



US010609918B2

(12) **United States Patent Blair**

(10) **Patent No.: US 10,609,918 B2**  
(45) **Date of Patent: Apr. 7, 2020**

(54) **REMOTE-CONTROLLED FISHING BOBBER**

(71) Applicant: **Billie K. Blair**, Georgetown, KY (US)

(72) Inventor: **Billie K. Blair**, Georgetown, KY (US)

(\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **16/264,660**

(22) Filed: **Jan. 31, 2019**

(65) **Prior Publication Data**

US 2019/0289839 A1 Sep. 26, 2019

**Related U.S. Application Data**

(60) Provisional application No. 62/645,635, filed on Mar. 20, 2018.

(51) **Int. Cl.**

*A01K 93/00* (2006.01)  
*A01K 91/00* (2006.01)

(52) **U.S. Cl.**

CPC ..... *A01K 93/00* (2013.01); *A01K 91/00* (2013.01)

(58) **Field of Classification Search**

CPC ..... *A01K 91/00*; *A01K 93/00*  
USPC ..... 43/26.1  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

3,758,975 A \* 9/1973 Curtis ..... *A01K 91/065*  
43/26.1  
4,638,585 A \* 1/1987 Korte ..... *A01K 91/02*  
43/26.1

5,086,581 A \* 2/1992 Barra ..... *A01K 91/02*  
43/26.1  
5,293,712 A \* 3/1994 Lo ..... *A01K 91/02*  
43/26.1  
5,557,878 A \* 9/1996 Ross ..... *A01K 91/20*  
43/43.11  
6,138,398 A \* 10/2000 Livingston ..... *A01K 93/02*  
43/17  
6,263,611 B1 \* 7/2001 Kimura ..... *A01K 91/02*  
43/26.1  
6,389,732 B1 \* 5/2002 Daniel ..... *A01K 91/02*  
43/26.1  
8,387,303 B2 \* 3/2013 Abraham ..... *A01K 85/01*  
43/26.1  
8,627,593 B1 \* 1/2014 Schepp ..... *A01K 93/00*  
43/26.1  
9,532,558 B2 \* 1/2017 Hamilton, II ..... *A01K 89/015*  
2005/0102883 A1 \* 5/2005 Temes ..... *A01K 91/02*  
43/26.1  
2011/0138675 A1 \* 6/2011 Cutts ..... *A01K 91/02*  
43/4  
2017/0356211 A1 \* 12/2017 Rejniak ..... *E04H 4/1654*  
2018/0279594 A1 \* 10/2018 Raskas ..... *A01K 83/00*

\* cited by examiner

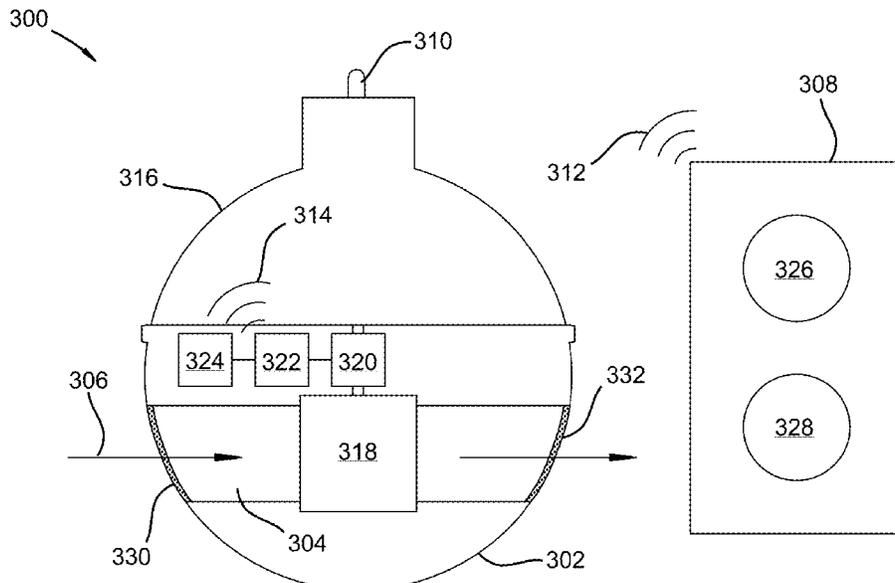
*Primary Examiner* — Claude J Brown

(74) *Attorney, Agent, or Firm* — Malone IP Law; Steven J. Malone

(57) **ABSTRACT**

The invention presented is a remote-controlled fishing bobber system. The fishing bobber is made up of a bottom portion being independently rotational from a top portion. The bottom portion of the bobber has a through channel connecting two ports on opposing sides. One or more protective screens protect the through channel. The system includes a propelling system with a pump, a motor, a control circuitry, a battery, and a remote control. A reverse motor direction causes the independent rotation of the bottom portion from the top portion by engaging a gear system.

