

May 9, 1950

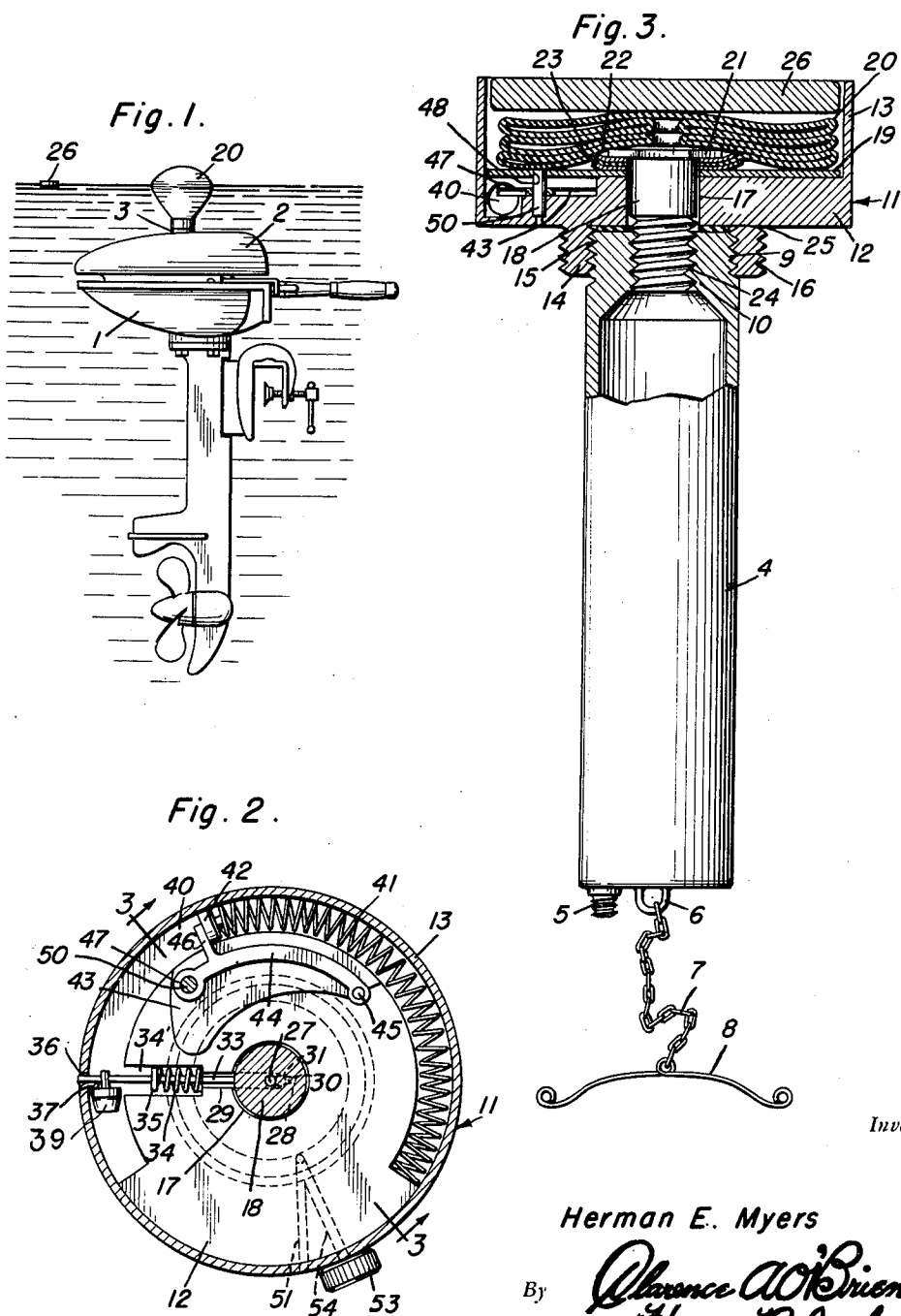
H. E. MYERS

2,506,884

OUTBOARD MOTOR FLOATING DEVICE

Filed Aug. 4, 1947

2 Sheets-Sheet 1



Inventor

Herman E. Myers

By *Clarence A. O'Brien*  
*and Harvey B. Jacobson*  
Attorneys

May 9, 1950

H. E. MYERS

2,506,884

OUTBOARD MOTOR FLOATING DEVICE

Filed Aug. 4, 1947

2 Sheets-Sheet 2

Fig. 4.

