L. C. STOCKTON.

PORTABLE FACE MASK FOR TELEPHONE USE.

APPLICATION FILED JULY 10, 1909.

1,021,434.

Patented Mar. 26, 1912.

4 SHEETS—SHEET 1.

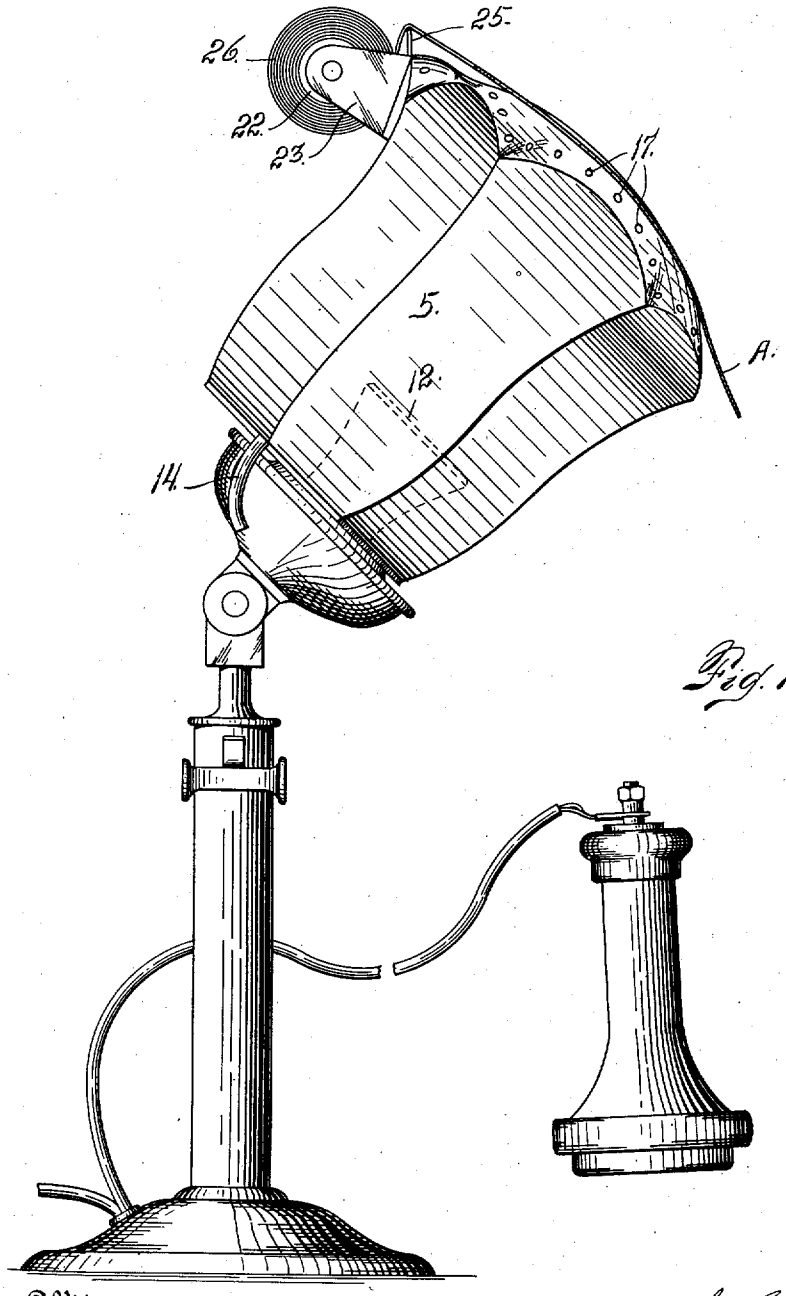

Fig. 1.

