B. E. CHAPIN.

ACOUSTIC STAND FOR TELEPHONE RECEIVERS.

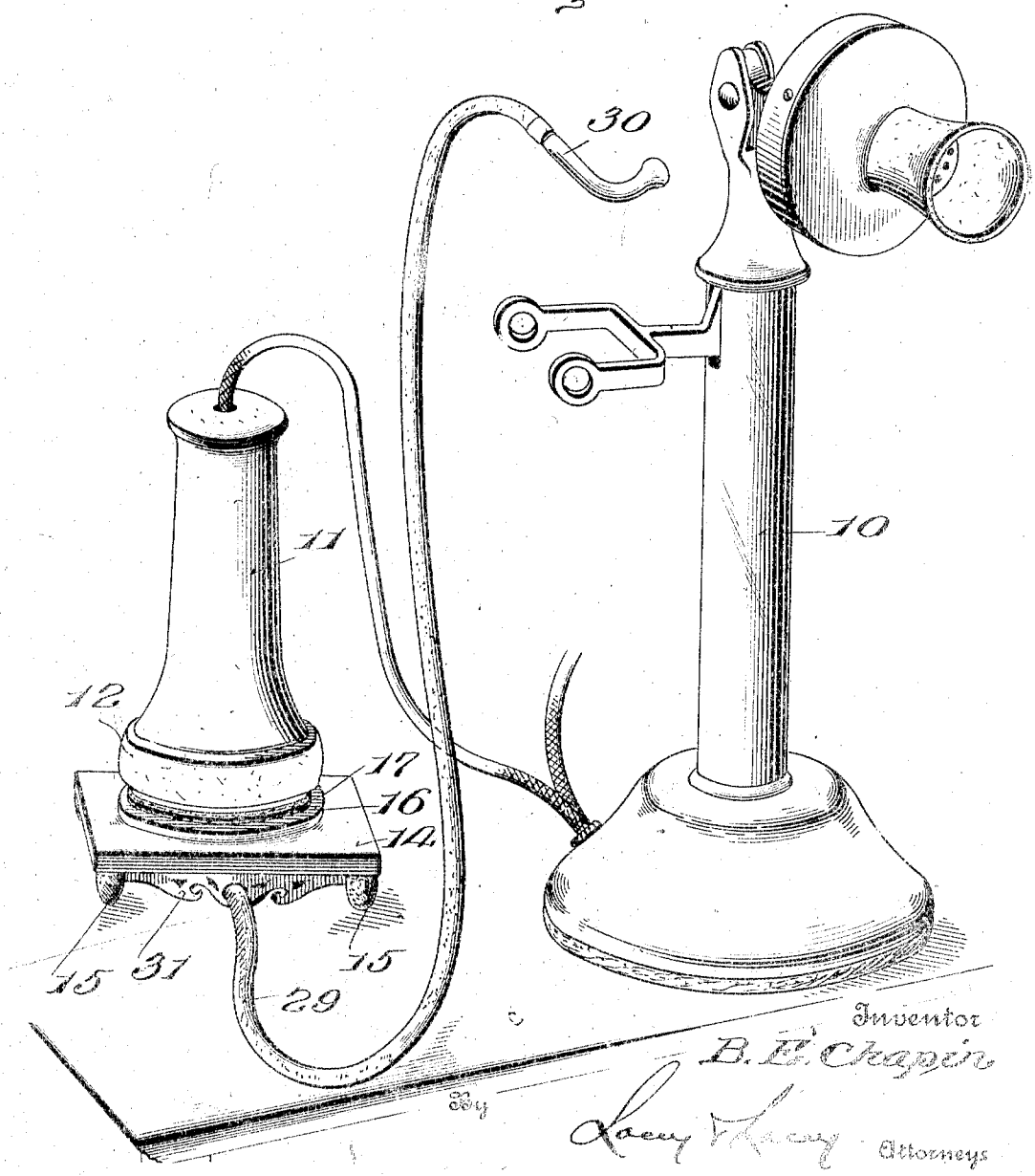
APPLICATION FILED AUG. 26, 1918.

1,341,358.

Patented May 25, 1920.

2 SHEETS—SHEET 1.

FIG. 1.



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2 SHEETS—SHEET 2.

FIG. 2.

