

[54] RESUSCITATION DEVICE

[76] Inventor: George H. Bauer, Jr., 5616 Ruth St., Metairie, La. 70003

[22] Filed: May 13, 1974

[21] Appl. No.: 469,410

[52] U.S. Cl. 128/145.5

[51] Int. Cl.² A61M 16/00

[58] Field of Search 128/145.5-145.8, 146.3-146.5, 146.7, 28, 30, 30.2, 142, 1 B

[56] References Cited

UNITED STATES PATENTS

2,347,326	4/1944	Kirschbaum	128/1 B
2,887,104	5/1959	Sovinsky et al.....	128/145.5
3,242,921	3/1966	Seeler	128/145.5
3,461,858	8/1969	Michelson.....	128/28
3,509,899	5/1970	Hewson	128/145.5

Primary Examiner—Richard A. Gaudet
 Assistant Examiner—Henry J. Recla
 Attorney, Agent, or Firm—Stein & Orman

[57] ABSTRACT

A resuscitation device designed to allow one man to perform external cardiac massage and mouth-to-mouth resuscitation simultaneously comprising an airway means having an operator mouth piece means attached at one end and a patient mask attached to the other end, flow regulating means disposed in operative position between the operator mouth piece and the patient mask, and head support means attachable to the patient mask means, whereby both hands of the operator are free to perform other functions, such as external cardiac massage, during the entire resuscitation procedure.

