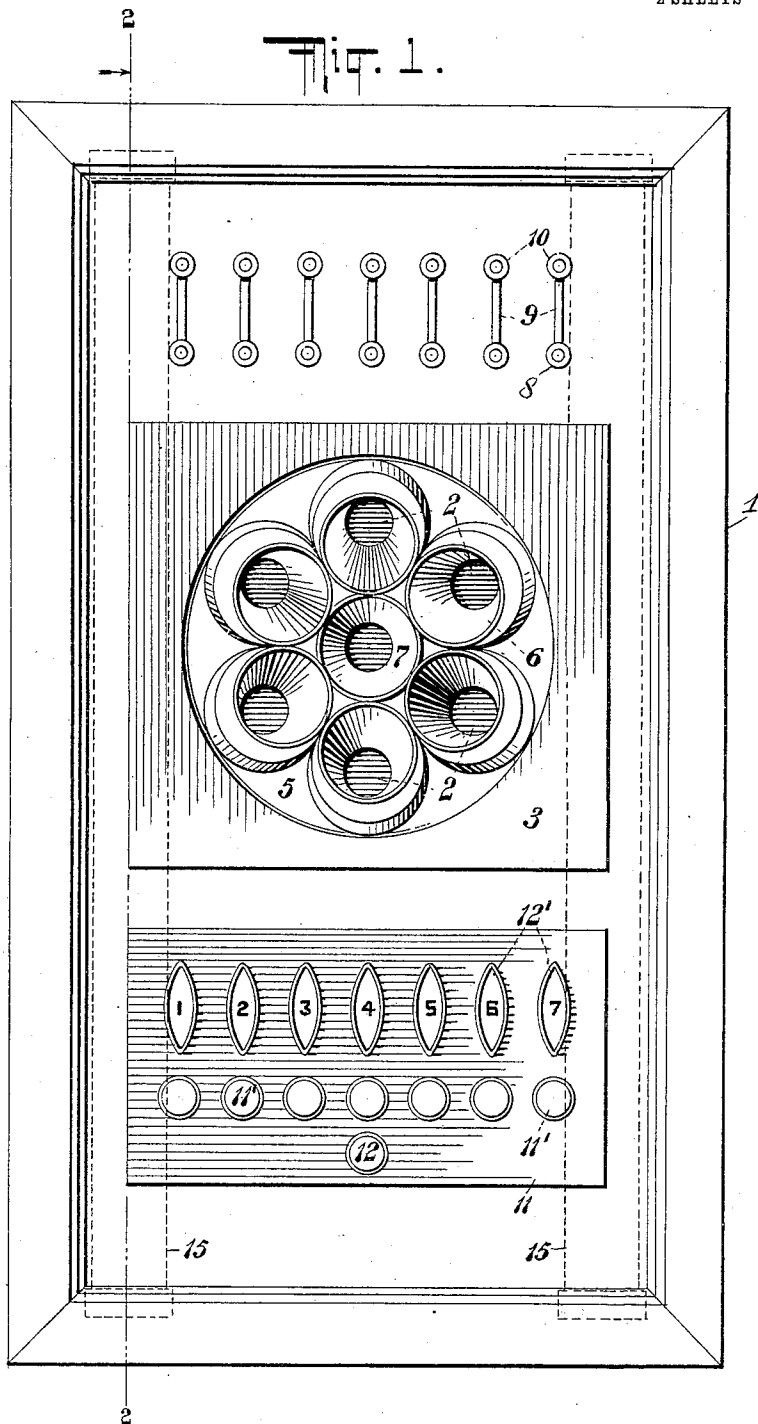


A. G. KAUFMAN.
TELEPHONE TRANSMITTER.
APPLICATION FILED AUG. 28, 1907.

931,127.

Patented Aug. 17, 1909.