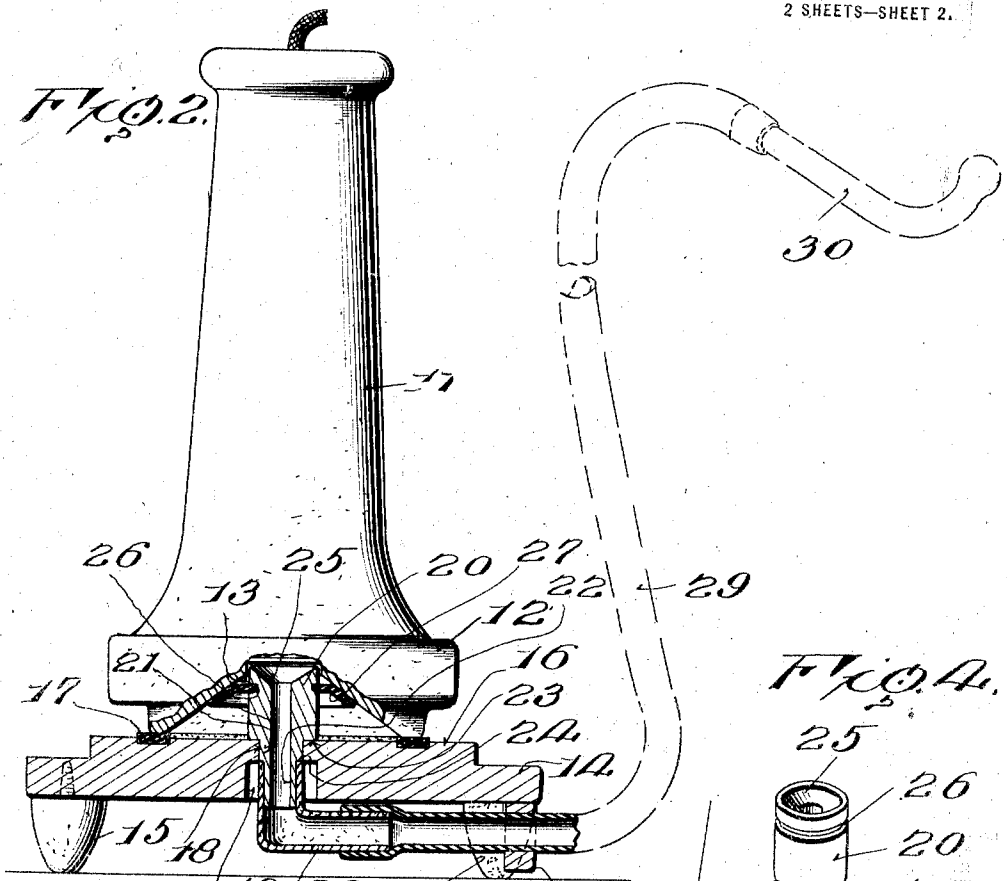
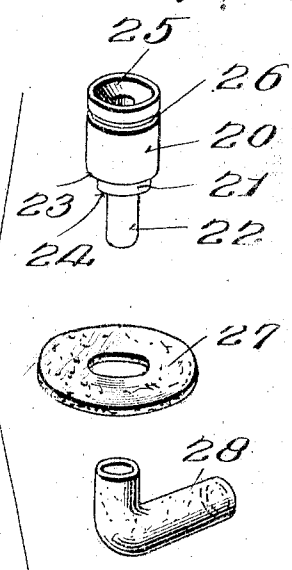


FIG. 4.



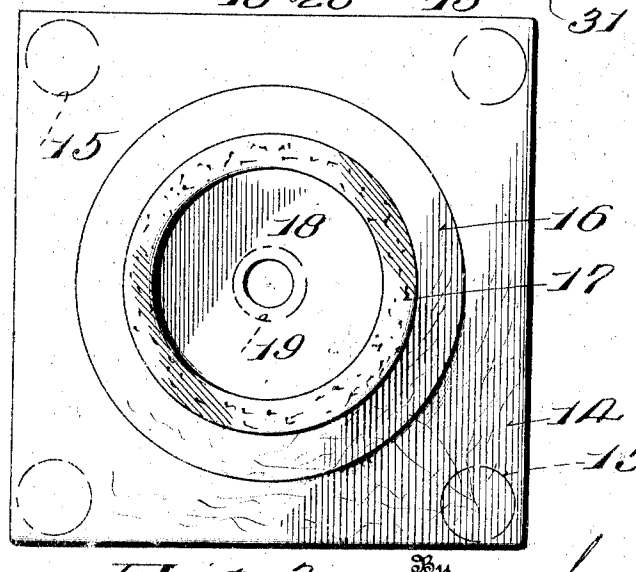


FIG. 3.

