May 31, 1960 R. V. GUARDINO 2,938,967

SANITARY TELEPHONE DEVICE

Filed July 21, 1958

FIG. 1

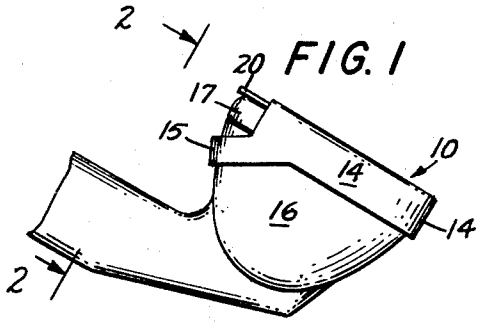


FIG. 2

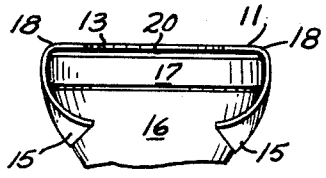


FIG. 3

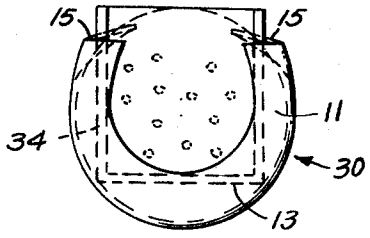


FIG. 4

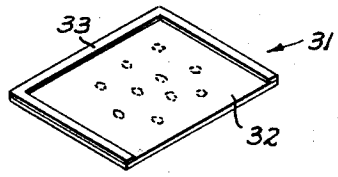


FIG. 5

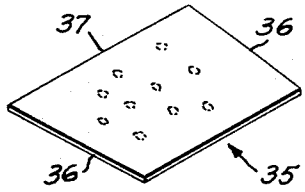


FIG. 6

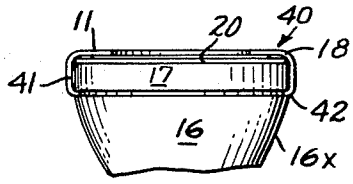
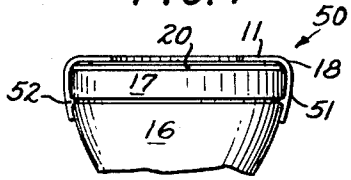


FIG. 7



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SANITARY TELEPHONE DEVICE

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4 Claims. (Cl. 179—185)

This invention relates to a protective cap for telephone mouthpieces and more particularly to a cap having a replaceable germicidal filter.

It is an object of this invention to provide a germicidal cap for a telephone mouthpiece having inexpensive throw-away replaceable elements.

It is a further object to provide a telephone cap of inexpensive construction and simplicity of manufacture.

These and other objects of this invention will become apparent upon reading the following descriptive disclosure taken in conjunction with the accompanying drawing in which:

Fig. 1 is a side view of the substantially U-shaped cap having opposed clip on hooks,

Fig. 2 is an end view taken along line 2—2 of Fig. 1,

Fig. 3 is a top view of a modified cap having a U-shaped channel for retaining the germicidal filter,

Fig. 4 is a perspective view of a rectangular replaceable germicidal filter,

Fig. 5 is a perspective view of a modified replaceable filter having the configuration of a truncated cone,

Fig. 6 is an end view of a modified cap showing a circular lip for securing the cap to the telephone, and

Fig. 7 is an end view of another modification having a circular ridge in the inner cap skirt wall for securing the cap to the telephone.

Preferably the cap of this invention is made of plastic but other material is operable. The filter element may be disposed upon the telephone mouth piece and against the inner top surface of the cap or the cap may be provided with a U-shaped cavity (Fig. 3) for receiving a rectangular germicidal filter (Fig. 4). To prevent falling out of the filter the U-shaped cavity may be modified into the shape of a truncated cone in which case a truncated filter (Fig. 5) is lockingly disposed in the modified cavity.

The filter is preferably made of paper or cloth and treated with a germicidal substance for example conventional germicidal quaternary ammonium salts, hexachlorophene, etc.

Turning to the drawing, the cap **10** is generally of a U-shaped construction having a top U-shaped wall **11** having a U-shaped cut-out **13** therein. The cap **10** is provided with a skirt **14** substantially at a right angle to top wall **11**. The opposed ends of wall **14** are each provided with an integral curved flap **15**. The curve of the flaps **15** are so curved as to snugly engage the bowl of the telephone **16** thereby securing the cap **10** firmly to the telephone bowl **16** and its cover **17**.

In a simple form of this invention the cap **10** is molded from plastic with a suitable curved bend **18** so that top wall **11** is in space relationship above the top face wall **19** of the telephone cover **17**.

A filter **20** of suitable firm paper or starched cloth treated with long lasting conventional oxidation and sunlight resistant germicide is slipped into the top of the U-shaped cavity **13** and between the inner surface of

cap wall **11** and the top wall or surface **19** of the telephone cover **17**.