Witnesses
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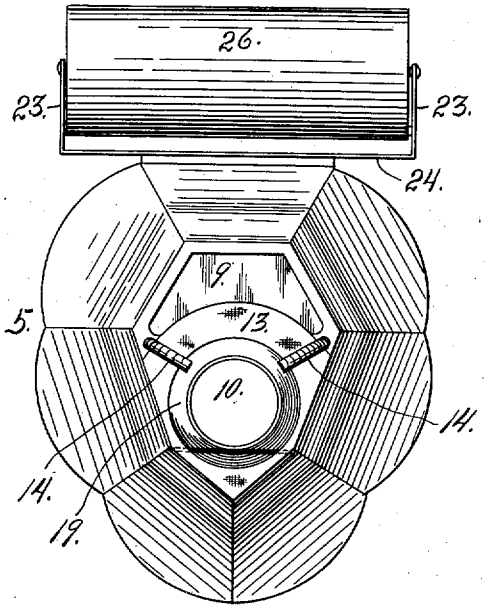

Fig. 2.

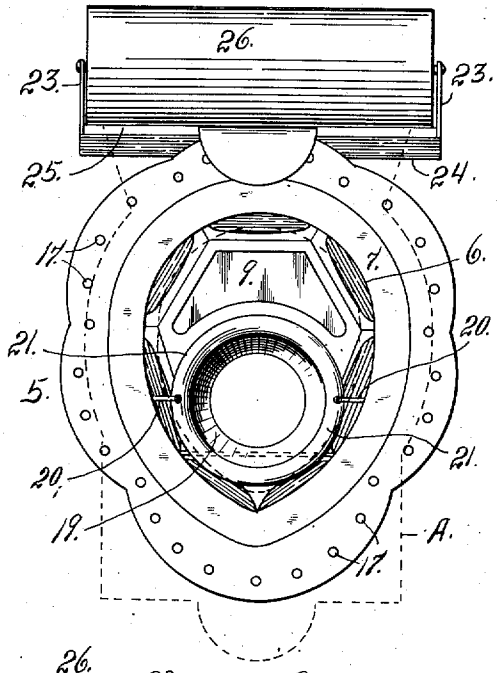

Fig. 3.

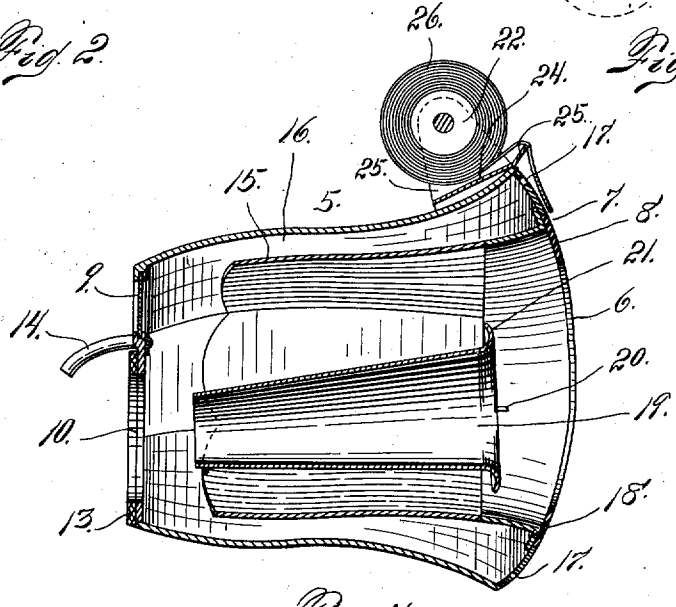

Fig. 4.

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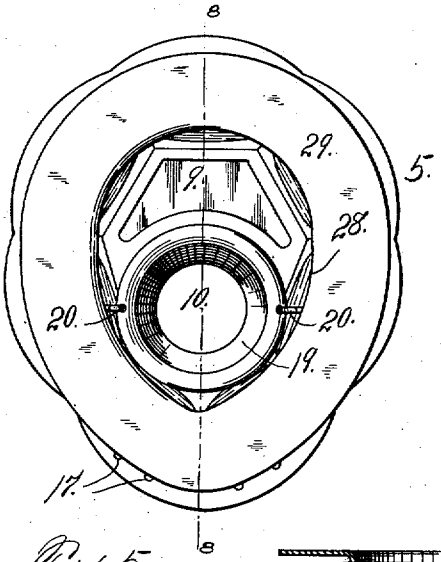

Fig. 5.

