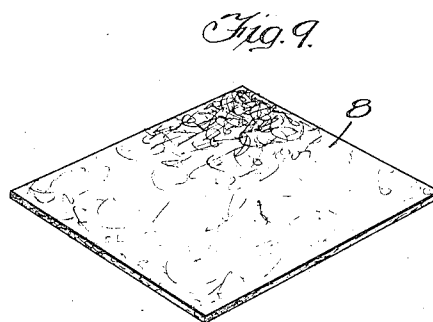
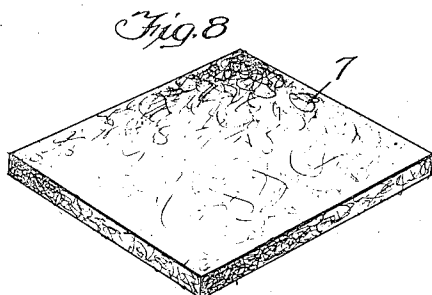
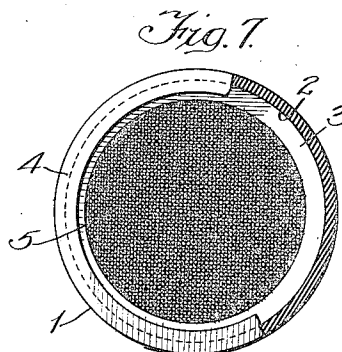
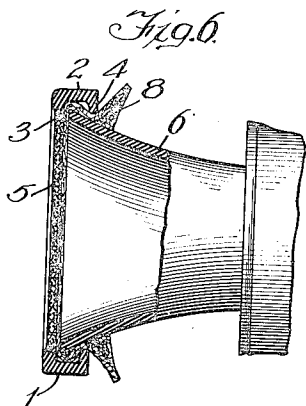
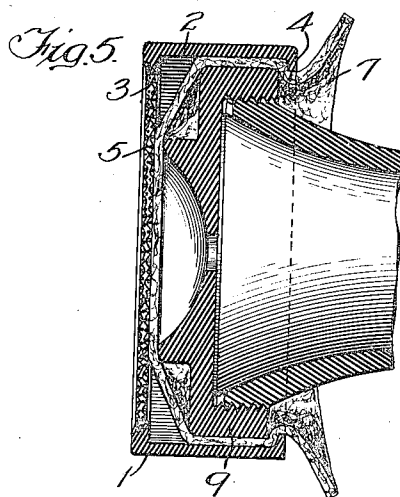
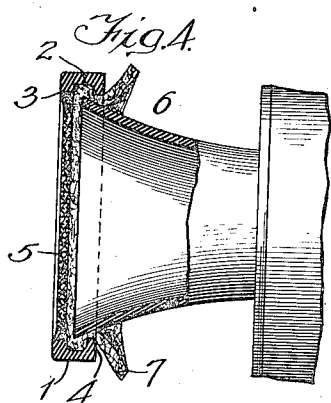


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APPLICATION FILED FEB. 12, 1917.

1,289,569.

Patented Dec. 31, 1918.

2 SHEETS—SHEET 2.



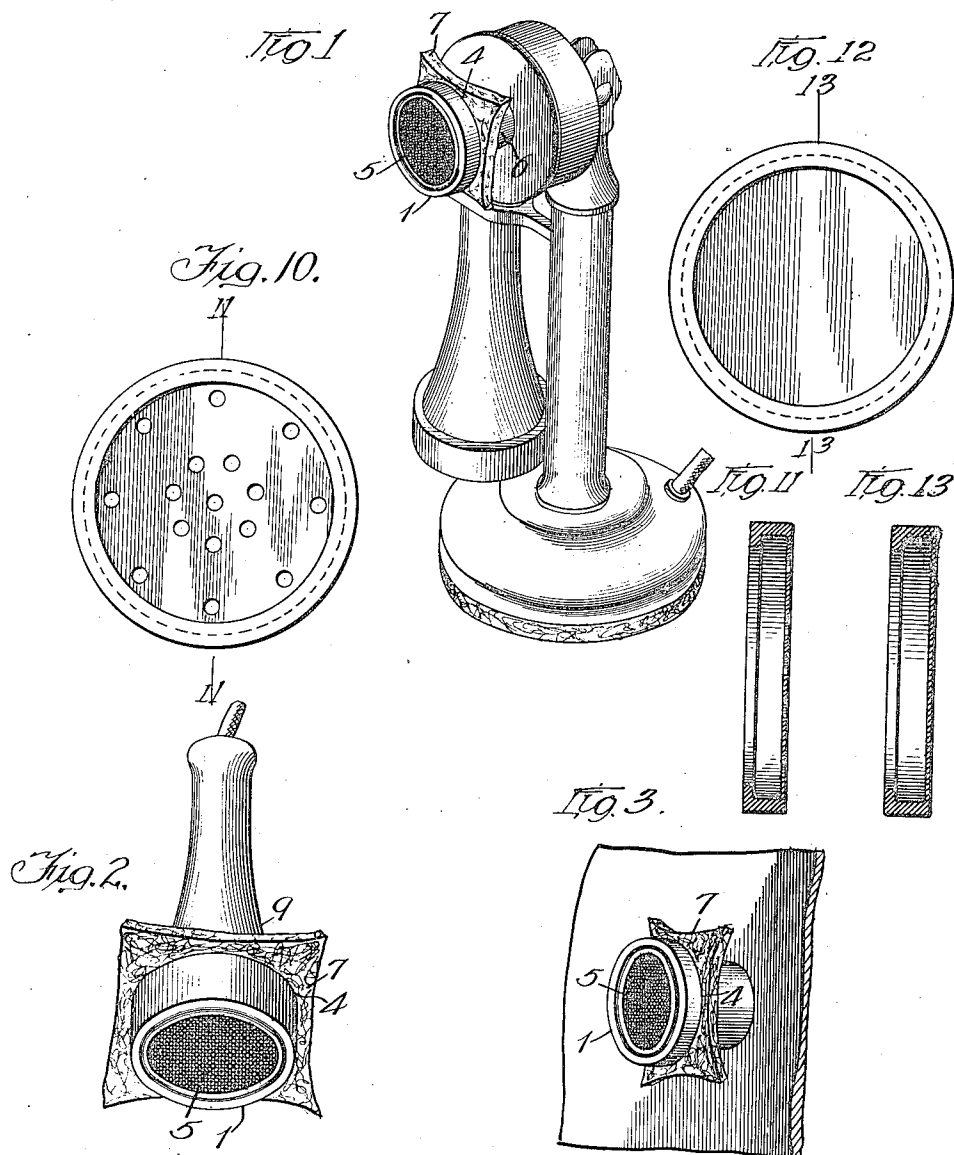
Witnesses:  
W. P. Kilroy  
Harry R. L. White.