The filter **20** is preferably of suitable paper having natural interstices or openings of a size to permit voice or sound waves to travel therethrough. However, the filter may optionally be provided with suitably small perforations (shown in dotted outline in Figs. 3, 4 and 5) if desired to aid voice transmission.

The filter **20** may be of non-woven germicidally treated fibers altered by strengthening the filter edges by means of plastic material deposited on at least three of the filter edges by dipping, spraying or roller coating said filter edges with a suitable plastic solution. Such plastic treated edges upon drying become rigid giving a soft pliable center portion having rigid edges.

Turning to Fig. 3, there is presented a modified cap **30** having a U-shaped channel molded in the inner surface of the U-shaped top wall **11**. The opposed channel walls are linear. Where the opposed channel walls are parallel to one another (Fig. 3) a rectangular filter **31** is used. The filter **31** is made of paper **32** preferably provided with strengthened insertion edges, strengthened by plastic material **33** deposited thereon or by other conventional means.

The filter **31** may be provided with suitably small voice transmitting apertures if desired, but where suitably thin and non-sized paper or cloth is used apertures are not needed. The filter **31** is inserted into the U-shaped channel **34** (Fig. 3). Where another party uses the telephone the old filter **31** is first removed and thrown away and replaced with a new filter **31**.

In order to firmly lock the filter **31** into channel **34** the filter **31** is given slightly larger transverse dimension than channel **34** and is slightly bent medially while being inserted into the U-shaped channel **34**.

Optionally the channel **34** may be a slightly truncated cone to receive a mating truncated filter **35** having sloping side walls **36** and base **37**. To insert filter **35** into its co-acting channel (not shown) the filter is pinched or bent medially and inserted base **37** first into its co-acting truncated channel.

Other means of locking the substantially U-shaped cap to the telephone are shown in Figs. 6 and 7, both modifications of which may be provided with filter receiving means or channels shown in Figs. 2 and 3.

In Fig. 6, the plastic cap **40** is provided with a vertically depending skirt **41** around the U-shaped top wall **11**, said wall **11** having a suitably curved bend **18** to keep the inner surface of wall **11** in suitable space-relationship to the telephone cover **17** to receive a filter **20**. The terminal edge of the cap **40** is U-shaped and curved inwardly to provide a lip **42** which engages lockingly into the conventional channel formed between the screwed-on telephone cover **17** and body of the telephone **16**.

Optionally the skirt **41** of cap **40** may be made longer and the lip **42** wider to embrace the bowl wall **16X** of the telephone body **16** below its maximum diameter. Another modification of this invention is shown in Fig. 7 wherein the plastic cap **50** is provided with an integral vertically disposed U-shaped wall **51** having a continuous suitable ridge **52** in the inner surface of wall **51**. The ridge **52** functions in the same manner as lip **42** of cap **40** by being snapped into place into the normal channel formed between the telephone screwed on cap **17** and the body portion **16** of the telephone.

This invention has been described by means of several illustrations showing a telephone snap-on U-shaped cap, preferably of plastic, having means for removeably receiving a flat germicidal filter element between the telephone and the cap through the open end of said U-

shaped cap. But it is not to be limited to these illustrations for its teaching is of generic scope.

Thus, this invention may be modified by the use of a plurality of suitable conical elevation or pimples disposed in a circular configuration in the depending vertical wall and adapted to be seated into the channel between the telephone cover and the body portion of the telephone.

I claim:

1. A disposable integral substantially U-shaped cap adapted to clasp a telephone mouthpiece cover in space-relationship to the top walls thereof and adapted further to slidingly receive an inexpensive disposable sheet filter element between the cap and the cover consisting essentially of a top truncated annular substantially U-shaped flat wall having a truncated circular aperture centrally therein; a depending wall integral with the outer edge of said top wall and at a right angle thereto and inwardly disposed locking means continuous with the edge of said depending wall for seizing the telephone cover in the groove disposed between mouthpiece cover and the body portion of the telephone.

2. The cap of claim 1 comprising a pair of curved

flaps, each integral with an oblique to a respective end of said depending wall, said flaps being curved to embrace the body portion of the telephone in space relationship to the opening of the U-shaped top wall.

3. The cap of claim 2 comprising a top wall having a filter receiving U-shaped channel in the under surface thereof, said channel having opposed linear side walls connected by a base wall, said base wall being opposite to the opening of said top wall.

4. The cap of claim 3 wherein the side walls of said U-shaped channel converge toward the opening of the U-shaped top wall, thereby being adapted to receive a filter sheet having the configuration of a truncated cone.

References Cited in the file of this patent

UNITED STATES PATENTS

1,340,661	Lobl	May 18, 1920
1,537,886	Sackl	May 12, 1925
1,833,643	Gluck	Nov. 24, 1931
2,520,416	Lewis	Aug. 29, 1950
2,700,075	Korn	Jan. 18, 1955