July 13, 1937. O. F. ROSENOW ET AL 2,087,119

EMERGENCY STIMULATOR UNIT

Filed Feb. 10, 1937

Fig. 1.

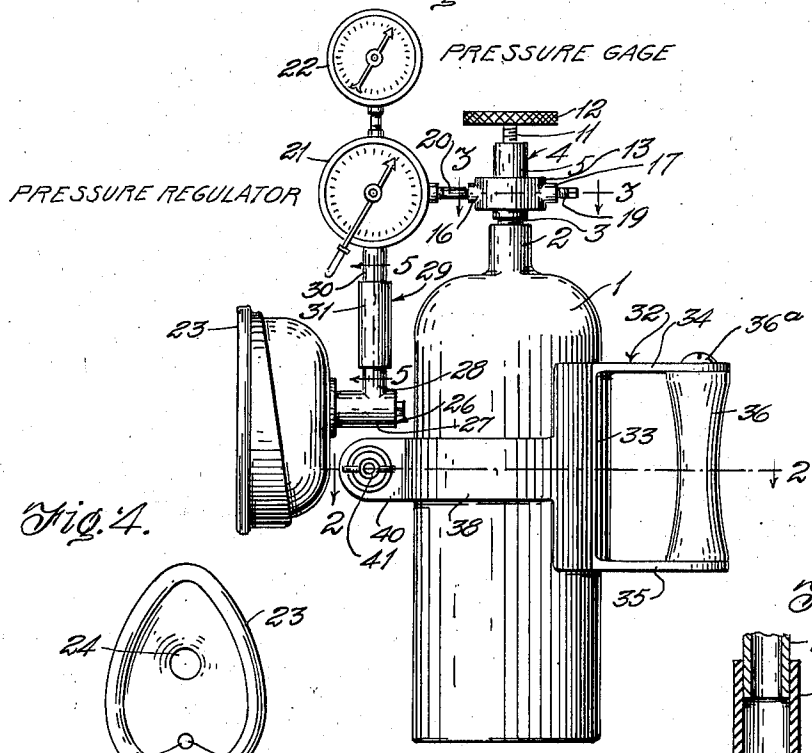


Fig. 4.

Fig. 5.

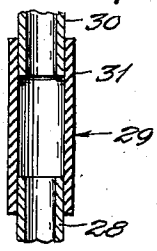


Fig. 2.

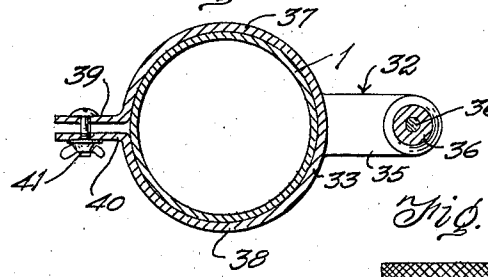


Fig. 3.

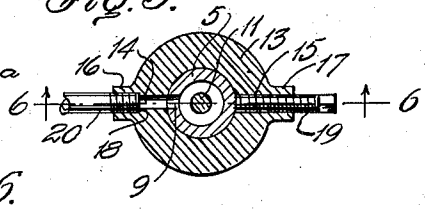
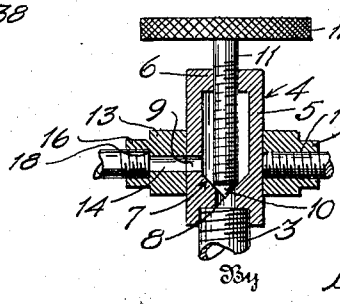


Fig. 6.



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Patented July 13, 1937 2,087,119

UNITED STATES PATENT OFFICE

2,087,119

EMERGENCY STIMULATOR UNIT

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Application February 10, 1937, Serial No. 125,128

7 Claims. (Cl. 128—203)

This invention relates to an emergency stimulator unit of the hand portable, holding and positioning type for the administering of oxygen and oxygen in conjunction with carbon dioxide, and it is intended to be placed in first aid stations, police and fire departments for use in ambulances and patrol cars, industrial plants, in hospital wards for the use of the staff, in physicians' offices or at any other suitable desired places.