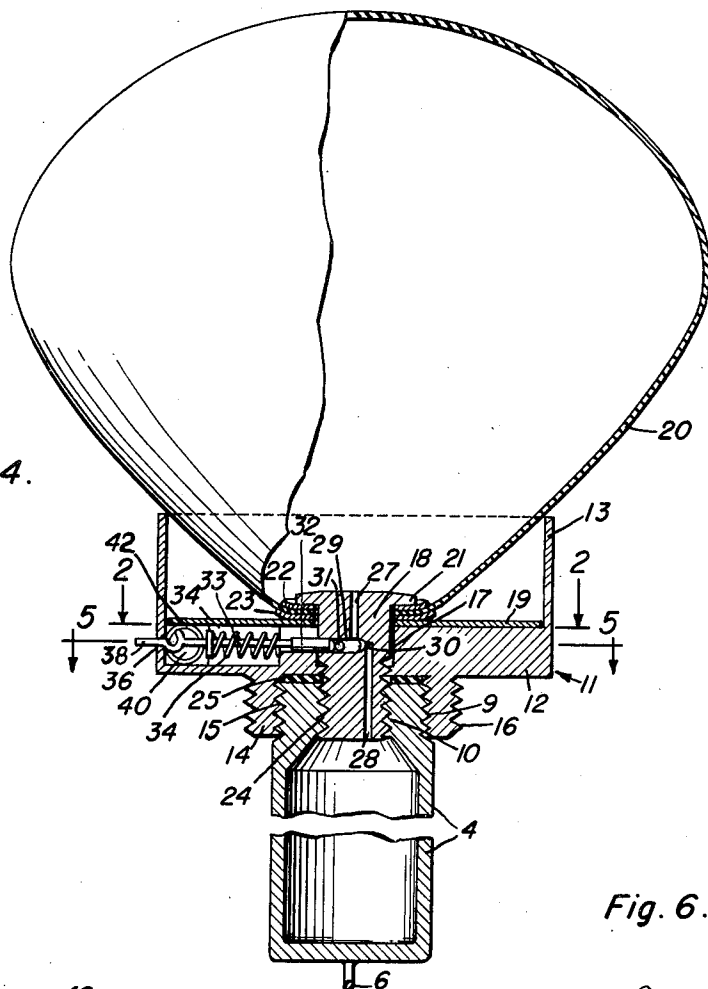
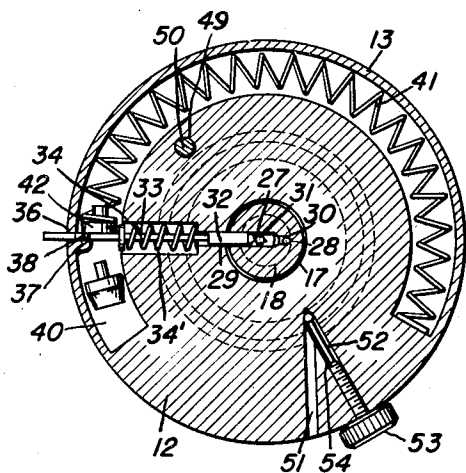


Fig. 6.



Fig. 5.



Inventor

Herman E. Myers

By

Clarence A. O'Brien  
and Harvey B. Jacobson  
Attorneys

## UNITED STATES PATENT OFFICE

2,506,884

## OUTBOARD MOTOR FLOATING DEVICE

Herman E. Myers, Milwaukee, Wis., assignor of  
one-half to Donald Lee Mills, Milwaukee, Wis.

