

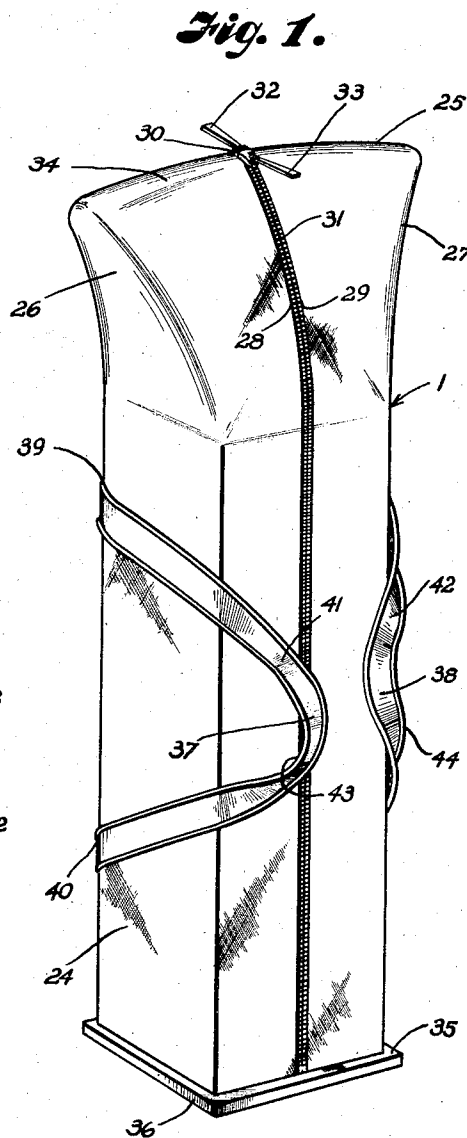
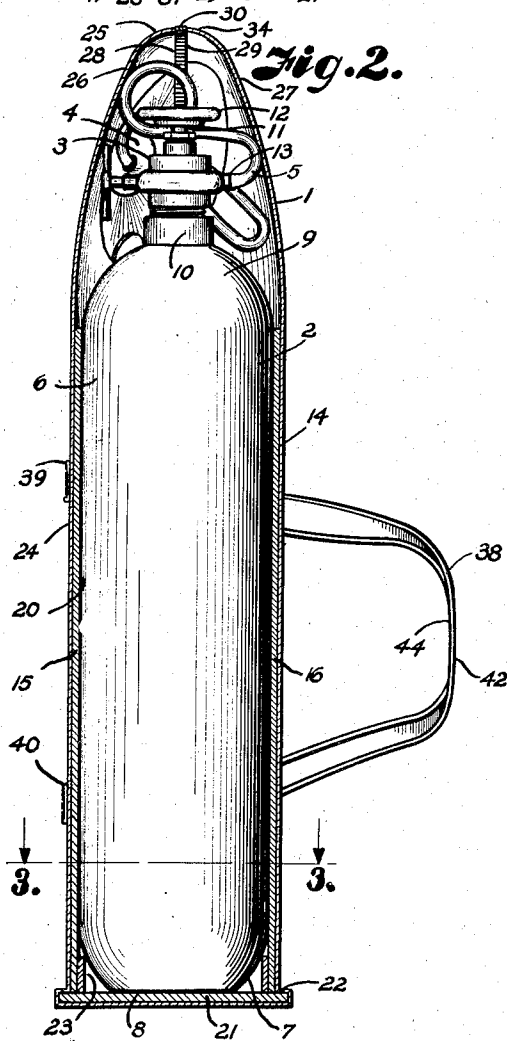
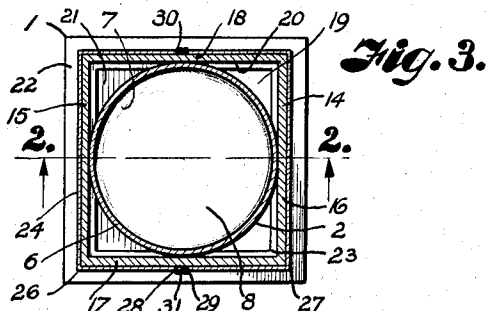
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CARRYING CASE FOR OXYGEN EQUIPMENT

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1

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CARRYING CASE FOR OXYGEN EQUIPMENT

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2 Claims. (Cl. 150—52)

This invention relates to a case for an apparatus to administer oxygen. For example, persons afflicted with respiratory diseases, such as asthma, require the immediate use of oxygen when paroxysms of asthma occur. This requires a mask, an oxygen bottle, a tubing connecting the mask with the oxygen bottle and a valve mechanism to control flow of oxygen to the mask. This equipment must be immediately available and, therefore, must be sufficiently portable so that it may be kept at hand when the attacks occur.

