

CORRESPONDENCE.

DYNAMIC METAMORPHISM OF ROCKS.

SIR,—It is from no mere love of controversy that I should like just to say, in reply to Mr. Hutchings' query (GEOL. MAG. for April, 1891, p. 168), that—while I am unable to appreciate unnecessarily realistic play upon a metaphor which is no invention of mine, and have no right to quarrel with him if he is still smitten with the charms of the fallacy to which I referred—it seems to me that, to apply the term "*dynamic metamorphism*" to a rock whose internal structure shows no signs of *differential* movement (under pressure) of its constituent particles, is only another instance, added to those with which we are already too familiar in petrology, of the abuse of technical language. Further, Mr. Hutchings seems to me to surrender the point in the very next paragraph, if the Coal-seams, by undergoing compression, have acted as buffers to relieve the fire-clays of that portion of the mechanical force which otherwise might be expended upon them to induce a cleavage-structure, in those larger movements, to which the Coal-measures of Northumberland as a whole have been subjected. There seems to be some confusion between *dynamic* agencies of change in the internal morphology of a rock and what Prof. Judd has described as *static* (GEOL. MAG. 1889, Dec. III. Vol. VI. pp. 243 *et seq.*), the potency of which I had previously recognized in my Thesis (see *Chem. and Phys. Studies*, etc., pp. 53-55, 93) to the extent of inducing such metamorphic alteration in chemical compounds previously formed as might complete their individuality *quâ minerals*.

This being so, I may be allowed to repeat my thanks to Mr. Hutchings for his most valuable contributions of *facts*, the full value and bearing of which will perhaps be better seen, when the present acute stage shall have passed of that "pressure on the brain," under which English petrology would seem at present to be suffering.

WELLINGTON COLLEGE, BERKS,
4th April, 1891.

A. IRVING.

MISCELLANEOUS.

DISCOVERY OF LOWER SILURIAN FISHES.—At the meeting of the Biological Society of Washington, on February 7th, 1891, Mr. Chas. D. Walcott, of the United States Geological Survey, announced the discovery of numerous dermal plates apparently of fishes in a formation believed to be of Trenton age, near Cañon City, Colorado. Mr. Walcott contemplates presenting a full account of the subject to the Geological Society of America at their forthcoming meeting in Washington in August next.