No. 665,924. Patented Jan. 15, 1901.

J. J. McGEE.

LIFE SAVING BUOY.

(No Model.) (Application filed Mar. 29, 1900.)

3 Sheets—Sheet 1.

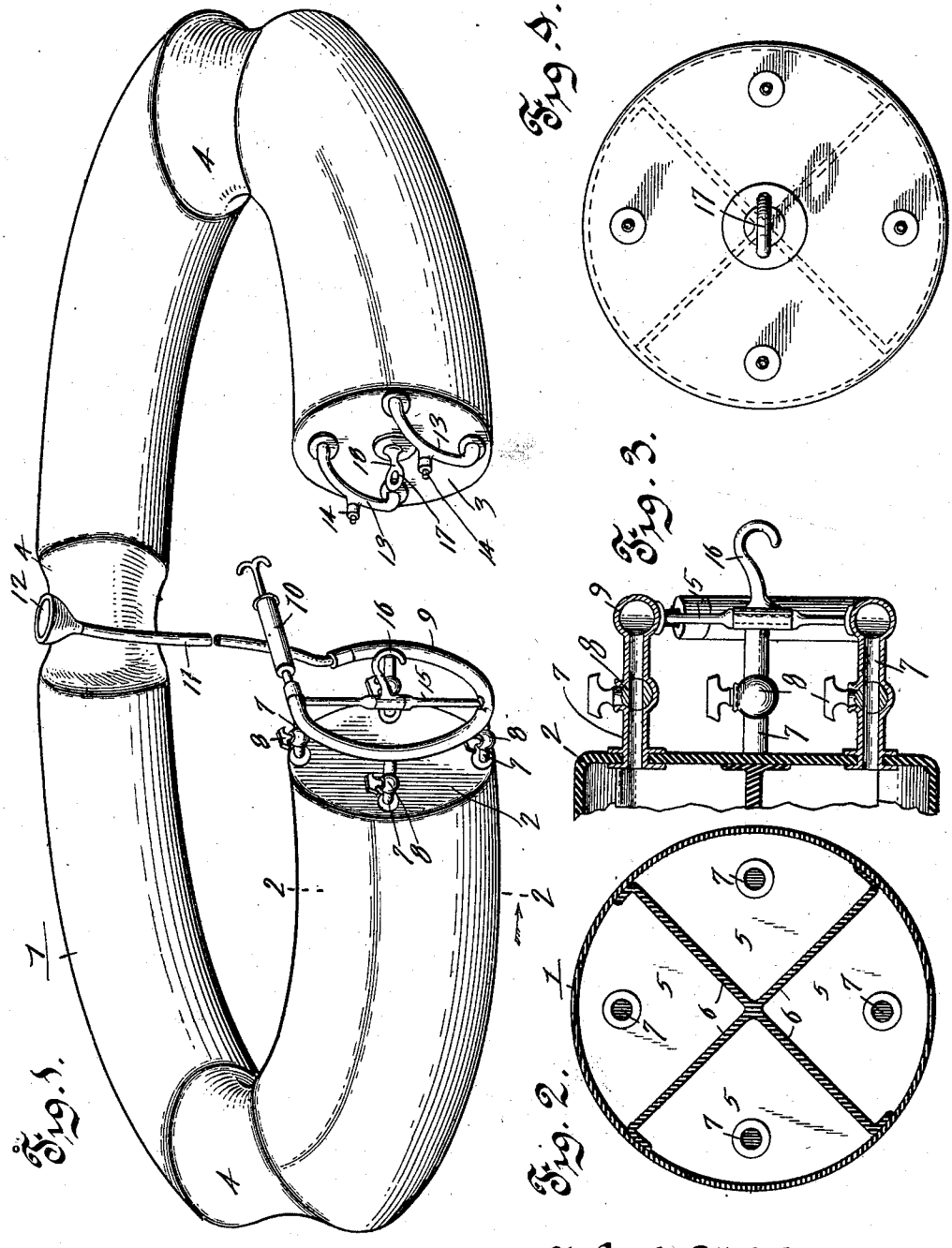


Fig. 1.