2 SHEETS-SHEET 1.



Witnesses:
John A. Kellenbeck.
Arthur Wright

Inventor
Adolph G. Kaufman
By his Attorneys
Briesen & Knauth

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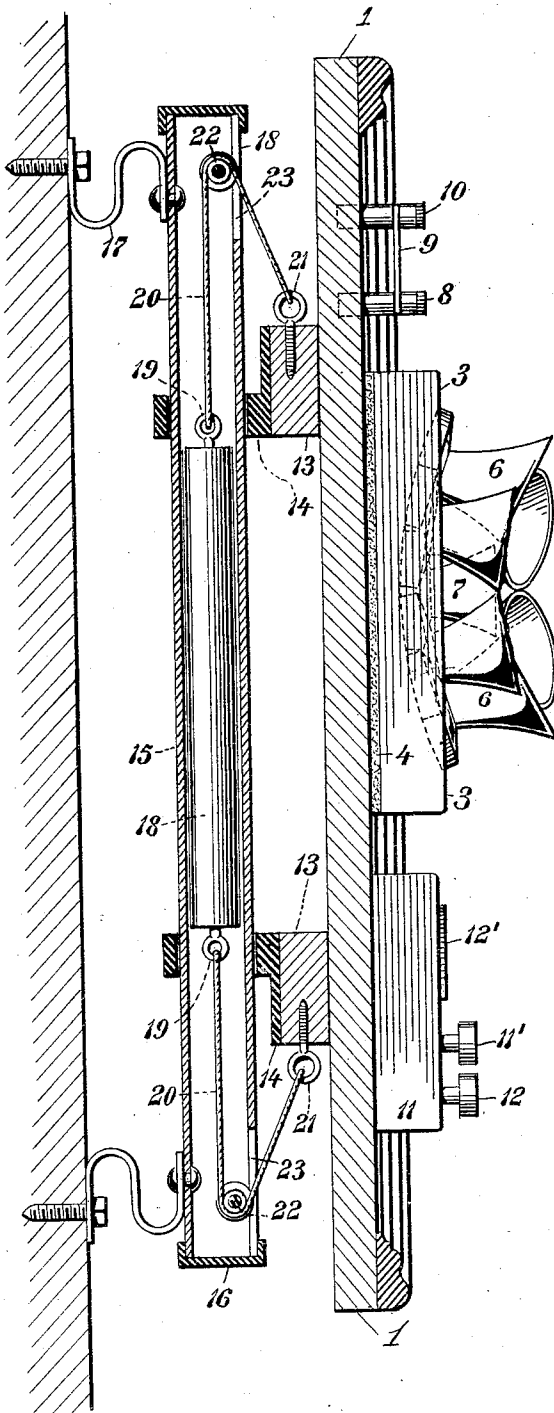


Fig. 2.

Witnesses:
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UNITED STATES PATENT OFFICE.

ADOLPH G. KAUFMAN, OF NEW YORK, N. Y., ASSIGNOR TO AMERICAN CALLAPHONE COMPANY,
OF NEW YORK, N. Y., A CORPORATION OF GEORGIA.

TELEPHONE-TRANSMITTER.

No. 931,127.

Specification of Letters Patent.

Patented Aug. 17, 1909.

Application filed August 28, 1907. Serial No. 390,422.

To all whom it may concern:

Be it known that I, ADOLPH G. KAUFMAN, a citizen of the United States, and a resident of the city, county, and State of New York, have invented a new and useful Improvement in Telephone-Transmitters, of which the following is a specification.

My invention relates to certain attachments used for supporting telephone transmitters and is designed particularly to provide an adjusting means whereby the elevation of the instrument can be readily adjusted to the varying heights of different people.

In addition to this my invention comprises a resilient supporting means for the entire apparatus, both the transmitter proper and the elevation adjusting means. The value of the latter will be seen from the fact that all of these improved attachments have been especially adapted by me to use in magnifying telephones, that is to say in that character of telephones where every precaution is taken to transmit as much of the speaker's voice as possible to the desired point and there magnify it to such an extent that it can be heard at a distance from the horn of the receiver. Although as I say, I have adapted these attachments especially for use in magnifying telephones, they can also be used to advantage in the ordinary type of telephones, and I wish it to be understood that I consider the latter to be within the scope of my invention.

In the accompanying drawings, Figure 1 is a front elevation of the instrument, and Fig. 2 is vertical section of the same taken at right angles to the plane of Fig. 1.

In the drawings, 1 is a plate for supporting the diaphragms 2, of which one is centrally located and the remainder distributed in a circle concentric therewith, through an intermediate supporting means consisting of a block 3 and an interposed felt pad 4. The block 3 is provided on its face with a concave recess 5 in which the diaphragms are placed in such a way that their axes are focused at about the point whence the sound to be transmitted emanates. Each of the diaphragms except the central one is furnished with a small horn 6 the outer side of which is somewhat longer than the inner side, as shown in Fig. 2. The central horn 7, although having its sides of equal length, is somewhat shorter than the others, as

shown also in Fig. 2. The effect of this arrangement is to give the mouths of the horns even a greater concavity than the recess 5. The electro-magnets for the different diaphragms are located inside of the block 3, but are not shown as they constitute no part of my invention and may be of any type adapted for use in transmitters of this character.

