' critical review of researches published by others during the last two or three years. In addition there is a very interesting *résumé* of the authors' views on the standard of purity for "pure cellulose" and of their attempts to define a "normal cellulose." Whilst they regard cotton cellulose as the prototype of the group, it is affirmed, in contradistinction to the descriptions