W. W. DEAN.

TELEPHONE CASING.

APPLICATION FILED JUNE 8, 1910.

1,008,122. Patented Nov. 7, 1911.

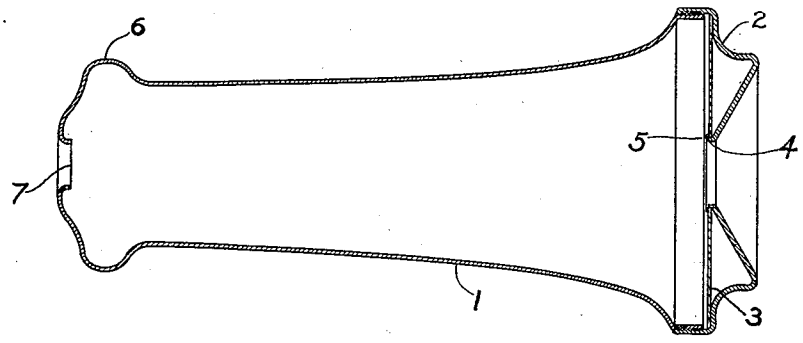

Fig 1

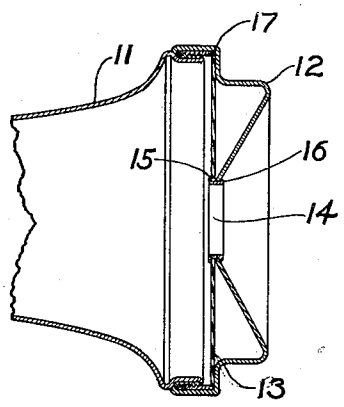

Fig 2

Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM W. DEAN, OF ELYRIA, OHIO, ASSIGNOR TO THE DEAN ELECTRIC COMPANY, OF ELYRIA, OHIO, A CORPORATION OF OHIO.

TELEPHONE-CASING.

1,008,122. Specification of Letters Patent. **Patented Nov. 7, 1911.**

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To all whom it may concern:

Be it known that I, WILLIAM W. DEAN, a citizen of the United States, residing at Elyria, in the county of Lorain and State of Ohio, have invented certain new and useful Improvements in Telephone-Casings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to telephone shells and contemplates more particularly the use of metallic shells with interior insulation. In a receiver shell I use an ear cap which is adapted to be fastened to the main portion of the shell. Within the cap end of the inclosure, I mount an insulating member. This member or diaphragm coöperates with the cap to form a chamber and if allowed to shift will separate from the cap sufficient to allow sound waves to pass into the chamber where they are extinguished. I connect the diaphragm to the shell in such a way as to prevent this.

My invention will be best understood by reference to the following description when taken in connection with the accompanying illustration showing specific embodiments thereof, while its scope will be more particularly pointed out in the appended claims.

Figure 1 is a cross section through a receiver shell showing my invention. Fig. 2 shows a modification.

1 is the main portion or body of the shell being substantially tubular in shape and closed at one end. This closed end is formed into an annular ring 6 and perforated at 7 to admit the conductors to the interior of the shell. The other end of the shell is expanded and open. A cap 2, is fastened to the shell closing the open end. This cap is folded inward to form an inverted cone and is perforated at the center to permit the passage of the sound waves to the ear when the shell is in use. Within the shell I show insulation 3 here shown in the form of a diaphragm. This diaphragm is perforated at the center to allow sound waves to pass from the receiver diaphragm to the ear. A chamber is formed between the diaphragm and the cap, into which part of the sound waves will be diverted and their energy uselessly expended against the walls thereof, if the joints between the diaphragm and the cap are open. The edge of the opening in the cap is folded, as shown at 4, over the edge of the opening in the diaphragm, clamping the two together by a rivet like joint. In Fig. 2 I show the main portion 11, cap 12, the diaphragm 13, and a hollow rivet 14 turned over at its edge 15 and 16 clamping the diaphragm and cap together. These joints make a substantially sound tight connection operating to exclude sound waves and to prevent the loosening and shifting of the insulation.

While I have shown these particular embodiments, it will be obvious to those skilled in the art, that numerous and extensive departures from the details of the apparatus here shown may be made without departing from the spirit of this invention, the same being herein shown solely for the purpose of clearly illustrating the said invention. For example I may employ a disk of any kind to close the hollow space in the ear cap and may otherwise insulate the mechanism from the shell or may employ my invention where a hollow cap of insulating material is used in connection with a diaphragm.

I claim:

1. In a telephone casing constructed of sheet metal, the combination of a main or body portion, a perforated ear cap adapted to be attached to said main portion, an insulating member to protect the metallic surface of the cap from any electrical apparatus mounted in the main portion and means connecting the insulating member and the cap together at the peripheries of the perforation in the cap.

2. In a telephone casing constructed of sheet metal, the combination of a main or body portion, a perforated ear cap adapted to be attached to said main portion, a perforated insulating diaphragm to protect the metallic surface of the cap from any electrical apparatus mounted in the main portion and a hollow rivet connecting the diaphragm and cap together at the peripheries of the perforations.

3. In a telephone casing the combination of a main portion and a perforated cap, a perforated diaphragm mounted in said casing and means connecting the diaphragm and cap together at the peripheries of the perforations.

4. In a telephone casing the combination of a main portion, a perforated cap therefor

and a perforated diaphragm mounted in said casing, said diaphragm and cap being riveted together.

5. In a telephone casing the combination of a main portion, a perforated cap therefor, a diaphragm mounted in said casing and a hollow rivet fastening said cap and diaphragm together.

6. In a telephone receiver shell constructed of sheet metal, the combination of a main or body portion, an ear cap perforated to permit the passage of sound waves therethrough, means to attach said cap to said main portion, a perforated insulating diaphragm mounted in said cap forming a chamber between the cap and the walls of the diaphragm and means to prevent sound waves from passing into said chamber.

7. In a telephone casing the combination of a main portion, a perforated ear cap therefor, a perforated insulating member, a hollow rivet connecting the edges of the peripheries, said cap and an insulating member forming a chamber between them.

8. In a telephone receiver shell constructed of sheet metal, the combination of a hollow main portion, an ear cap perforated to permit the passage of sound waves, means to connect said cap to said main portion, an insulating diaphragm mounted in said cap and means to prevent the sound waves from passing into the space between said cap and diaphragm.

9. In a telephone casing, the combination of a main portion, a cap therefor, insulating means mounted in said casing and connecting means uniting said cap and insulating means, said connecting means operating to exclude sound waves from the space between the cap and insulating means.

10. In a telephone casing, the combination of a main portion, a cap therefor, insulating means mounted in said casing, said casing and insulating means so associated as to form a hollow space between them and means to exclude the sound waves from said hollow space.

In testimony whereof I affix my signature in the presence of two witnesses.

WILLIAM W. DEAN.

Witnesses:
MARY MALLEY,
F. O. RICHEY.