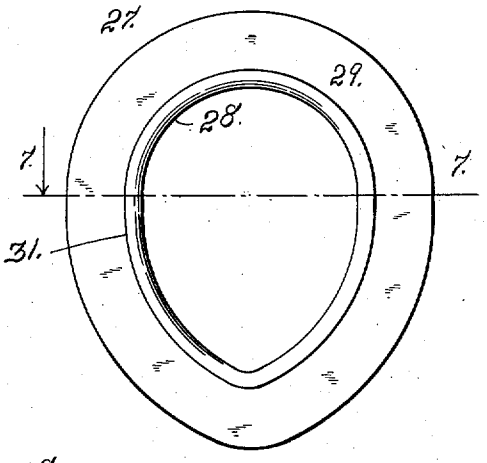

Fig. 6.

Fig. 7.

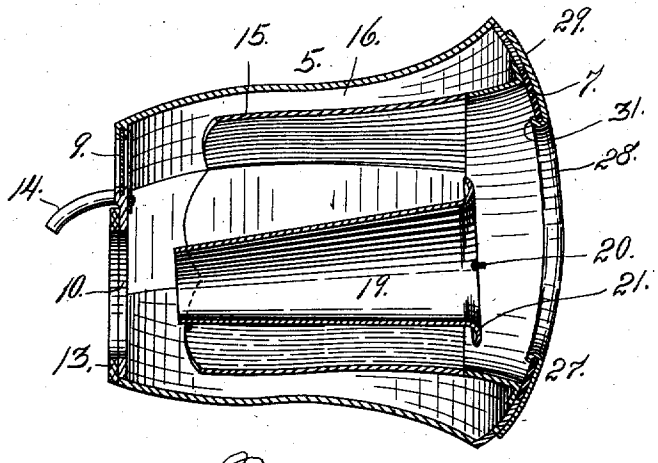

Fig. 8.

Witnesses

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4 SHEETS—SHEET 4.

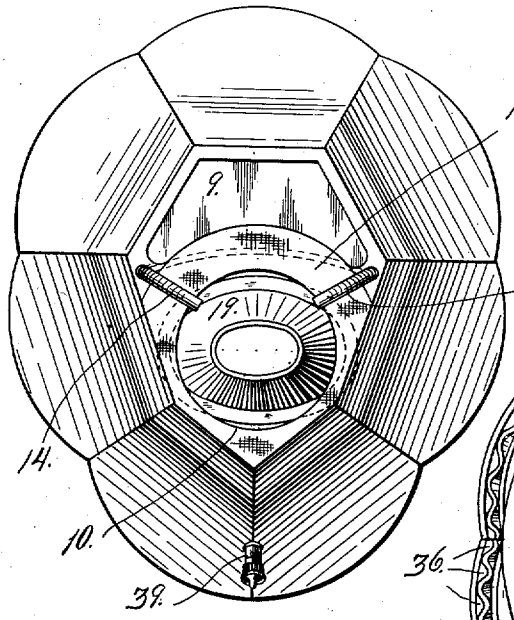

Fig. 9.

