

The University,  
Glasgow.

23/71

17<sup>th</sup> April, 1885.

Dear Sirs

Lockyer has sent me your paper with his note which you will see in one corner. I return it to you with some remarks pencilled on it, which can be removed by the use of India Rubber, but I thought you might wish to make some changes, <sup>in your own article</sup> before resending it to "Nature" for publication.

As you will see, instead of taking only 2 out of 3 as you accuse me, I very explicitly took the whole 3 elements into account; see p. 133 of vol. II of my collected papers (I am supposing that

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it is this and which is in the Cyclopaedia that you have for reference). On p. 135 you will see reasons given for my concluding that the effects of electric inertia are not sensible in the submarine telegraph problem. The "Mathematical investigation" referred to under (3) on page 135, was a working out of Kirchhoff's problem, with an amendment which his mode of dealing with the ends and surrounding of the wire seemed to need, and with extension to the multiple problem referred to on p. 135. But Kirchhoff's own work with some necessary improvement does I believe lead purely and simply to  $\sqrt{\mu}$  for the velocity of the

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front of the electric pulse through a wire insulated in air, if  $n$  denote the number of electrostatic units of electricity in the electromagnetic unit.

Any one reading your paper as it stands would imagine that I had ignored a definite velocity of propagation for electric impulses. How wrong this inference would be is illustrated by p. 134, line 9 from foot. I think in any case you ought to add to what you have already quoted from my paper, the last sentence of page 134 and the first of page 135 containing my reference to Kirchhoff.

I have never yet felt any satisfaction

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I need hardly say that my letter to "Nature" was not intended back  
to inform you of anything as I might as well teach my grandmother  
~~point out the uncertainty of, to captain how to correct~~  
to seek eggs and ~~to prove~~<sup>left by your words)</sup> what I feel pretty sure will be the  
impression upon many who though less clear-sighted than you are  
nevertheless influence ~~thought the views of~~ <sup>(have)</sup> considerable influence.  
~~in moulding the views of~~