Application August 4, 1947, Serial No. 765,869

8 Claims. (Cl. 115—0.5)

1

This invention relates to improvements in outboard motor floating devices.

An object of the invention is to provide an improved device for automatically floating an outboard motor at approximately the surface of a body of water should the same accidentally fall from a boat into the water.

Another object of the invention is to provide an improved outboard motor floating device comprising an inflatable waterproof bag and a supply of carbon dioxide gas automatically released by the dissolving or disintegration of a trigger holding pin or plug when the outboard motor and attached device falls into a body of water, said device being disposed in the filling cap of the gasoline tank of the outboard motor and normally supported in collapsed and in set position.

A further object of the invention is to provide an improved outboard motor floating device comprising a self-contained inflatable waterproof bag and a supply of carbon dioxide gas; and a normally set releasable valve mechanism held closed by an expendable plug or pin of lime stick or other desired material which will disintegrate upon being immersed in water, as for example when the outboard motor falls overboard from a boat, then said valve being automatically released to permit the carbon dioxide gas from the gas storage tank to fill the inflatable waterproof bag to float the outboard motor at the surface of the water so that the same may be readily retrieved.

A still further object of the invention is to provide an improved outboard motor floating device which will be highly efficient in operation, and relatively inexpensive to manufacture and produce.

Other objects will appear as the description proceeds.

In the accompanying drawings which form a part of this application:

Figure 1 is a side elevation of the improved outboard motor floating device showing the same in operation with an outboard motor supported approximately at the surface of a body of water;

Figure 2 is a transverse sectional view taken on the line 2—2 of Figure 4 looking down upon the floating device with bag removed and the valve mechanism disposed in set or closed position;

Figure 3 is a side elevation of the improved outboard motor floating device being shown partly broken away and in section taken on the line 3—3 of Figure 2 to show the collapsed bag disposed within the body of the device;

Figure 4 is a vertical sectional view through the

2

improved outboard motor floating device shown in operative position;

Figure 5 is a sectional view taken on the line 5—5 of Figure 4 showing the valve mechanism in actuated or open position; and,

Figure 6 is a perspective view of the dissolving or disintegrating locking pin.

Like characters of reference are used throughout the following specification and the accompanying drawings to designate corresponding parts.

In carrying out the invention, there is provided and illustrated an outboard motor generally designated by the reference number 1 having a gasoline tank 2 with the usual internally threaded filling opening 3.

The improved floating device for the outboard motor 1 is adapted to be threaded into the filling opening 3 in the gasoline tank 2, and comprises a cylindrical tank 4 in which carbon dioxide gas will be stored. A plug 5 will be disposed in the lower end of the gas tank 4 and may be removed for refilling the tank when necessary. An eye 6 will be suitably supported upon the inner end of the gas tank 4, and will support a length of chain 7 upon the outer end of which will be mounted a transverse resilient wire safety bar or member 8 disposable in the gasoline tank 2 for preventing the loss of the device therefrom.

The upper end of the gas tank 4 is externally threaded as at 9 and is formed with a reduced or restricted internally threaded discharge opening 10 through its upper end.

A cylindrical body 11 is formed with a thickened bottom 12 and with an upstanding side wall 13. A depending attaching collar 14 is formed integrally with the bottom 12 of the body 11 and is internally threaded as at 15 for threading upon the external threads 9 formed on the upper end of the carbon dioxide storage tank 4. The collar 14 is also externally threaded as at 16 for threading into the filling opening 3 in the gasoline tank 2 of the outboard motor 1.

The bottom 12 of the body 11 is axially bored as at 17 to receive the centrally disposed valve member 18. A washer 19 is adapted to be disposed upon the upper surface of the bottom 12, and a collapsible air bag 20 of waterproof material is adapted to be supported thereon within the limits of the side wall 13. The valve member 18 is formed with a head 21 on its upper end which will be disposed within the opening in the air bag 20, and spaced rubber gaskets 22 and 23 will be disposed about the valve member 18 interiorly and exteriorly of the air bag 20 for pro-

viding a tight joint between the bag 20 and the valve member 18.

