## Dec. 25, 1962

D. O. DICK RESUSCITATOR Filed May 17, 1961

3,070,089

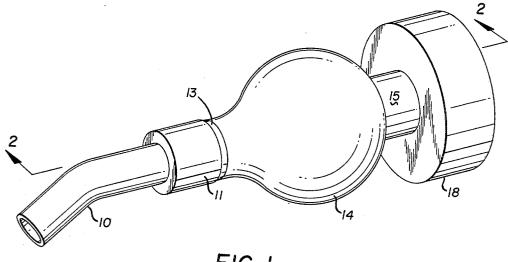
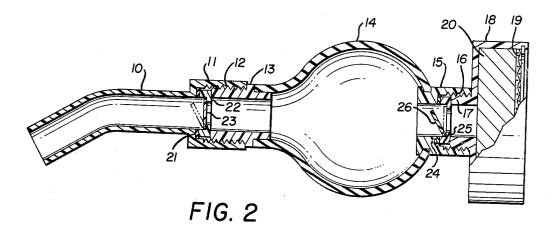


FIG. I



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## 3,070,089 Patented Dec. 25, 1962

#### 3,070,089 RESUSCITATOR Dale O. Dick, P.O. Box 133, Kinsman, Ohio Filed May 17, 1961, Ser. No. 110,680 3 Claims. (Cl. 128–29)

This invention relates to a resuscitator and more particularly to a resuscitator by which artificial respiration may be conveniently and easily given.

The principal object of the invention is the provision of 10 a resuscitator arranged to be engaged in a person's mouth so as to displace the tongue from its normal position and thereby provide a passageway for air moved by the resuscitator.

A further object of the invention is the provision of 15 a resuscitator arranged to improve the so-called "mouthto-mouth" technique of artificial respiration.

A still further object of the invention is the provision of a simple, inexpensive, easily-used resuscitator that will work efficiently in moving air into a person's lungs 20 as in the case of artificial respiration.

The resuscitator disclosed herein comprises an improvement in the art relating to such devices in that a simple and inexpensive device is provided which may be readily positioned in the mouth of a person requiring artificial 25 respiration and manually operated to force air into the person's lungs. The person's nose is held shut so as to prevent the air from escaping until time for the air to be expelled from the person's lungs and replaced again in the next cycle. The device provides a filter to insure 30 the delivery of clean air to the person's lungs and it enables the technique of mouth-to-mouth respiration to be employed without the actual mouth-to-mouth contact heretofore believed necessary by the person rendering the artificial respiration and the person receiving it. 35

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being the intention to cover all changes and modifications of the example of the invention herein chosen for purposes of the disclosure, which do not constitute departures from the spirit and scope of the invention.

The invention is illustrated in the accompanying drawing, wherein:

FIGURE 1 is a perspective view of the resuscitator formed in accordance with the invention.

FIGURE 2 is a vertical section on line 2-2 of FIG-URE 1.

By referring to the drawings, it will be seen that the resuscitator comprises an angular elongated tube 10 having an enlarged extension 11 which is internally threaded as at 12 and arranged to receive an externally threaded neck 13 on one side of a resilient bulb 14. The other side of the resilient bulb 14 is secured to a collar 15 which is internally threaded as at 16 and which in turn receives a threaded tubular end 17 of a circular filter case 18, one side of which is opened and provided with a screen 19. Filter media such as known in the art is provided in the form of a removable replaceable cartridge 20 positioned in the filter case 18.

The interior of the enlarged end portion 11 forms an annular shoulder 21 against which a flap valve unit comprising an apertured disc 22 and a valve member 23 pivotally secured therto is positioned. The flap valve unit is secured in position by the engagement of the exteriorly threaded neck 13. The collar 15 also forms an annular shoulder 24 and a flap valve unit exactly like that just described and including an apertured disc 25 and a valve member 26 pivoted thereto is positioned against the annular shoulder 24 and retained in that position by the engagement thereagainst of the threaded tubular end 17 of the filter case 18.

It will thus be seen that when the resuscitator is positioned with the tube 10 in the mouth of the person to which arificial respiration is to be supplied, the same will reach downwardly into the throat of the person and displace the tongue in so doing. Manual manipulation of the resilient bulb 14 will cause air to move through the filter cartridge 20, the valve member 26 and into the bulb 14. Continued manual manipulation of the bulb 14 will cause the air within the bulb 14 to close the valve member 26 and move past the valve member 23 into the tube 10 and thence into the lungs of the person. It will thus be seen that a number of squeezing manipulations of the bulb 14 will cause a quantity of air to flow into the lungs of the person to whom artificial respiration is being supplied and that when the lungs have become filled the device can be moved and the air will flow outwardly of the lungs. The device is then repositioned in the person's mouth and the cycle repeated as long as the artificial respiration is necessary.

It will thus be seen that the resuscitator disclosed herein meets the several objects of the invention, and having thus described my invention, what I claim is:

1. A resuscitator comprising an elongated angular tube open on one end and having an enlarged internally threaded extension on the other end, a resilient bulb having a neck portion engaged in said internally threaded extension, a flap valve disposed in said internally threaded extension and arranged to pass air from said bulb to said tube, a collar on said bulb and a flap valve in said collar arranged to pass air into said bulb, a filter case having an externally threaded tubular member engaged in said collar and acting to retain said flap valve therein, a filter in said filter case.

2. The resuscitator as set forth in claim 1 and wherein each of said flap valves comprises an apertured disc having a valve member hingedly secured thereto for engagement with one side thereof.

3. A resuscitator comprising a deformable flexible air containing bulb having a neck on one side thereof and a collar on the other side thereof, an elongated angular tube secured to said neck and a first flap valve mounted between said neck and said elongated angular tube and arranged to prevent air from entering said bulb there-50 through and to pass air from said bulb into said elongated angular tube, a filter case having a filter cartridge therein, a tubular extension on said filter case engaged in said collar, a second flap valve arrangement positioned in said collar and between a portion thereof and said tubular 55 extension of said filter case, said secondary flap valve arranged to pass air from said filter into said bulb and to prevent air in said bulb from passing into said filter.

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