Aug. 6, 1968 M. STILLMAN 3,395,700

MOUTH-TO-MOUTH RESUSCITATION DEVICE

Filed June 2, 1965

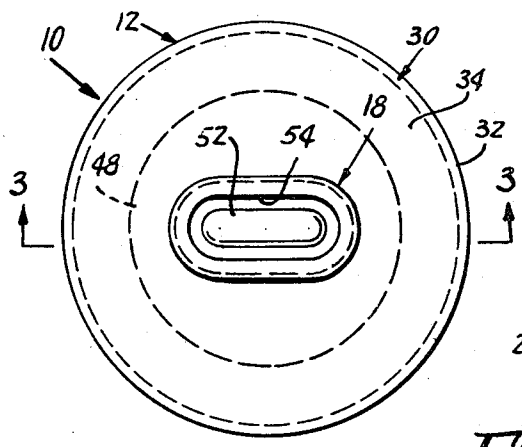


FIG. 2

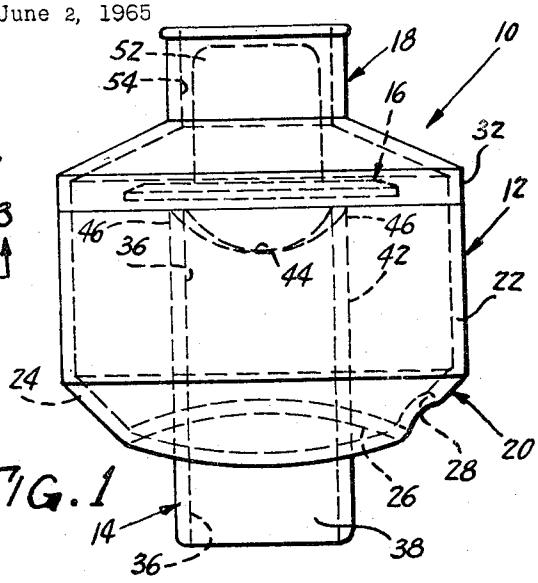


FIG. 1

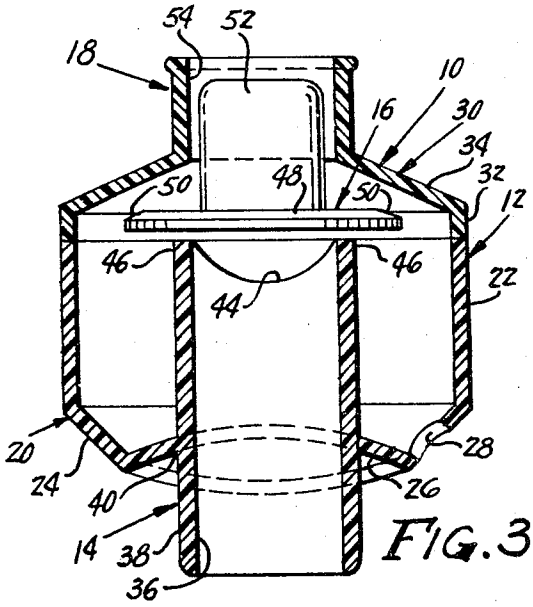


FIG. 3

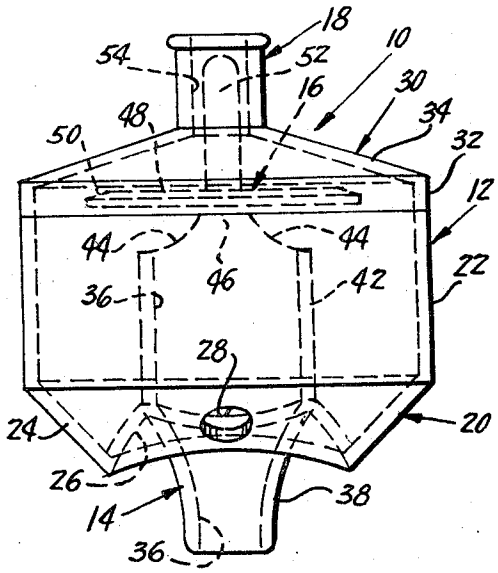


FIG. 4

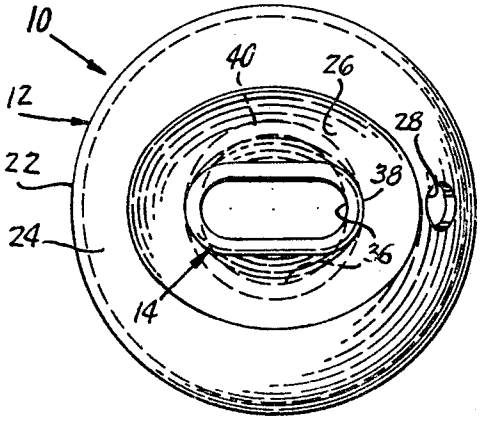


FIG. 5

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MOUTH-TO-MOUTH RESUSCITATION DEVICE