19 Claims, 15 Drawing Figures

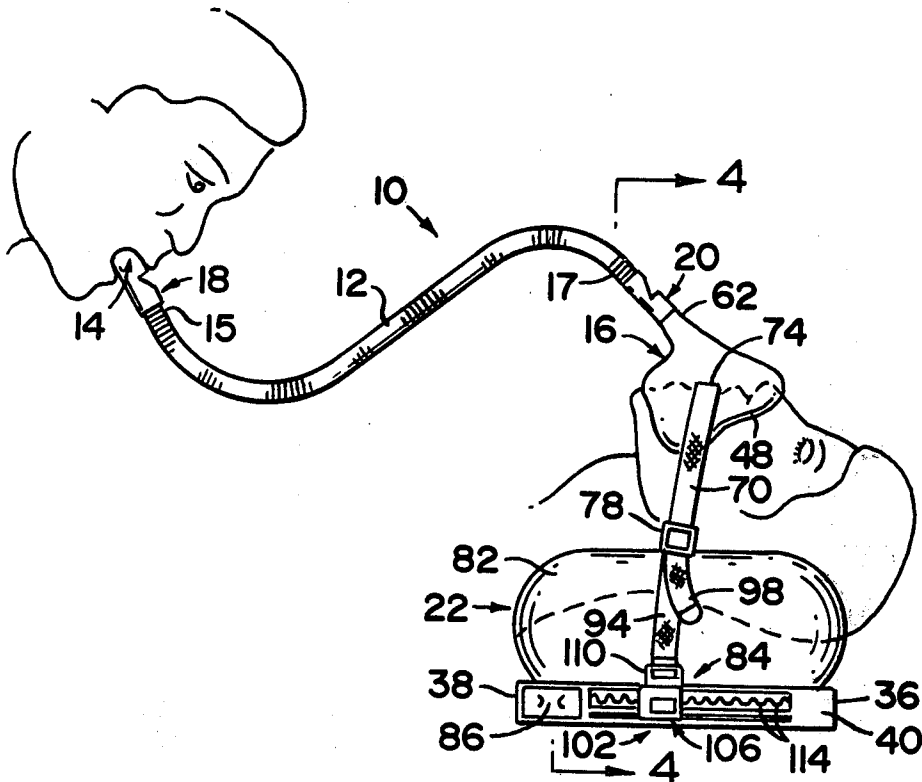


FIG. 1

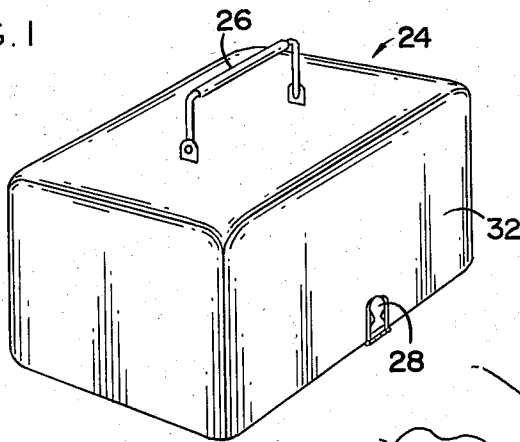


FIG. 2

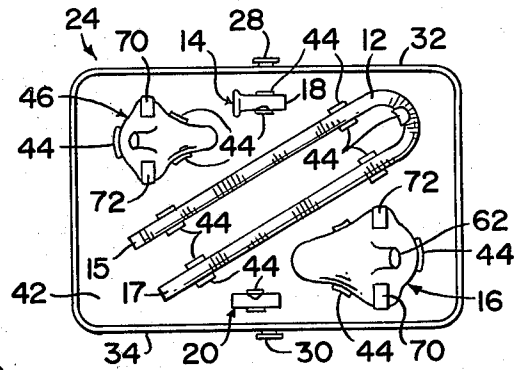


FIG. 4

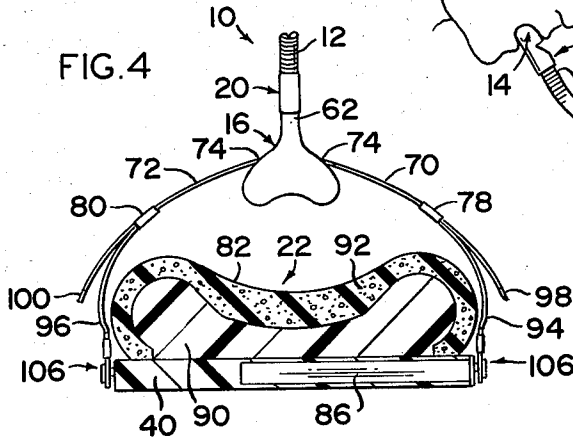


FIG. 3

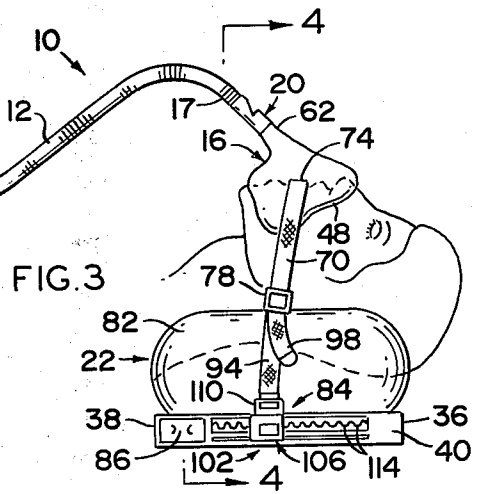


FIG. 6

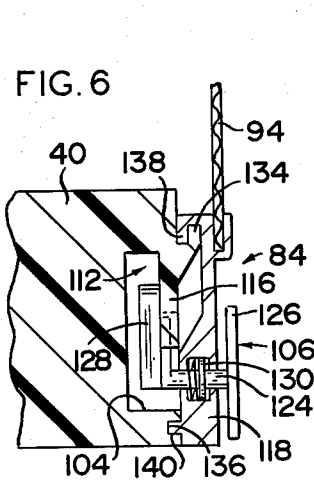


FIG. 5

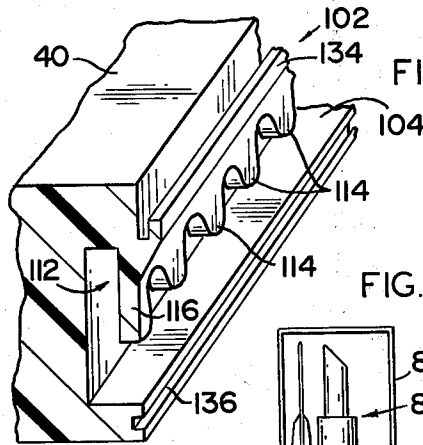


FIG. 9

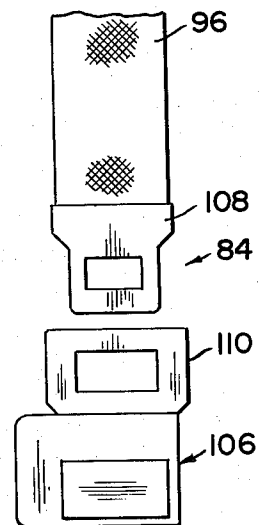


FIG. 7

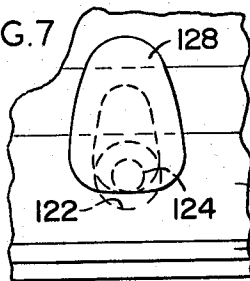


FIG. 8

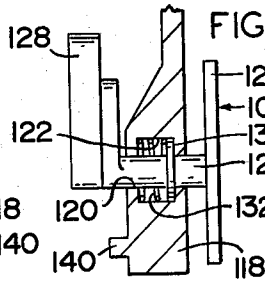
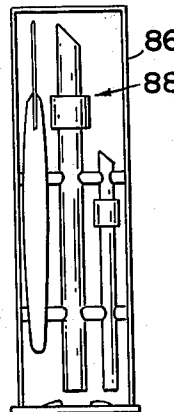