The connections for the magnets with the receiving apparatus are made through the binding-posts 8, the fuses 9 and the binding posts 10, located at the top of plate. At the bottom of plate is situated a block 11 carrying a series of push buttons 11' located in a straight line, a single push button 12 below the line and a number of label plates 12' corresponding to the several buttons that are located in the straight line. Each of the buttons 11' is designed to connect the transmitter with a different group of receivers, the arrangement being usually such that each button connects the transmitter with a different locality, for example, the different parts of a building. These different groups of receivers or localities are adapted to be indicated on the label plates 12'. The button 12 is designed to provide communication with the receivers or localities controlled by the buttons 11' all at one and the same time.

Secured to the back of plate 1 are two horizontal beams 13, shown in cross-section in Fig. 2, having the four bearing-brackets 14 projecting therefrom. These brackets surround and are adapted to slide upon two vertical tubes 15 having caps 16 and spring-supports 17. The tubes 15 contain counter-balance weights 18 attached to the plate, through the agency of eyes 19 located on the opposite ends of the weights, cords 20 and screw-eyes 21 located in the horizontal beams 13. The cords 20 before leaving the tubes 15 pass over pulleys 22 and leave the tubes through slots 23.

The operation of the device is as follows: When a speaker wishing to talk through the telephone steps up to the transmitter he raises or lowers the same by pushing it up or down until the mouth pieces 6, 7 are exactly opposite his mouth, as in a telephone of this character where loudness is one of the principal objects to be attained it is essential to secure the passage into the instrument of every part of the speaker's voice

that is possible. In raising or lowering the plate, the counter-balance weights 18 are moved in a vertical direction through the agency of the cords 20 and the pulleys 22, and, because of the fact that the heaviness of the weight is substantially the same as that of the plate and its attachments, the movable system will remain in any position in which it is placed. During the vertical movements of these parts the plate is guided, so that it is caused to move in a vertical direction only, by the bearing-brackets 14, which as stated before pass around the tubes 15.

In order to insulate the apparatus as much as possible from extraneous noises conducted by the supporting wall and to preserve as much as possible the vibrations caused by the movements of the diaphragms, the block 3 used for supporting the diaphragms is separated from the plate 1 by the felt pad 4, and the entire apparatus including the means for permitting vertical adjustment is supported on the springs 17 secured to the supporting wall.

When it is desired to communicate with any particular set of receivers or locality the button 11' corresponding thereto is pushed before speaking into the instrument. If on the other hand all of the receivers or localities are desired to be communicated with simultaneously then the operator depresses button 12.

I do not wish myself to be limited to the minute details of the construction which I have described, but consider that a number of changes might be made therein without departing from the broad principles of my invention.

What I claim and desire to secure by Letters Patent is:

1. In a device of the character described, the combination of one or more transmitters, means for vertically adjusting said transmitters, and a means for insulating said transmitters as to sounds conveyed by said adjusting means.

2. In a device of the character described, the combination of one or more transmitters, means for vertically adjusting said transmitters, a means for insulating said transmitters as to sounds conveyed by said adjusting means, and a spring supporting means for the whole mechanism.

3. In a device of the character described, the combination of a plate, one or more transmitters supported thereon, means for vertically adjusting said plate, a sound insulator interposed between said plate and said adjusting means, and a spring supporting means for the whole mechanism.

4. In a device of the character described, the combination of a plate, one or more transmitters supported thereon, means for vertically adjusting said plate, a pad of sound insulating material interposed between said plate and said adjusting means, and a spring supporting means for the whole mechanism.

5. In a device for vertically adjusting telephone transmitters, the combination of resilient means whereby said device may be supported and a sound insulating means interposed between said adjusting device and the transmitters.

6. In a device of the character described, the combination of a supporting means for one or more diaphragms and an elevation adjusting means comprising inclosed counterbalances said counterbalances being guided at each end by means independent of their inclosures whereby contact between said counterbalances and said inclosures is prevented, substantially as and for the purpose set forth.

In testimony whereof I have hereunto signed by name in the presence of the two subscribing witnesses.

ADOLPH G. KAUFMAN.

Witnesses:

BENJAMIN L. WEIL,
BARTHOLOM WEIL.