The application of oxygen or oxygen in conjunction with carbon dioxide for stimulation is valuable in many cases, shock and hysterics, gassing of all kinds, heart attacks, loss of blood, drowning cases, attempts at suicide, use of narcotics, intoxication and many others, and the aim of this invention is to provide, a stimulator unit acting to temporarily aid the patient until he may be brought under the care of a physician. The unit in accordance with this invention is not intended for artificial resuscitation or to inspire breathing but to artificially stimulate the patient by the administering of oxygen or oxygen in conjunction with carbon dioxide.

The devices as now available commercially for the administration of oxygen and oxygen in conjunction with carbon dioxide are difficult to handle, carry and operate. This invention aims to provide, in a manner as hereinafter set forth, a unit of the class referred to which will overcome the objections as aforesaid and which is extremely portable, conveniently handled, simple to operate, immediately available for use, possessing greater applicatory variation, compact, strong, durable, and thoroughly efficient in its use.

With the foregoing and other objects in view, the invention consists of the novel construction, combination and arrangement of parts as will be more specifically referred to and are as illustrated in the accompanying drawing wherein is shown an embodiment of the invention, but it is to be understood that changes, variations and modifications may be resorted to which fall within the scope of the invention as claimed.

In the drawing:

Figure 1 is a side elevation of the unit,

Figure 2 is a section on line 2—2, Figure 1,

Figure 3 is a section on line 3—3, Figure 1,

Figure 4 is a front elevation of the mask or inhaler,

Figure 5 is a section on line 5—5, Figure 1, and

Figure 6 is a section on line 6—6, Figure 3.

The unit includes a container or tank of the desired capacity for oxygen or for oxygen in conjunction with carbon dioxide. The tank or container 1 is provided with a neck 2 which is interiorly threaded, and extending into and threadedly engaging with the neck 2, as well as extending upwardly from the latter is a peripherally threaded nipple 3. Encompassing the nipple 3 and extending upwardly therefrom is a valve casing 4 consisting of a tubular housing 5 formed at its upper end with an inwardly extending annular flange 6 having its edge threaded. The housing 5 in proximity to its lower end and on its inner face is formed with a valve seat 7. The intake for housing 5 is indicated at 8. The body of housing 5 is formed intermediate its ends with an opening 9 constituting an outlet. There is associated with the housing 5 a shut-off valve structure for the container or tank 1. The valve structure includes a valve 10 carried on the inner end of the threaded stem 11. The latter threadedly engages with the flange 6. The outer end of stem 11 is provided with a handle 12. The valve 10 is for coaction with the seat 7 for controlling the discharge from a container or tank 1. Encompassing the housing 5 is a collar 13 formed with a pair of inner endwise aligned openings 14, 15 disposed diametrically thereof. The periphery of collar 13 is provided with a pair of annular bosses 16, 17. The boss 16 is of greater inner diameter than the diameter of opening 14 and the boss 16 is arranged at the outer end of opening 14. The collar 13 is formed with a shoulder 18 at the outer end of opening 14. The inner diameter of the boss 17 is the same as the diameter of the opening 15. The inner face of the boss 17 forms a continuation of the wall of opening 15. The wall of opening 15 and the inner face of boss 17 are threaded. Extending through the boss 17 and opening 15 and abutting the housing 15 is a binding screw 19 which acts to secure the collar 13 stationary to the housing 5. The opening 9 in housing 5 registers with the opening 14 in collar 13. The boss 16 is interiorly threaded and extending into boss 16, abutting shoulder 18 and threadedly engaging with boss 16 is a conducting-off pipe 20.

The unit includes a pressure regulator 21 into which the pipe opens. Arranged over the pressure regulator 21, as well as communicating with the latter is a pressure gauge 22. The unit includes an inhaler or mask 23 having an intake opening 24 and an expiratory valve 25. Formed integral with the mask 23 and registering with the opening 24 is an intake pipe 26 formed of a horizontal leg 27 and a vertical leg 28. The leg 28 extends upwardly from the leg 27 adjacent the inner end of the latter. The leg 28 is of less diameter than the leg 27.