Fig. 4.

Fig. 3.

Fig. 2.

Witnesses
Clarence N. Walker.
Chas. S. Hoyer.

John J. McGee, Inventor.
By Hio Attorneys.
C. A. Snow & Co.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C

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Fig. 5.

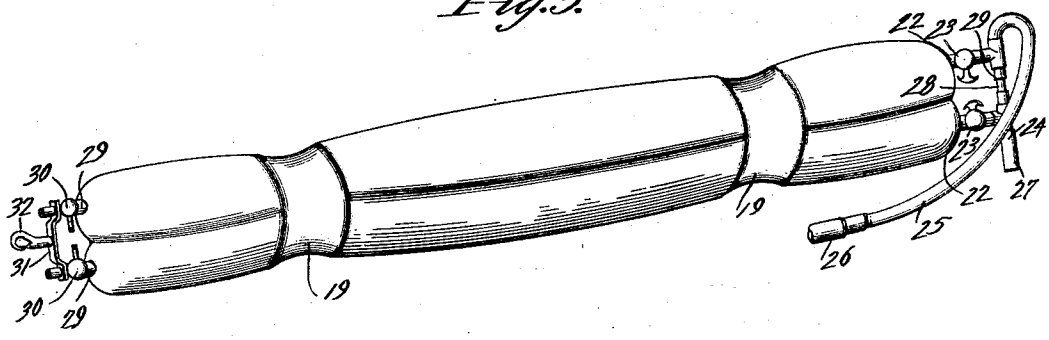


Fig. 6.

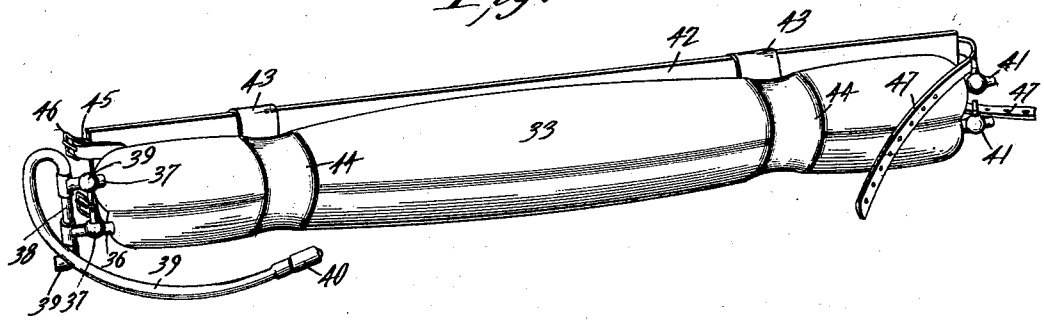


Fig. 7.

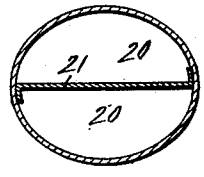
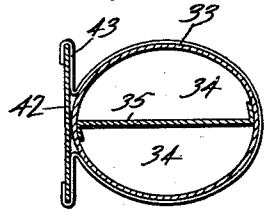


Fig. 8.



Witnesses
C. H. Walker
Chas. S. Hoyer.

John J. McGee Inventor
By his Attorneys,
C. A. Snow & Co.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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Fig. 9.

