I say these things not because I like saying them, but because, feeling as I do, I do not think I ought to abstain from saying them. No one has a higher admiration for our President than I have, and no one would less willingly utter a syllable that would give him pain. I rejoice in one aspect of the case, that the University of Cambridge has crowned a great scientific career by a signal honour. But I cannot but feel that the authority and position of the Presidency of the Royal Society belong to a sphere of action infinitely above the conflict of parties, and that they will run a serious risk of impairment when the honoured name of its occupant appears for the first time in modern scientific history in the lists of a party division.

W. T. THISELTON DYER.

Royal Gardens, Kew, November 26, 1887.

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As a Fellow of the Royal Society who has sat for many years continuously in the House of Commons, I have read with much interest your article on the above subject, which, from a Royal Society point of view (but not in any sense from a Parliamentary stand-point) is one of very great importance. No reasonable person would for a moment object, I presume, to Prof. Stokes entering Parliament as a politician, if he be one, provided he be very careful to doff at the door of the House of Parliament every vestige of Royal Society representation, and appear there as a private politician to be taken for just what he is worth in that capacity, and no more. Do not let me be misunderstood: as a man of science he will, even in the House of Commons, receive the personal consideration due to his distinguished personal attainments; and few public assemblies are more ready than that House to give the full value to personal qualities and achievements. But the President of the Royal Society will put that distinguished body, no less than himself, in a thoroughly false position if he presumes to utter there a single sentence in its name. Should I be present—and the same may be said, I trust, of other Fellows—I shall not hesitate to rise instantly and disclaim his pretensions, and declare that he has no more authority than one of the doorkeepers to speak in a political assembly in the name of the Society over which in a purely scientific capacity he presides.

Having a most careful regard to the purity of your columns in respect of everything merely political, I find it very difficult to say much of what I think and feel on this question; but when I consider the depths to which a certain ex-Professor has descended since he seated himself upon the steep and slippery slope of politics, I must very earnestly deprecate any similar proceeding on the part of the highest officer of the Royal Society, in that capacity. In the political arena, I fear, we are on both sides daily getting a lower and lower opinion of our opponents, and I must confess that it is rapidly becoming hard to reconcile with the scientific spirit the rancorous abuse and unreasoning misrepresentation with which we are now too familiar.

But I must not be drawn into either polemics or personality. I must content myself with saying, that, if Conservatives think meanly of Liberal politicians just now, their sentiment is thoroughly reciprocated, and probably more than reciprocated, by those who, like myself, believe we have at heart the true greatness, the lasting tranquillity and the intellectual and social progress of the country. For Heaven's sake let us keep the Royal Society, if not above, at least most distinctly apart from, all political contentions; and, in order that we may do this, let its President, who has now become a professed party politician, either vacate the chair, or make it absolutely clear that on the floor of Parliament he will not presume to speak with any kind or degree of authority in the name of the Society.

I have no idea, Sir, of your political views, but I appreciate your desire to keep the Royal Society politically neutral—aye, politically non-existent—and I hope your timely and courageous warning will not have been given in vain.

I have no care to conceal my name, but the end in view may be best promoted, perhaps, by my merely signing myself,

F.R.S. AND M.P.

Library of House of Commons, November 21.

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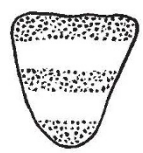
## The Vitreous State of Water.

TO-DAY, between 2 and 3 p.m., with the barometer standing at 29 inches, the thermometer a little below 0° C., and the wind north-east, we had for the space of about twenty minutes an interesting fall of hail in this neighbourhood. The stones varied in size from that of a mustard-seed to that of a hemp-seed or thereabouts. Some rain accompanied them, and this became frozen in part on cold exposed surfaces. The stone sill of my study window, which faces nearly north-west, was soon covered in this way with a thin pellicle of ice, which served as a convenient resting-place for the hailstones at a low temperature. I was struck at once with their glassy appearance, and examined a number of them with a pocket lens as they lay on the cold surface of the stone, not having at hand any refrigerating arrangement adjustable to the stage of a microscope. Nor was the latter necessary. The lens showed most distinctly the clear transparency of the glass of which these hailstones consisted, and the vitreous fracture of some which had been broken by impact. Watching them as they lay, one saw minute nests of crystals form, in some cases in a peripheral zone, extending gradually inwards; but in the majority of instances the crystallization began in the centre of the ice, and gradually extended in a beautiful crystal growth more or less through the mass.

There would seem to be no room left for doubt that this crystal-building process (sometimes in bands, sometimes in confused nests of crystals) was a simple case of devitrification—as distinct a case, one may almost say, as the well-known devitrification on a larger scale which is clearly exhibited by some glassy slags. The fact of lying on a surface below 0° C., and undergoing devitrification instead of liquefaction, seems to lend direct support to the theory of *latent heat of the vitreous state*, which I have ventured elsewhere to propound (see NATURE, vol. xxxvi. p. 77).

I may add that last July, in a much heavier hailstorm in the Trent Valley, I noticed a very great number of hailstones, many of them as large as a moderate-sized hazel-nut, and peg-top shaped, with a zonal or banded structure thus :—



The layers or zones were alternately transparent and opaque (apparently crystalline), but in this case the temperature caused them to melt away without allowing a good opportunity for observation of any devitrification of the glassy portions. To-day Nature has performed the experiment suggested in my previous letter, and the result is found to accord with the theory.

A. IRVING.

Wellington College, Berks, November 18.

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## The Bagshot Beds.

IT may interest some of your readers to know that I recently obtained some casts of fossils from the Bagshot Sands of the Newbury district, from which, with one doubtful exception ("Survey Memoir," vol. iv. p. 330), they have not, I believe, hitherto been recorded. The fossils are of the nature of ferruginous casts, and were found in a sand-pit about one-third of a mile south-east of the London lodge of Highclere Park, mapped by the Survey as Lower Bagshot. They consist both of univalves and bivalves, and four or five genera are represented. They resemble, both in appearance and mode of occurrence, the fossils found in the Upper Bagshot of the Bagshot district; and the sands in which they occur have a strong resemblance to the