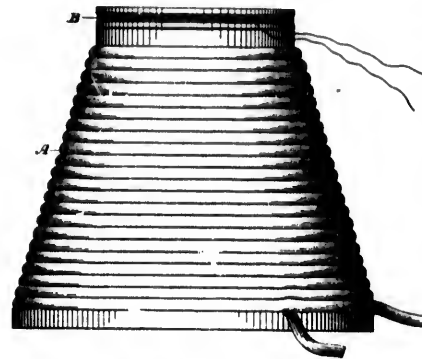


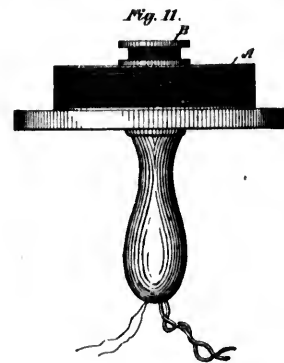
Singularly enough Mr. J. H. C. Watts, in Baltimore, had independently arrived at a very similar form of coil, and with

*Fig. 10.*



the instrument shown in Fig. 10 he had obtained at one time a hearing distance of 7.5 cm., (or 3 inches,<sup>1</sup>) but from some cause not ascertained he was unable subsequently to reproduce the effect.

The final form of apparatus adopted as the result of the above experiments is shown in Fig. 11. With this arrangement and a battery of six bichromate elements freshly set up, we were always sure of a hearing distance of at least 5 cm., although after the battery had been in use for some time the hearing distance hardly exceeded 4 cm.



The following are the dimensions of the coils A B (Fig. 11) and their resistance:

Coil. A.....	External diameter.....	7 cm.
	Internal diameter.....	4.5 cm.
	Depth.....	2.4 cm.
	Wire used, No. 23, (cotton covered.)	Resistance, 2 ohms.
Coil. B.....	External diameter.....	2.5 cm.
	Internal diameter.....	8 mm.
	Depth.....	8 mm.
	Wire used, No. 36, (silk covered.)	Resistance, 75 ohms.

<sup>1</sup> See Appendix, note 11.