The lower or inner end of the valve member 18 will be externally threaded as at 24 for threading into the interiorly threaded discharge opening 10 of the gas storage tank 4. A rubber gasket 25 will be disposed about the valve member 18 between the bottom 12 of the body 11 and the upper end of the gas storage tank 4 to provide an air tight seal therefor.

A removable disk-shaped cover 26 will be disposed upon the top of the collapsed air bag 20 within the body 11 when the device is not in actual use.

The valve member 18 is formed with offset vertical passages 27 and 28 and with a laterally extending passage 29 connecting said passages 27 and 28, extending to the edge of the valve member 18. A seat 30 is formed at the inner end of the passage 29 and is adapted to receive the valve ball 31 when forced upon its seat by means of the head 32 on the inner end of a valve actuating pin 33, being disposed in the slot 34' in the bottom 12 of the body 11, and engaging a limiting washer 35 adjustably mounted upon said pin 33.

The outer end of the pin 33 may be extended through an opening 36 in the side wall 13 of the body 11 adjacent the stop 37 formed on the inner surface of said side wall 13, and a trigger finger 38 is formed adjacent the outer end of said pin 33, being engaged by the plug 39 when said pin 33 is pressed inwardly to compress the coil spring 34 and to hold the valve ball 31 on its seat 30.

A peripheral channel 40 is formed about the greater part of the edge of the bottom 12 of the body 11, and supports an elongated compressible coil spring 41. A plug 42 is supported by one end of the spring 41 and is adapted to forcibly engage the plug 39 when the compressed spring 41 is released, thereby knocking the plug 39 from its trigger finger 38, permitting the coil spring 34 to move the pin 33 outwardly, and permitting the valve ball 31 to be unseated and the carbon dioxide from the gas storage tank 4 to pass through the valve member 18 into the air bag 20 to inflate the same.

The bottom 12 of the body 11 is further recessed as at 43 to house the arcuate trigger member 44 which is pivoted at 45 at one end, and is formed with a laterally extending arm 46 adjacent its opposite end, said arm 46 being engageable with the plug 42 for holding the coil spring 41 in compressed or set position. An eye 47 will be formed through the opposite end of the trigger member 44 and will be alignable with an opening 48 in the washer 19 and with an opening 49 extending through the bottom 12, to receive the lime stick or other dissolvable trigger holding pin 50, which will dissolve or disintegrate when the outboard motor 1 falls into a body of water and the water reaches the trigger holding pin 50.

An air vent passage 51 will be formed through the bottom 12 of the body 11 and will be open to connect with the gasoline tank 2 when the motor is in operation. A needle valve 52 having a head 53 will be threadably disposed in a passage 54 through the bottom 12 which will intersect the passage 51, so that the said passage 51 may be closed when the motor is not in operation to prevent accidental draining of the gasoline through the air vent passage 41 if and when the outboard motor 1 is laid upon its side.

From the foregoing description, it will be ap-

parent that the mode of operation of the improved float device will be as follows:

Assuming that the device is in position within the gasoline tank 2 of the outboard motor 1, and that the bag 20 is collapsed within the body 11 and the cover 26 disposed thereover. In the event that the outboard motor 1 falls overboard from a boat, the water will enter the body 11 through the opening 49 in the bottom 12 and will engage the lime stick holding pin 50 used for holding the trigger member 44 in set position with the coil spring 41 fully compressed. As the water disintegrates the pin 50, the trigger member 44 will move inwardly within its recess 43, permitting the coil spring to project the plug 42 to forcibly engage the plug 39 holding the trigger finger 38 and the pin 33 from its set position, thus permitting the coil spring 34 to move the pin 33 outwardly to permit the valve ball 31 to become unseated from its seat 30, whereupon the carbon dioxide gas will flow from the gas storage tank 4 through the valve member 18 and into the water-proof air bag 20 to inflate the same. As soon as the air bag 20 has been inflated, its buoyancy will be sufficient to float the outboard motor upwardly until it reaches a point adjacent the surface of the water, whereupon it may be readily retrieved.