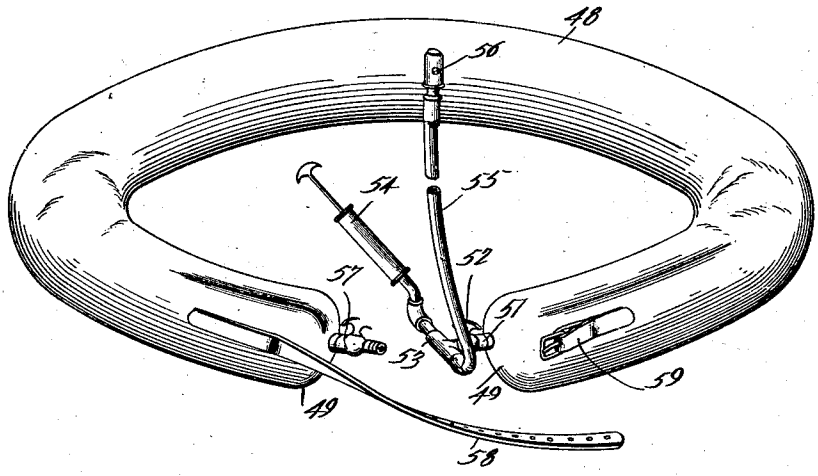
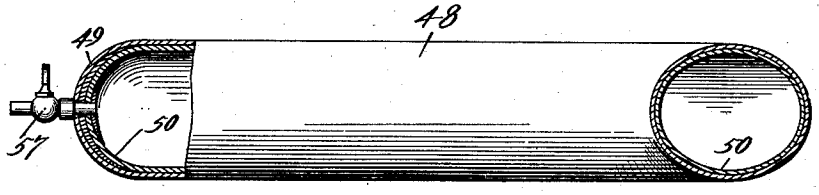


Fig. 10.



Witnesses
L. M. Walker.
Chas. S. Hoyer.

John J. McGee Inventor
By his Attorneys,
C. A. Snow & Co.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN JOSEPH McGEE, OF JERSEY CITY, NEW JERSEY, ASSIGNOR OF TWO-THIRDS TO WILLIAM H. SERVISS, OF SAME PLACE, AND ABRAHAM P. ZOLLER, OF FORT PLAIN, NEW YORK.

LIFE-SAVING BUOY.

SPECIFICATION forming part of Letters Patent No. 665,924, dated January 15, 1901.

Application filed March 29, 1900. Serial No. 10,661. (No model.)

To all whom it may concern:

Be it known that I, JOHN JOSEPH McGEE, a citizen of the United States, residing at Jersey City, in the county of Hudson and State of New Jersey, have invented a new and useful Life-Saving Buoy, of which the following is a specification.

This invention relates to a life-saving belt; and the object of the same is to provide a simple and effective means or device of this character of a light portable nature and adapted to be either suspended from a part of the body of the person wearing the same or attached to the garments and capable of being quickly inflated and so constructed as to render punctures ineffective in destroying the utility and one which will occupy a comparatively small amount of space when deflated and also capable of being reduced to a compact form for storage about the person, and thereby always be in convenient position or reaching distance for quick application.

The invention consists in the construction and arrangement of the several parts, which will be more fully hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of a life-saving belt embodying one form of the invention. Fig. 2 is a transverse vertical section on the line 2 2, Fig. 1. Fig. 3 is a longitudinal section of a portion of the device shown by Fig. 1. Fig. 4 is an end elevation of the opposite extremity of the device shown by Fig. 1 and having applied the exhaust attachments. Fig. 5 is a perspective view of another form of the improved belt. Fig. 6 is a similar view of a still further modification in the construction of the improved belt. Fig. 7 is a transverse vertical section of the form of device shown by Fig. 5. Fig. 8 is a transverse vertical section of the form of device shown by Fig. 6. Fig. 9 is a perspective view of a circular or horseshoe form of the improved device similar to the form shown by Fig. 1 and embodying further modifications in the construction and arrangement of parts. Fig. 10 is a sectional view of the device shown by Fig. 9.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