Leading from the pressure regulator 21 is a sec-

tional supply pipe 29 for the intake pipe 26. The supply pipe 29 consists of a rigid section 30 which is connected with the pressure regulator 21 and a flexible tubular section 31 which couples the section 30 with the leg 28 of the intake pipe 26. The diameter of section 30 of supply pipe 29 is the same as the diameter of the leg 28 of the intake pipe 26. The section 31 encompasses the lower end of section 30 and the upper end of leg 28. The section 31 is short but greater in length than the section 30 and regulator 21. The section 31 is in the form of a rubber tube.

The container or tank 1 is provided with a handle structure 32 for conveniently handling, carrying and positioning the unit. The structure 32 consists of a segmental-shaped body part 33 having extended outwardly from its upper and lower ends parallel arms 34, 35 between which is arranged a handle piece 36. The latter is connected to the outer ends of the arms 34, 35 by the holdfast means 36a. The arms 34, 35 are disposed centrally with respect to the upper and lower ends of the body part 33. The sides of body part 33 have extending therefrom a pair of oppositely disposed substantially semi-circular straps 37, 38 having their free ends formed with tongues 39, 40 respectively. The tongues are arranged in parallel relation and are apertured. The straps 37, 38 are positioned against the container or tank 1 and are maintained in binding engagement therewith by an adjustable clamping device 41 carried by the tongues 39, 40.

What we claim is:

1. In an emergency stimulator unit of the hand portable, holding and positioning type, a container, a valve controlled outlet structure therefor at the upper end thereof, a handle structure secured to said container intermediate its ends and extending laterally therefrom, a mask, an intake pipe communicating with the mask, a pressure regulator, a pressure gauge communicating with said regulator, means for establishing communication between said pressure regulator and said valve structure, and a supply pipe leading from said regulator to said intake pipe, said supply pipe including a flexible section connected to said intake pipe.

2. The invention as set forth in claim 1 having said intake pipe of angle contour, said supply pipe disposed in parallel relation with the upper portion of the container, said intake pipe including a vertical leg, and the flexible section of said supply pipe being connected to said vertical leg.

3. In an emergency stimulator unit of the hand portable, carrying and positioning type, a container, a handle structure therefor including a body portion provided with a pair of straps and means carried by the straps for securing said structure to the container, an inhaler disposed in lateral relation with respect to said means, an angle-shaped supply pipe carried by and opening into the mask and arranged above said means, an adjustable valve controlled outlet structure for and connected to the container, a supply pipe arranged over said intake pipe and having a flexible section connected to one of the legs of said intake pipe, a pressure regulator communicating with said valve structure and with said supply pipe and pressure gauge communicating with said regulator.

4. The invention as set forth in claim 3 having said handle structure formed with a hand grip disposed in lateral relation with respect to the container.

5. An emergency stimulator unit comprising a container having a neck, an adjustable valve controlled outlet structure connected to said neck, a pressure regulator disposed in lateral relation with said structure and communicating with the latter, a pressure gauge communicating with said regulator, a handle structure secured stationary to said container intermediate the ends of the latter, an inhaler provided with an intake pipe, and a supply pipe leading from said regulator to said intake pipe including a flexible section.

6. An emergency stimulator comprising a portable container having a neck, an adjustable valve controlled outlet structure communicable with and anchored to said neck, a pressure regulator disposed in lateral relation and in proximity to said structure above said container, a pressure gauge fixed to and opening into said regulator, a handle structure secured to the container intermediate the ends of the latter and extending laterally therefrom, an inhaler arranged in close proximity to the container intermediate the ends of the latter, an angle-shaped intake pipe opening into the inhaler and including a pair of legs and a supply pipe arranged in proximity to the container depending from the regulator and including a short flexible section opening into one of the legs of the intake pipe.

7. In an emergency stimulator unit of the hand portable, holding and positioning type, a container, an adjustable valve controlled outlet structure fixed to the upper end of and for communication with the container, an inhaler arranged in close proximity to the container intermediate the ends of the latter, means for establishing communication between said structure and inhaler and including a short flexible tubular part attached to the inhaler, and a handle structure secured to the container intermediate the ends of the handle and including a hand grip disposed in lateral spaced relation to the container.

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