

College Hill Mass. Dec. 19th. 1878

Mr. F. L. Pope

Dear sir

I have been looking
an "L'Electricite d'Oct. 20 in which
Lacour's phonic apparatus is described by
Dr. Moncel. It has occurred to me
that if such a toothed wheel of iron - the teeth
numbering say 5000 more and the wheel capable
of being rotated 8 or 10 times a second by a gear
arrangement that a pitch could be given to the
developed sound which when reinforced by
a proper tube could be made an excellent
Call. Suppose then that at a such an iron
~~the~~ toothed wheel was fixed so as to rotate close to
the pole p. when the teeth passed through
the field at the rate say of 512 p. sec the pitch
would be that of a closed pipe about six inches
long and would be heard better at b as under
and at a like instrument receive provided it
had the resonant tube upon it. This sound
would be quite loud as you are aware
and I think it likely it might be of service
when attached to an ordinary telephone

we saw the expense of a separate call as well as be useful over as long a line as the telephone is used over.

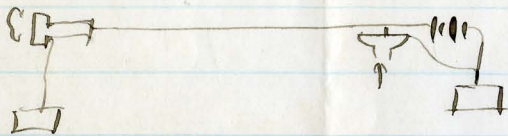
There is no objection for me to make experiments with so if it is of any account it must be made there. There is no other alternative that I see.

But I must tell you of an experiment which I tried the other day with success.



A thin rubber tube a about 3 inches long was filled with mercury and the ends tied on a stout copper wire b & c to which were attached the terminals of a battery B, also in circuit with a receiver. In front of this tube a when the latter was so sharply bent as to make a very thin thread of mercury, the finger from the telephone was placed so that the vibrations of the plate would act upon the thread of mercury through which the current was passing, this of course varied the cross section and thus the current and talking was heard quite plainly and some of the words quite loud (so as to be heard 3 or 4 ft from the instrument) but my apparatus was crude and I could do no more than this. By bending the rubber tube any degree of thinness may be given to the mercury and the whole system is simple.

I also got a tolerable result by short circuiting the
sender with my electrophorus point, thus,



Please tell me if there are
of any account. I want

also to say that I have been able to get better
results with my devices, by far than any I
have heard with any others - I have Edison
Carbon - and a Coaxial and so on, but they don't
talk loud like mine as I am ready to
demonstrate any day here.

Last Saturday I gave an exhibition of these
instruments at the College using my house
line half a mile long. ~~Hardly~~ ^{Scarcely} every thing
said at my house could be heard all
over my lecture room (about 30 ft square)
there were 45 students present.

Yours truly

A. E. Dolbear