**19 Claims, 6 Drawing Sheets**



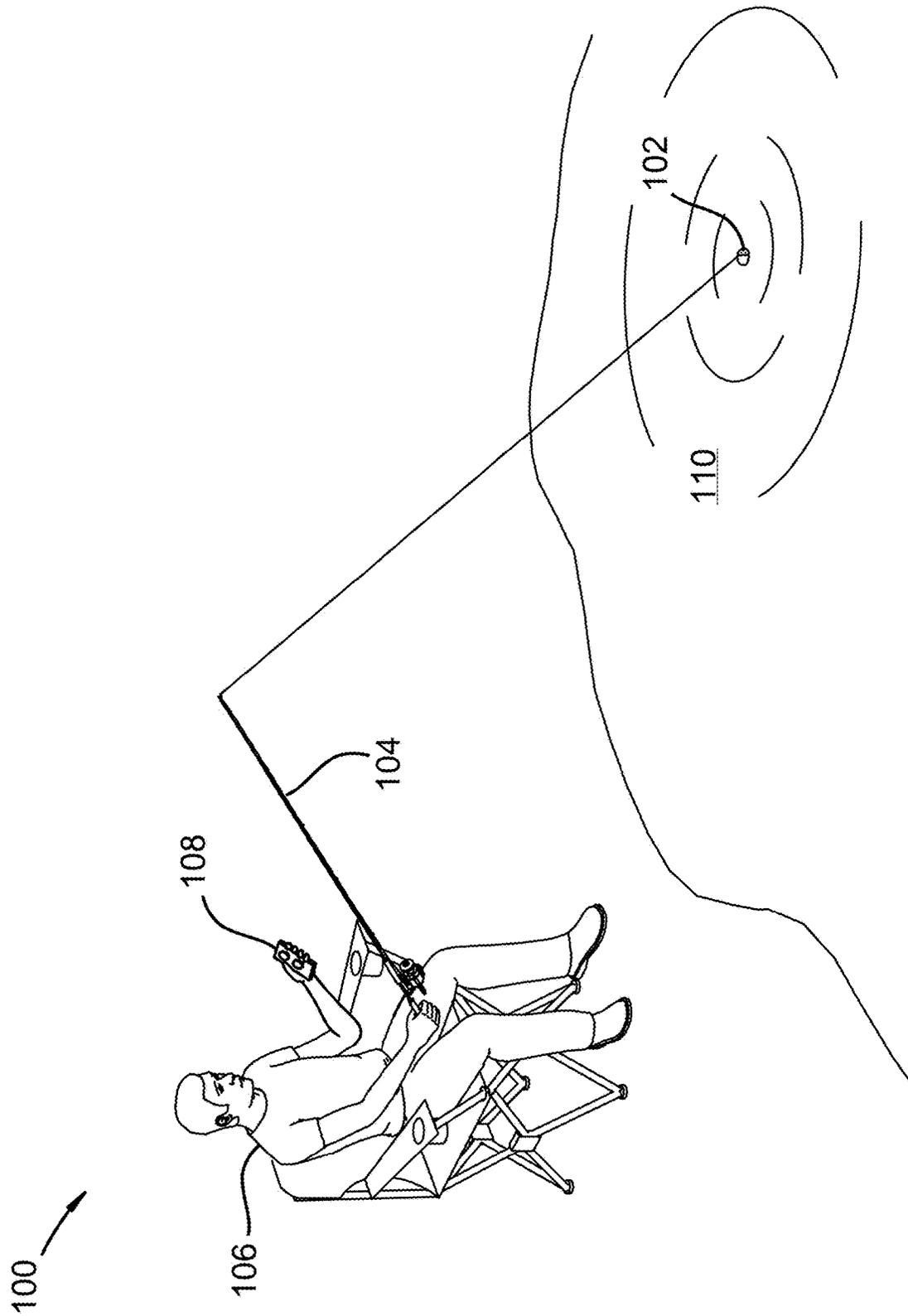


FIG. 1

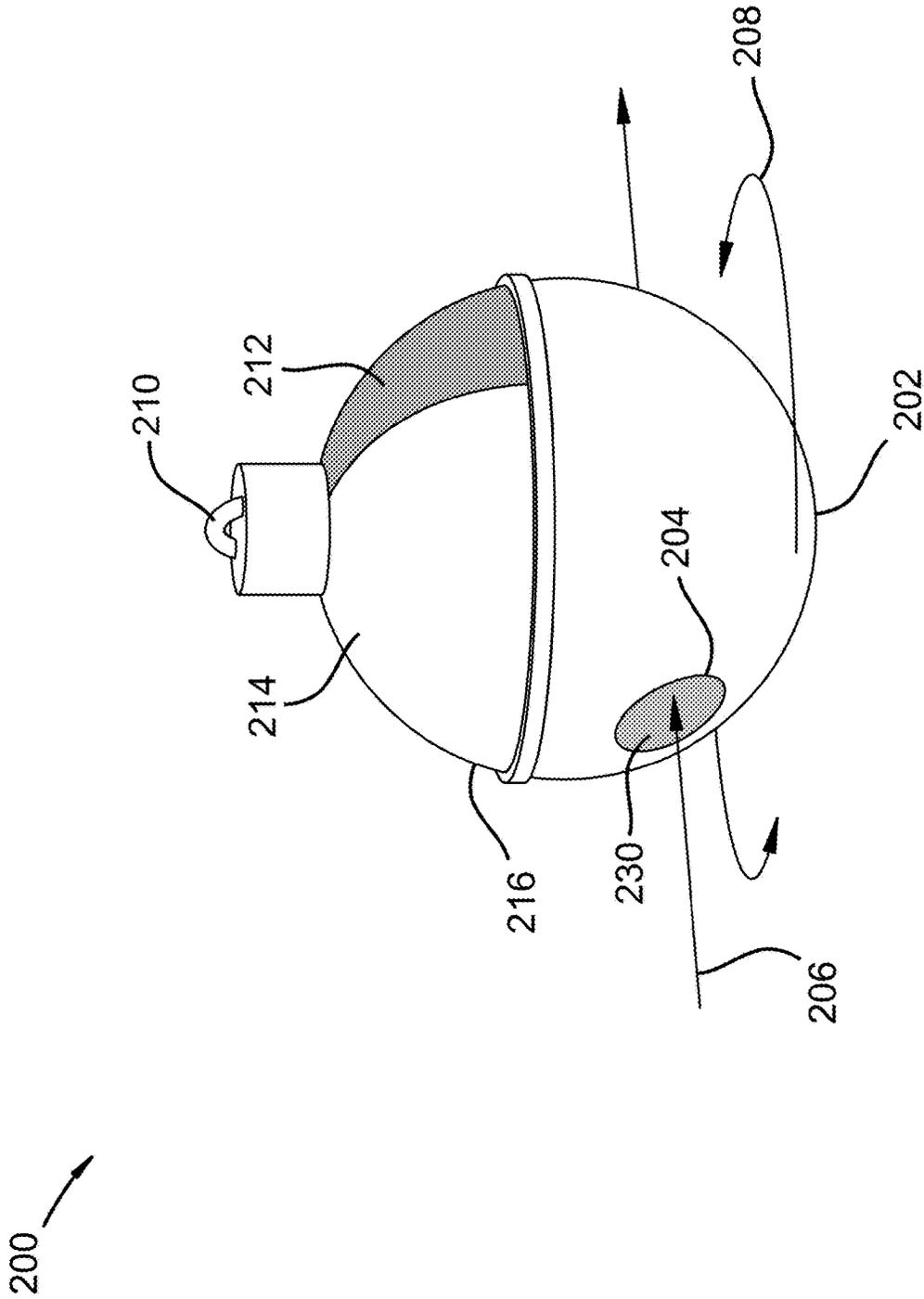


FIG. 2

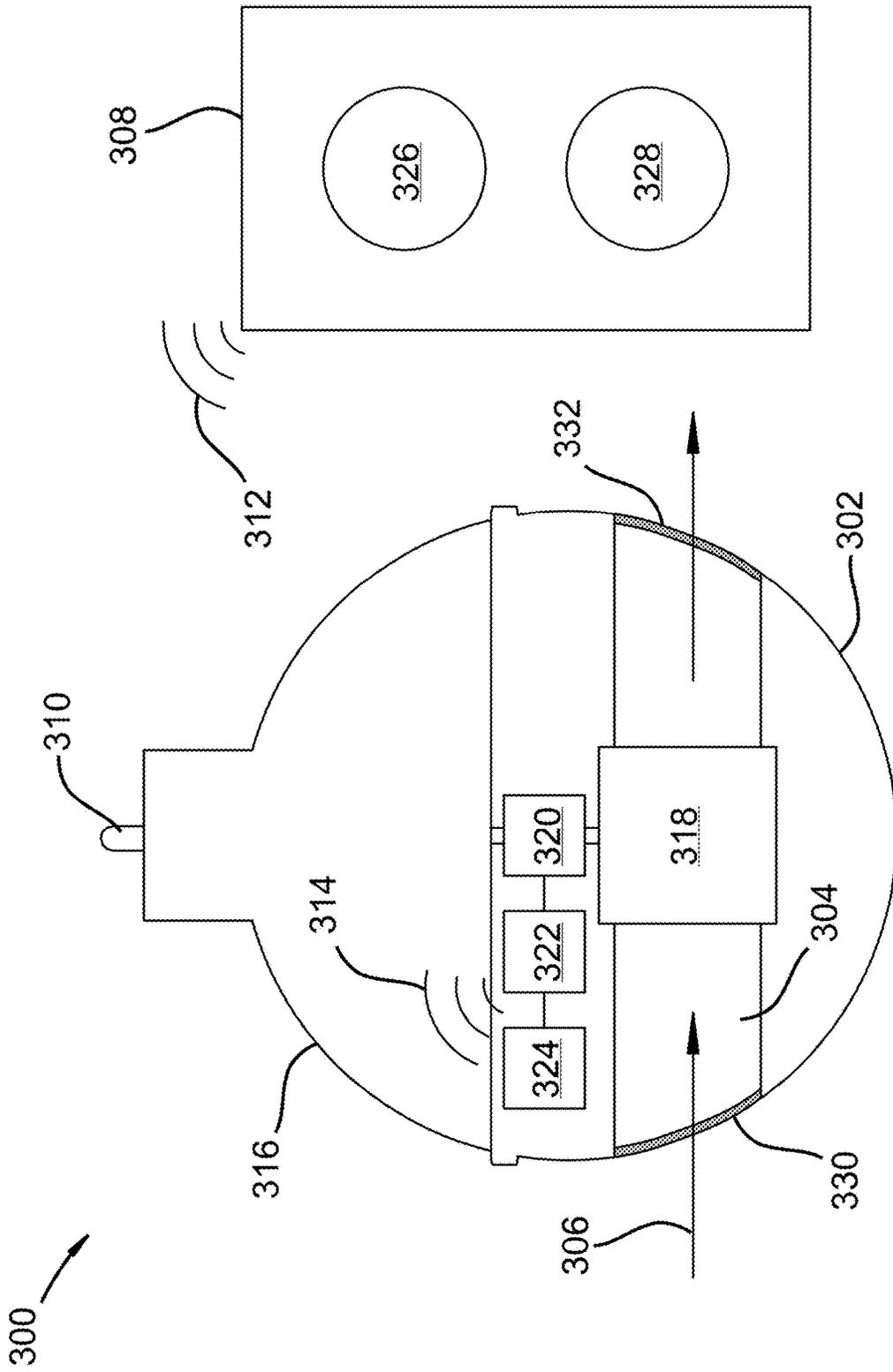


FIG. 3

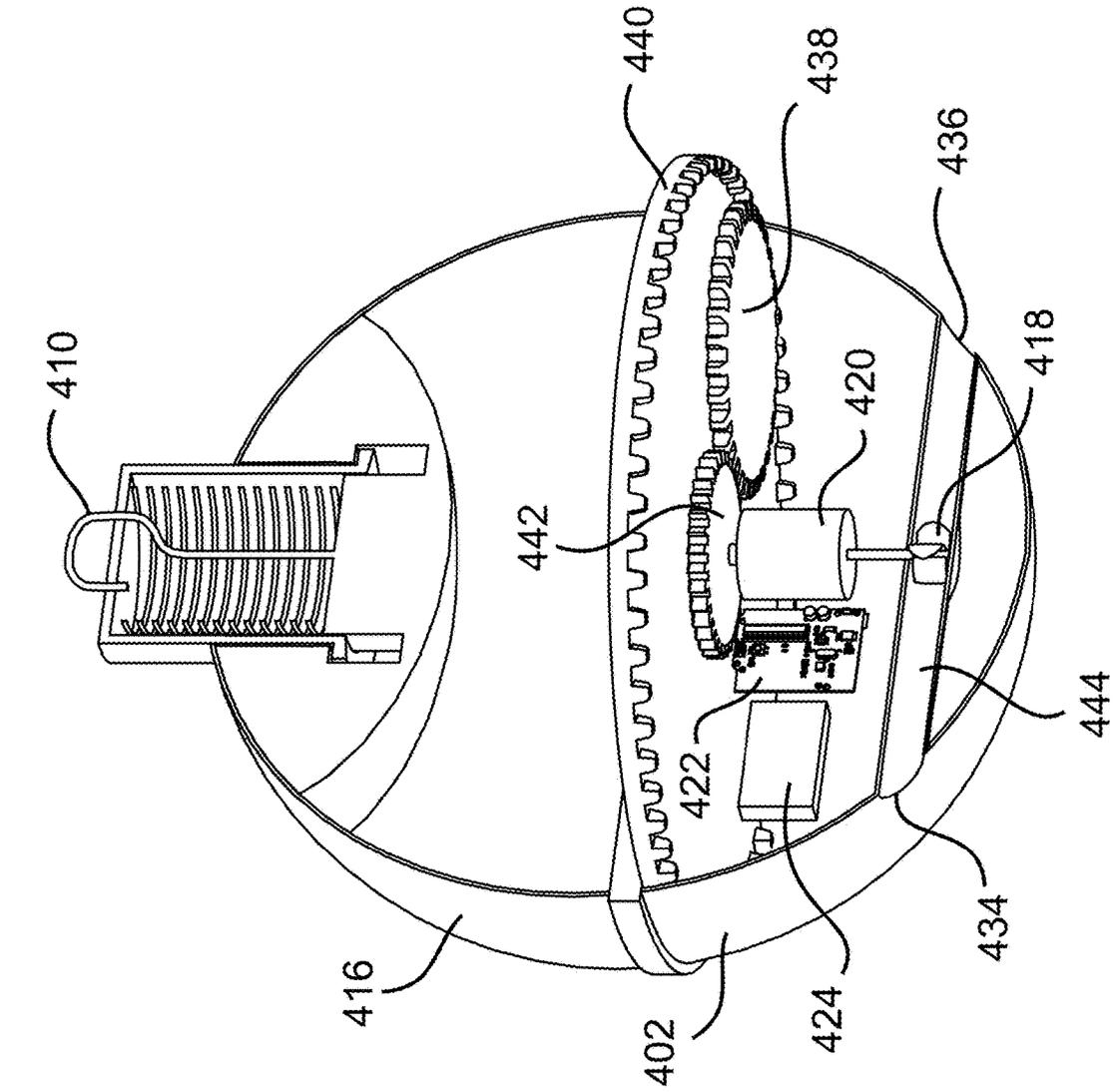


FIG. 4

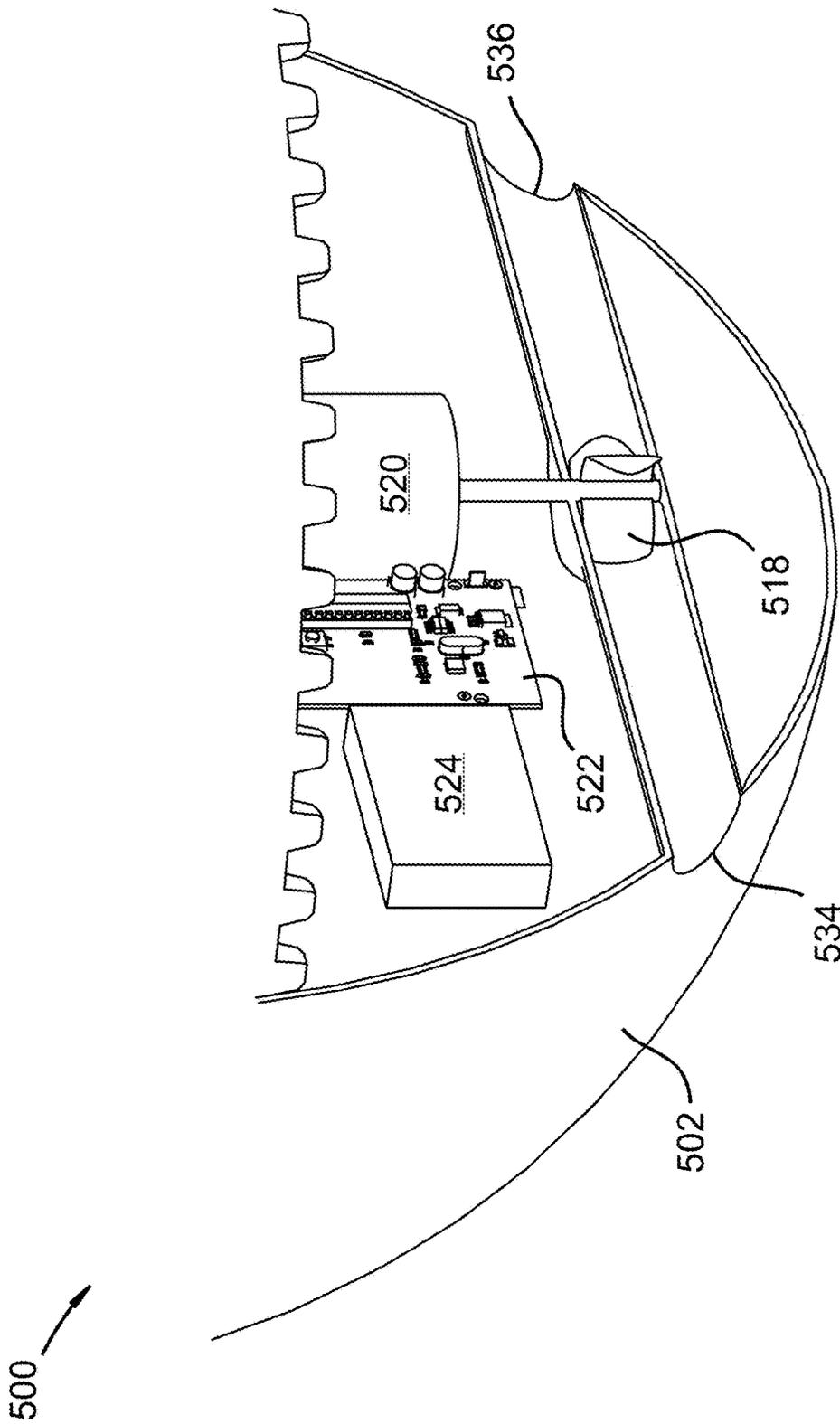


FIG. 5

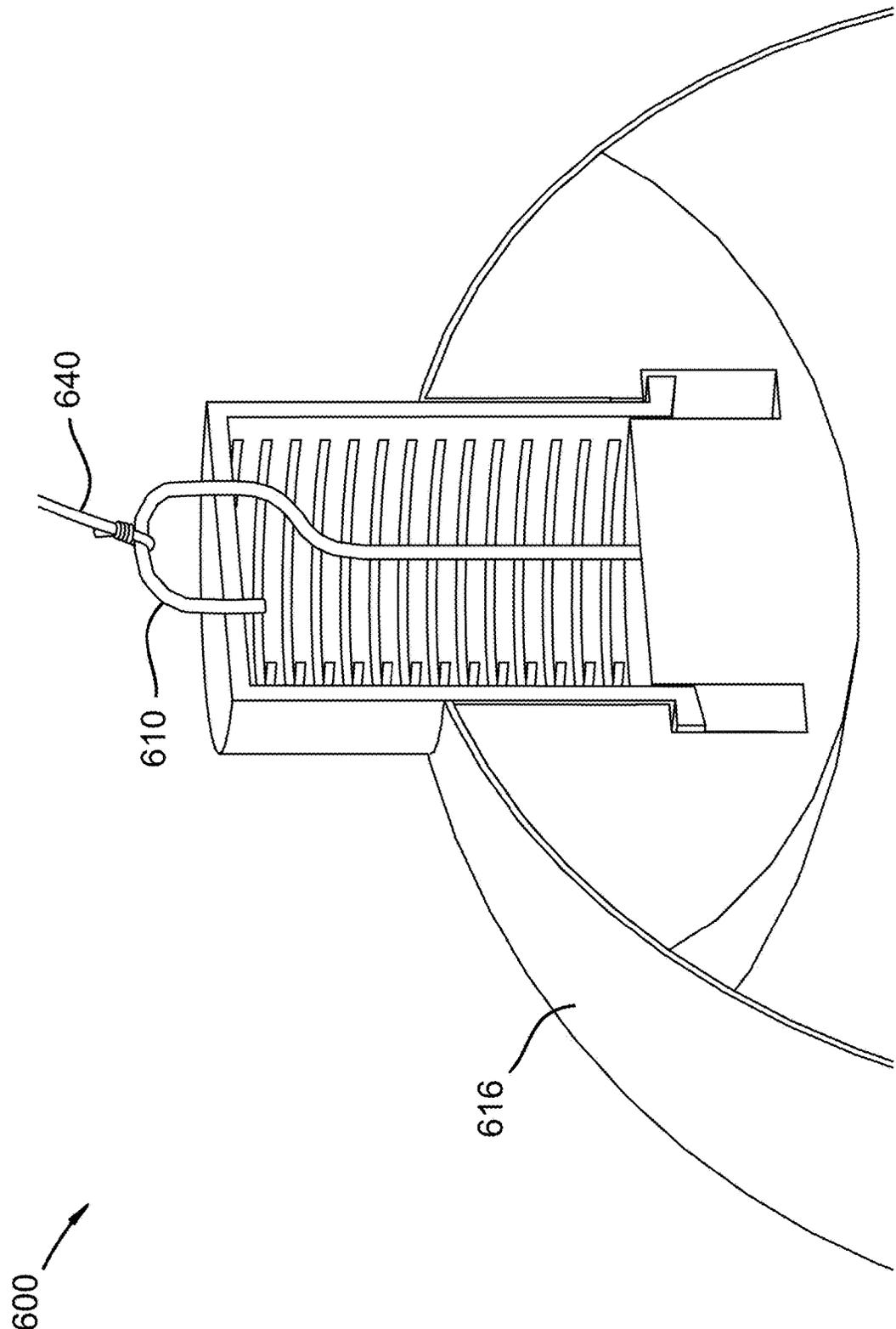


FIG. 6

**REMOTE-CONTROLLED FISHING BOBBER**

## RELATED APPLICATIONS

This application claims priority to U.S. Provisional Patent No. 62/645,635 filed on Mar. 20, 2018, the disclosure of which is hereby incorporated by express reference thereto.

## FIELD OF THE INVENTION

The present invention discloses a remote-controlled fishing bobber with propelling abilities.

## BACKGROUND

The fishing sport is a relaxing pastime; however, a few frustrations occur with beginning and experienced fishermen alike. Fishing involves casting a line and hook into a certain place in the water to lure and catch fish. Beginning fishermen often