Inventor  
William F. Stearns  
By *Rudolph Wm. Logg* Atty.

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Witnesses:  
W. F. Kilroy  
Harry R. L. White

Inventor:  
William F. Stearns  
By *Rudolph M. Loeb*  
Att'y.

# UNITED STATES PATENT OFFICE.

WILLIAM F. STEARNS, OF EXETER, NEW HAMPSHIRE.

ATTACHMENT FOR TELEPHONES AND THE LIKE.

1,289,569.

Specification of Letters Patent.

Patented Dec. 31, 1918.

Application filed February 12, 1917. Serial No. 148,244.

*To all whom it may concern:*

Be it known that I, WILLIAM F. STEARNS, citizen of the United States, residing at Exeter, in the county of Rockingham and State of New Hampshire, have invented certain new and useful Improvements in Attachments for Telephones and the like; 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.

This invention has for its object to provide a sanitary or hygienic telephone attachment adapted for the receivers and transmitters of telephones, for speaking tubes and similar devices adapted to contact, or come into close proximity with the lips and ears of individuals; the object of the invention being to provide means adapted to prevent the spread of disease by the transmission of germs from such devices to users thereof.

Users of telephones and the like come into direct contact with the surfaces of receivers and transmitters, and exhale and inhale air while using the instruments, in both cases perhaps lodging disease germs on such surfaces which are capable of transmission by similar means to others. Instruments located for convenience of the public are perhaps very efficient transmitters of such germs.

Much, if not all of this danger may be avoided by the use of portable attachments adapted to be carried by individuals and temporarily mounted upon the transmitter mouth-piece and receiver of the telephone during use for the dual purpose of preventing deposit on or receipt from such parts, of disease germs. This may be variously accomplished with more or less efficiency in any of the several ways and by any of the several means embodying the present invention as hereinafter fully described.

It is well-known to the medical fraternity and pathologists that germs do not penetrate through cotton, and my invention, therefore, contemplates the use of cotton as a protection against the transmission of germs from the receiver, transmitter, or the like, to the person using the same, the invention consisting particularly in means for easily and quickly mounting upon and removing from the telephone transmitter or receiver, or similar device, a layer of cotton or other ma-

terial of a suitable character to prevent the transmission of germs as aforesaid from said device to the ear or lips of the telephone user.

The particular object of the present invention is to provide a very small and compact device particularly adapted for easily and conveniently removably securing a layer of cotton or other suitable material over the mouth-piece or receiver of a telephone or the like, which is easily carried in the pocket and is cheap, durable and efficient and may be easily and thoroughly cleansed and fumigated or otherwise treated to maintain the same sanitary and hygienic.

The invention consists in the features of construction and combinations of parts hereinafter fully described and particularly claimed.

In the accompanying drawings illustrating the invention:

Figure —1— is a perspective view of an ordinary telephone equipped with cotton and retaining devices therefor, the latter being constructed in accordance with the invention.

Fig. —2— is a perspective view of a telephone receiver equipped with said device and such cotton.

Fig. —3— is a fragmentary detail perspective view showing the transmitter of a speaking tube similarly equipped.

Fig. —4— is a fragmentary detail central vertical section of a telephone transmitter mouth-piece equipped with a cotton-retaining device embodying the invention.

Fig. —5— is a similar view of a telephone receiver similarly equipped.