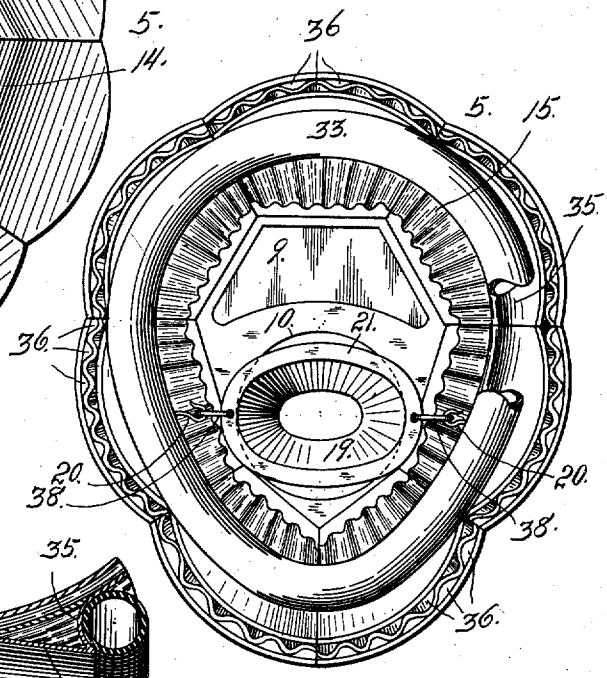

Fig. 10.

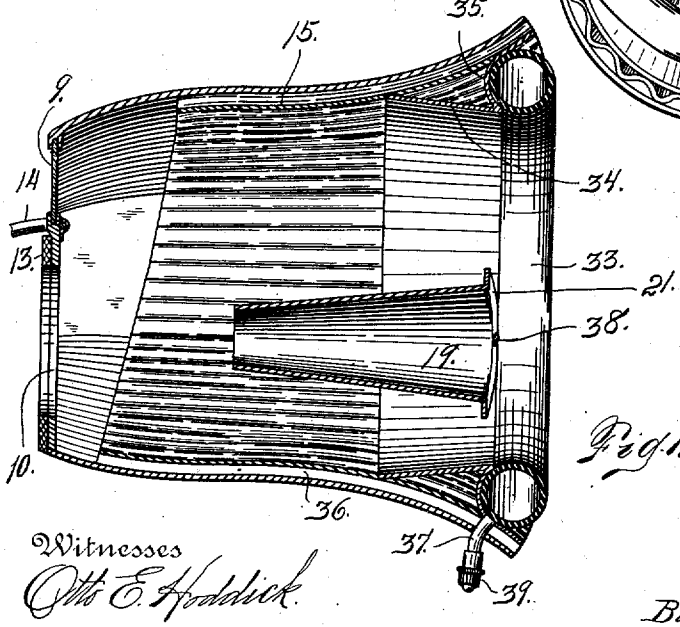

Fig. 11.

Witnesses

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UNITED STATES PATENT OFFICE.

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PORTABLE FACE-MASK FOR TELEPHONE USE.

1,021,434. Specification of Letters Patent. Patented Mar. 26, 1912.

Application filed July 10, 1909. Serial No. 507,006.

To all whom it may concern:

Be it known that I, LINCOLN C. STOCKTON, citizen of the United States, residing in the city and county of Denver and State of Colorado, have invented certain new and useful Improvements in Portable Face-Masks for Telephone Use; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in face masks for use in telephoning, the object being to prevent the sound of the voice from being heard by others in the vicinity of the party telephoning. It is therefore intended to take the place of a booth. Its advantage is, however, that it may be readily attached to any telephone and may be used with the same facility as if the mask were not employed. When this device is used, it may be detachably mounted upon the telephone or it may, if desired, be attached to the head of the user. In any event, the vibrations of the air within the mask are prevented from escaping or, in a sense, are condensed and directed against the diaphragm of the transmitter, thus making it practicable to telephone by speaking much lower than is practicable without the use of the mask. In fact, even a whisper within the mask is sufficient to be heard plainly at the opposite end of the line. At the same time, the sound of the voice is confined within the mask, thus giving the user the same advantage, so far as secrecy and privacy are concerned, that he would have in a closed booth.

The mask is provided at its outer open extremity with a yielding member surrounding its outer edge and against which the face of the user is pressed, thus making the mask practically air tight. Within the mask is located a tube, detachably applied, and having its outer extremity close to the mouth of the user, while its inner extremity enters the mouth-piece of the transmitter. Within the outer shell of the mask is placed a sort of lining or wall, separated from the outer wall, leaving an air space which communicates with the mask at its inner extremity, while its outer extremity is in communication with the atmosphere, through a series of perforations, thus admitting pure air during the operation of telephoning.