FIG. 10



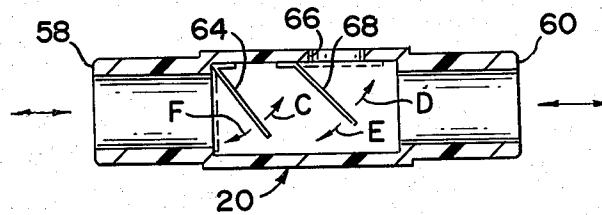
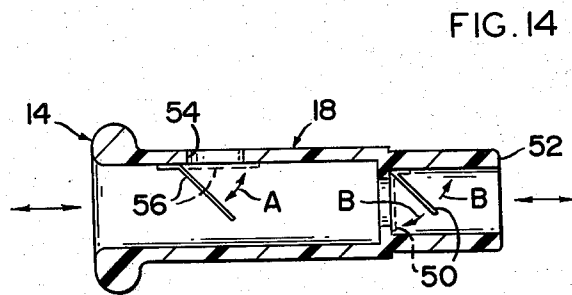
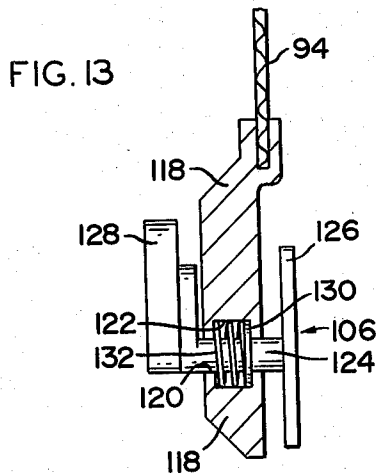
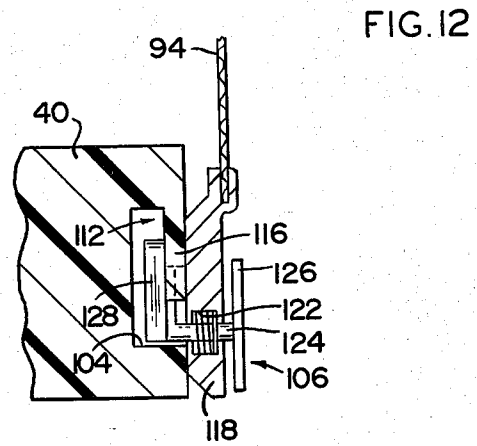
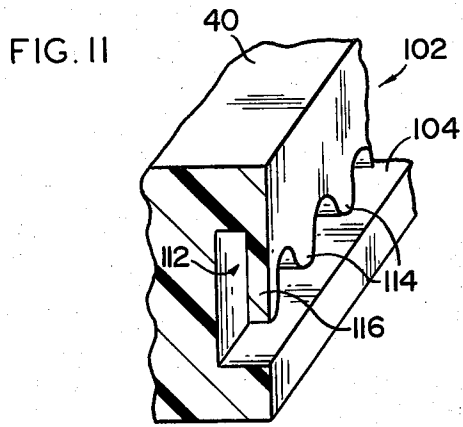


FIG. 15

RESUSCITATION DEVICE

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to a resuscitation device of the type designed and constructed for use by a single individual in rendering artificial respiration. The device is constructed so that both hands of the individual administering mouth-to-mouth resuscitation are left free for performing other first aid procedures. An external power source is not required in the operation of the device of the subject invention.

2. Description of the Prior Art

The technique of mouth-to-mouth resuscitation where air is forced directly into a victim's lungs in an effort to restore those organs to their normal operation has long been recognized as an effective life-saving technique. In the most simple form of administering mouth-to-mouth resuscitation, the individual endeavoring to assist the party whose respiratory system has been temporarily disabled is required to establish physical contact between his mouth and that of the patient. As a result, there has been an understandable reluctance on the part of some people to render such first aid assistance. Of course, when such respiratory failure is also accompanied by severe facial injury, this form of mouth-to-mouth resuscitation is virtually impossible. In recognition of these and various other obvious shortcomings of literal mouth-to-mouth resuscitation, numerous devices have been built and are described in the prior art for use in resuscitation where physical contact between the operator and the victim is eliminated.

One such device is disclosed in U.S. Pat. No. 3,509,899, relating to an extremely sophisticated heart and lung resuscitator. The device of that patent basically comprises a portable unit including lung ventilation means and cardiac compression means, both connected to a pneumatic control circuit which coordinates their respective functions. The pneumatic control circuit is mounted within a shoulder lift ordinarily placed beneath the shoulders and upper back of the victim. By virtue of its construction, this device provides for simultaneous ventilation of the victim's lungs and external cardiac massage. Additionally, once the unit is operational, the operator is free to perform other first aid measures. However, the device of this patent contains several inherent limitations.

First, and perhaps most important, the device of U.S. Pat. No. 3,509,899, is limited in its applicability by its dependence on a pressurized source of ventilating gas. Absence or failure of the oxygen tank would render the device virtually useless. Other serious limitations derive directly from the complexity of the pneumatic control circuit. This complexity not only increases the cost of the device, but also compounds the difficulties of maintenance and operation. Finally, as is apparent from studying the patent, while the device is portable in that it does not depend on any external power source other than an oxygen tank, it would require a healthy adult operator to transport and operate it.

