

ALFRED BARNARD BASSET—1854—1930.

ALFRED BARNARD BASSET was born on July 25, 1854. He was educated at Trinity College, Cambridge, and graduated in 1877 as 13th wrangler, a position which could hardly have represented his real mathematical attainments. He appears to have at first contemplated a legal career, and was called to the Bar at Lincoln's Inn in 1879, but having succeeded to a considerable estate, he soon abandoned the law, and apart from the duties incidental to his private station, devoted himself mainly to mathematical research.

From 1883 onwards Basset produced a succession of papers on applied mathematics, mainly on topics suggested by current discussions. The "classical" hydrodynamics was at that time beginning, after a long interval, to exercise a great fascination on a number of rising mathematicians, and Basset's own contributions in this kind to the 'Proceedings' of the Cambridge Philosophical Society, and the London Mathematical Society, and to the 'Philosophical Transactions' were of distinct originality and merit, and led to his election into the Royal Society in 1889. He was for many years an active member of the Mathematical Society and made many contributions to its 'Proceedings.' He was Vice-President in 1892-93.

Among the numerous subjects which he treated we may mention the dynamical theory of the motion of solids in a fluid, inaugurated by Kirchhoff and Kelvin, the equilibrium of fluid masses revolving under their mutual gravitation, and its stability, and the theorems of Dirichlet and Dedekind, the interest in which had been revived by Bryan, Greenhill, and Love. At a somewhat later period he became interested in elasticity, and wrote extensively on the theory of elastic plates and shells, which was then a matter of some controversy. In this connection he was led to recognise independently the true explanation of an apparent paradox. Mention must also be made of his work on viscosity, and in particular on Boussinesq's problem of the variable (slow) motion of a sphere in viscous fluid. He made some valuable contributions to electrostatics, and wrote also on various developments of the electro-magnetic theory of light.

Basset's work was distinguished throughout by a remarkable command of analytical methods, and it may even be fair to say that it was the analytical aspect, as much as the physical content of the theories on which he wrote, which attracted him. As an instance of his mathematical resources, he was an expert in the use of Bessel functions, and discovered new results in connection with them, at a time when the theory was only beginning to be familiar to English applied mathematicians.

Basset was also the author of several able treatises. A book on hydro-

dynamics, in which he incorporated much of his own work, was published in 1888, and did much to sustain the interest in the subject. This was followed in 1892 by a treatise on physical optics, another of his favourite subjects, on which he bestowed immense pains, but which scarcely met with the recognition which it undoubtedly deserved.

At a later period Basset turned his attention to pure mathematics and produced two text-books, on cubic and quartic curves, and on solid geometry. But his interest in current mathematical topics, and his relations with mathematical contemporaries, seem gradually to have faded, partly, no doubt, owing to failing health, and he lived in great retirement at his seat in Berkshire. He died on December 5, 1930, at the age of seventy-six years.

H. L.

LORD MELCHETT—1868—1930.

ALFRED MORITZ MOND, first Baron Melchett of Landford, was born on October 23, 1868, at Farnworth, in Lancashire, within smell of the famous alkali works. His father, Dr. Ludwig Mond, was at that time a chemist at the Hutchinson Alkali Works; it was not until five years later that he founded the firm of Brunner Mond in partnership with John Brunner, an accountant at Hutchinsons. Mrs. Ludwig Mond has described to me the Farnworth days as very happy ones—they preceded some very strenuous times at Winnington. When the new enterprise was started, their capital was very insufficient, their optimism very great. The process was an unknown one and it was laughed at by those who understood the industry; the operations were continuous and Ludwig Mond and a small band of loyal helpers often worked for 36 hours at a stretch.

Alfred Mond in his lifetime has thus seen the founding of the B.M. Works, as it is familiarly called in the North, the overcoming by strenuous effort of its early difficulties both technical and financial, its growth to become the most important chemical firm in Britain and its disappearance as an entity on absorption into Imperial Chemical Industries. Although he was associated closely with the management of the firm in early days, after the retirement to London and death of Ludwig Mond, the active management at Winnington passed into the hands of Sir John Brunner and his two sons, and Alfred Mond's energies were largely spent in other directions.