the presence of parasitic organisms, as a disturbance of the equilibrium between host and parasite unfavourable to the host. The reactions of any host to the presence of pathogenic organisms are numerous and complex, but are not mutually exclusive. Thus, the parasite may be rapidly killed by defensive mechanisms of the host's body, without giving rise to any symptoms of disease, or it may cause a local reaction known as inflammation. Fever is also a common result of infection, and tends to be a protective mechanism. Sir Weldon dwelt on the fact that a 'carrier state' may be established either following illness with apparent recovery without complete destruction of the invading parasite, or in consequence of a 'silent' infection without actual disease.

THE manner in which infecting parasites gain access to the body was then dealt with, the two commonest portals of entry being the skin and the nose and mouth. Infection may enter through the nose or mouth by the inhalation of infected droplets in the breath of patients or carriers, as with measles, influenza and others, or by swallowing infected food or drink, as in cholera and typhoid fever. The importance of the carrier state as a cause of cases or epidemics of infectious diseases was emphasized, and reference was made to the fact that different diseases may be caused by the same organism. For example, scarlet fever, tonsillitis, puerperal fever and probably acute rheumatism are all caused by various hæmolytic streptococci. In conclusion, Sir Weldon discussed measures of disinfection and prevention, and in regard to 'current' and 'terminal' disinfection, pointed out that treatment of infective material in the sick room during the patient's presence there ('current disinfection') is all that is necessary with most diseases. 'Terminal disinfection' after recovery or removal of the patient, upon which until recent years most reliance has been placed, is needless, and may be confined to the free use of soap and water with thorough ventilation.

Discoveries in Antarctica

A DISPATCH from the British Graham Land Expedition under the leadership of Mr. J. Rymill published in *The Times* of December 12 announces an important change in the map of Graham Land. In December 1928 Sir Hubert Wilkins in his flight over Graham Land reported the existence of two straits, Casey Channel and Stefansson Strait, in about latitudes 69° 45′ S. and 71° S. respectively, across the area known as Graham Land which previously was thought to be united to the Antarctic Continent. Between the two straits he mapped roughly the Finley Archipelago. The British expedition, sledging along the west coast of Graham Land, to lat. 72° S., long. 67° W., or ninety miles south-west of where Sir H. Wilkins turned, found no trace of these two straits and believes that low glaciers must have been mistaken for ice-covered straits. Thus Graham Land south of Crane Channel in the Antarctic Circle is restored to its former continuity with the continent. A further discovery of importance is that Alexander I Land, discovered by Bellingshausen in 1821 and sighted by Charcot in 1909, is not a small island but a large land area at least two hundred and fifty miles from north to south and separated from Hearst Land by an ice-filled cleft-like strait fifteen miles wide and 200 miles long. The expedition charted the eastern coast line of this island. The strait appears to be a fault feature with the eruptive rocks of Graham Land on the east and fossiliferous sedimentary rocks on the west or island side.

Hooker's Work on Lapachol and Related Compounds

THE yellow crystalline pigment lapachol, found in Bethabarra wood (from West Africa) as well as in several South American timbers, provided the late Dr. S. C. Hooker, the eminent American sugar technologist, with an absorbing problem in chemical structure which lasted a lifetime and has given us an admirable model of chemical research, based upon highly skilled technique, close observation, patience and careful deduction. The publication during the present year of no fewer than eleven posthumous papers by Dr. Hooker in the *American Chemical Journal* after a silence of forty years must have come as a complete surprise to organic chemists. But the work to which Dr. Hooker was so devotedly attached was interrupted by his long period of activity in industry. On his retirement in 1915, he resumed the problems which had remained untouched since 1896, and he was reluctant to publish prematurely the numerous results which he was able to collect in the last twenty years of his life.

HOOKER was born in Kent of British parents, but after studying in London under Japp and at Munich under Bamberger, with whom he undertook the investigation of retene, he migrated to the United States. His published work contains an account of the properties and structure of lapachol and of many closely allied compounds. Many of his results were obtained by close observation of minute samples under a microscope. Lapachol is a β-amylene β-hydroxy α-naphthoquinone, which undergoes isomerism with mineral acids into lapachone, involving ring-closure with the hydroxy-group and sometimes also change to the orthoquinone structure. But further structural changes of an unusual type are readily induced and we cannot fail to admire the skill with which he solved the problems of change of structure from the *p*-quinone to the *o*-quinone type, of the exact location of the double bond in the amylene group and of the mechanism of the process of oxidation, whereby the quinone-ring is first broken with elimination of carbon dioxide and then re-formed from the side-chain, in such a way that the next lower homologue of the original compound is formed. A memorial volume containing an obituary notice from the *Journal of the Chemical Society*, together with reprints of twenty-two memoirs from the same journal and the *Journal of the American Chemical Society*, has been edited by Prof. L. F. Fieser of the Converse Memorial Laboratory, Harvard University, to whom application may be made for copies.