The oxygen is available in small bottles equipped with a control valve and the bottles, when empty, may be exchanged for full bottles at convenient markets. This makes portability feasible but the bottle, mask, and supply tube must be connected. It is obvious that this renders the apparatus unsightly and bundlesome to carry, particularly when the person is traveling.

Therefore, it is a principal object of the present invention to provide a carrying case wherein the bottle, mask and tubing are contained in connected condition and ready for instant use.

Other objects of the invention are to provide a case that is easily and quickly opened by the person suffering such paroxysms, to provide a case that has the appearance of a piece of luggage, to provide a case that may be held from turning or falling over when the control valve is manipulated, and to provide a case wherein the apparatus is carried in horizontal balance.

In accomplishing these and other objects of the invention, hereinafter pointed out, I have provided improved structure, the preferred form of which is illustrated in the accompanying drawings, wherein:

Fig. 1 is a perspective view of a case constructed in accordance with the present invention.

Fig. 2 is a longitudinal section showing the case on the line 2—2 of Fig. 3.

Fig. 3 is a horizontal section on the line 3—3 of Fig. 2.

Referring more in detail to the drawings:

1 designates a case constructed in accordance with the present invention to contain an oxygen bottle 2 having a valve 3, and a mask 4 that is connected with the valve by a flexible tubing 5.

The bottle 2 is of standard type and includes a cylindrical wall 6 curving at one end as at 7 into a flat bottom 8 wherein the bottle is adapted to be supported in an upright position. The upper end of the wall curves inwardly to form a dome 9 having a collar 10 to which the valve 3 is connected. The valve 3 includes a stem 11 equipped with a hand wheel 12 by which the valve is opened and closed to control flow of oxygen from the bottle. The outlet of the valve has a nipple 13 to which one end of the tubing is connected. The other end of the tubing is connected to the mask and the tubing is of sufficient length to permit use of the mask by the person when seated and the bottle is on the floor.

The mask 4 is of light-weight, flexible material and may be of usual construction to fit over the nose and/or mouth.

The case 1 includes a rigid body portion 14 having

2

parallel side walls 15—16 and 17—18 suitably secured together at their edges to form a compartment 19 of square cross-section so that the inner faces 20 of the side walls make tangential contact with opposite diametrical portions of the cylindrical wall of the bottle, as shown in Fig. 3. Suitably attached to the lower ends of the side walls is a bottom member 21 also in the form of a square but which is of larger dimension than the exterior width of the side walls to provide a marginal flange 22, for a purpose later described. The side walls of the case are of a sufficient length to terminate substantially at the juncture of the cylindrical wall of the bottle with the dome portion 9 thereof, as best shown in Fig. 2.

In order to restrain rotation of the bottle in the case when the hand wheel 12 of the valve is turned, the inner faces of the side walls at the bottom 21 are provided with means to wedge the curved portion 7 of the bottle therebetween. This means may be strips 23 that are secured along the inner faces 20 of the side walls and in a position to engage the curvature 7 of the bottle. The strips 23 may be formed of suitable material so that when the bottle is slipped into the case the end of the bottle will be gripped thereby with sufficient force to prevent turning upon manipulation of the hand wheel but the gripping force need not be sufficient to make the bottle difficult to remove from the case.

The body portion of the casing is covered on the exterior side thereof with a flexible material 24 which may be cloth, leather, one of the synthetic plastics or imitation leather to give the simulation of an article of luggage. The material is applied tightly about the outer face of the side walls from the bottom to the top thereof and is of sufficient length to extend above the side walls in the form of a hood 25.

The hood 25 is shaped to cover the top of the bottle, mask and tubing and for convenience and quick opening is formed in two sections 26 and 27 having meeting edges 28 and 29 preferably in the center of two opposite side walls and which are connected together by "zippers" 30 and 31. The "zippers" have slides 32 and 33 that move from the top 34 of the hood downwardly to the upper edge of the side walls to the top 34 for closing the hood about the valve, tubing and mask, as later described. If desired, the fastening elements of the "zippers" may be extended down the case for appearance's sake. However, there is no point in opening the "zippers" below the upper edges of the side walls. The cover material also preferably extends around the projecting marginal edge of the bottom 8 and across the under side thereof, as shown at 35 and 36.