have difficulty directing a cast to the desired location in the water surface. Wind, nearby trees and bushes, and other things can cause additional difficulty in casting. Another complication with placing a line and hook in a fish inhabited location is water currents that cause a fishing line to drift.

## SUMMARY

The invention presented is a remote-controlled fishing bobber system. The fishing bobber is made up of a bottom portion being independently rotational from atop portion. The bottom portion of the bobber has a through channel connecting two ports on opposing sides. One or more protective screens protect the two ports. The system includes a propelling system with a pump, a motor, control circuitry, a battery, and a remote control.

The top portion of the bobber or the bottom portion or both portions may be hemispherical. The top portion of the bobber may be air-tight and may float above the water surface. The motor, control circuitry, and battery may be located in the air-tight, bottom portion of the bobber. The top portion may include a connector to attach to a fishing line. The bottom portion may include a gear strip on the inside of the top of the bottom portion.

The pump may be located in the through channel and may include at least two speed options controlled by the remote. The remote may be a physical control piece included in the purchase of the fishing bobber system, or it may be a downloadable app to an electronic device.

The independent rotation of the bottom portion from the top portion may be controlled by the remote by measured degree amounts. The remote control may control the direction of the motor. The motor in reverse may power the independent rotation of the bottom portion from the top portion of the fishing bobber using a motor gear, a power gear and the bottom portion gear strip. The battery and control circuitry may remain stationary with the motor and pump and may not rotate