Having briefly outlined my improved construction, I will proceed to describe the same in detail, reference being made to the accompanying drawing, in which is illustrated an embodiment thereof.

In this drawing: Figure 1 is a side elevation of a telephone equipped with my improved face mask. Fig. 2 is a rear view of the mask shown in detail. Fig. 3 is a front view of the same. Fig. 4 is a vertical, longitudinal section of the mask. Fig. 5 is a front view, showing a member applied to the front of the mask, and readily removable for sanitary purposes. Fig. 6 is a detail view of the said member, shown in a position the reverse from that illustrated in Fig. 5. Fig. 7 is a section taken on the line 7—7, Fig. 6. Fig. 8 is a vertical longitudinal section taken on the line 8—8, Fig. 5. Fig. 9 is a rear view, showing a modified form of construction. Fig. 10 is a front view of the same, showing a pneumatic face tube, partly broken away. Fig. 11 is a vertical longitudinal section of the form of construction shown in Figs. 9 and 10.

The same reference characters indicate the same parts in all the views.

Let the numeral 5 designate the body of the mask, which is hollow, and open at both extremities, its forward extremity being somewhat larger than its rear extremity and fashioned to conform to the general contour of the face of a person, so that the face will fit tightly thereagainst, and close to the front opening 6. This opening is surrounded by a yielding strip of material 7, preferably composed of rubber. The inner edge 8 of this strip protrudes into the opening 6 at the outer edge thereof, thus forming a yielding member against which the face of the user presses while telephoning.

The upper part of the rear extremity of the device is provided with a window, having a transparent member 9, through which the user may look for the purpose of examining notes or data, while using the telephone, and while his face is against the mask. Below this window is an opening 10 to receive the mouth piece 12 of the transmitter, which

protrudes thereinto, as shown by dotted lines in Fig. 1. The opening 10 is surrounded by a strip of soft material 13, which rests against the transmitter around the mouthpiece, and forms a close joint to prevent the escape of sound vibrations. On opposite sides of the upper part of the opening 10, yielding hook-shaped members 14 are located and adapted to engage the transmitter in the rear for the purpose of holding the mask in place thereon.

Within the outer shell of the mask, is mounted an inner wall 15, separated from the said shell by a space 16. This inner wall does not extend to the rear extremity of the shell, whereby the space 16 is open in the rear, and communicates at its forward extremity with the atmosphere by perforations 17. These perforations admit pure air to the mask, and also afford a means of escape for the impure, exhaled air. The forward extremity of the wall 15 is secured to the front wall 17 of the mask as shown at 18.

Mounted within the space surrounded by the inner wall of the mask is a speaking tube 19, which is connected with hooks 20, with which the mask is provided on the inside. Both extremities of this tube are open. Its outer extremity is outwardly flared as shown at 21. The tube tapers from its outer extremity which is largest, gradually toward its inner extremity, which enters the mouthpiece of the transmitter, as heretofore explained.

In the form of construction, shown in Figs. 1 to 4 inclusive, a roller 22 is journaled in ears 23, projecting upwardly from a plate 24, attached to the top of the mask, and having a vertically and upwardly projecting member 25. Upon this roller is wound paper 26, adapted to be drawn from the roll and occupy a position over the front of the mask. This paper is provided with openings to register, or approximately register, with the opening in the front of the mask, whereby the paper surrounds the opening in the mask and engages the front part thereof, so that when the mask is in use, the face of the user engages the paper. This paper is adapted to be torn off and the plate member 25 over which the paper is drawn, acts as a sort of knife for this purpose. With this form of construction, each person who uses the mask is supposed to draw a piece of paper over the front part thereof, for sanitary purposes.

