

to increased efficiency, but were never accomplished without trespass on local sentiment or without interference with individual liberty in research work. Fortunately, he found urgent problems in other fields, even more than enough for his apparently unlimited energy and never-failing sense of duty.

In the *Sunday Times* of March 22, Mr. Newman Flower mentions the fact that the night before his operation, which he knew might be fatal, Lord Curzon wrote minute instructions about his forthcoming book on "British Government in India," and this incident reminded me of a somewhat similar illustration of his remarkable regard for small things in spite of greater distractions. In 1905, when the controversy with Lord Kitchener, which led to his resignation, was at its height, Lord Curzon sent me long notes from Simla about certain marble pedestals in Government House which he had asked me, during the previous Calcutta session, to take a personal interest in and to have erected before the arrival of the Prince of Wales.

It was not until after 1916, when war conditions forced upon one many duties of an unfamiliar nature, that one saw further direct evidence to show the great depth as well as width of Lord Curzon's marvellous activities in railway extension, in university education, in public health, in town-planning, in industrial developments, in army administration, and, most remarkable of all, in the complex problems of land revenue which not even an experienced member of the Civil Service professed to understand for any but his own province. His views were expressed in reasoned notes that left one with the impression that each file in turn covered the one subject in which he had specialised. Five years' experience with the Government of India, where the records of his previous work are filed, left me with two outstanding impressions—first, an inexpressible admiration for his energy, thoroughness, and conscientious devotion to India; and secondly, an equally strong feeling of thankfulness that geology was not one of the subjects in which he had occasion to specialise between 1898 and 1905. T. H. HOLLAND.

#### PROF. A. VON WASSERMANN.

WE regret to record the death on March 16, at sixty years of age, of August von Wassermann in Berlin. He was born in Bamberg, and having studied in Strasbourg, Vienna, and Berlin, early became associated with the Institute for Infectious Diseases under Koch, and it was here that most of his work was done. He ultimately became Director of the Serum department of Koch's Institute, and in 1913 Director of the large Institute of Experimental Therapy of the vast Kaiser-Wilhelm Gesellschaft zur Förderung der Wissenschaft in Dahlem, Berlin. He was also honorary professor in the University of Berlin and was ennobled in 1910.

Von Wassermann's scientific life-work was done in the domain of immunity; he saw its rise and zenith and contributed in no small degree to its development. He was an exceedingly clever man, untiring in his diligence, and in the highest degree efficient if lacking in imagination when compared with the greatest workers in his science. Throughout the development of immunity problems he was constantly on the alert, and felt almost every pulsation of advancement of knowledge with extraordinary acumen. Although

rarely the first on the field, he was almost invariably among the first to take full advantage of anything new, and he always added something fresh and clever to work already done. He was a typical "Prussian," somewhat arrogant to his inferiors, but withal a man that was liked. He was a brilliant speaker, and a great star at medical gatherings and congresses, where he was always listened to with attention. As an example of his diligence we may cite the "Handbuch der pathogenen Mikroorganismen" which he edited with W. Kolle. This monumental if somewhat uncritical work appeared in two editions, the first in six volumes between 1903 and 1909, the second in eight volumes with nearly nine thousand pages, all of which was published within two years (1912-1913).

From 1906 Wassermann attained world-wide fame, and his name became almost a household word through his discovery of the so-called Wassermann reaction in the diagnosis of syphilis. In its altered form, this test is practised in every pathological laboratory the world over, and is perhaps the most accurate laboratory test applied to the clinical diagnosis of disease. Wassermann's test was the practical application of a fundamental principle discovered by Bordet and Gengou (1901) of Brussels, and it was characteristic of him that he saw almost immediately how Bordet's work could be utilised for human medicine. Wassermann's name will live long in the annals of bacteriology and immunology. W. B.

DR. WILLIAM F. HILLEBRAND, chief chemist of the United States Bureau of Standards, died on February 7 at the age of seventy-one years, and an appreciative account of his life and work by a colleague at the Bureau of Standards has been published in a recent issue of *Science*. William Francis Hillebrand spent two years at Cornell University before taking up chemistry, most of his training in which was received in Europe. In 1872 he went to Heidelberg to study under Bunsen and Kirchhoff, and from there, he and T. H. Norton published in 1875 their paper on the preparation of metallic cerium, lanthanum, and the mixture then called didymium. Hillebrand's later work showed these metals were trivalent and belonged to the rare earth group. He also discovered the pyrophoric properties of cerium filings. From Heidelberg Dr. Hillebrand went to Strassburg under Fittig, and from there to the Mining Academy at Freiberg. Returning to the United States, he was appointed to the staff of the Geological Survey in 1880, and until 1885 was stationed at Denver. Here was plenty of mineral material to exercise his growing skill as an analyst, and the work was continued after his transfer to Washington. In 1908 he became second chief of the Bureau of Standards. Dr. Hillebrand devised general analytical procedures suitable for different types of mineral and rock, and also special methods for the determination of individual elements, which were placed on record in various issues of the Bulletin of the Geological Survey; silicate rocks were dealt with in 1897, carbonate rocks in 1907, both of which were quickly translated into German. Dr. Hillebrand was a member of the National Academy of Sciences, and in 1906 was president of the American Chemical Society; for many years he served as an associate-editor of this Society's Journal and also of the *Journal of Industrial and Engineering Chemistry*.