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Applied Chemistry in Peace and War.

In a recent issue of the official organ of the Society of Dyers and Colourists,[1] Prof. Gardner reviews impartially and judicially the present position of the British dyestuffs industry, more especially with regard to recent negotiations between the British Dyestuffs Corporation Ltd. (B.D.C.) and the Interessen-Gemeinschaft (I.G.). His article, which is written in non-technical language, should be read by all wishing to obtain a clear perspective of the dyestuffs problem in its national aspects.

It is essential in considering the merits and demerits of the proposed agreement to differentiate clearly between the British dyestuff industry and the B.D.C., a distinction which is daily becoming more pronounced in proportion as the independent dyemakers gain an increasing amount of the home trade in colours. An agreement which is mutually advantageous to the I.G. and the B.D.C. may nevertheless be ruinous to the British competitors of the latter organisation. A criticism frequently made against the recent report of the Dyestuffs Development Committee of the Board of Trade is, that this document emphasises the great technical advances made since the War by British colour chemists, and at the same time urges the need for a continuance of the protection afforded to the industry by the Dyestuffs Act. The two points of view are, however, not inconsistent.

The enormous improvement in manufacturing capacity cannot be gainsaid. It may be recalled that prior to the War, 80 per cent. of British requirements for dyes came from abroad, and principally from Germany; at present "something over 80 per cent." of our home needs are supplied by British makers. It is, however, to secure the remaining 16 per cent. that the directors of the B.D.C. are striving for an arrangement with the great German combine. It is argued, Why should we expend money on research when the results are ours for the asking? Not being chemists, the directorate forgets that there is no finality in chemical industry, and that even now investigations are on foot which may render obsolete many of these precious dyes and also the majority of the commoner ones. To ensure steady growth, the still infantile industry needs protection not only from competition outside but also from apathy and lack of knowledge within the nation.

At the same time, it should be conceded that, so far as the interests of his shareholders are concerned, the chairman of the B.D.C. has done a great work in internal reorganisation and retrenchment, and also, in

[1] W. M. Gardner, "The British Dyestuffs Industry," Journal of the Society of Dyers and Colourists, vol. 40, No. 6, June 1924. (Bradford: Pearl Assurance Buildings, Market Street, 1924.) 5s.

view of the possible repeal of the Dyestuffs Act, he has made a very good bargain with a foreign competitor against whom the home industry would be heavily handicapped if the existing restriction on foreign importation were removed.

While these acute discussions are in progress in Great Britain, five lectures delivered by Prof. Haber during the last four years, and recently published,[2] have the sombre significance of the writing on the wall, for the text of his discourses may be taken to be the national necessity of a self-contained chemical industry vital to the public welfare either in peace or war. As the recipient of a Nobel Prize, the lecturer naturally dealt with the more peaceful attributes of the industrial synthesis of ammonia from its elements. But the warlike aspects of chemical science are displayed in the address on "Chemistry in War," delivered to the officers of the Ministry of National Defence (1920), and in the lecture on "The History of Gas Warfare," given last October before the Parliamentary research committee of the German Reichstag. In the former discourse Haber refers to the larger problems of munitions which arose in Germany on the prolongation of the War, and also on the special requirements for chemical warfare. He compares favourably the comparatively humane nature of the casualties inflicted by chemical means with the ghastly and disfiguring wounds produced by flying shrapnel and the other older weapons, and points out that, in spite of the Washington Conference, the fervent wish expressed in England, as in America, for the establishment of an independent chemical industry is due to a recognition of the importance of this trade in the production of chemical munitions of war.

In the lecture to the Reichstag representatives, Prof. Haber traces the development of chemical warfare both before and since the surprise attack with chlorine made by the German army at Langemark on April 22, 1915. He concludes by asserting that the moral indignation displayed in the Entente press during the War was directed principally against German gas warfare, but not against the employment of similar weapons by the Allies.

It is doubtful whether the proposed agreement between the B.D.C. and the I.G. will restrict secret preparations for gas warfare being made by any nation holding a predominant and self-contained position as regards the chemical arts. Our path of safety is to encourage to the utmost the development of research and industrial expansion in an independent national dye industry.

G. T. M.

[2] "Fünf Vorträge aus den Jahren 1920–1923: Über die Darstellung des Ammoniaks aus Stickstoff und Wasserstoff; Die Chemie im Kriege; Das Zeitalter der Chemie; Neue Arbeitsweisen; Zur Geschichte des Gaskrieges." Von Fritz Haber. Pp. v+92. (Berlin: Julius Springer, 1924.) 0·65 dollar.

Sir Archibald Geikie.

A Long Life's Work: an Autobiography. By Sir Archibald Geikie. Pp. xii+426. (London: Macmillan and Co., Ltd., 1924.) 18*s*. net.

FROM time to time Sir Archibald Geikie has interested his numerous readers by writing sketches or reminiscences of incidents in his long and busy life. In the volume now before us he has set out in orderly sequence the principal events of his career from early boyhood to a well-earned period of rest. Advancing years may have curtailed his activities, but his memories of friendly intercourse with many distinguished men in all parts of the world, of the almost innumerable functions in which he has taken a prominent part, and the charm of the literary style in which he tells his experiences, remain as fresh as ever.

Born in 1835, Geikie's earliest reminiscences relate to incidents which to many of us seem to belong to ancient history, as, for example, the gathering of the Elders at the Disruption of the Kirk of Scotland, when black coats swarmed like hiving bees in and out of St. Andrew's Church, or the opening of the first railway in Scotland. But interest centres chiefly on the early proclivities of the boy himself, inasmuch as he was destined to become a leader in geology, a noted man of letters and a distinguished public servant.

At the Edinburgh High School, Geikie acquired an appreciation of the Latin classics which has been a joy to him all his life, but a love of Nature was evidenced by a passion for collecting butterflies. It was while so engaged in a limestone-quarry that he first found a fossil. Enthusiastically he broke up block after block, disclosing delicately preserved plants, and realising, not without awe, that he was bringing to the light organisms that had never before been seen by human eyes. Thenceforward the rocks and their fossils became increasingly the subject of his thoughts. Through this incident he became acquainted with Robert Chambers, author (as it appeared later on) of "Vestiges of the Natural History of Creation." He read every book on geology he could lay hands on, but in the "Old Red Sandstone" of Hugh Miller found a greater stimulus than in any other, not so much from the information it supplied as from its revelation of the enthusiasm of a true lover of Nature. From the consideration he received at the age of seventeen from such men as Logan, David Forbes, and Sorby, it may be inferred that he had already shown unusual promise as a geologist.

The time had come, however, for choosing a profession, and to his parents, as to so many others before and since, it appeared that though geology might be