

partners to consent to the scrapping of inefficient plant and the substitution of improved appliances. A man of great energy, he was ready at all times to work twenty-five hours a day for several days together. He long lived on the works in the most modest quarters and his all-seeing eyes were everywhere. In Germany the success of the great chemical works has been mainly due to the effective co-operation of a variety of workers, representing the different sides of the business, supported by a small army of highly disciplined, qualified scientific assistants; but Messel did everything himself: his versatility was astounding; he was not only chemist but also engineer, works manager and business man; he had no scientific staff but only an assistant or two.

Though a German but a German fired with Jewish imagination, Messel appreciated and practised English methods. Aided only by the most modest resources, he long held his place successfully against his rivals in Germany. Probably much of his early success was due to his sympathetic attitude towards his workmen, by whom he was generally beloved; but Messel was not only a worker, he also played hard. In great social request, he knew everyone: Gilbert was one of his great friends. Of late years Messel had been one of the most familiar and popular figures at the Savage Club.

Messel's eminent scientific services to industry were recognised in 1912 by his election into the Royal Society. No other compliment could have given him greater satisfaction. Though a manufacturer, he lived for science and in the atmosphere of science and not the least of his merits is the example he has thus set. H. E. A.

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PROF. A. K. HUNTINGTON.

By the regretted death, on April 17, at sixty-four years of age, of Prof. Alfred Kirby Huntington so shortly after relinquishing the chair of metallurgy at King's College, University of London, which he had occupied since 1879, British technical science loses one of its old guard, and both metallurgy and aviation are the poorer by the loss of an indefatigable worker and an outstanding personality.

Though it be admitted that Prof. Huntington's name is linked with no spectacular discovery, his work, beyond its professional duties, was continuous, scholarly, and of marked originality. In both respects he therefore exercised a determinative moulding influence upon the two generations of men he trained in this rapidly widening field of science. His career, indeed, coincided with what we may justly regard as the Renaissance of non-ferrous metallurgy. For nearly forty years he was invariably abreast, more usually in the forefront, of the many new departures which have marked it. A physicist as well as a chemist, his researches on the micro-structure of metals and on "corrosion" have added essentially to our metallographic knowledge; his paper on "The

Concentration of Metalliferous Sulphides by Flotation," read before the Faraday Society in 1905, broke ground which has been gratefully cultivated by others, and provided the starting-point for fresh researches; whilst in the discussion of such diverse technics as those of copper-smelting, cyanidation, nickel metallurgy, etc., many have owed essential enlightenment to his suggestions and criticisms, imparted with a kindly, if somewhat gruff, sententiousness.

Prof. Huntington rendered yeoman service in the earlier development of several of our now important technical associations; thus one recalls his two papers (upon "The Mexican Amalgamation Process" and "The Metallurgy of Nickel and Cobalt") which were read at the first annual meeting of the Society of Chemical Industry in 1882. Later he was actively interested in the formation of the Institution of Mining and Metallurgy, becoming its second president in 1894, and remaining an honoured member of council until his death. The mere enumeration of his contributions to its Transactions occupies a whole page of index. In 1913 he succeeded to the presidential chair of the Institute of Metals, and to that society he gave of his energy and experience with equal freedom. During the war his specialised knowledge of high explosives was placed at the disposal of, and fully utilised by, the Admiralty.

A marked characteristic of Prof. Huntington's metallurgical outlook was its practicality and its constant insistence upon the economic aspect of the problem under consideration. His motto might seem to have been: "First write your equation in economics, and the remaining 20 per cent. of technics will be easily and better supplied thereafter"—though it must be admitted that he could be unsparing if that balance appeared faulty!

Prof. Huntington's intense practical interest in aeronautics, which advancing years were powerless to quench (since, in addition to his exploits in ballooning, he was until quite recently his own pilot and flew his own plane), made him famous to a wide circle; but it is to his services to modern metallurgy that special tribute is due.

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DR. A. J. CHALMERS.

THE death of Dr. A. J. Chalmers in Calcutta on April 5 causes a gap in the ranks of British workers in tropical medicine, and will also be deeply regretted by his many friends in this country, as well as in the various Colonies in which he held important posts. The son of a Wesleyan minister, Dr. Chalmers was born in London in 1870, but began his career at University College, Liverpool, which at that time formed part of Victoria University. His career in the Medical School during his student days was brilliant, and it was soon apparent that he had a bright future before him. He gained the Holt fellowship of his college in 1890 and 1891, and obtained honours on taking his degree as M.D. Soon after