Oct. 3, 1961 M. F. MURRAY 3,002,490

SURVIVAL KIT

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Fig.2

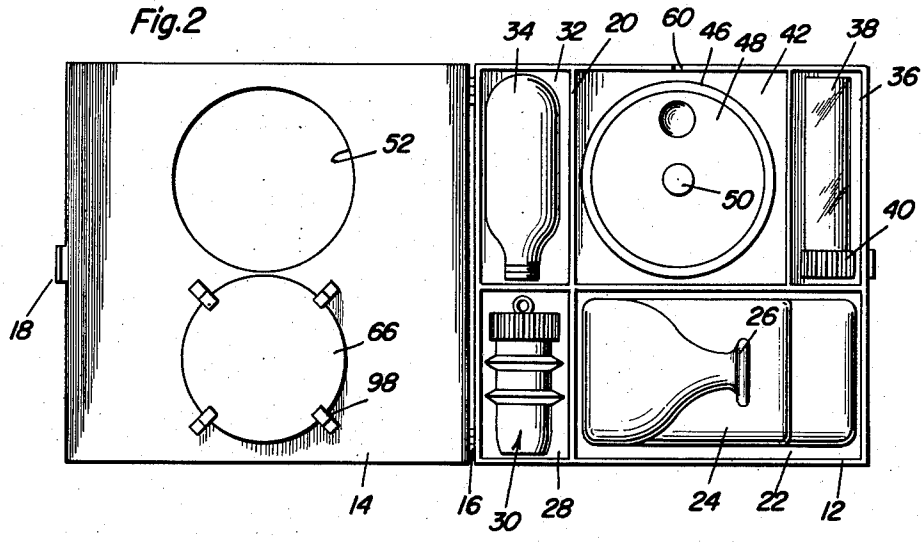


Fig.1

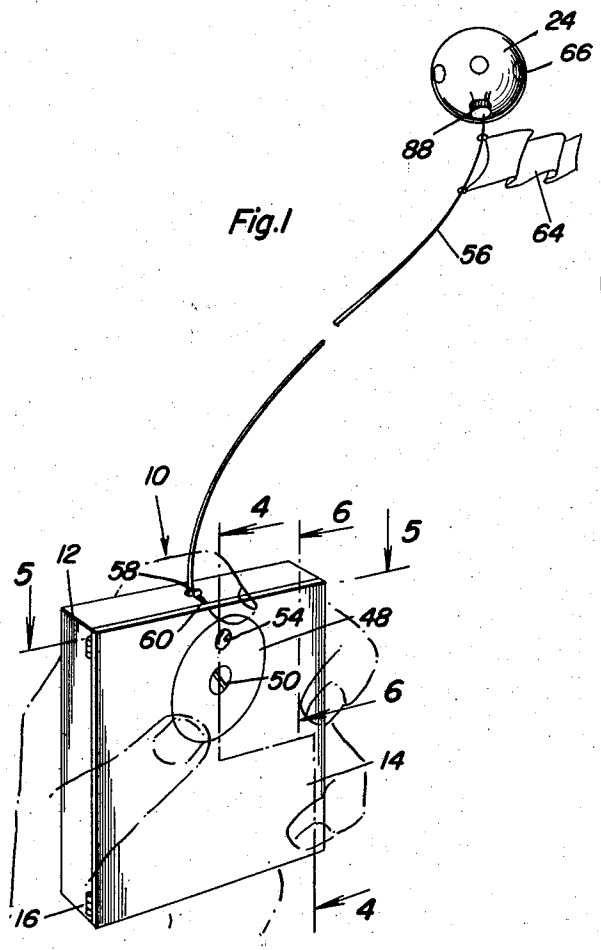
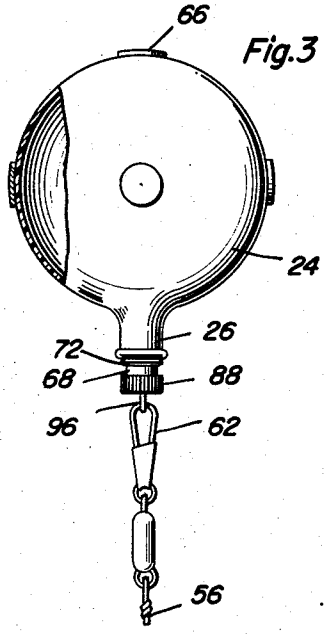