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ABSTRACT OF THE DISCLOSURE

A mouth-to-mouth resuscitator comprising a single unitary body which includes a mouthpiece for a victim which forms a conduit extending into a chamber in the body and a mouthpiece for a rescuer, said chamber communicating exteriorly through an aperture, and a reciprocably mounted deflector plate in the chamber having a tongue extending into the rescuer's mouthpiece for preventing passage of saliva from the rescuer to the victim and removal of such saliva from the chamber is disclosed.

This invention relates to resuscitation devices, and more particularly to a device usable in the mouth-to-mouth resuscitation technique which obviates the need for direct oral contact and yet provides all of the advantages of this procedure.

Various mouth-to-mouth resuscitation aids have been proposed by the prior art, but it has been found that there are serious disadvantages residing in all of them. The prior art devices are characterized by a movably mounted diaphragm which, although it effects complete separation of the victim and the rescuer, often results in an inadequate volume of air delivered to the victim. Other disadvantages of the diaphragm type include its inherent complexity, usually requiring mechanical valves and the like.

A primary object of the instant invention is to provide a resuscitator for mouth-to-mouth resuscitation which obviates the requirement of direct oral contact and which delivers a volume of air to the victim that is dependent only upon the lung power of the rescuer.

Another object of the instant invention is to provide a resuscitator for mouth-to-mouth resuscitation which is simple in construction, simple in operation, inexpensive to manufacture, and which may be easily sterilized.

A further object of this invention is to provide a resuscitator for mouth-to-mouth resuscitation having a direct air passage from the mouth of the rescuer to the mouth of the victim.

A still further object of this invention is to provide a resuscitator for mouth-to-mouth resuscitation having a direct air passage from the rescuer to the victim and having means within the air passage to collect saliva of the rescuer.

Other objects and advantages of the instant invention reside in the combinations of elements, arrangements of parts and features of construction and operation some of which will be apparent and some of which will be more fully pointed out hereinafter and disclosed in the accompanying drawings wherein there is shown a preferred embodiment of this inventive concept.

In the drawings:

FIGURE 1 is a front elevational view of the resuscitator of the instant invention;

FIGURE 2 is a top plan view of the resuscitator of FIGURE 1;

FIGURE 3 is a cross-sectional view of the resuscitator of FIGURE 2, taken along line 3—3 and viewing in the direction of the arrows;

FIGURE 4 is a side elevational view of the resuscitator of the instant invention; and

FIGURE 5 is a bottom view of the resuscitator of FIGURES 1 to 4 inclusive.

Referring now to the drawing in detail, wherein like

reference characters designate like elements throughout the several views thereof, there is indicated generally at **10** a mouth-to-mouth resuscitation device made of any desirable material but preferably of plastic or hard rubber, the major components of which comprise an enlarged receptacle shown generally at **12**, a mouthpiece for a victim shown generally at **14**, a reciprocable float indicated generally at **16** and a mouthpiece for a rescuer shown generally at **18**.

Receptacle **12** includes a bottom portion shown generally at **20** having a cylindrical wall **22** and a bottom wall consisting of a frusto-conical surface **24** and a trough-shaped surface **26**. As shown in FIGURES 1 and 3 to 5, an aperture **28** is formed in frusto-conical surface **24** which serves as a drain hole and as a means for selectively sealing receptacle **12**, as by the index finger of a rescuer, as more fully explained hereinafter.

Receptacle **12** also includes an upper portion indicated generally at **30** having a cylindrical wall **32** which may be temporarily or permanently secured to the upper end of cylindrical wall **22**, and a frusto-conical surface **34** secured to cylindrical ring **32**.

