found in Lord Kelvin's celebrated Baltimore Lectures,[1] where with unlimited resourcefulness the methods of analogy, analysis, and experiment are employed to solve or to define the intricate problems of physical optics. Nor is it a merely fortuitous coincidence for the history of thought that, whilst his mind must have been filled with the many illustrations and mechanical devices, and all the wealth of suggestions contained in the Baltimore Lectures, Lord Kelvin should have delivered the opening address to the mathematical section of the British Association, entitled, "Steps towards a Kinetic Theory of Matter." Following—as did also Clerk Maxwell—on the lines indicated by Stokes's earlier papers, he has done much to change our fundamental conceptions as to the properties of matter, and this in two distinct ways. The first consisted in breaking down the rigid barriers which popular definitions had set up between the different forms of aggregation—the solid, liquid, and gaseous states of matter; whilst the second tended to show how

87. Lord Kelvin's researches.

[1] The Baltimore Lectures were delivered by Lord Kelvin (then Sir W. Thomson) after the meeting of the British Association at Montreal in the month of October 1884, at the Johns Hopkins University, before a company of physicists. The final edition of these important and highly suggestive conferences is in the press as the fourth volume of the collected mathematical and physical papers. The completion of this publication is eagerly expected, as containing the most mature exposition of the elastic-solid theory of light, towards which the author has in the course of the last fifteen years made various valuable additions. Notably in a paper dated 1888, published in the 'Philosophical Magazine,' he has, as it has been said, "extricated the elastic theory from the position of deadlock, according to which the ether must be both compressible and incompressible," by showing that the difficulty can be met, "provided we either suppose the medium to extend all through boundless space, or give it a fixed containing vessel as its boundary." Prof. Glazebrook has further worked out the consequences of this suggestion. See vols. 26 and 27 of the 5th series of the 'Phil. Mag.,' also 'Nature,' vol. 40, 1889, p. 32, and Fletcher, the 'Optical Indicatrix,' p. 6, &c.