In the form of construction shown in Figs. 5, 6 and 8, a shield 27 is removably applied to the face of the mask. This shield has an opening 28 of approximately the size of the front opening in the mask. The body 29 of the shield overlaps the front part of the mask, covering the yielding member 7. The inner edge of the body of the shield merges into a bend 30, from which a short flange 31 is turned outwardly forming a groove 32, adapted to receive the inner edge of the rubber member 7, when the shield is applied. In order to attach the shield to the mask, it is only necessary to press the inner edge of the shield against the yielding member 7, when the latter will bend sufficiently to allow its inner edge to enter the groove 32, thus securing the shield in place upon the mask. The shield, however, may be readily removed and another one applied for sanitary purposes. It is supposed that a number of these shields will be always accessible, so that each person who uses the telephone may have a new shield, if he so desires.

In the form of construction shown in Figs. 9, 10 and 11, the face of the mask surrounding the opening therein, is equipped with a pneumatic tube 33, which the face of the user engages, while talking through the telephone. As shown in this form of construction, there is a forwardly located, relatively short partition member 34, which is bent outwardly, forming a grooved seat 35, for the tube 33. This outwardly grooved part is secured to the outer extremity of the inner wall 15. This wall 15 in this form of construction, is shown corrugated and the grooves of the corrugations form channels or passages 36, communicating at their inner extremities with the mask, and at their outer extremities with the atmosphere, as is best illustrated in Fig. 11.

As shown in the drawing, the speaking tube 19 is equipped with elastic bands 38, one on each side, which are connected with the hooks 20.

The mask is equipped with a short inflation tube 37, communicating with the relatively large face tube 33. The inflation tube is provided at its outer extremity with a check valve 39.

From the foregoing description, the use of my improved face mask will be readily understood.

Assuming that the device is applied to the transmitter of a telephone, in the manner heretofore explained, the user of the telephone simply presses his face against the front part of the mask. If the paper roll attachment is applied, he first pulls down a piece of paper, the same being indicated by dotted lines in Fig. 3 and designated by the letter A. This paper shield covers the front part of the mask, where the latter is engaged by the face of the user and should be torn off as soon as the conversation is completed. If the removable shield 27, illustrated in Figs. 5 to 8 inclusive, is employed, one of these shields is applied to the yielding member 7 of the mask, in the manner heretofore explained. When the face of the user is in position, the mouth is close to the outer extremity of the tube 19, while the

inner extremity of the tube enters the mouth piece of the transmitter. Under these circumstances, the user of the telephone proceeds, as in the ordinary manner, except that if he desires, he may lower his voice to a whisper, and be distinctly heard at the other end of the line. This lowering of the voice also prevents the possibility of others in the room from hearing the conversation. The construction of the mask, however, is such that when the voice is at the ordinary pitch or tone used in conversation, it will not be heard by others in the room.

Attention is called to the fact that the speaking tube 19 is preferably composed of some cheap material, as paper. This tube is readily removable for sanitary purposes.

Having thus described my invention, what I claim is:

1. A face mask of the class described, comprising a shell open at both ends, its extremities being of unequal size, the smaller extremity being applied to the telephone transmitter, the mouth-piece of the latter entering the opening therein, while the opening at the opposite extremity of the hood is adapted to conform to the contour of the face, and is surrounded by a yielding member, to form a tight joint, as the face is pressed against the same, while using the telephone, and a speaking tube located within the shell and having one extremity adjacent the mouth of the user, while its opposite extremity enters the mouth piece of the transmitter for the purpose set forth.

2. A face mask comprising an outer shell, open at both ends, an inner wall separated from the outer shell to form an intervening compartment, the inner wall being shorter than the outer wall, whereby the intervening space communicates at its inner extremity with the cavity of the mask, the forward extremity of the said space being in communication with the atmosphere, the inner extremity of the mask having an opening adapted to receive the mouth-piece of the telephone transmitter, while the outer extremity is shaped to fit the face of a person, using the telephone, and a speaking tube located within the mask and mounted upon the inner wall thereof, for the purpose set forth.

3. A face mask, of the class described, comprising a shell open at both ends, its rear extremity being smaller than its forward extremity, the opening in the rear extremity being adapted to receive the mouth-piece of the transmitter of a telephone, the rear extremity of the mask also having a window, above the mouth-piece opening, the forward extremity of the mask being provided with a yielding member surrounding the face opening, for the purpose set forth.