Fig.3



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Fig.4

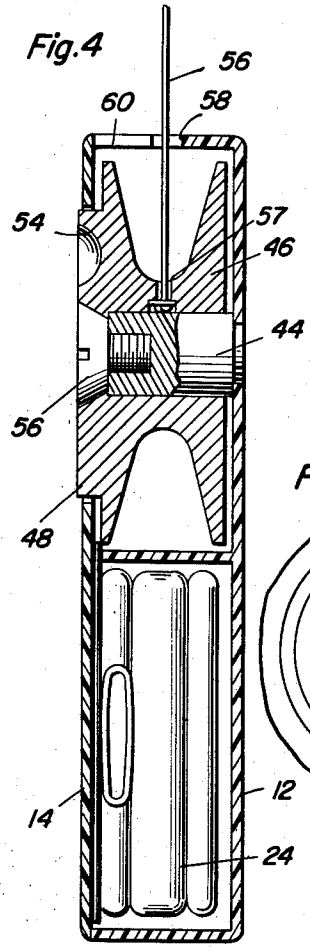


Fig.5

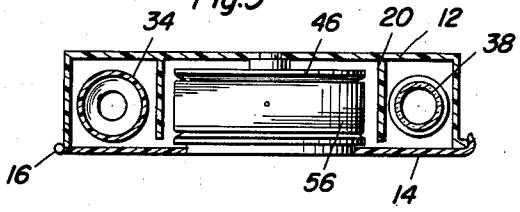


Fig.7

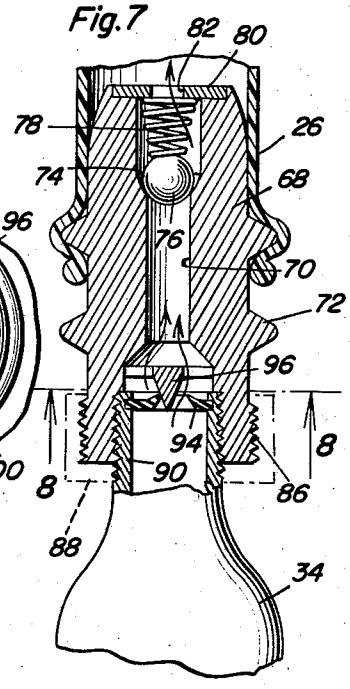


Fig.8

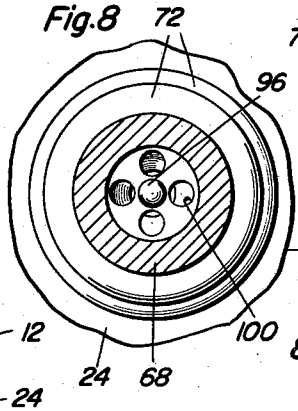
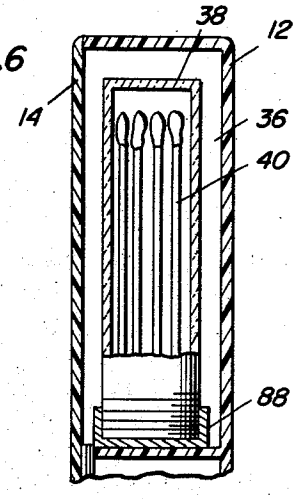


Fig.6



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3,002,490

SURVIVAL KIT

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The present invention generally relates to a survival kit and more particularly to such a kit constructed in a size that may be readily carried in a person's pocket while hunting or going into a remote area where one might become lost.

An object of the present invention is to provide a survival kit in the form of an inflatable ballon having a reel for a line attached to the ballon together with a novel structural arrangement for providing inflation and sealing of the balloon so that the balloon will stay aloft at a relatively high altitude so that the same may be observed whereby the person employing the survival kit may be readily located with the kit having many uses as by hunters, boy scouts, fishermen, military personnel, forest rangers, mountain climbers and sportsmen of various type.

