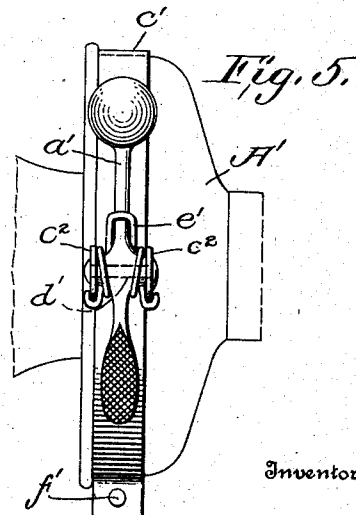
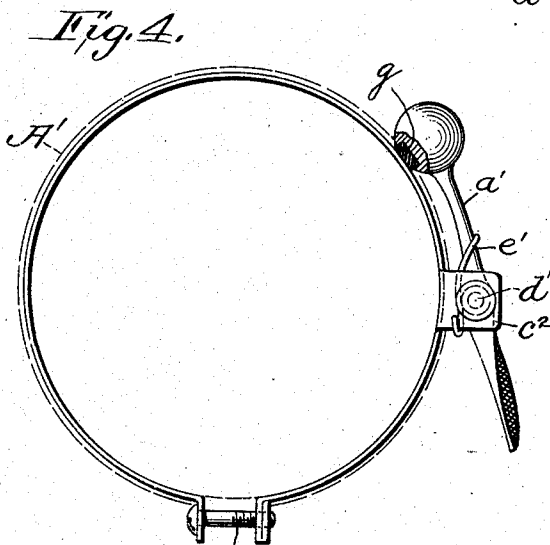
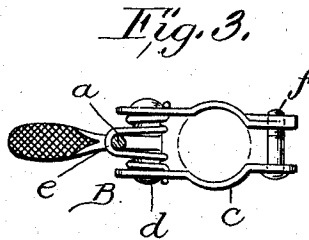
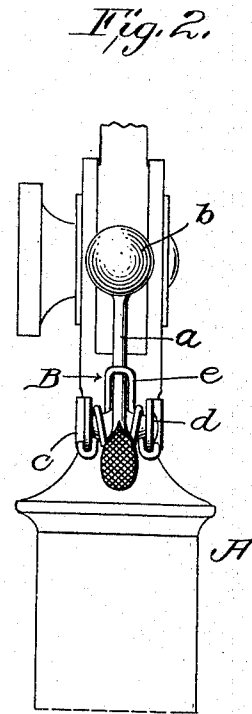
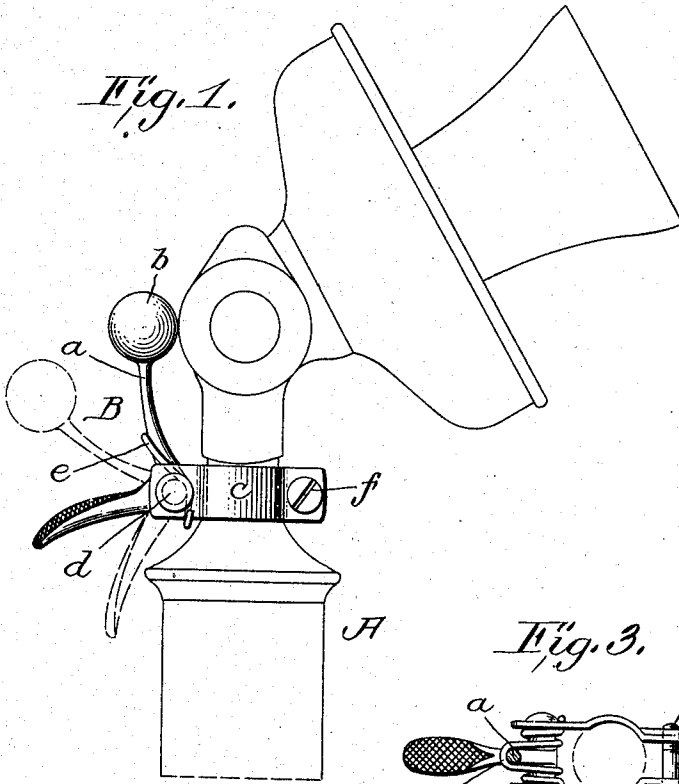


J. P. EDWARDS.
VIBRATOR FOR TELEPHONE TRANSMITTERS.
APPLICATION FILED JULY 15, 1909.

946,664.

Patented Jan. 18, 1910.



Witnesses

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JOSEPH P. EDWARDS, OF CHICO, CALIFORNIA.

VIBRATOR FOR TELEPHONE-TRANSMITTERS.

946,664.

Specification of Letters Patent.

Patented Jan. 18, 1910.

Application filed July 15, 1909. Serial No. 507,796.

To all whom it may concern:

Be it known that I, JOSEPH P. EDWARDS, citizen of the United States, residing at Chico, in the county of Butte and State of California, have invented new and useful Improvements in Vibrators for Telephone-Transmitters, of which the following is a specification.

My invention has relation to telephone transmitters, and contemplates the provision of means through the medium of which a transmitter may be expeditiously and easily vibrated with a view of agitating or loosening the carbon when the same is lacking in efficiency or practically inoperative, and this without subjecting any part of the telephone instalment to rough handling and injury.