with the independent rotation of the bottom portion from the top portion of the fishing bobber. The through channel may rotate with the independent rotation of the bottom portion from the top portion of the fishing bobber and may rotate around the pump. The pump and motor may remain stationary in relation to the independent rotation of the bottom portion from the top portion of the fishing bobber.

The two ports located in the bottom portion of the bobber on opposing sides may be of equal size and shape. They may

be covered by the one or more protective screens. The one or more protective screens may act as filters and may allow water to pass through freely while blocking debris.

## BRIEF DESCRIPTION OF THE DRAWINGS

In order that the advantages of the invention will be readily understood, a more particular description of the invention briefly described above will be rendered by reference to specific embodiments illustrated in the appended drawings. Understanding that these drawings depict only typical embodiments of the invention and are not therefore to be considered limiting of its scope, the invention will be described and explained with additional specificity and detail through use of the accompanying drawings, in which:

FIG. 1 shows a fisherman using the remote-controlled fishing bobber in accordance with an embodiment of the invention;

FIG. 2 shows a close view of the fishing bobber in accordance with an embodiment of the invention;

FIG. 3 shows a cross-cut view of the fishing bobber in accordance with an embodiment of the invention;

FIG. 4 shows a cross-cut view of the fishing bobber with the rotating gears in accordance with an embodiment of the invention;

FIG. 5 shows the propelling system of the fishing bobber in accordance with an embodiment of the invention; and

FIG. 6 shows the connector on the top portion of the fishing bobber in accordance with an embodiment of the invention.