Other devices in aid of mouth-to-mouth resuscitation are disclosed in U.S. Pat. Nos. 2,887,104, and 2,887,105. Actually, both these patents relate to mask-to-mask resuscitators for use in toxic atmospheres. Neither of the devices disclosed in these patents shows

means for positioning the victim's head and neck in a position conducive to resuscitation.

Finally, both U.S. Pat. No. 3,099,985, and U.S. Pat. No. 3,219,030, disclose devices for use in mouth-to-mouth resuscitation. Both these patents are directed to the valve means of the respective devices, and neither would free the hands of the operator for performing first aid measures other than mouth-to-mouth resuscitation. Specifically, neither of the devices of these patents discloses means for securely attaching the resuscitator to the victim, nor for positioning the victim in that position most conducive to resuscitation efforts.

It is thus apparent that there is a great need in the art for a mouth-to-mouth resuscitation device which incorporates a number of desirable attributes. Because of its intended use in emergency situations, such a device should be simple to operate and maintain. Similarly, it should be truly portable, requiring no external power source of any kind. For both aesthetic and health reasons it should provide for a one-way flow of air from the operator to the victim. So that it may be reasonably made available to all accident victims, it must be of a simple construction which will be inexpensive to manufacture. Finally, since emergency situations often require treatment in addition to mouth-to-mouth resuscitation, the hands of the operator must be left free to perform other lifesaving functions.

SUMMARY OF THE INVENTION

This invention relates to a resuscitation device designed and constructed so as to allow one man to perform, simultaneously, mouth-to-mouth resuscitation and other first aid measures, such as external cardiac massage. Heretofore, two persons have been required to perform these separate tasks efficiently. The device of the present invention is designed to keep the hands of the operator free at all times and to be efficiently, easily and rapidly used, sanitary, portable and inexpensive. No external power source is required for the operation of the device of this invention.

The resuscitation device basically comprises airway means, an operator mouthpiece means attached to one end of the airway, patient mask means attached to the other end of the airway, flow regulating means disposed between the operator mouthpiece means and the patient mask to control the flow of air therebetween, and head support means attachable to the patient mask in such a way as to hyperextend the patient's neck and thereby open his airway. As will be described in more detail hereinafter, it should also be noted that the entire resuscitation device is stored and transported within a single box-like carrying case. Additionally, means may be provided within the carrying case for storage of additional emergency paraphernalia, such as a tracheostomy kit.

The airway of the present device preferably comprises a flexible hose of approximately two to three feet in length. The hose's flexibility not only allows for mobility of the operator during use of the device, but also facilitates storage of the airway within the carrying case. Of course, it should be obvious that the airway should preferably be constructed from heat resistant material so that it may be sterilized. Similarly, the operator mouthpiece means, the patient mask means and the flow regulating means should all be constructed from heat resistant, sterilizable material. In the preferred embodiment of this invention, the flow regulating means comprise a first valve means removably at-

tachable between the operator mouthpiece means and one end of the airway and a second valve means removably attachable between the other end of the airway and the patient mask means. Both the first and second valve means are generally the same construction, and, together, they provide for a one-way flow of air through the airway from the operator to the patient. That is, when the operator inhales through the operator mouthpiece means, he inhales atmospheric air through an opening formed in the side wall of the operator mouthpiece. When the operator exhales, the first valve means functions to close this hole in the operator mouthpiece and allow the air to pass through the airway. When the operator is exhaling, the second valve means allows the flow of air to pass through the patient mask means into the patient's lungs. As the patient exhales, the second valve means operates to close the airway and simultaneously expose an opening to the atmosphere, whereby exhaled gases from the patient pass into the atmosphere rather than back to the operator.

So that the patient mask means may be retained on the patient in a position conducive to the administration of artificial respiration, the patient mask further includes retention means attached thereto. In the preferred embodiment, the retention means comprises at least two predetermined lengths of substantially elastic material fixedly attached at one end thereof to substantially opposite sides of the patient mask means. Buckles are attached to each of the free ends of the two elastic belts. In order to retain the patient mask means on the patient, these buckles are engaged by correspondingly disposed securing means attached to the base means of the device.

In the preferred embodiment, this securing means comprise two straps attached at one end thereof to substantially opposite sides of the base means. It is the free ends of these straps that are engaged by the buckles attached to the free ends of the retention means in order to affix the patient mask means over the patient's airway.

In order to pull the patient's jaw open, the base means of the present invention further comprises adjustment means, whereby the securing means is attached to the base means by engagement with the adjustment means. The adjustment means of the present invention comprises at least two adjustment tracks correspondingly formed in side walls of the base means in substantially opposed relation one from the other. The adjustment means further comprise at least one release mechanism movably disposed within each of the tracks. At least one of the release mechanisms further includes a female connector means mounted thereon, and at least one of the strap means includes a male connector means attached at one end thereof, whereby that strap means may be removably connected to the corresponding release mechanism. The remainder of the strap means are fixedly attached at one end to the remainder of the release mechanisms. As previously stated, the free ends of each of the strap means are in corresponding relation to the patient mask means buckle means, whereby the head support means may be both removably and adjustably attached to the patient mask means.