The numeral 1, Figs. 1 to 4, designates an outer body-covering of waterproof yielding material which is continuous from one extremity 2 to the opposite extremity 3 and shaped into a cylindrical form or tube which is reduced and circumferentially banded at intervals, as at 4, and at points where a bend or break is liable to occur and interfere with the proper inflation of the same or in time wear through and produce a leak. These interval reductions also facilitate the folding of the belt into compact form when deflated without injury to the texture of the material of which the belt is composed. As clearly shown by Fig. 2, this form of the belt is divided into four compartments 5 by intersecting diametrically-disposed partitions 6, each of which at the extremity 2 has a nipple 7 communicating therewith and provided with a valve 8 and also attached to a circular supply-tube or rigid pipe 9, to one end of which an air-pump 10 is removably or permanently applied, and at the opposite end a flexible pipe 11 is secured and supplied with a mouthpiece 12, with a check-valve in the neck thereof. By this means it will be seen that the several compartments 5 may be independently inflated by compressed air through the operation of the pump 10, or in the event that the latter becomes detached and lost the tube 11 can be utilized for the same purpose by the wearer of the belt. In the operation of inflating the belt the several valves 8 will be opened, and after the desired or maximum inflation shall have been obtained the said valves are closed and the compressed air introduced or compressed within the belt can be regularly maintained in accordance with the demands of the user or the necessities that may arise during the employment of the belt for life-saving purposes. The opposite extremity 3 of the belt has bowed exhaust-pipes 13 applied thereto and one terminal of each in communication with one of the four compartments, a pair of said exhaust-pipes being used, and thereby providing means of exhaust for all the compartments. Each ex-

haust-pipe has a centrally-disposed outlet-valve 14, which is normally closed to prevent escape of the air and collapse of the belt when not desired. When it is intended to store the belt or after use of the latter, each of the valves 14 may be quickly opened to exhaust the improved device.

The belt set forth may be applied to the person of the wearer in any suitable manner, and suspending-straps or other attaching devices may be used in connection therewith, and to couple the two extremities the circular supply-pipe has a cross-rod 15 secured thereto, to the center of which a coupling-hook 16 is secured for separable engagement with an eye 17, centrally connected to and held by a shank 18, fastened in the opposite extremity 3, and thereby provide means for causing the belt to snugly embrace the body of the wearer and which at times may be the only means necessary for holding the device in proper applied position.

In Figs. 5 and 7 a different form of the belt is shown and is normally straight, and likewise has reductions 19 at intervals for the same purpose as those heretofore described, the body of this form of the belt being substantially similar, so far as material is concerned, as in the form heretofore described. In this form of the device, however, the belt is divided into two compartments 20 by an intermediate horizontally-disposed partition 21, and at one extremity nipples 22 are located and individually communicate with the compartments 20, and like those heretofore described are each provided with a valve 23, the outer portions of said nipples communicating with the common feed-pipe 24, having a flexible tube 25 attached to one end thereof, with a suitable mouthpiece 26 at its free extremity, in a portion of which a check-valve will be located for obvious reasons. The opposite end 27 of the said feed-pipe 24 is adapted to have a pump permanently or removably attached thereto in a manner similar to the first-described form, and at an intermediate point said feed-pipe is reduced to form a seat 28, with guard-shoulders 29 at opposite extremities thereof for a purpose which will presently be explained. The opposite extremity of this form of the belt is also provided with exhaust nozzles or nipples 29, one for each compartment 20, and each having a valve 30 for apparent purposes. Secured to the outer portion of the nozzles or nipples 29 are the opposite extremities or terminals of a supporting-strip 31, to the center of which a snap-hook 32 is secured for engagement with the seat 28, formed at the center of the feed-pipe 24, to thereby render it convenient for applying this form of belt about the body of the wearer and securing it in the position desired.