## DETAILED DESCRIPTION

It will be readily understood that the components of the present invention, as generally described and illustrated in the Figures herein, could be arranged and designed in a wide variety of different configurations. Thus, the following more detailed description of the embodiments of the invention, as represented in the Figures, is not intended to limit the scope of the invention, as claimed, but is merely representative of certain examples of presently contemplated embodiments in accordance with the invention. The presently described embodiments will be best understood by reference to the drawings.

FIG. 1 shows a fisherman **106** using the remote-controlled fishing bobber system **102** in accordance with an embodiment of the invention. The fishing bobber **102** may sit in the water **110** and be controlled by a remote **108**. The top portion or bottom portion of the fishing bobber **102** may be hemispherical or both may be hemispherical. The top portion of the fishing bobber **102** may be air-tight and float above the water **110** surface. The invention allows the fisherman **106** to choose his or her fishing location in a body of water. An inexperienced fisherman **106** may cast a fishing line and fail to reach a desired location and may use a remote **108** to direct the movement of the fishing bobber **102** to the desired fishing location in the water **110**. Another use of the system may be when a current is active in the body of water **110** and the fisherman **106** wants to prevent the fishing bobber **102** and hook from drifting with the current. The remote **108** directs the movement of the fishing bobber **102** by signaling the pump to direct water flow, causing the fishing bobber **102** to move in the direction opposite of the water flow. The remote **108** also controls the independent rotation of the bottom portion of the fishing bobber **102** from the top portion of the fishing bobber **102** to alter the orientation of the water flow and moving direction. The speed of the

movement of the fishing bobber **102** may also be controlled by the remote **108** which may be adjusted according to the strength of a current. Another use of the remote-controlled fishing bobber system **102** may be when a fisherman **106** chooses to direct the fishing bobber **102** to drag a lure in a manner imitative of the movement of a small fish to bait larger fish. The internal design of the propelling system with protective screens allow the fishing bobber **102** to be easily cleaned and protected from debris. The remote **108** may be a downloadable app onto an electronic device which uses the internet to control the movement of the fishing bobber **102**. The remote **108** may also be a radio-wave controller, or an electronic controller included in the purchase of the fishing bobber system **100**.

FIG. 2 shows a view of the fishing bobber **200** with the bottom portion **202** being independently rotational **208** from the top portion **216**. A connector **210**, which may be located on the top portion **216** allows the fishing bobber **200** to be attached to a fishing line. The two ports on opposing sides **204** may be covered by one or more protective screens **230**. The one or more protective screens **230** may allow water flow **206** to pass freely through the two ports **204**, but may act as a filter, blocking debris. The independent rotation **208** of the bottom portion **202** from the top portion **216** of the fishing bobber **200** may allow the orientation of the water flow **206** to change, changing the direction of propelled movement of the fishing bobber **200**. While the water flow **206** may be moving in an eastward direction with a current to hold the fishing bobber **200** and hook in place, the fisherman may choose to move the fishing bobber **200** out of the current to a fish in a location with still or slower moving water. The independent rotation **208** of the bottom portion **202** of the fishing bobber **200** may be controlled by the remote to rotate by ninety degrees, allowing the water flow **206** to change to a northward direction and moving the fishing bobber **200** away from the current.

FIG. 3 shows a dissected view of the fishing bobber **300** with a view of the propelling system including the pump **318**, motor **320**, control circuitry **322**, battery **324**, and remote **308**. The remote **308** may be a physical controller included in the purchase of the remote-controlled fishing bobber system **300**, or it may be a downloadable app. The signal from the remote **312** may be via internet, radio waves, Ethernet, or any other wired or wireless connection to send signals to the control circuitry **314**. The pump **318** may be located in the through channel **304**. The motor **320**, control circuitry **322**, and battery **324** may be located in an air-tight location protected from water. The remote **308** may control the direction of the motor **320** which may reverse to control the independent rotation of the bottom portion **302** from the top portion **316** of the fishing bobber **300**. Button **328** may cause the motor to power the pump **318** and direct water flow **306** by pulling water in through port and protective screen **330** and out through port and protective screen **332**. Button **326** may reverse the motor **320** to power the independent rotation of the bottom portion **302** from the top portion **316** of the fishing bobber **300**. The two ports and protective screens **330** and **332** may be equal in size and shape to allow water to flow freely and control pressure to propel the movement of the fishing bobber **300**. When the water flow **306** matches the water current, the fishing bobber **300** is able to remain in place without drifting with water movement or the drifting of the fishing bobber **300** is reduced to be slower than the water current movement.

