The invention of a device by means of which the exact tones and inflections of the human voice are transmitted to a distant station constitutes the most valuable step of advancement in the progress of telegraphical communication. While the growth of the "telephone" has been accompanied by a number of out-breaks in its mortality, yet its growth has been one of comparative steadiness, and not as many would have you to believe ~~one~~ the work of but little more than a decade.

As the existance of sound is due to the vibrations of surrounding mediums, the object to be accomplished was to contrive suitable means by which vibrations could

be set up irrespective of the distance from which they originated.

The first step toward this accomplishment was made by Wheatstone in 1831. With two guitars, he found that by connecting their sounding boards & with a light wooden stick, a melody played upon one would be faithfully repeated by the other, i.e. through the medium of the stick vibrations in one would be set up in the second. Upon this is founded the principle of the vibrating phone of to-day. The problem for the phonist to solve was the means of constructing a device, whether mechanically or by aid of electricity ~~to could~~ by means of which he could set in vibration a plate

or diaphram at a distant station in harmony with the vibrations produced by articulate sounds. Mechanically this was accomplished successfully, for short distances and ~~with~~ under favorable circumstances, but further it ~~was~~ without success.

In 1854 Bourseul attempted the same accomplishment with the aid of electricity. ~~But with~~ He was successfull as far as the reproduction of a mere noise, though articulation was absent.

In 1861 Philip Reis constructed an instrument called by him the "Telephone" - from the nature of its accomplishments. It resembled very much in its essential principles those of the

human "ear." Reis claimed for his instrument the power of transmission of musical notes, although his did transmit speech. His instruments were crude, and lacked mechanical accuracy for such a mast. But that the human voice was first transmitted ~~any~~ through the power of electricity, by Philip Reis is beyond doubt.

However much may be due to the nominal inventor of the instrument that has thronged the markets for the past few years, we cannot place his work - though mostly as his devices have been, other than as the outgrowth of a less efficient machine constructed

ed practically upon the same ~~fraudulent~~ plans. That is to say Mr. Bell's researches and invention of 1876 (if to Mr. Bell this is rightfully due) on the results of a more effective application of the principle evolved by Mr. Reis.

The fundamental principal is based upon the discovery made by Mr Faraday in the year 1825. - viz, Relation between magnetism and electricity. The plan as used today consists essentially of a magnet, coil of insulated wire, and soft-iron diaphragm placed in an encasement. The diaphragm placed at right angles to the axis of the magnet in such a manner that in its

vibrations in unison alternately increase and decrease the magnetism in the magnet, thus setting up infinite currents through the helix or coil around it; and as a current passing around a magnet increases the magnetism a like vibration of the diaphragm in the distant phone is generated. It is said that as many as twenty four thousand currents have been known to pass per second.

When we consider this and note the inductive influence of neighboring currents we readily appreciate the great obstacle with which this extremely delicate instrument works. On account of the delicacy of this instrument it

enabled to take notes and reproduce the slightest accent and tonnor of the tone. In combination with the microphone it has been found this work must of tone may be nearly our ears, but always at the expense of clearness and accuracy.

However inefficient it may at present be, it is fast encroaching its relative competitors — the Telephone and today hundreds of the cities are with our Telephone systems, and it is not more difficult to converse from London to Paris, a distance 300 miles, than formerly a short distance.

Incredibly this machine cannot stop when it is. Its wealth has been

that I possess and will beyond all doubt continue until in the unfortunate case I shall in every Public house, in every business room, in & during every dwelling means by which summons may be made by one and all.

T. McLinscott.