The case is carried in horizontal position by handles 37 and 38. The handles are preferably straps formed of suitable material which may be the same as that forming the covering of the case and the straps include portions 39 and 40 that are attached transversely across the side wall 15 and which are affixed thereto by stitching or other suitable means. The straps extend loosely across the adjacent side walls and terminate in loops 41 and 42 to form hand holds 43 and 44, as shown in Figs. 1 and 2. The transverse strap portions are preferably attached to the side wall 15 at points whereby the case and its contents are substantially balanced in horizontal position.

In using the case, the hood is opened by moving the slides 32 and 33 of the "zipper" downwardly of the hood. The hood sections 26 and 27 are thereby freed to fall apart and downwardly at the sides of the case, leaving the body portion open for reception of the oxygen bottle. The bottle is inserted by sliding the bottom end thereof into the compartment 19 with the cylindrical wall 6 of the bottle tangentially engaging the inner faces of the side

walls 15, 16, 17, and 18 until the portion 7 engages the wedging straps 23 and the flat end of the bottle sets upon the bottom 21 of the case. The tubing 5 and the mask 4 may then be connected with the valve 3, after which the tubing is coiled around the valve so that the valve, tubing, and mask may be covered by the sections of the hood when they are closed thereover and secured by moving the "zipper" slides 32 and 33 upwardly to meet at the top of the hood. The case with its contents may then be conveniently carried as an article of luggage when traveling. The tubing and mask are safely retained and protected by the hood so that they are immediately available for use when oxygen is needed.

When an asthma paroxysm occurs, the person stands the case on the floor in vertical position with the body portion of the case engaged between the knees, and if desired, the feet may be placed on the projecting marginal edges 35 and 36 of the bottom 21 to further stabilize the bottle in vertical position. The "zipper" slides 32 and 33 are then quickly manipulated to open the sections 26 and 27 of the hood. The mask 4 with the tubing 5 connected is withdrawn and placed over the nose and/or mouth. The wheel 12 of the valve 3 is turned to allow a whiff or two of oxygen to reach the person. The wedging portion of the bottom of the case prevents any tendency for the bottle to turn, even though the valve may be tightly seated. After use, the valve 3 is closed and the tubing 5 is recoiled and placed together with the mask over or alongside the valve of the bottle after which the hood sections 26 and 27 are closed thereover by pulling the "zipper" slides upwardly.

From the foregoing, it is obvious that I have provided a case that is of simple construction and which firmly contains an oxygen bottle together with tubing and mask in condition for immediate use whenever oxygen is required.

What I claim and desire to secure by Letters Patent is:

1. A case for carrying an oxygen administering apparatus, which apparatus includes a cylindrical oxygen bottle having a valve at one end and a base at the other end, a flexible tubing connected with the valve and a mask connected with the tubing, said carrying case including a rigid body portion having opposed substantially flat side walls and a base forming a closed-bottom compartment open at the opposite end and adapted to contain said bottle therein with the base of said bottle rested upon the base of said body portion and opposite sides of the bottle in tangential contact with said side walls to support the bottle in a vertical position on said base of the body portion of the case, a pliable covering for the body portion and having an integral hood extending upwardly from said side walls for covering relation with

the valve, tube and mask, said hood having an opening extending upwardly from one side wall of the body portion across to the opposite side wall to divide the hood into sections adapted to be folded retractively from the other two side walls for removal of the mask for use, "zipper" means for closing said opening to retain the hood sections in covering relation with the valve, tubing and mask, and a carrier strap for said case having spaced apart portions extending transversely across one side wall of said body portion and having portions extending across the adjoining side walls and terminating in loops adapted to be gathered across the other side wall to form handholds for carrying the case with the bottle in horizontal position.

2. A case for carrying an oxygen administering apparatus, which apparatus includes a cylindrical oxygen bottle having a valve at one end and the other end curving inwardly in forming a base of smaller diameter than the diameter of the bottle, a flexible tubing connected with the valve and a mask connected with the tubing, said case including a rigid body portion having opposed substantially flat side walls joined together and provided with a base forming a closed-bottom compartment open at the opposite end and adapted to contain said bottle therein with the base of said bottle rested on the base of said body portion and the bottle in tangential contact with said side walls, said base being of larger area than the base of the bottle to stabilize the support of the bottle in a vertical position, a pliable covering for the body portion and having an integral hood extending upwardly from said side walls for covering relation with the valve, tube and mask, said hood having an opening extending upwardly from one side wall of the body portion across to the opposite side wall to divide the hood into sections adapted to be folded retractively from the other two side walls for removal of the mask for use, "zipper" means closing said opening to retain the hood sections in covering relation with the valve, tubing and mask, and a carrier connected with a side wall of the body of the case for carrying the case with the bottle in horizontal position.

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