VICTORIA UNIVERSITY

UNIVERSITY COLLEGE,
LIVERPOOL.

23/35

March 9th 1897.

Dear Prof. Fitzgerald,

I enclose an extract from the Electrical World containing a paper on Ether Theories of Electricity, in which you may be interested.

The author (Fessenden) suggests $[\kappa] = [\mu] = \frac{1}{v}$, as you did in 1889, and states some consequences of it. Would not such an assumption make the κ and μ of a substance proportional to each other, so that if μ decreases

as, for example, when iron becomes magnetically "saturated", K would decrease also, and μK would not be constant?

Or are the two quantities slownesses of different kinds of motion, not necessarily proportional?

I don't follow his argument that M ought to enter into the dimensions of μ and K, because free charges only occur at boundaries of matter.

The paper was sent to me to be abstracted for the Physical Society's Journal, and I thought you would like to see it. I don't want it back, as I have finished the abstract.

Yours sincerely,
James L. Howard.

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