

CLARKE, CHAPMAN & Co
ENGINEERS

STEAM WINCH & CRANE MAKERS.
PRIVATE WIRE TO WORKS
FROM NEWCASTLE POST OFFICE.

TELEGRAPHIC ADDRESS,
"CYCLOPS, GATESHEAD"

Victoria Works.

Gateshead upon Tyne.

Jan 9. 8 1884

12/80

My dear Fitzgerald

I recollect your once telling me you had gone into the theory of dynamos & their efficiency

We are rather inclined here to go in for the manufacture provided we could get hold of something better & more adapted to shipping than the present dynamos of Siemens & Edison

The first cost is such a very large item & interest & depreciation consequently very often are very much greater than the working expenses especially when the light is not much used

I have been thinking of largely increasing the speed of the dynamo I think the drawings of it may be managed, would not an increase of speed & reduction in diameter of the armature (say of the Siemens type) give a much more than proportionate increase of electric current?

In all the machines of which accounts of tests have been published I find that the e.m.f. is proportional to the speed almost exactly up to 1600 revolutions will this go on if the speed is further increased? and as centrifugal force will enable the armature to be reduced in diameter will such a field as ⁱⁿ the Siemens continuous current machine be equally strong when the bars are curved inwards around an armature

of $\frac{1}{2}$ to $\frac{1}{5}$ th the diameter

Perhaps you have considered
the subject more lately people
seem to have dreamed very
new fangled things they could
imagine to get hold of the public's
money & without the smallest
improvement except in a very few
cases

Yours very sincerely
Charles A. Parsons

12/80