It should also be noted that the head support means of the present invention includes a pillow disposed on its upper surface in supporting relation to the head of the patient. Preferably, this pillow has a hard inner core to help maintain its shape and a soft outer covering so

as to conform to the contour of the patient's head and neck better. Furthermore, storage means may be integrally formed within the head support means for the purpose of making other emergency equipment readily available.

In an emergency situation, where mouth-to-mouth resuscitation is appropriate, the operator first removes the cover from the device and then assembles the operator mouthpiece, the airway, the flow regulating means and the patient mask. The resuscitator, after having laid the patient's head on the pillow, then places the patient mask over the patient's mouth and nose. The patient mask retention means are then buckled to the corresponding strap means forming a part of the securing means of the head support. The male connector is then inserted into the female connector. The operator then grasps the straps extending from the buckles of the patient mask retention means and pulls the mask tight over the patient's face. Finally, the operator depresses the release mechanisms of the adjustment means with his palms and slides these mechanisms forward (toward the operator) in such a way as to cause the bottom of the patient mask to pull the patient's jaw open. It should be noted that the retention means of the patient mask are formed of a substantially elastic material, thus relieving the operator of the necessity of making fine adjustments in the fit of the patient mask to the patient. This entire installation procedure will take no more than 5 to 10 seconds, and the operator is now ready to begin mouth-to-mouth resuscitation.

The resuscitator then places the mouthpiece in his mouth and begins his task of resuscitation. Of course, it is obvious that his hands are now free to allow for other emergency procedures, such as external cardiac massage. When the operator inhales, the first valve means functions to close the airway while at the same time opening an aperture in a side wall, whereby the operator inhales atmospheric air. Exhalation by the operator serves to close this aperture in the first valve means and simultaneously to position the second valve means so that the air will pass directly into the victim's lungs. When the victim exhales, the second valve means functions to close the airway, while at the same time opening an aperture to allow the exhaled gases to escape into the atmosphere.

While the patient mask means of this device has been generally described as fitting an adult victim, it should be obvious that a child-sized mask would be an obvious substitute for the mask means described herein.

Thus, by virtue of the structure of the present invention, there is provided a mouth-to-mouth resuscitation device which is simple to operate and maintain and is truly portable, requiring no external power source. Furthermore, the present device is inexpensive to manufacture, thereby increasing its potential availability to accident victims. Finally, and perhaps most importantly, the construction of the present device is such that it may be used by a single operator while still leaving the hands of the operator free to perform other life-saving procedures. This, of course, allows the second member of the usual two-man rescue team to provide care to other injured persons.

This invention accordingly comprises an article of manufacture possessing the features, properties and the relation of elements which will be exemplified in the article hereinafter described, and the scope of the invention will be indicated in the claims.

BRIEF DESCRIPTION OF THE DRAWINGS

For a fuller understanding of the nature and objects of the invention, reference should be had to the following detailed description taken in connection with the accompanying drawings in which:

FIG. 1 is an isometric view of the cover means of the present invention.

FIG. 2 is a plan view of the interior of the cover means, showing the location and storage of various parts of the present device.

FIG. 3 is a side view of the device of the present invention in use.

FIG. 4 is a sectional view taken along line 4—4 of FIG. 3.

FIG. 5 is a fragmentary isometric view, partially in section, of an adjustment track of the present invention.

FIG. 6 is a sectional view of the adjustment track shown in FIG. 5 showing the placement of a release mechanism of the present invention therein.

FIG. 7 is a fragmentary side view of a release mechanism of the present invention.

FIG. 8 is a front view, partially in section, of a release mechanism of the present invention.

FIG. 9 is a plan view of a release mechanism including female connector means mounted thereon showing a strap means including male connector means attached thereto in engaging relation to the release mechanism.

FIG. 10 is a plan view of the drawer means of the present invention showing a trecheostomy kit stored therein.

FIG. 11 is a fragmentary isometric view of another embodiment, partially in section, of an adjustment track of the present invention.

FIG. 12 is a sectional view of another embodiment of the adjustment track shown in FIG. 5 showing the placement of a release mechanism of the present invention therein.

FIG. 13 is a front view of another embodiment, partially in section, of a release mechanism of the present invention.

FIG. 14 is a sectional view of the operator mouthpiece means and first valve means of the present invention.

FIG. 15 is a sectional view of the second valve means of the present invention.

Similar reference characters refer to similar parts throughout the several views of the drawings.

