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3,091,236

RESUSCITATOR

Filed June 16, 1960

FIG. 1.

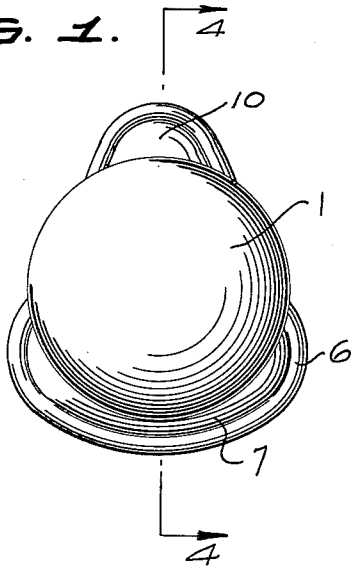


FIG. 2.

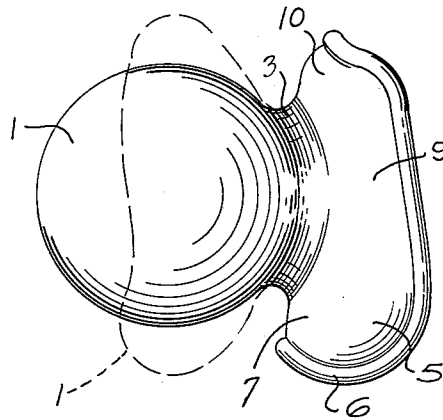


FIG. 3.

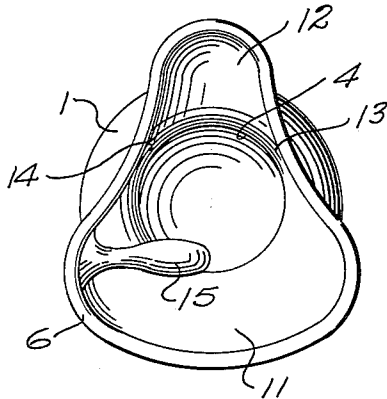
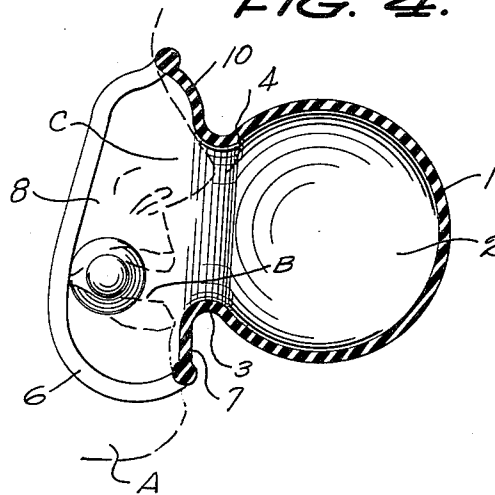


FIG. 4.



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RESUSCITATOR

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2 Claims. (Cl. 128—29)

The present invention relates to resuscitators for the artificial respiration of humans and is more particularly concerned with a manually operable device for forcing air into and withdrawing the same from the respiratory organs.

The principal object of the present invention is to provide a resuscitator which is manually operable as a substitute for the mouth-to-mouth type of artificial respiration and which resuscitator is economical to produce, is long lasting, and can be immediately used at all times without special preparation.

A further and important object of the invention is to provide a one-piece resilient member capable of being economically produced by conventional manufacturing methods and which will retain the mouth of a person having the same positioned on their face retained open thereby for the passage of air therethrough.

Further objects of the invention will be in part obvious and in part pointed out in the following description of the accompanying drawings wherein FIG. 1 is an end view of the present resuscitator. FIG. 2 is a side view of said resuscitator with the bulb in its compressed position shown in dotted lines. FIG. 3 is an end elevation of the resuscitator opposite to FIG. 1. FIG. 4 is a side view opposite to FIG. 2 with a portion in cross section taken on line 4—4 of FIG. 1 and with the device mounted upon a face for use.

Referring now more particularly to the accompanying drawings, wherein like and corresponding parts are designated by similar reference characters, numeral 1 indicates a resilient hollow bulbous portion of the present resuscitator having an internal cavity 3. Said bulbous portion 1 has an annular oppositely curved neck 3 forming a throat 4 in communication with cavity 2 and having a longitudinal axis extending radially of said bulbous portion 1.