Another object of the present invention is to provide a survival kit in which the balloon is provided with reflective disk and a bright color together with a flag disposed under the balloon for attaching attention thereby enabling the balloon to be used as a distress warning or signal or a device for location of a camp or a red cross may be used to designate a first aid station or to designate that first aid is needed. All of the many variations incorporate the reel construction and the inflatable balloon and a small carrying case for the entire assembly thus enabling the device to be easily carried in the pocket without adding much weight to the usual heavy load of a hunter or sportsman.

Another important feature of the present invention is to provide a survival kit which is simple in construction, easy to use, compact, well adapted for the particular purposes for which the same is intended and relatively inexpensive to manufacture.

These together with other objects and and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a perspective view of the survival kit of the present invention illustrating the same in use;

FIGURE 2 is an enlarged elevation of the kit in stored condition with the closure member disposed in open condition;

FIGURE 3 is an enlarged side elevation of the warning balloon or signaling balloon with portions thereof broken away for illustrating the construction thereof;

FIGURE 4 is an enlarged vertical sectional view taken substantially upon a plane passing along section line 4—4 of FIGURE 1;

FIGURE 5 is an enlarged transverse, plan sectional view taken substantially upon a plane passing along section line 5—5 of FIGURE 1;

FIGURE 6 is an enlarged detail sectional view taken substantially upon a plane passing along section line 6—6 of FIGURE 1;

FIGURE 7 is an enlarged vertical sectional view illustrating the capsule puncturing mechanism and the check valve assembly for the balloon; and

FIGURE 8 is an enlarged sectional view taken substantially upon a plane passing along section line 8—8 of FIGURE 7.

Referring now specifically to the drawings, the numeral 10 generally designates the survival kit of the present invention which includes a generally rectangular pocket

sized container 12 having one side 14 thereof hingedly connected to the open face of the container 12 by hinge members 16 and retained in closed condition by a catch 18. The container 12 is divided into a plurality of compartments by partition walls 20. Adjacent one corner of the container 12 is a compartment 22 receiving a deflated ballon 24 having the usual neck or entrance mouth 26. In a compartment 28 alongside of the balloon 24 is a valve and puncturing mechanism generally designated by the numeral 30. Disposed in the compartment 32 immediately above compartment 28 is a cylinder 34 of compressed gas such as helium, air or carbon dioxide. Disposed in a compartment 36 at the other upper corner is a water-proof container 38 having a removable cap 40 thereon which may be constructed of a length for receiving a plurality of matches 40 whereby the matches 40 will be retained in water-proof condition.

Disposed between the compartments 36 and 32 is an enlarged compartment 42 having a shaft 44 extending upwardly therein for receiving a pulley reel 46 which has cylindrical projection 48 on one side thereof with the pulley 46 being held onto the shaft 44 by a screw threaded and headed fastener 50. The cylindrical projection 48 is received in a circular opening 52 in the openable closure 14 thus revealing a finger notch 54 whereby the pulley reel 46 may be rotated by engaging the finger in the socket or notch 54. An elongated flexible line 56 is attached to the reel 46 at point 57 and extends outwardly through an opening 58 having a notch 60 leading to the edge of the top wall whereby the line 56 may be payed out through the aperture 56 or the same may be wound onto the reel pulley 46 by rotating the pulley 46 and winding the line 56 onto the same.

The line 56 is provided with a snap hook 62 on the free end thereof for engagement with the opening and sealing mechanism 30 when it is inserted into the neck 26 of the balloon 24. Mounted on the line 56 below the balloon 24 is a flag 64 of any brilliant color and the balloon 24 is provided with a plurality of reflective disks 66 which may be constructed of polished aluminum or the like.

Referring specifically to FIGURE 7, it will be seen that the puncturing and sealing mechanism 30 includes a generally cylindrical body 68 having a longitudinal bore 70 therethrough. The body 68 is provided with a pair of longitudinally spaced circumferetnial ribs 72 for frictionally and positively engaging the neck 26 of the ballon. The inner end of the bore 70 is provided with a valve seat 74 receiving a spherical check valve 76 urged to a closed position by a spiral coil spring 78 with the coil spring being held in position by a retainer 80 which has a central opening 82 therein for allowing air to enter into the balloon. The lower outer end of the body 68 is externally threaded as indicated by the numeral 86 for receiving a cap and washer 88 for sealing the bore 70 under certain conditions.

