

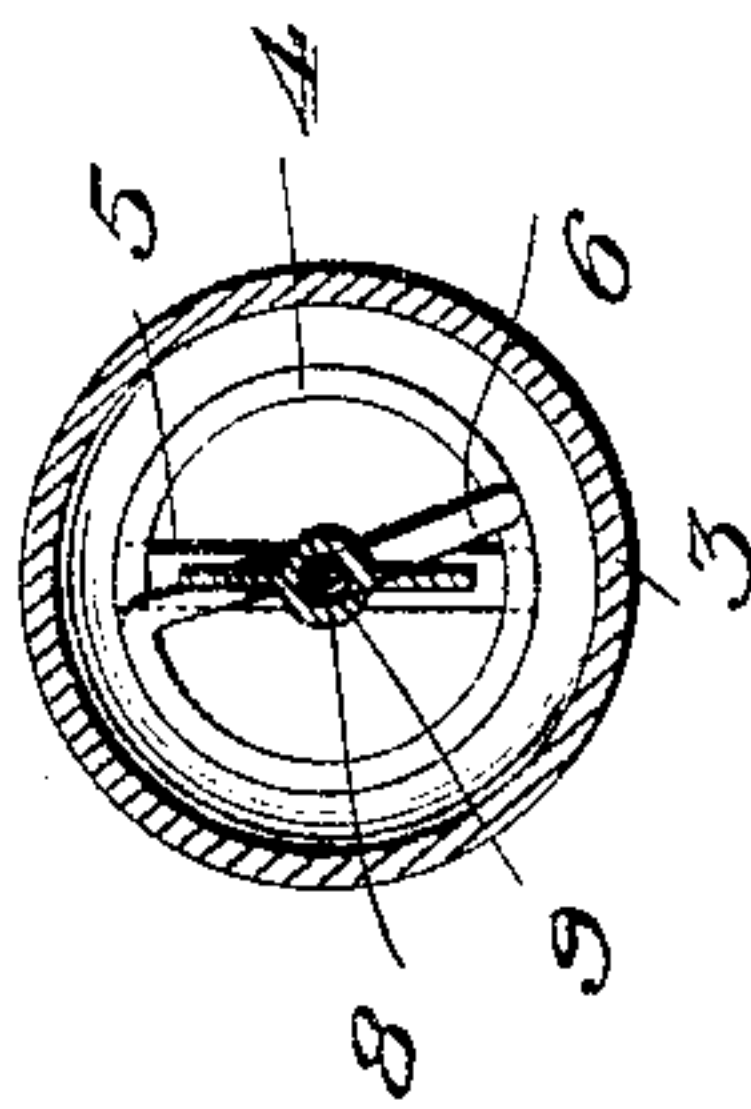
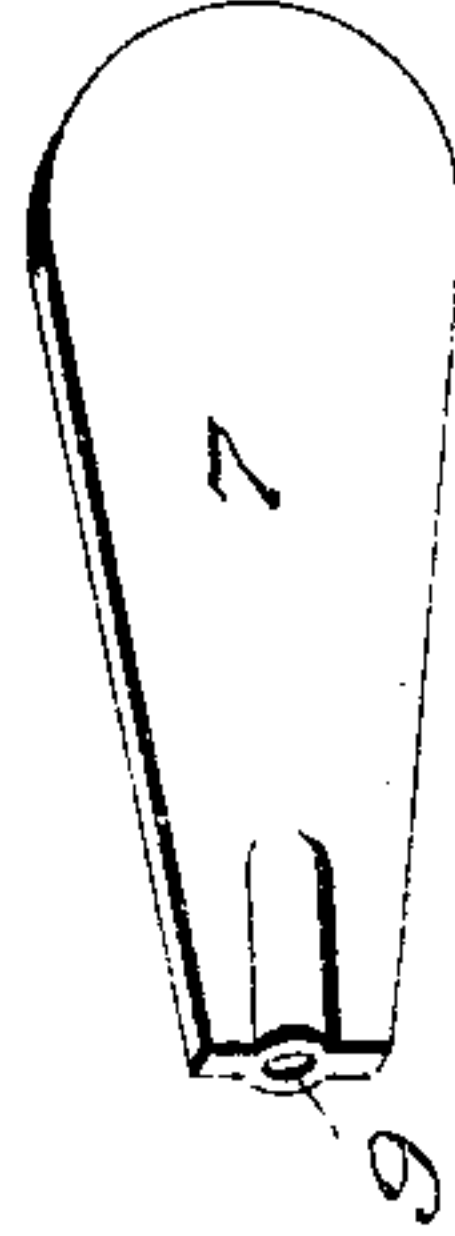
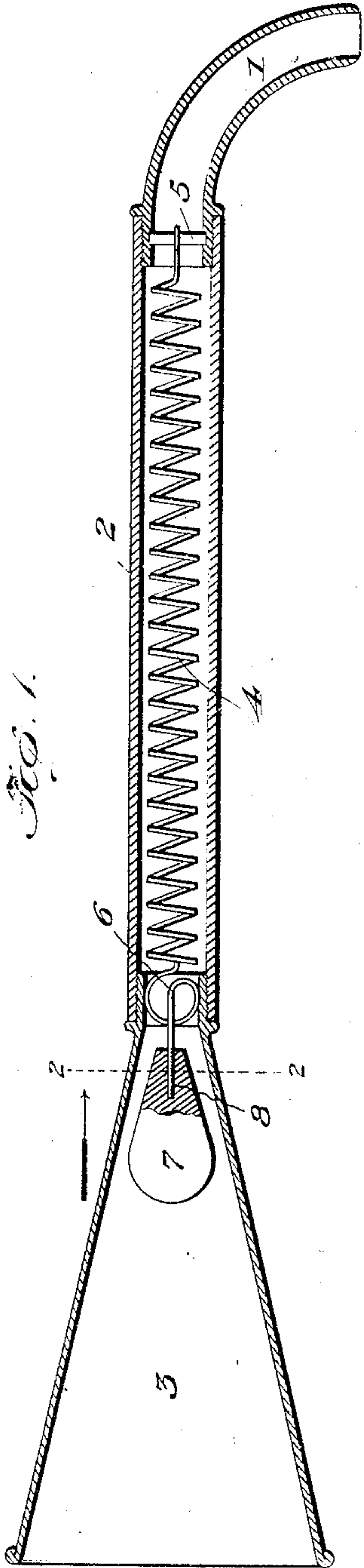
No. 780,699.