As will be further obvious from the foregoing description that there has been devised and provided a highly efficient form of an outboard motor floating device which will be highly efficient in operation, and relatively inexpensive to manufacture and produce.

While the preferred embodiment of the instant invention has been illustrated and described, it will be understood that it is not intended to limit the scope of the invention thereto, as many minor changes in detail of construction may be resorted to without departure from the spirit of the invention.

Having described the invention, what is claimed as new is:

1. In combination with an outboard motor having a fuel tank and an air bag and carbon dioxide storage tank forming the closure for said fuel tank, a valve body member disposed between said air bag and carbon dioxide storage tank, a valve in said valve body, and resiliently tensioned means for holding said valve in closed position.

2. In combination with an outboard motor having a fuel tank and an air bag and carbon dioxide storage tank forming the closure for said fuel tank, a valve body member disposed between said air bag and carbon dioxide storage tank, said valve body member having offset connecting passages formed therein, a ball valve in said valve body, resiliently tensioned means for holding said valve in closed position, and an actuating means for releasing said valve to permit the carbon dioxide to pass from said storage tank to inflate said air bag.

3. In combination with an outboard motor having a fuel tank and an air bag and carbon dioxide storage tank forming the closure for said fuel tank, a valve body member disposed between said air bag and carbon dioxide storage tank for securing said air bag, said valve body member having offset vertical passages and a transverse connecting passage formed therein, a ball valve in said transverse passage, resiliently tensioned means for holding said valve in closed position, resiliently tensioned actuating means for releasing said valve to permit the carbon dioxide from said tank to pass to said bag for inflating the

5

same, and a latchable trigger for holding said actuating means in set position.

4. The subject matter as claimed in claim 3, and an expendable and dissolvable locking pin for holding said latchable trigger in set position.

In combination with an outboard motor having a fuel tank and an air bag and carbon dioxide storage tank forming a removable closure for said fuel tank, a valve disposed between said air bag and storage tank, a trigger latch for controlling the operation of said valve, and a dissolvable pin for holding said trigger latch in latched position.

6. In combination with an outboard motor having a fuel tank and an air bag and carbon dioxide storage tank forming the closure for said fuel tank, a valve body member disposed between said air bag and carbon dioxide storage tank for securing said air bag, said valve body member having offset vertical passages and a transverse connecting passage formed therein, a ball valve in said transverse passage, resiliently tensioned means for holding said valve in closed position, an arcuate channel in said valve body, tension means secured in said channel, means on said tension means to engage said ball valve tension means to unseat same, and a latchable trigger

6

for holding said channel tension means in set position.

7. The subject matter as claimed in claim 3, and a dissolvable locking pin for holding said latchable trigger in set position.

8. The combination of claim 6 wherein said ball valve tension means includes a pin engaging said valve, a spring on said pin urging said pin into valve releasing position and a trigger finger engaging said pin to normally retain the ball valve in closed position.

HERMAN E. MYERS.

#### REFERENCES CITED

The following references are of record in the file of this patent:

#### UNITED STATES PATENTS

| Number    | Name     | Date          |
|-----------|----------|---------------|
| 1,247,809 | Foster   | Nov. 27, 1917 |
| 1,290,927 | Fontaine | Jan. 14, 1919 |
| 2,243,551 | Daly     | May 27, 1941  |
| 2,284,650 | Grant    | June 2, 1942  |

#### FOREIGN PATENTS

| Number | Country | Date         |
|--------|---------|--------------|
| 68,632 | Germany | Aug. 1, 1914 |