4. A face mask for use with telephones, comprising a shell having a face opening at its forward extremity and a mouth-piece opening at its opposite extremity, the last named extremity having a window located above the mouthpiece opening, an inner wall forming an air space between itself and the shell, the said space being in communication with the atmosphere at one extremity and with the cavity of the mask at its opposite extremity, and a speaking tube located within the mask, substantially as described.

5. A face mask for use with telephones, comprising a shell, having its rear extremity open to receive the mouth-piece of a telephone transmitter and equipped with retaining hooks, adapted to engage the transmitter, the rear extremity of the device being also provided with a window located above the mouth-piece opening, the forward extremity of the device having a yielding member surrounding the face opening therein, the device having an inner wall, forming an air space, which is in communication with the cavity of the mask and also with the atmosphere, and a speaking tube located within the mask between the mouth-piece of the transmitter and the mouth of the speaker, when the device is in use.

6. A face mask of the class described, comprising a casing open at both ends, one extremity being adapted to receive the mouth-piece of the telephone transmitter, while the other extremity is shaped to engage the face of the user, and a readily removable speaking tube, located within the device, one extremity being adjacent the mouth of the user, while the other extremity is adjacent the mouth-piece of the telephone transmitter.

7. A face mask for use with telephones, comprising a shell, the inner extremity being smaller than the opposite extremity, the said inner extremity being adapted to be connected with the mouth-piece of a telephone transmitter and having a cushion member surrounding its opening to form a tight-joint with the transmitter, the opposite extremity being provided with an annular trough on the inner periphery of the shell, a yielding member positioned in the said trough and surrounding the inner periphery of the face opening, as means of forming a cushion for the face of the user, substantially as described.

8. A face mask for use with telephones, comprising an inner and outer shell, one extremity of the shell having a cushioned opening adapted to receive the mouth-piece of a telephone transmitter, while the outer extremity is provided with suitable cushioned means for engaging the face of the user, a speaking tube flexibly suspended from the inner wall of the shell at a centrally located position between the openings of the mask, one end of said tube to enter the mouth-piece of a telephone transmitter,

while the opposite end is arranged to come into contact with the mouth of the user, substantially as described.

9. A telephone of the character specified comprising an acoustic shell having an opening at one end to receive the mouthpiece of a telephone and provided at said end with a window and with attaching means and having the opposite end of said shell constructed to fit close against the face of the person using the telephone.

10. A device for use in conjunction with a telephone for excluding noise and confining the sound to be transmitted, said device comprising an acoustic shell and having the telephone located at one end thereof and provided at the opposite end with a breathing rim consisting of a portion provided with a series of small openings.

11. A device for use in conjunction with a telephone for excluding noise and confining the sound to be transmitted, said device comprising an acoustic shell and having the telephone located at one end thereof and provided at the opposite end with a breathing rim consisting of a portion provided with a series of small openings, and a baffle consisting of a band arranged opposite the breathing rim and having a breathing space for the entrance and exit of air but serving to interrupt sound waves.

12. A telephone attachment of the character specified comprising an acoustic shell having its front portion provided with a forwardly converged breathing rim provided with a series of openings.

13. A telephone attachment of the character specified comprising an acoustic shell having its front portion provided with a forwardly converged breathing rim provided with a series of openings, and a flexible lip at the inner edge of the breathing rim to insure a close fit between the breathing rim and the face of the person using the telephone.

14. A device for use in conjunction with a telephone for securing secrecy and increasing the acoustics of the telephone line said device comprising an acoustic shell having the telephone at one end and constructed to receive the face of the person using the telephone at its opposite end, a sound concentrator and director located within the acoustic shell, and means for securing the sound concentrator within the acoustic shell to admit of the ready removal of said concentrator.

In testimony whereof I affix my signature in presence of two witnesses.

LINCOLN C. STOCKTON.

Witnesses:
A. J. O'BRIEN,
JESSIE HOBART.