The interior or hollow bore 70 of the body 68 is enlarged at the threaded end and is provided with internal threads for threaded engagement with the external threads on the neck 90 of a compress gas cylinder 92 having a puncturable seal 94 therein which may be ruptured by a depending pointed punch 96 which will rupture the seal 94 but will assure that all of the energy stored therein will be effectively consumed.

With this construction, the capsule 92 is threaded into the sockets in the body 68 and engaged with the pointed member 96 thus rupturing the seal for the open end of the capsule 92.

The closure cap 88 is provided with a loop 96 for receiving the snap hook fastener 62 thus securely attaching the line 56 to the balloon 24. When the balloon 24 is stored, it is folded compactly and the various articles are

arranged as shown in FIGURE 2 with the reflective disks **66** which are provided with adhesive on the back to stick on the plastic balloons being mounted on the closure member by clips **98**.

While dimensions may vary it has been found that the balloons may be made of latex, plastics or other materials and range in size from 12 inches in diameter up to any size required. The container may be constructed of plastic or metal and the balloon may be colored a brilliant color such as red or a gantron fluorescent red signifying a distress signal. The insert valve and puncturing device is preferably constructed of platsic and inserted into the mouth of the balloon and the puncture point or prick point **96** is constructed of metal and will effectively puncture the cap **94** of the compressed gas cylinder **92** so that the compressed gas may escape through the holes on either side of the punch **96** as illustrated in FIGURE 8 in which the holes are designated by the numeral **100**. As soon as the balloon is completely inflated, the capsule containing the helium and air or carbon dioxide is removed with the check valve **76** holding the air or gas in the balloon. The cap which may be provided with a sealing gasket is then placed over the valve body **68** and is provided with the loop **96** for receiving the swivel snap fastener or loop fastener **62**. The purpose of the aluminum disk which may be conveniently three inches in diameter with adhesive on the back is to reflect or refract the sun's rays and send out light ray signals as an added feature. The disk thus will allow a person many miles away from the ascended balloon to notice or observe the light rays reflected from the aluminum disk as well as the balloon from a position over the horizon.

On windy days the round survival balloon has a tendency to drift downward below the treetops. Therefore, the balloon has been constructed along the lines of a kite with a string attached to the center of the same. This construction performs beautifully in the wind as it climbs to the given length of the string if the wind is blowing. On a calm day the balloon goes aloft in the same manner minus a breeze. With string attached, it will maintain a given elevation if sent aloft on a windy day. The same construction and technique could be applied to a kite balloon for children to fly as a toy whether a breeze is blowing or not.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and

equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A survival kit comprising a container, a reel rotatably mounted in the container, said reel including means projecting exteriorly of the container for enabling rotation of the reel, a flexible line having one end connected to the reel, said container including an opening receiving said line, said line extending exteriorly of the container, an inflatable balloon having an entrance mouth, a longitudinally elongated hollow valve body disposed in said mouth, said valve body defining a longitudinal bore communicating the interior of said balloon with the atmosphere, a closure cap mounted on one end of said valve body, the other end of said valve body being disposed in said mouth, and means on said cap connected with said flexible line, a puncturing element mounted on said body within said bore, said puncturing element having a pointed end facing the cap and disposed adjacent thereto, check valve means disposed in said bore inwardly of said puncturing element for admitting gas into said balloon and preventing discharge of gas from said balloon, said body defining a counterbore at said one end for receiving the sealed end of a pressurized gas cartridge, said counterbore being defined by a cylindrical wall having means thereon for sealing and detachable connection with a pressurized gas cartridge, whereby the cap may be removed and the sealed end of a pressurized gas cartridge inserted into the counterbore and engaged with the puncturing element for puncturing the sealed end of the cartridge and inflating the balloon.

2. The structure as defined in claim 1 wherein said valve means includes a spherical valve member, spring means interconnecting the valve member and the valve body for biasing the valve member longitudinally inwardly of the valve body, said valve body defining a counterbore at the other end thereof with the inner end of the counterbore defining an annular valve seat for receiving said valve member whereby said valve member normally closes said bore.

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