Fig. —6— is a view similar to Fig. —4— showing a thin layer of felted or compressed cotton employed.

Fig. —7— is a view in rear elevation partly in section of a cotton-retaining device constructed in accordance with the invention.

Figs. —8— and —9— are respectively detail views of ordinary felted absorbent cotton sheeting and compressed cotton sheeting adapted to be used in connection with my said device.

Fig. —10— is a view in elevation partly in section showing another embodiment of the invention.

Fig. —11— is a section on the line 11—11 of Fig. —10—,

Fig. —12— is a view similar to Fig. —10— showing still another embodiment of the invention.

Fig. —13— is a section on the line 13—13 of Fig. —12—.

My said device in its preferred embodiment consists of a flexible ring 1, preferably made of soft rubber, and which is channel-shaped in cross-section, the same being provided with an interior annular groove 2 bordered by the annular flanges 3 and 4 respectively. Spanning one end of this ring 1 and secured to said flange 3 is a disk or a plurality of disks of a suitable material as desired. Thus as shown in Figs. —1— to —7— inclusive, the disk 5 consists of woven wire fabric, such as window screening, which is embedded along its periphery in the flange 2 and thus firmly secured and offers a foraminous surface through which sound will easily penetrate. This foraminous fabric 5 lends stiffness and rigidity to the flange 3 into which it extends; the flange 4 and the intermediate portion, constituting the bottom of the groove 2, being preferably very elastic and flexible. Or as shown in Fig. —10— the disk 10 may be of rubber provided with perforations, or as shown in Fig. —12— the disk 11 may be of rubber and devoid of perforations.

The opening bordered by the flange 4 is preferably of such dimensions relatively to the mouth-piece 6 of the telephone transmitter as to cause the same to relatively snugly hug the rim of said mouth-piece 6 when mounted thereon with a filler or layer 7 of cotton or other suitable material, which may be either a very loosely felted cotton, such as the ordinary absorbent cotton, sold in packages in all drug stores, or it may consist of a layer 8 of compressed cotton sheeting which is adapted to lie against and cover the inner face of the foraminous material 5, and to substantially fill the channel groove 2 of the ring 1 and project between the inner edge of the flange 4 and the opposed portion of the rim of the mouth-piece 6. For convenience the layer of cotton 8 or 7 consists preferably of a square, or substantially square, piece the edge portions of which will project outwardly from the outer face of the flange 4 of the ring. The cotton is thus detachably held in place over the mouth-piece 6, and will prevent the transmission of germs from said transmitter to the mouth and nose of the user in breathing while conversing through the telephone, speaking-tube or the like. The said flange 4 will be somewhat smaller than the diameter of the rim of the mouth-piece of the instrument plus the thickness of the layer of cotton surrounding the same, and will be sprung over the latter.

The device is very small and compact, and

may be easily carried in the vest pocket of the user. It is principally designed and intended for the transmitter mouth-pieces of telephones, but may, as shown in Fig. —5—, be constructed to adapt it for use on telephone receivers, the diameter and depth of the ring 9 corresponding to the ring 1 being respectively increased to render it suited to this particular purpose.

The cotton, being very porous, does not interfere with the transmission of sound waves from the mouth of the transmitter and from the receiver to the ear respectively, but will protect the user against the possibility of contagion from the use of the instrument. I have found that in practice the device of Figs. —12— and —13— presenting a non-foraminous surface, transmits sound quite as efficiently as the foraminous disks shown in the other figures, and this device possesses the added advantage that it may be used with or without the layer of cotton, thus particularly adapting it for popular use.

Preferably the foraminous material 5 comprises several layers or disks of ordinary preferably rust-proof window screening relatively disposed so that the longitudinal and transverse wires of the several disks extend angularly relatively to each other, thus lending stiffness and rigidity to the whole structure, and better adapting it to the purpose and insuring longer life thereto.

The cotton may obviously be renewed from time to time and the device boiled or otherwise subjected to the action of suitable germicides to maintain the same free of germs and thus thoroughly sanitary and hygienic.

While the edges of the disk or disks 5 are preferably embedded in the flange 3 to firmly secure the same to the ring 1, it will be obvious that any other suitable means for securing the same may be substituted without departing from the invention, the embodiment shown and described being obviously capable of modification without departing from the invention as defined in the appended claims.

Obviously the devices illustrated and described herein may be varied in dimensions to adapt them to all variations in shape and size of the instruments to which they are adapted to be attached.

I claim as my invention:

The herein-described improvements comprising in combination a pad of relatively soft fibrous material of larger area than and adapted to cover the mouth of a telephone receiver and the like and having its edge portion formed over the edge portion of the same, an elastic rim adapted to be sprung over the said edge and the edge portion of the pad for holding the latter engaged with the device to present a porous

diaphragm covering the mouth thereof, and  
a foraminous disk mounted in and bordered  
by said elastic rim and extending entirely  
over and covering the visible middle por-  
5 tion of said pad.

In testimony whereof I have signed my

name in presence of two subscribing wit-  
nesses.

WILLIAM F. STEARNS.

Witnesses:

ELSIE I. BUSWELL,

FRANK A. BATCHELDER.