A face mask 5 is formed contiguous with neck 3 and has a bead 6 extending completely around the edge thereof provided by a thickening of the material of said mask.

The lower portion 7 of said mask extends downwardly from and laterally of said axis of throat 3 and is of sufficient width to extend across the chin of a user thereof below and beyond the edges of the user's mouth. Said lower portion 7 has an arcuate curve in the direction of said width with its edge conforming to the outline of the user's chin.

Said mask has inwardly converging convex sides 8 and 9 extending outwardly on a slight slant from said neck 3 and are contiguous with the upper portion 10 of said mask. Said upper portion 10 extends upwardly and outwardly from neck 3 having an arcuate configuration both in a direction extending upwardly from said neck and laterally of said direction. The configuration of lower part 7, sides 8 and 9, and top portion 10 of said mask gives bead 6 a pear-shape configuration when viewed from the open end thereof as in FIG. 3 and a C-shaped configuration as viewed from FIGS. 2 and 4 with a result-

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ing bead outline which will closely fit the contour of the contacted areas of the person's face to which the mask is applied. Also, said lower part 7 of said mask by its convex configuration provides an internal cavity 11 above which is provided restricted cavity portion 13—14 defined by sides 8 and 9 and an arcuate upper cavity 12 defined by top portion 10.

A tongue 15 extends into cavity 11 from one side of the inner face of lower portion 7.

The bulbous portion 1, entire mask 5 including bead 6, and tongue 15 are all formed from one piece of a resilient material such as natural or artificial rubber or a plastic such as polyethylene or of other materials or combinations of materials capable of retaining air therein and with at least the bulbous portion capable of returning to its bulbous configuration after being compressed through its inherent characteristics.

To use the present resuscitator, the mask 5 is applied to the face A of a person by inserting tongue 15 into the mouth B and between the teeth therein retaining the teeth parted and holding the tongue down. This automatically positions the bead 6 on the user's face with the lower portion 7 encasing the entire mouth and the chin therebeneath and sides 8 and 9 tapering inwardly and enclosing the sides of the nose C with the top portion 10 enclosing the top of the nose so that the bead 6 contacts the skin of the face throughout its length and completely houses the mouth and nose of the face A. The bulbous portion 1 is then manually compressed to a position as indicated in dotted lines in FIG. 2 forcing air from cavity 2 through throat 4 into the mouth B and the respiratory organs of the person upon whom the resuscitator is being employed.

The contact of bead 6 with the face prevents the escape of the air from the resuscitator.

Releasing bulbous portion 1 causes the same to return to its natural position as shown in FIGS. 1 and 4 due to its resilient properties expanding cavity 2 creating a suction which draws air through throat 4 from the mouth B and the respiratory organs. The action of compressing and releasing the bulbous portion 1 at the proper rate forces air into and out of the lungs for reviving, for example, an unconscious person who has been overcome by gases, water or electric shock.

Mask 5 can at any time be lifted from the user's face and may from time to time be raised during or after the compression of bulbous portion 1 for expelling or drawing air or another media relative to said bulbous portion as conditions necessitate.

The present device is capable of considerable modification, and such changes thereto as come within the scope of the appended claims is deemed to be a part of the present invention.

I claim:

1. A resuscitator for humans comprising a face mask of a configuration for encasing the nose and mouth of a human face, a resilient bulbous member having an internal cavity in communication and contiguous with said mask for supplying media to and withdrawing the media from said mask and the mouth encased therein, said mask and bulbous member being of a continuous resilient sheet material which has a thickened edge portion forming a bead stiffening around said mask and a tongue of a resilient material extending cross-wise of

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the interior and from said mask for retaining the mouth of the human in an open position.

2. A resuscitator comprising a one piece resilient member having a hollow bulbous portion having a side opening, a face mask contiguous therewith having a front opening coinciding with said bulbous portion opening, and a tongue, said face mask having an internal cavity capable of receiving a portion of a human face including the mouth and nose and the edge of said mask being of a configuration similar to the portion of a face being

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mounted thereon in an air-tight manner, and said tongue extending from said mask inwardly of and cross-wise of said mask internal cavity.

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