when used in its ordinary chemical sense of a root (Latin, *radicula*), basis, or common ingredient of a series of chemical compounds?

Surely the word is a substantive, and, like similar derivatives, should be spelt "radicle," and not as the adjective "radical." I hope, however, that those who spell it in the latter way will be able to adduce a partical of reasoning in favour of their practice.

I am quite aware of the existence of a "leading article" called a "Radical" in politics; but in this case there is reference to one who desires a "radical" change in existing institutions. If, however, we are to consider him as "a common ingredient in a series of Caucuses," then I should maintain that here also the spelling should be amended. H. G. MADAN

Eton College, April 5

An Earthquake Invention

REFERRING to Prof. Milne's letter in NATURE of March 11 (p. 438), I have to say:—(1) That what I, as representing my father, have to complain of is that in a British Association Committee's Report describing experiments made with an aseismic arrangement, and which appeared in the *Transactions* of the British Association of 1884, the writer thereof, who appears to have been Prof. Milne alone, did not acknowledge that Mr. David Stevenson had invented, described, and constructed precisely such apparatus in 1868, facts which Prof. Milne cannot deny, and yet took the honour to himself; and, when this was pointed out, he then set up a claim for Mr. Mallet which Mr. Mallet assuredly never made, and would have been the first to repudiate.

(2) Prof. Milne in that Report praised the aseismic joint as a most useful invention, introducing a new and valuable principle of construction for earthquake-affected countries, and though he may now think otherwise, yet the account given in the Tsugisaki light-keeper's letter, quoted by him, of the effects of a shock at that lighthouse, in place of showing the uselessness of the apparatus, in my opinion proves the reverse, as the shock is reported to have been very severe; and had there been no aseismic joint under the illuminating apparatus, it would have been so seriously damaged as to have been rendered useless, in place of which the light was only extinguished for five minutes.

Mr. Stevenson, in his original paper, with characteristic caution, carefully calls it an apparatus to *mitigate the effect of earthquake shocks*. Mr. Kinjoro Fugicura, Engineer in Chief to the Lighthouse Department of Japan, writing January 11, 1886, says he is unable at present to give any definite opinion as to the merits of the aseismic arrangements, because, since he put them in operation when he became Engineer in Chief, the occurrence of earthquakes has been very rare indeed; and further, he is of opinion that really to get at the bottom of the matter, two experimental tables would have to be placed at the same locality side by side, one with the aseismic arrangements, and the other fixed, so that the behaviour of the two tables might be directly compared. To which I might add that the whole lighthouse (or any building of equal size), like that constructed and sent to Japan by my father, but which was unfortunately lost at sea, should be rebuilt and tried against ordinary houses unprovided with my father's invention.

(3) Prof. Milne asks what I claim as coming under Mr. Stevenson's invention. I claim of course everything which employs the same principle, and most distinctly the house carried on shot or "cast-iron sand," as Prof. Milne calls it, and which he lately erected in Japan, as well as the building described by him in the B. A. Report, p. 248, for 1884, as "resting on four cast-iron balls," and the action of which has been so perfect as to have actually "destroyed" all the "sudden motion or shock," and recorded by him as a notable earthquake.

I will not further trespass on your space, but refer your readers to the former correspondence on this subject in NATURE.

D. A. STEVENSON

84, George Street, Edinburgh, March 22

DR. T. SPENCER COBBOLD, F.R.S., F.L.S.

DR. COBBOLD was the son of the Rev. Richard Cobbold of Wortham in Suffolk. He was born in 1828, and educated at Charterhouse. He matriculated

at the University of Edinburgh in November 1847, after having, in accordance with the mode of preparation for the profession of medicine then regarded as most advantageous, served a three years' apprenticeship with Mr. Crosse of Norwich, one of the most eminent and distinguished surgeons of his time. He thus came up to the University provided with a large amount of practical information, and even as a first year student possessed great dexterity in dissection and in the making of museum preparations, and was a skilful draughtsman. After working diligently for a year under Prof. Goodsir, he was appointed by that great anatomist as his prosector, and under his influence was led to abandon practical medicine for the more attractive study of morphology; his first original research being an anatomical essay on the Canal of Petit, which he offered as his graduation thesis, and for which a gold medal was awarded him by the Medical Faculty.

Like all other earnest Edinburgh students of that time he took an active part in the debates of the Royal Medical Society, and became in 1852 its senior President. In the same year, not many months after his graduation, he was appointed Curator of the Anatomical Museum, and became a prominent leader in the biological work of the School. As Curator he gave lectures on comparative osteology, and added largely to the collections. He also worked out the material for his article "Ruminantia," which appeared in the "Cyclopædia of Anatomy and Physiology" in 1856.

In 1856 Dr. Cobbold removed to London, and soon afterwards began to devote himself to the study of animal parasites, and particularly to the experimental investigation of their life-history, on which subject he made during the following years a number of important communications to the Linnean and other Societies. In 1864 his well-known work on "Helminthology" appeared, to which in 1869 he added a supplement containing his later researches. He subsequently published a manual of the parasitic diseases of domestic animals, a work on the grouse disease, and various other works relating to diseases of the same class.

In 1868 he was appointed by the Trustees of the British Museum to the Swiney Professorship of Geology, to which subject he had been led, under the influence of Prof. Edward Forbes, to devote much attention during his residence in Edinburgh. The greater number of these lectures were given at the Royal School of Mines, and were largely attended.

Dr. Cobbold's reputation as a comparative pathologist will rest on his treatise on the Entozoa. His most important contributions to morphology are his article on Ruminantia, his experimental researches on *Tænia mediocanellata* and other Cestodes, on Trichina, and on *Distoma hæmatobium*, and his recent paper on the parasites of elephants. His last communication to the Linnean Society was read on March 4.

THE GEOLOGISTS' ASSOCIATION AT THE SCIENCE SCHOOLS

ON Saturday, March 20, a party of over a hundred members of the Geologists' Association visited the Science Schools at South Kensington, by permission of the Science and Art Department, and were conducted over the building by Prof. J. W. Judd, F.R.S. The visitors met in the entrance-hall at 2.30, and then seated themselves in the large Chemical Lecture Theatre, where Prof. Judd gave a sketch of the history and development of the Schools and of the methods of study therein followed. At the conclusion of this address the party walked slowly through the various laboratories and lecture-rooms—metallurgical, physical, and chemical—gradually ascending to the upper stories of the lofty building, where are situated the biological and geological rooms. In one of