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ACOUSTIC STAND FOR TELEPHONE-RECEIVERS.

1,341,358. Specification of Letters Patent. Patented May 25, 1920.

Application filed August 26, 1918. Serial No. 251,526.

To all whom it may concern:

Be it known that I, BYRON E. CHAPIN, a citizen of the United States, residing at Oklahoma, in the county of Oklahoma and State of Oklahoma, have invented certain new and useful Improvements in Acoustic Stands for Telephone-Receivers, of which the following is a specification.

This invention relates to an improved acoustic stand designed for use in connection with a telephone and has as its primary object to provide a stand upon which the telephone receiver may be rested, when the telephone is in use, and equipped with a listening tube through which the sound vibrations produced by the receiver will be carried to the ears of the listener and thereby eliminate the necessity for holding the receiver directly against the head.

The invention has as a further object to provide a stand of such construction that substantially all of the sound waves produced by the receiver will be communicated to the ears of the listener while, at the same time, extraneous sounds will be shut out of the receiver.

The invention has as a still further object to provide a construction wherein communication to the stand of sound vibrations emanating from the receiver will be prevented to accordingly overcome responsive discordant vibrations in the stand.

And the invention has as a still further object to provide a device which may be readily employed with the receiver of substantially any type of telephone now in common use.

Other and incidental objects will appear during the course of the detailed description of the invention. In the drawings, wherein I have illustrated the preferred embodiment of the invention, and wherein similar reference characters designate corresponding parts throughout the several views:

Figure 1 is a perspective view showing the receiver of a conventional type of telephone in position upon my improved stand,

Fig. 2 is a sectional view more particularly illustrating the structural details of the stand and the manner in which the stand is formed to support the telephone receiver, the receiver being illustrated in elevation and partly broken away,

Fig. 3 is a plan view of the stand having the sound plug thereof removed, and

Fig. 4 is a perspective view showing the auditory tube plug of the stand in detail, its extraneous sound excluding apron, and the elbow connected with the said plug.

Referring now more particularly to the drawings I have shown my improved stand in connection with a conventional type of telephone 10 having a receiver 11. This receiver is provided with the usual ear piece 12 having a flared sound opening 13 therein. In carrying the invention into effect I employ a stand which is formed with a rectangular body block 14. This body block is preferably formed of wood and is supported by foot knobs 15 connected thereto in any approved manner adjacent its corners. The knobs 15 are preferably of rubber so as to prevent the transmission of sound vibrations to the body block from the object upon which the stand is rested. Centrally the body block is formed with an annular raised portion 16 in which is seated an annular sound insulating and cushioning member 17. This member is preferably in the nature of a rubber ring and is fixed within a suitable groove in the upper face of the raised portion 16, the ring projecting, as particularly shown in Fig. 2, a slight distance above the top face of the raised portion.

Formed through the stand body 14 centrally thereof and axially with respect to the cushioning member 17, is an opening 18 enlarged throughout the major portion of its length to provide a recess 19 at the lower side of the stand body. Removably engaged in said opening is a sound tube or plug 20, shown in detail in Fig. 4 of the drawings. The plug 20 is preferably formed of wood so as to eliminate any metallic vibrations therein and the wood of the block is such as to possess good phonetic properties so as to facilitate the transmission of sound vibrations therethrough. Formed on the plug is a reduced annular shank 21 terminating in a further reduced nipple 22. An annular shoulder 23 is thus formed at the inner end of the shank and a similar shoulder 24 at the inner end of the nipple. As particularly shown in Fig. 2 of the drawings, the shank 21 is snugly received within the opening 18 for connecting the plug with the stand body while the shoulder 23 of the plug rests against the upper face of the stand body for thus supporting the plug to upstand from the stand body axially of the cushioning member 17. The plug is cylindrical, being of a diameter slightly less than

the diameter of the opening 13 in the ear piece 12 of the telephone receiver, and at its upper end is formed with a flared sound collecting bowl 25. Formed in the plug adjacent its upper end is an annular groove 26 and engaged in this groove is an extraneous sound excluding apron or washer 27. The washer 27 is preferably formed of rubber and is normally flat.