DETAILED DESCRIPTION

Referring first to FIG. 3, this invention relates to a resuscitation device generally indicated as 10, which is designed and constructed so as to allow one man to perform mouth-to-mouth resuscitation and other first aid measures simultaneously. The device will hereinafter be described with particular reference to its use on adult victims, but it should be obvious that it could be modified easily, both for pediatric use and for use on victims having severe facial or neck injuries. The resuscitation device basically comprises airway means 12, an operator mouthpiece means 14 attached to one end 15 of airway 12, patient mask means 16 attached to the other end 17 of airway 12, flow regulating means comprising first valve means 18 and second valve means 20 disposed between the operator mouthpiece 14 and the patient mask 16 to control the flow of air therebe-

tween, and head support means generally indicated as 22 attachable to patient mask 16. The entire resuscitation device is stored and transported in a box-like carrying case, the cover of which is generally indicated as 24 in FIGS. 1 and 2.

Cover 24 includes handle means 26 and fasteners 28 and 30 disposed on opposite sides 32 and 34, respectively, of cover 24. Fasteners 28 and 30 engage corresponding elements disposed on sides 36 and 38, respectively, of base means 40. As seen in FIG. 2, the top, interior surface 42 of cover 24 includes a plurality of bracket means 44 mounted thereon, whereby various parts of the resuscitator device may be stored therein. Specifically, FIG. 2 shows bracket means 44 disposed for storage of airway 12, operator mouthpiece 14 and first valve means 18, patient mask 16, pediatric mask 46, and second valve means 20.

Operator mouthpiece 14, patient mask 16, first valve means 18, second valve means 20, and airway 12 are all preferably formed from heat-resistant material so that they may be sterilized. Furthermore, airway 12 comprises a predetermined length (approximately two feet) of flexible material. The flexibility of airway 12 is important both for its storage and to allow the operator freedom of movement while using the device. It could also be noted that the peripheral edge 48 of patient mask 16 is flexible so that an air-tight seal may be formed when it is placed over the patient's mouth and nose.

The structure and operation of operator mouthpiece 14 and first valve means 18 are best seen in FIG. 14. First valve means 18 comprises a first two-way valve 50 disposed within end 52 of first valve 18, and a first aperture 54 formed in a side wall of first valve means 18. A flap 56 is mounted for pivotal movement within first valve means 18 in covering/uncovering relation to first aperture 54, as indicated by arrow A in FIG. 14. First two-way valve 50 is similarly mounted for pivotal movement as shown by arrows B. End 52 of first valve means 18 is removably attachable to end 15 of airway 12. By virtue of this construction when the operator inhales through mouthpiece 14 first two-way valve 50 closes and flap 56 falls, exposing aperture 54. This results in the operator's inhaling fresh air through aperture 54. When the operator exhales, flap 56 closes aperture 54 and first two-way valve 50 opens to allow air to pass through airway 12.

Second valve means 20, best seen in FIG. 15, is constructed and operated in substantially the same manner as first valve means 18. The second valve means 20 is connected to end 17 of airway 12 by inserting end 58 into end 17. It is connected to the patient mask 16 by inserting end 60 into female connector 62 formed on the patient mask 16. Mounted within second valve means 20 for pivotal movement is second two-way valve 64. A second aperture 66 is formed in a side wall of second valve means 20 substantially adjacent end 60, and a flap 68 is disposed for pivotal movement in covering/uncovering relation thereto. When the operator exhales through airway 12, second two-way valve 64 opens, as shown by arrow C, and flap 68 covers second aperture 66, as shown by arrow D. This necessarily allows free passage of air into the victim. When the operator ceases exhaling, flap 68 uncovers second aperture 66, and second two-way valve 64 falls, as shown by arrows E and F respectively. The victim can then exhale directly to the atmosphere through second aperture 66, thereby preventing any contamination of the

operator.

As best seen in FIGS. 3 and 4, patient mask 16 further comprises retention means comprising two predetermined lengths 70 and 72 of elastic material fixedly attached at one end, 74 and 76 respectively to opposite sides of patient mask 16. Attached to the free end of each length 70 and 72 are buckles 78 and 80.

Head support means 22 comprises base 40, pillow 82 disposed on base 40 in supporting relation to the patient's head, and securing means generally indicated as 84 in FIG. 3 attached to base 40. If desired, an accessory drawer 86 may be formed in base 40, as shown in FIG. 3. Such a drawer 86 may be used, for example, for providing ready access to a trecheostomy kit such as that generally indicated as 88 in FIG. 10. Of course, drawer 86 is not limited in its intended use to the storage of a trecheostomy kit but could be utilized for the storage of any applicable accessory device.

As best seen in FIG. 4, pillow 82 preferably comprises a substantially rigid inner core 90 and a relatively softer outer portion 92 disposed in surrounding relation to inner core 90. Both inner core 90 and outer portion 92 are configured to supportingly engage the head of a patient in a position conducive to the uninterrupted flow of air to the patient's lungs. More specifically, pillow 82 is configured to allow the back of the patient's head to rest relatively lower than his neck.

Securing means 84 of the resuscitation device preferably includes two straps 94 and 96 disposed on opposite sides of base 40. Free ends 98 and 100 are disposed in corresponding relation to buckles 78 and 80, whereby head support means 22 may be removably attached to patient mask 16 by passing ends 98 and 100 through buckles 78 and 80.