Extending through trough-shaped bottom **26** of receptacle **12** is a mouthpiece **14** having a central passageway **36** extending therethrough and a lower section **38** which is configured to be conveniently placed in the mouth of a victim to keep the mouth open and to prevent the victim from swallowing his tongue. Accordingly, lower section **38** describes a circular cross-sectional area at the inner section **40** of mouthpiece **14** in trough-shaped surface **26** and a generally oval cross-section as shown in FIGURE 5.

Mouthpiece **14** also includes an upper section **42** which is circular in cross section and which is formed with a pair of arcuate cut away surfaces **44** at its upper end forming a pair of upwardly facing protuberances **46**. As more fully explained hereinafter, cut away sections **44** provide an air passageway between the respiratory tract of the victim and the respiratory tract of the rescuer.

As shown in FIGURE 3, float **16** is positioned within receptacle **12** immediately above the upper end of mouthpiece **14** and includes a circular plate **48** which is beveled as at **50** on its upper surfaces. A centrally mounted upwardly extending elongated tongue **52** is secured to plate **48** and extends into mouthpiece **18** which is secured to frusto-conical surface **34** of receptacle **12**. Mouthpiece **18** includes a generally oval inlet **54** which communicates with the interior of receptacle **12**.

In the operation of the resuscitator of the instant device, mouthpiece **14** is placed in the mouth of a victim with the victim's tongue being held in place by lower section **36**. To initiate mouth-to-mouth resuscitation, a rescuer places his mouth about mouthpiece **18** with aperture **28** being closed by a finger of the rescuer. By forcefully exhaling through mouthpiece **18** float **16** is pushed downwardly against protuberances **46** of mouthpiece **14** with the exhaled air flowing around plate **48** and through the area provided between cut away section **44** and plate **48**. The exhaled air then flows through passageway **36** into the respiratory tract of the victim.

The rescuer may then remove his mouth from mouthpiece **18** in order to take a breath and will remove his finger from aperture **28**. The air injected into the respiratory tract of the victim will be exhaled by the normal collapse of the victim's lungs and will pass through passageway **36** and will exit through aperture **28** and opening **54** of mouthpiece **18**. Should the rescuer desire to breathe through the nose, the mouth need not be removed from mouthpiece **18**, with the air exhaled from the victim's respiratory tract exiting through aperture **28**.

Those who are experienced in mouth-to-mouth resuscitation practices will readily appreciate that the rescuer

will often drool or otherwise allow saliva to exit from the mouth which is accommodated by the resuscitator of the instant invention. Any saliva so discharged from the mouth of the rescuer will ultimately come into contact with plate **48** and may drip off the periphery thereof into the collector provided by the inner surface of frusto-conical wall **24** and trough-shaped surface **26**. Any liquid thus accumulated may readily flow through aperture **28** when the finger of the rescuer is removed.

It should be apparent that the resuscitator of the instant invention provides a convenient means for avoiding direct oral contact between the victim and the rescuer and at the same time allows the use of the total lung power of the rescuer in an attempt to revive the victim. It should also be apparent that the relationship between plate **48** and passageway **36** avoids the undesirable inhalation of liquids by the victim.

It is now seen that there is herein provided an improved resuscitator having all of the advantages of the instant invention and others, including many advantages of great practical utility and commercial importance.

Since many embodiments may be made of the instant invention, and since many modifications may be made of the embodiment hereinbefore shown and described, it is to be understood that the foregoing is to be interpreted merely as illustrative and not in a limiting sense.

I claim:

1. A resuscitator adapted for use in mouth-to-mouth resuscitation in a normally vertical attitude comprising a body having an inner chamber having a first end and a second end in fluid communication with said first end, a first mouthpiece including a substantially straight member forming a substantially straight passageway therein and having two ends, said first mouthpiece being secured to said first end of said body with one of said ends of said member extending into said inner chamber for providing communication between said inner chamber and the exterior of said resuscitator, said first mouthpiece being adapted to be positioned within the mouth of a victim with said body being held in a normally vertical position, a second mouthpiece secured to said second end of said body providing communication between said inner chamber and the exterior of said resuscitator, means mounted in said inner chamber above said passageway of said first mouthpiece when said body is in the vertical position for deflecting liquids away from said passageway, said deflecting means including a plate extending beyond the lateral extent of said passageway, said end of said first mouthpiece inwardly of said chamber forming a series of air passages, and a tongue secured to said plate extending into said second mouthpiece.

2. The structure of claim **1** wherein said body provides an opening communicating between said inner chamber and the exterior of said resuscitator below said air passages provided in said first mouthpiece.

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