The invention will be fully understood from the following description and claims when the same are read in connection with the drawings, accompanying and forming part of this specification, in which:

Figures 1 and 2 are views taken at right angles to each other and showing one practical embodiment of my invention. Fig. 3 is a plan view showing my novel vibrator in the form of an attachment. Figs. 4 and 5 are views at right angles to each other, illustrating a modified application of the vibrator to a transmitter.

Referring by letter to the said drawings, and more particularly to Figs. 1 to 3 thereof: A is a telephone transmitter of the kind comprised in the ordinary, well known movable sets, and B is my novel vibrator which essentially comprises a knocker *a* for striking against a part of the transmitter and putting the same under vibration for the purpose stated. The knocker *a* is preferably in the form of a lever having a head *b* at one end, and pivoted at an intermediate point of its length to a body *c*, and in addition to the said knocker *a* and body *c*, the vibrator comprises a pivot pin *d*, and a spring *e*, the latter having a loop straddling the upper portion of the knocker, and being coiled about the center of movement of the knocker and being then made fast at its ends to the body *c*.

In the embodiment shown in Figs. 1 to 3, the body *c* is in the form of a clamp having side members connected by the before mentioned pin *d* and by a screw *f*. Thus it will be seen that the body may be quickly and easily fixed on the upright of the transmitter A at the point shown in Figs. 1 and 2.

With the vibrator applied as shown in the figures stated, it will be manifest that when it is necessary to vibrate the transmitter in order to loosen the carbon or for any other purpose, it is simply necessary for the person using the telephone to depress the lower arm of the knocker so as to put the spring *e* under tension, and then release the said arm suddenly, whereupon the head *b* will be forcibly impelled against the transmitter, and in that way will bring about the desired vibration.

It will here be noted that the lower arm of the knocker may be depressed and suddenly released as many times as necessary to render the transmitter efficient, and that the operation of the vibrator is not attended by injury to the transmitter. It will further be noted that the vibrator is so arranged, relative to the upright of the transmitter, that the operator is enabled while grasping said upright in the hand, to conveniently manipulate the knocker *a* with the thumb or one finger.

The embodiment of my invention shown in Figs. 4 and 5 is designed more particularly for application to an immovable transmitter A', and comprises a clamp-like body *c'* designed to surround the transmitter and be secured thereon by a screw *f'*, ears *c''* carried by and forming part of the body *c'*, a knocker *a'*, pivotally connected by a pin *d'* to the ears *c''*, and a spring *e'*, applied to the knocker and the body in the same manner that the spring *e* is applied to the knocker and body shown in Figs. 1 and 2. The knocker *a'* is also operated in the same manner as the knocker *a* of Figs. 1 to 3, and it is therefore deemed unnecessary to reiterate such operation.

As shown in Fig. 4, the head of the knocker *a'* is provided with a pad *g* designed to bring up against the transmitter and prevent in a large measure noise when the vibrator is operated, and from this it will be understood that when preferable either the knocker head or the transmitter in either embodiment of my invention may be equipped with a pad. The pad, however, does not affect my invention, and may therefore be omitted when deemed expedient. I would also have it understood that without involving departure from the scope of my invention, a spring of a type different from that shown may be employed; also, that such other changes or modifica-

tions may be made in the future practice of the invention as do not depart from the spirit of my invention as claimed. I prefer, however, to employ one or the other of the constructions illustrated, this because of the simplicity and durability of the same, and the fact that each is susceptible of application to types of telephones at present in general use, without the necessity of employing skilled labor.

Having described my invention, what I claim and desire to secure by Letters-Patent, is:

1. The combination of a telephone transmitter, and a knocker connected with the transmitter and adapted, when actuated, to strike against and vibrate the same.

2. The combination with a telephone transmitter, of a vibrator carried by the transmitter and comprising a spring-impelled knocker for striking against the outer side of the transmitter.

3. The combination with a telephone transmitter, of a vibrator carried by and adapted to swing with respect to the transmitter, and also adapted when manually moved in one direction and released to swing against and strike the transmitter.

4. The combination with a telephone transmitter, of a body thereon, a knocker pivoted at an intermediate point of its length to the body and having a head adapted to bring up against the transmitter, and a spring that is placed under tension by manual movement of the knocker in one

direction and serves to impel the knocker in the other direction.

5. The combination with a telephone transmitter, of a clamp-like body secured thereon, a knocker pivoted at an intermediate point of its length to the body and having a head on one of its arms and its other arm forming a finger or thumbpiece, and a spring connected with the body and cooperating with the knocker to impel the head of the knocker against the transmitter after the knocker is moved to carry the head away from the transmitter and is then released.

6. As a new article of manufacture, a vibrator comprising a body adapted to be attached to a transmitter, and a knocker pivoted to the said body.

7. As a new article of manufacture, a vibrator comprising a clamp-like body adapted to embrace and be fixed on a part of a transmitter, and a spring-impelled knocker pivoted to the said body and having a head or enlargement adapted when the knocker is moved in one direction to put its spring under tension and is then released, to be impelled by the spring against the transmitter.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOSEPH P. EDWARDS.

Witnesses:

CHESTER H. ROAKE,
GRACE THURMAN.