In order to retain the resuscitation device in its optimum operating position, the preferred embodiment of the device further comprises adjustment means generally indicated as 102 in FIG. 3 mounted on base 40. In this preferred embodiment, securing means 84 is attached to adjustment means 102.

In the preferred embodiment of the resuscitation device adjustment means 102 comprises two adjustment tracks 104, each one of tracks 104 being formed in a side wall of base 40 in opposite relation one from the other. Adjustment means 102 further comprises a release mechanism 106 movably disposed within each adjustment track 104. As shown in FIG. 6, strap 96 may be removably attachable to the release mechanism 106. Strap 96 includes male connector 108 attached at one end thereof in corresponding relation to female connector 110 mounted on corresponding release mechanism 106. Strap 94 is similarly attachable to corresponding release mechanism 106. Detail views showing a preferred construction for adjustment tracks 104 and release mechanisms 106 are shown in FIGS. 11, 12 and 13. Referring first to FIG. 11, adjustment tracks 104 comprise substantially L-shaped groove 112 including a plurality of teeth 114 formed on the relatively narrow portion 116 of base 40 defined by groove 112. As best seen in FIG. 13, release mechanism 106 of this preferred embodiment comprises a body 118 including an aperture 120 formed therethrough. Aperture 120 further includes an enlarged, substantially cylindrical portion 122. A shaft 124 extends through aperture 120. Attached to one end of shaft 124 is handle 126, and attached to the other end of shaft 124 is locking head 128. Locking head 128 is correspondingly configured as adjustment track 104 for mating engagement there-

with. A shoulder portion 130 is formed on shaft 124 within enlarged portion 122, and a spring 132 is disposed within enlarged portion 122 in abutting relation between one end of enlarged portion 122 and shoulder 130. By virtue of the biasing force of spring 132, locking head 128 is normally urged into engagement with teeth 114 to hold release mechanism 106 at a predetermined point along adjustment track 104. Of course, it should be obvious that by depressing handle 126 to overcome the biasing force of spring 132 release mechanism 106 may be repositioned along adjustment track 104.

FIGS. 5, 6 and 8 present detailed views of another embodiment for adjustment tracks 104 and release mechanism 106. The embodiment shown therein differs from that of FIGS. 11, 12 and 13 in the formation of upper guide rail 134 and lower guide rail 136 in a side wall of base 40 substantially parallel to and co-extensive with L-shaped groove 112. In this embodiment, release mechanism 106 further comprises upper guide tip 138 and lower guide tip 140 formed on body 118 for cooperatively engaging guide rails 134 and 136, respectively.

In order to provide a complete and full disclosure of the resuscitation device of this invention, the following description of its assembly and use is provided.

When it is desired to use the resuscitation device, the operator first removes cover 24 by releasing fasteners 28 and 30. He then places the victim's head and neck on pillow 82. Next, airway 12 is removed and operator mouthpiece 14 and first valve means 18 are attached to end 15 thereof. The appropriate patient mask 16 is selected and it is connected to end 17 of airway 12 at female connectors 62. Patient mask 16 is then placed over the patient's mouth and nose, and straps 94 and 96 are passed through buckles 78 and 80. Male connector 108 is then inserted into female connector 110, and straps 94 and 96 are tightened by pulling on their free ends 98 and 100. At this point it should be noted that fine adjustment of patient mask 16 is not necessary because of the resilient nature of retention means length 70 and 72. As a final adjustment the operator depresses handles 26 of release mechanism 106 with his palms and slides mechanisms 106 along adjustment tracks 104 toward the patient's feet in such a way as to cause the bottom of patient mask 16 to pull the patient's jaw open. Accordingly, it is desirable to form the bottom of head support means 22 from non-skid material. The operator now places mouthpiece 14 in his mouth and commences resuscitation efforts. As previously described, because of the unique structure and placement of first valve means 18 and second valve means 20, the operator constantly inhales fresh air; upon his exhaling a closed flow of air is provided to the patient's lungs; and the patient exhales into the atmosphere without thereby contaminating the operator.

It will thus be seen that the objects made apparent from the preceding description are efficiently attained, and since certain changes may be made in the above construction without departing from the scope of the invention, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the following claims are intended to cover all of the generic and specific features of the invention herein described, and all statements of the scope of the invention which, as a matter

of language, might be said to fall therebetween.

Now that the invention has been described,
What is claimed is:

1. A resuscitation device of the type designed and constructed for use by a single individual in rendering artificial respiration to a victim, said device comprising: airway means; operator mouthpiece means attached in fluid communicating relationship with said airway means; patient mask means attached in fluid communicating relationship with said airway means; flow-direction regulating means disposed in operative position between said operator mouthpiece means and said patient mask means providing a one-way flow from said mouthpiece means to said patient mask means during insufflation of the lungs of the victim and a one-way flow from said patient mask means to the atmosphere during deflation of the lungs of the victim; and head support means attached to said patient mask means, said head support means comprising a base means for supporting the head of the victim including longitudinal adjustment means mounted thereon in parallel relation to a longitudinal axis of said base means; and securing means attaching said patient mask means to said adjustment means, whereby said patient mask means may be removable and longitudinally adjustable to said head support means.