Snugly fitted over the nipple 22 of the plug 20 within the recess 19 in the stand body, is one end of an elbow 28 abutting the shoulder 24 of the plug shank. This elbow may be formed of hard rubber, ebonite, or the like, and, as will be obvious, will hold the plug 20 against upward displacement. Fitted over the opposite end of said elbow is a flexible listening tube 29. The tube 29 may be formed of rubber and, at its free end, may be equipped with a single ear tube 30, or, if preferred, may in the well known manner, be equipped with a pair of such tubes. Suitably connected to the lower side of the stand body at one side edge thereof, is a guide strip 31, which, to increase the attractiveness of the device may, as shown in Fig. 1 of the drawings, be in the nature of a grill. This guide strip is, as shown in Fig. 2, formed to snugly receive the listening tube 29 therethrough and supports the inner end portion of the said tube with respect to the elbow 28 while, at the same time, tending to prevent accidental disengagement of the tube from the elbow.

As will now be seen upon an inspection of Figs. 1 and 2 of the drawings, the cushioning member 17 is of a diameter to receive the ear piece 12 so that the telephone receiver may, when the telephone is in use, be rested upon the stand by simply fitting the ear piece over the sound plug 20 to engage at its outer end with the cushioning member. This cushioning member will, therefore, act to not only yieldably support the receiver but, as will be clear, will also provide practically a sealed joint between the stand body and the receiver and will thus insulate the interior of the flared opening of the ear piece 12 of the receiver with respect to outside sounds.

As shown in Fig. 2, when the receiver is thus rested upon the stand the sound plug 20 will fit snugly within the opening 13 of the ear piece in close spaced relation to the diaphragm of the receiver. Sound vibrations given off by the diaphragm will thus be collected within the bowl 25 of the sound plug and directed thereby through the plug and through the listening tube to the ears of the party using the telephone. At the same time, the apron 27 will be engaged by the flared face of the sound opening in the ear piece 12 and flexed downwardly thereby so that a practically sealed joint will be provided between this apron and the said ear piece for effectually excluding, in addition to the similar function of the cushioning member 17, extraneous sounds from the bowl 25 of the sound plug, as well as stopping the vibrations emanating from the diaphragm of the receiver and directing substantially all of such vibrations through the sound plug to be carried through the listening tube. I thus provide a highly efficient device for the purpose set forth and a stand of such structural character that practically all of the vibrations given off by the diaphragm of the receiver will be carried to the ears of the party using the telephone while, at the same time, foreign interfering sound vibrations will be practically excluded. Should the sound plug of the device become impaired, this plug may, as will be observed, be easily renewed and similarly, the apron 27 of the plug may also be readily renewed when found necessary, without the necessity for discarding the plug. The device may thus be readily maintained at its maximum efficiency.

Having thus described the invention, what is claimed as new is:

1. An acoustic stand for telephone receivers including a stand body, a sound plug provided with a reduced inner end portion defining a shoulder upon the plug, said reduced inner end portion of the plug being fitted through the stand body to engage said shoulder therewith for supporting the plug upon the body, and means connected with the reduced inner end portion of the plug at the lower side of the body and holding the plug against upward displacement, the body being adapted to support a telephone receiver rested thereon to fit over the sound plug.

2. An acoustic stand for telephone receivers including a stand body, a sound tube upstanding therefrom and formed in its periphery with a groove, and an annular flexible sound excluding apron fitting around the tube and engaged in said groove, the apron being adapted to contact at its free margin with the wall of the sound opening of the ear piece of a telephone receiver rested upon the stand over the sound tube.

3. An acoustic stand for telephone receivers including a stand body, a sound tube upstanding therefrom, and a flexible sound excluding apron removably fitted upon the tube to be supported thereby above the body, the apron being adapted to contact at its free margin with the wall of the sound opening of the ear piece of a telephone receiver rested upon the stand over the tube.

In testimony whereof I affix my signature.

BYRON E. CHAPIN. [L. S.]