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HANDSET PROVIDED WITH A SOUND COLLECTING LID
MOVABLY MOUNTED BEFORE THE MICROPHONE

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2 Sheets-Sheet 1

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Fig. 5.

Fig. 6.

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1. The invention relates to a telephone handset with a contact spring set provided therein for switching the instrument to speaking or signalling position, respectively, and provided with a member adapted to operate said spring set when the instrument is placed on or lifted from its support, whereby, when the handset occupies signalling position, the receiver and microphone are facing said support.

Hitherto known instruments of this type have many disadvantages. If an instrument of high efficiency is wanted, the mouth piece should preferably be placed just in front of the lips when the handset occupies speaking position. This fact implies that when the instrument is placed on its support the height over the support is relatively great, the centre of gravity therefore lying high, thus causing instability of the instrument. The member operating the spring set is constructed as a pin located close to the microphone and since such a pin has a very small outer surface, a certain instability follows in the switching operation, as irregularities in the support or objects placed thereon may disturb the switching operation.

The invention which has the object of avoiding said disadvantages will be described more in detail with reference to the accompanying drawings. Fig. 1 is a perspective view of the instrument, one of the two halves, in which the casing is divided, being removed. Fig. 2 is a perspective view illustrating the lid placed in front of the mouth piece and the springs in which said lid is suspended and a socket provided at the lower part of the casing, the lid being pivoted in said socket. Fig. 3 is a longitudinal section showing the instrument in signalling position on the table, and Fig. 4 a side view partly in section of the instrument lifted from the table. Figures 5 and 6 are fragmentary detail views showing a device for holding the lid in open position.

The microtelephone casing consists of two detachably connected halves separated in the longitudinal direction. Fig. 1 shows only part 1 in which all the details are mounted, it being assumed that the second part, formed as a cover, is removed. 2 signifies the microphone which is inserted in a slot 3 in the casing and 4 the spring set which is operable by the lid 5 which, by means of a shaft 6 running along one edge, is inserted in a socket 7 and together with the part 1 of the casing out of one piece, and being slotted so that the lid may be turned a certain angle. To each of the taps 9 of said shaft 6 which are square-formed in cross- section, the one end of a band spiral-spring 11 is fastened, the other end 12 of which, after the shaft 6 having been introduced in the socket 7, rests against one longitudinal edge 10 of socket 7. The spring power of said springs tends to bring the lid into opened position as shown in Fig. 4 in which it occupies when the instrument is in talking position.

Due to the lid being suspended in said spiral-springs the friction is insignificant. The spring-coils also serve to dampen the shock when the lid is struck. Due to the shaft 6 having greater dimensions than the taps 9, the force of an impact against the lid is absorbed by said shaft and not by the taps. The outer surface of the arched lid is shaped so that, when struck in a sidewise direction, no fractures are produced in the lid and regardless of the direction in which the lid is struck the lid will move in the direction to be shut. The movement of the lid from shut into open position is comparatively large, which causes the sound-collecting part of the lid to occupy a position just before the lips when the instrument is held in talking position. Further, the centre of gravity of the instrument, when the lid is shut, lies low, the instrument thereby lying more stable. The large movement is favourable also from another view-point, namely that the electric switching will take place almost in the middle of the movement. This will reduce the risk of small unintentional movements of the lid causing switching from talking position into signalling position, and also reduce the risk of irregularities in the table surface or in objects placed thereon preventing switching operation from talking position to signalling position when the instrument is placed on the support.

When the instrument is placed on the table the lid, due to the weight of the instrument, will shut, thereby turning at a certain angle around the taps 9 whereby the edge 13 of the lid will press against an arm 14 which is turned and thus operates the spring set 4, thereby causing the desired switching.

As the instrument lies with the microphone lid against the table it may occur that dust enters through the sound slits of the lid into the microphone. Due to the lid being made to be shut, the risk of said drawback will be reduced. The microphone casing is shaped so that the outline of the opening, from which the lid may be swung out, lies on a level with the table surface when the instrument occupies signalling position, as shown in Fig. 3. This is also an advantage gained.
by using the microphone lid as an operating member for the spring set.

The invention is not limited to the embodiment shown but may be modified in many ways. Thus, it is not necessary to form the socket 1 together with the casing out of one piece, but the socket may form an individual part inserted in a cylindrical hole of the casing. Instead of the microphone unit being placed in a slot of the casing it may be fixed within the lid, whereby the microphone moves with the lid. This is preferable if, from a transmission point of view, it is desired that the microphone is to lie closer to the sound slits in the lid. The invention may also be modified in such a way that the lid, when being opened and the handset in talking position, is blocked by some member operated by the gravity whereby the lid is prevented from being pushed in unintentionally when the handset is held in talking position. Figs. 5 and 6 show an embodiment of such a modification. A bracket 16 is turnably mounted on a pivot 15 secured in the casing and so disposed that when the handset lies on the table said bracket occupies the retracted position shown in Fig. 5. On lifting the handset and placing it in speaking position, the bracket turns under the influence of gravity to the position shown in Fig. 6, wherein it extends into the path of the lid thus preventing any unintentional pushing in of said lid.

I claim:

1. A telephone handset comprising a casing having a sound transmitting opening therein and a microphone located behind said opening, an electric contact device mounted in said casing and movable between positions for conditioning the telephone for speaking or signalling respectively, a sound-collecting lid pivotally mounted in front of said microphone for movement between outward and inward positions in the former of which it effectively uncovers said microphone for speaking purposes, and means biasing said lid toward its outward position, said contact device having a portion projecting into the path of said lid for movement thereby to operate said contact device to condition said handset for signalling purposes upon movement of said lid to its inward position, said lid being of outwardly arched shape to extend beyond the profile of said handset when in its outward position, for operation to its inward position by forces directed sidewise of the direction of movement of said lid.

2. A telephone handset in accordance with claim 1, in which the means for biasing said lid comprises springs arranged at opposite sides of the lid.

3. A telephone handset in accordance with claim 1 wherein a portion of said lid is pivotally received within a slotted cylinder detachably connected with said handset.

4. A handset in accordance with claim 1, and gravity-operated means for retaining said lid in its outward position whenever said handset is oriented for speaking purposes.

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