2. A device as in claim 1 wherein said head support means further comprises pillow means disposed on said base means in supporting relation to the head of a patient.

3. A device as in claim 1 wherein said airway means comprises a predetermined length and is formed from substantially flexible, heat-resistant material.

4. A device as in claim 1 wherein said operator mouthpiece is removably attachable to said airway means.

5. A device as in claim 1 wherein said patient mask means is removably attachable to said airway means.

6. A device as in claim 1 wherein said flow direction regulating means comprises a first valve means disposed within said operator mouthpiece means and a second valve means disposed within said patient mask means.

7. A device as in claim 6 wherein said first and second valve means comprise first and second two-way valves, respectively.

8. A device as in claim 7 wherein said first valve means further comprises a first aperture formed in a side wall of said first valve means between the operator and said first two-way valve, and wherein said second valve means further comprises a second aperture formed in a side wall of said mask means between the patient and said second two-way valve, whereby the flow of air through said device defines a closed path from the atmosphere through said first aperture to the operator, from the operator through said airway means to the patient, and from the patient through said second aperture to the atmosphere.

9. A device as in claim 8 wherein said first and second valve means are detachable from said operator mouthpiece means and patient mask means, respectively.

10. A device as in claim 1 wherein said patient mask means further comprises retention means attached thereto, whereby said patient mask means may be secured to the patient.

11. A device as in claim 1 wherein said base means includes drawer means disposed therein, whereby accessories for said device may be stored therein.

12. A device as in claim 1 wherein said pillow means comprises a substantially rigid inner core and a relatively softer outer portion disposed in substantially surrounding relation to said inner core, both said inner core and said outer portion being configured to supportingly engage the head of a patient in a position conducive to artificial respiration.

13. A device as in claim 1 wherein said patient mask means further comprises retention means attached thereto, said retention means comprising a plurality of predetermined lengths of substantially elastic material fixedly attached at one end thereof to substantially opposite sides of said patient mask means, said plurality of retention means further comprising buckle means attached to each of the free ends thereof.

14. A device as in claim 13 wherein said securing means comprise a plurality of strap means attached at one end thereof to substantially opposite sides of said base means in corresponding relation to said buckle means, whereby said head support means may be removably attached to said patient mask means.

15. A device as in claim 13 wherein said adjustment means comprises a plurality of adjustment tracks, each one of said plurality of adjustment tracks being formed in a side wall of said base means in substantially opposed relation one from another, said adjustment means further comprising at least one release mechanism movably disposed within each of said plurality of adjustment tracks, at least one of said release mechanisms further including a female connector means mounted thereon, and wherein said securing means comprises a plurality of strap means, at least one of said plurality of said strap means including male connector means attached to one end thereof whereby said one strap means may be removably connected to said one release mechanism, the remainder of said plurality of said strap means attached at one end thereof to the remainder of said release mechanisms, free ends of said plurality of strap means being in corresponding relation to said buckle means, whereby said head support means may be removably and adjustably attached to said patient mask means.

16. A device as in claim 15 wherein said adjustment tracks comprise substantially L-shaped grooves including stop means comprising a plurality of teeth means formed on the relatively narrow portion of said base means defined by said grooves, and wherein said release mechanisms comprise a body means including an aperture formed therethrough, said aperture including an enlarged, substantially cylindrical portion; a locking pin means extending through said aperture, said locking pin means comprising a handle means formed on one end thereof and locking head means correspondingly configured as said adjustment tracks, and shaft means interconnecting said handle means and said locking head means through said aperture, said shaft means including shoulder means formed thereon within said enlarged portion of said aperture; and biasing means disposed with said enlarged portion in abutting relation between one end of said enlarged portion and said shoulder means, whereby said locking head means is normally urged into engagement with said teeth means to hold said release mechanism at predetermined points along said adjustment tracks.

11

17. A device as in claim 16 wherein said adjustment means further comprises guide rails formed in a side wall of said base substantially parallel to and coextensive with said adjustment tracks, and wherein said release mechanisms further comprise guide tips formed on said body means for cooperatively engaging said guide rails.

18. A device as in claim 1 further comprising cover means removably attachable to said base means, said cover means including hand gripping means disposed

12

thereon, and latch means mounted on the open periphery thereof in engaging relation to said base means, whereby said device may be conveniently carried.

19. A device as in claim 18 wherein said cover means further comprises a plurality of bracket means mounted on the inside thereof, whereby said airway means, said operator mouthpiece means, said patient mask means and said flow regulating means may be held inside said cover means.

* * * * *

15

20

25

30

35

40

45

50

55

60

65