PATENTED JAN. 24, 1905.

A. W. AYLSWORTH.

EAR TRUMPET.

APPLICATION FILED SEPT. 27, 1904.



Witnesses

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UNITED STATES PATENT OFFICE.

ALVIN W. AYLSWORTH, OF FOSTORIA, OHIO.

EAR-TRUMPET.

SPECIFICATION forming part of Letters Patent No. 780,699, dated January 24, 1905.

Application filed September 27, 1904. Serial No. 226,098.

To all whom it may concern:

Be it known that I, ALVIN W. AYLSWORTH, a citizen of the United States of America, and a resident of Fostoria, Seneca county, and State of Ohio, have invented certain new and useful Improvements in Ear-Trumpets, of which the following is a specification.

This invention relates to certain new and useful improvements in ear-trumpets or speaking-tubes for use to make the deaf hear more readily.

The advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claims.

The invention in one of its preferred forms is clearly illustrated in the accompanying drawings, which, with the numerals of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a substantially central longitudinal section through the improved tube. Fig. 2 is a cross-section of the same as on the line 2 2 of Fig. 1. Fig. 3 is a perspective view of the vibrator detached.

Like numerals of reference indicate like parts throughout the several views in which they appear.

Referring now to the details of the drawings, 1 designates the portion adapted to enter the ear. It may be of any desired shape and material, such as vulcanized rubber or the like, and to one end of this is connected the tube 2, which may be of flexible rubber or other material which will serve the required function. This may be connected in any suitable manner. If of material capable of being screw-threaded, it may be screwed onto the end of the part 1, as shown. If of flexible rubber, it may be held in place on the member 1 by slipping over the end thereof and held by frictional contact of the parts. The other end of this tube 2 is designed to be connected in any suitable manner, as by screw-threading or otherwise, with the horn 3, which likewise may be of vulcanized rubber or any other material suited to the purpose. In some instances I may make it of aluminium, brass, copper, or other metal.

4 is a spiral conductor, preferably of wire,

copper wire being preferred. It is held at one end in any suitable manner, as by being secured to the cross-pin 5, held in the end of the member 1 centrally, so as to hold the spiral out of contact with the inner wall of the tube, and its other end is formed with a coil or convolute 6, which bears against the inner wall of the smaller end of the horn, as seen clearly in Fig. 1, and the free end of the wire extends centrally within the horn, as shown, and so as to hold the vibrator 7 out of contact with the walls of the horn, which would impede its vibration. This vibrator 7 may be formed of any durable substance suited for the purpose—such as aluminium, sheet-brass, or copper—and it may be secured on the end 8 of the wire in any suitable manner, preferably so that it may be readily removed when necessary. In the present instance it is shown as having a screw-threaded socket 9 to receive the threaded end of the wire; but other ways of connecting these parts may be devised.

The mode of use will be apparent, and the manifest advantages will be at once recognized and appreciated.

From the above it will be seen that I have devised a simple and efficient novel form of speaking-tube or ear-trumpet, and while the structural embodiment of the invention as hereinbefore disclosed is what I at the present time consider preferable it is evident that the same is subject to changes, variations, and modifications without departing from the spirit of the invention or sacrificing any of its advantages. I therefore do not intend to restrict myself to the details of construction, mode of connecting parts, material, or shape herein shown and described, but reserve the right to make such changes, variations, and modifications as come properly within the scope of the protection prayed.

What is claimed as new is—

1. A speaking-tube comprising a portion adapted to enter the ear, a tube connected with said portion, a horn, a spiral conveyer within said tube and held at one end within the horn, and a vibrator within the horn out of contact with the walls thereof and connected with the said conveyer.

2. A speaking-tube comprising a portion adapted to enter the ear, a tube connected with said portion, a conveyer held at one end within said portion and its other end extended beyond
5 the end of the tube, a horn within which the end of the conveyer extends, and a flat vibrator connected with the conveyer within the horn and held out of contact with the walls thereof.

3. A speaking-tube comprising a portion
10 adapted to enter the ear, a tube connected therewith, a horn having one end extended within said tube, a spiral conveyer having one

end connected within the said portion and near the other end formed with a convolute bearing against the inner wall of the smaller end of
15 the horn, and a vibrator carried by said conveyer within the horn.

Signed by me at Fostoria, Ohio, this 19th day of September, 1904.

ALVIN W. AYLSWORTH.

Witnesses:

R. L. UNDERWOOD,
JOHN R. BRADNER.