

Hence the axis of the single resultant rotation passes through the point whose co-ordinates are $\frac{\Sigma(\omega x)}{\Sigma(\omega)}$, $\frac{\Sigma(\omega y)}{\Sigma(\omega)}$, $\frac{\Sigma(\omega z)}{\Sigma(\omega)}$; these are independent of l, m, n , and this point therefore remains the same so long as the magnitudes of the rotations, and the points through which their axes are drawn are unaltered, whatever be the common direction of these axes; by analogy this point might be called the *Centre of Parallel Rotations*.

ON A SMALL CAPILLARY WAVE NOT HITHERTO DESCRIBED.

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It is well known that the shape and velocity of waves, and the different circumstances under which they are propagated, have attracted considerable attention amongst men of science, not only from the importance of the subject as connected with the theory of tides, but also from its practical bearing in relation to the resistance of fluids, and the best form for vessels which are destined to move in them. An elaborate report upon waves was prepared by J. Scott Russell, for the British Association, in 1844, the experiments detailed in which have been the origin of some of the greatest improvements of the present day in ship-building, and have inseparably connected the wave line with the name of Russell. Although this report is principally devoted to the solitary wave of translation, which gave rise to the investigation, it treats at less length of other varieties, and may, I believe, be said to embody all that is known upon the subject from observation. There is nothing, however, amongst the waves there enumerated in any way resembling that which I propose bringing under the notice of the Institute to-night, nor have I elsewhere seen any account of its having been previously observed. Amongst all the different kinds of waves, varying as they do in dimensions from the great tidal wave, which, with an elevation of only a few feet, rests upon a base of hundreds of miles in extent, to the ripple which is raised by a summer's breeze, the wave which I am about to introduce to you is, perhaps, the smallest. It