

THE TELEPHONE AS AN AID TO HEARING.

By D. B. ST. JOHN ROOSA, M. D., New York.

It has been observed for a long time that many persons with impaired hearing can hear perfectly well through the telephone, with the ear or ears that are impaired. It is not, perhaps, so well known that the condition in which this improvement occurs is one of disease of the middle ear. Those who have disease of the acoustic nerve, fortunately rare cases, are injured rather than assisted by the use of the telephone, and in no case is their hearing improved by the use of this instrument. The cause for this improved hearing in certain cases, is perhaps to be found in the increased vibration of the membrana tympani, caused by the rapid action of the sound waves upon the drum head. This is exactly the same thing that obtains with those people who hear better in a noise, which as I showed some years ago, occurs only in those with middle ear disease, and is probably dependent upon increased action of the membrana tympani and the ossicles, by the increased formation of sound waves, just as in the case of improvement of hearing through the telephone. It is not far to seek to find an ideal adaption of an open telephone, so to speak, for the improvement of hearing. The instrument sold by Mr. Hutchinson in New York, called the Acouphone, is more nearly like the telephone than anything I have seen. That apparatus which consists essentially of a transmitter and of electric wires connecting with it and with two receivers, the wires being supplied by a battery, is of the greatest use to certain people with disease of the middle ear. In properly chosen cases, the receiver may be placed on a table, the person with impaired hearing holding the transmitter. One need not talk into the receiver at all, but simply from any part of the room, to get very excellent hearing for certain persons who cannot hear ordinary conversation except close to their ears. I believe the physicist who will pay attention to this subject, could actually improve on any instrument on the market and make a large class of persons with incurable disease of the ear, causing great impairment of the hearing, able to transact business, go to the theatre and so forth, with satisfaction and enjoyment.—*Post-Graduate.*