In Figs. 6 and 8 a still further change in the construction is manifest, and in the main particulars or features this form of the device is similar to that shown by Figs. 5 and 7 and comprises an elongated tubular body 33, divided into two compartments 34 by a horizontally-positioned intermediately-located partition 35, extending full length of the same, and with each compartment at one end a feed-nipple 36 communicates and is provided with a controlling-valve 37, both nipples in turn being attached to a single feed-pipe 38, having a flexible tube 39 attached to one extremity, with a mouthpiece 40 at its free end, in which a check-valve of suitable construction is located. The opposite end of the feed-pipe 38 is also intended to have a suitable mechanical air-compressing device attached thereto, as in the forms heretofore described, and so that the belt in this modified structure may be supplied with air or inflated by two different methods. The opposite end of this form of device has two valved exhaust-nozzles 41 secured thereto and individually communicating with the compartments 34 for relieving the latter of the contained air when it is desired to deflate the belt. To this form of the belt an inner band 42 of cloth or suitable material is attached by binding-bands 43, which also surround interval reductions 44 of the main body of the belt and which have the same function as similar constructions heretofore referred to. The said inner belt 42 is arranged for attachment to the articles of wearing-apparel of the user of this form of the device and will be preferably secured to the lower part of the vest by any suitable means to hold the device in a predetermined applied position. To secure this form of the belt around the body of the wearer, one end of the same has strap lengths 45 secured thereto and carrying buckles 46, which are arranged for adjustable engagement by perforated straps 47, attached to the opposite ends of the belt, and this additional fastening means serves as an efficient auxiliary for holding the belt in position on the body of the wearer.

In Figs. 9 and 10 a still further modified form of the improved device is shown and is of circular or horseshoe form and comprises an outer tube 48, of suitable waterproof material, with closed ends 49 normally at a distance from each other. Within the outer tube 48 an inner tube 50 is loosely mounted, and exclusively connected thereto at one end is a supply-nozzle 51, having a valve 52, and also attached to a feed-pipe 53, to one extremity of which a pump or compressor 54 is attached and to the opposite extremity a flexible tube 55, having a mouthpiece 56, including a check-valve in its organization, the said latter devices supplying means for inflating the inner tube 50 by two methods, as heretofore explained. The opposite extremity of the inner tube 50 has a valved exhaust-nozzle 57 solely connected thereto, and from the immediately-foregoing explanation it will be understood that the inner tube 50 is inflated inside of the outer tube 48 and that no air passes between. As a means of drawing

this form of the belt tightly around the body, one extremity has an attaching-strap 58 secured thereto and the other a buckle 59 to adjustably receive the said strap.

From the various forms that have been set forth it will be seen that the main purpose in view is to construct one or more compartments which will operate to prevent total disabling of the belt in the event that a portion becomes punctured or torn from any cause. In those forms of the device which particularly embody separate compartments it will be obvious that a puncture in one will not render the entire belt useless, and the remaining compartment or compartments will be sufficient to preserve its buoyancy and life-saving properties. In the form of the device shown by Figs. 9 and 10 a puncture of the outer tube or other injury thereto producing a leakage will not necessarily incapacitate the belt for further service, as it is proposed to make the inner tube of a more highly elastic nature, and thereby offer greater resistance to puncture. Moreover, the several inflating and deflating attachments, as well as the modes of application, which are all simple and easily understood, provide conveniences for the user in quick application and preparation of the belt for buoyant service, and though the preferred forms have been illustrated and descriptively disclosed it is obviously apparent that changes in the form, proportions, size, and minor details may be resorted to without departing from the principle of the invention.

Having thus described the invention, what is claimed as new is—

1. A life-saving belt having one or more longitudinally-extending compartments therein and in the form of an elongated cylinder closed at the free ends which are drawn close to each other when the device is applied, one or more inflating devices in one free end, and one or more exhausting devices in the other free end, whereby the exhausting and inflating devices may be arranged adjacent to each other within the confines of the belt and in convenient position for operation by the wearer.

2. A life-saving belt having more than one longitudinally-extending compartment therein and in the form of an elongated cylinder closed at the free ends, independent inflating devices for the compartments connected to a common air-supply means and located in one free end, exhaust devices for the compartments in the opposite free end, both inflating and exhaust devices being within the confines of the belt.

3. A life-saving belt of elongated cylindrical form with closed ends and having a plurality of independent longitudinally-extending compartments therein, an inflating-nipple communicating with each compartment and having a valve, all the nipples being located in one free end of the belt, a supply-tube connected to the nipples, and independent exhaust means for the compartments situated in the opposite free end of the belt.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHN JOSEPH McGEE.

Witnesses:
WM. G. E. SEE,
CAROLINE L. CUE.