FIG. 4 shows a cross-cut view of the fishing bobber **400**, the propelling system, and gears in accordance with an embodiment of the invention. The top portion **416** may

include a connector **410** to connect onto a fishing line. A bottom portion gear strip **440** may be attached to the inside and top of the bottom portion **402**. The battery **424** may be located in a protected, air-tight location within the fishing bobber **400** to power the system along with the control circuitry **422** which may send signals to the motor **420**. The motor **420** may power the pump **418** to pull water in through port **434** and out through port **436**, allowing the fishing bobber **400** to be propelled through the water. The motor **420** in reverse may rotate the motor gear **442**, turning the power gear **438**, and the bottom portion gear strip **440** which may cause the independent rotation of the bottom portion **402** from the top portion **416** of the fishing bobber **400**. The independent rotation of the bottom portion **402** from the top portion **416** of the fishing bobber **400** may include the bottom portion **402**, the bottom portion gear strip **440**, the two ports **434** and **436**, and the through channel **444** rotating around the pump **418**. But the pump **418**, motor **420**, battery **424**, and control circuitry **422** may remain stationary in relation to the independent rotation of the bottom portion **402** from the top portion **416** of the fishing bobber **400**. A fisherman may use the remote-controlled fishing bobber system to navigate the fishing bobber **400** and hook through a body of water filled with obstacles. The motor **420** may direct the pump **418** to rotate at a slower speed of the at least two speed options pulling the water flow through the through channel **444** with the current to propel against the current, which may slow the drifting of the fishing bobber **400** with the current. The current may pull the fishing bobber **400** toward a log or other obstacle in the body of water and a fisherman may reverse the direction of the motor **420** which may rotate the motor gear **442**, turning the power gear **438**, and the bottom portion gear strip **440** which may cause the independent rotation of the bottom portion **402** from the top portion **426** of the fishing bobber **400** at such an amount that the fisherman may turn the motor **420** back to the pump **418** and may choose a faster speed option of the at least two speed options to propel the fishing bobber **400** against the current and out of the way of the log. When the fishing bobber **400** is clear of the log, a fisherman may rotate the bottom portion of the fishing bobber again to align the through channel **444** with the current and may use the remote to direct the pump at a slow option of the at least two speed options to slow the drift of the fishing bobber **400** in the current as before.

FIG. 5 shows the propelling system in the lower portion **502** of the fishing bobber **500** in accordance with an embodiment of the invention. The signal from the remote may reach the control circuitry **522** via internet, Ethernet, radio waves, or any other wired or wireless connection. The battery **524** may power the motor **520** as it receives directions from the control circuitry **522**. The motor **520** may rotate the pump **518**, pulling water through the port **534** and out the port on the opposing side **536**.

FIG. 6 shows the connector **610** on the top portion **616** of the fishing bobber **600** in accordance with an embodiment of the invention. The fishing line **640** may be attached to the connector **610** at a desired position on the fishing line **640** to provide an appropriate length for the desired fishing depth.

The systems and methods disclosed herein may be embodied in other specific forms without departing from their spirit or essential characteristics. The described embodiments are to be considered in all respects only as illustrative and not restrictive. The scope of the invention is, therefore, indicated by the appended claims rather than by

5

the foregoing description. All changes which come within the meaning and range of equivalency of the claims are to be embraced within their scope.

The invention claimed is:

1. A remote-controlled fishing bobber system comprising:
  - a fishing bobber with a bottom portion being independently rotational from a top portion;
  - the bottom portion having two ports on opposing sides with a through channel connecting the two ports;
  - one or more protective screens protecting the through channel;
  - a propelling system comprising:
    - a pump, a motor, a battery, control circuitry, and a remote control to direct a movement of the fishing bobber; and
  - wherein the motor, in reverse, powers the independent rotation of the bottom portion from the top portion.
2. The system of claim 1, wherein the top portion of the fishing bobber or the bottom portion of the fishing bobber is hemispherical.
3. The system of claim 1, wherein the pump is positioned in the through channel.
4. The system of claim 1, wherein the one or more protective screens are positioned over the two ports on either side of the through channel.
5. The system of claim 4, wherein the one or more protective screens allow water to pass through freely while blocking debris.
6. The system of claim 5, wherein the one or more protective screens are constructed of a filtering material.
7. The system of claim 1, wherein the top portion of the fishing bobber is air-tight and floats above water.
8. The system of claim 1, wherein the remote control is a downloadable app or a physical remote.

6

9. The system of claim 8, wherein the independent rotation of the bottom portion from the top portion of the fishing bobber is directed by the remote control.

10. The system of claim 9, wherein the independent rotation of the bottom portion from the top portion of the bobber that is directed by the remote control is controlled to rotate at a measured degree amount.

11. The system of claim 10, wherein the through channel rotates around the pump with the independent rotation of the bottom portion from the top portion of the fishing bobber.

12. The system of claim 11, wherein the battery and control circuitry remain stationary with the motor and pump in relation to the independent rotation of the bottom portion from the top portion of the fishing bobber.

13. The system of claim 1, wherein the top portion includes a connector to be attached to a fishing line.

14. The system of claim 1, wherein the two ports are of similar size and shape.

15. The system of claim 1, wherein the motor is controlled by the remote control.

16. The system of claim 15, wherein the motor has at least two speed options controlled by the remote control.

17. The system of claim 16, wherein the battery, the control circuitry, and the motor are protected in an airtight location within the fishing bobber.

18. The system of claim 1, wherein the bottom portion has a gear strip on the inside of the top edge.

19. The system of claim 18, wherein the independent rotation of the bottom portion from the top portion is powered by the motor, a motor gear, a power gear, and the bottom portion gear strip.

\* \* \* \* \*