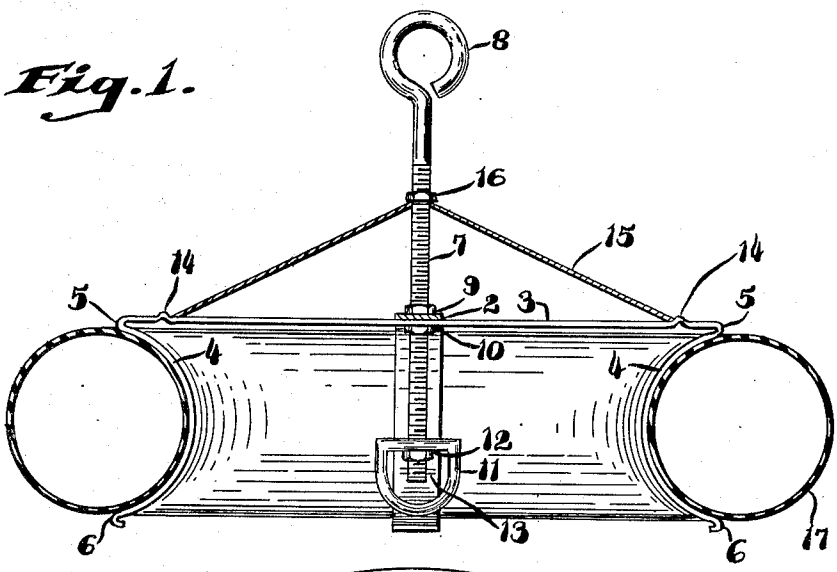
Nov. 26, 1957 H. E. PHILLIPS 2,814,054

MOORING BUOY

Filed Feb. 14, 1955 2 Sheets-Sheet 1

Fig. 1.



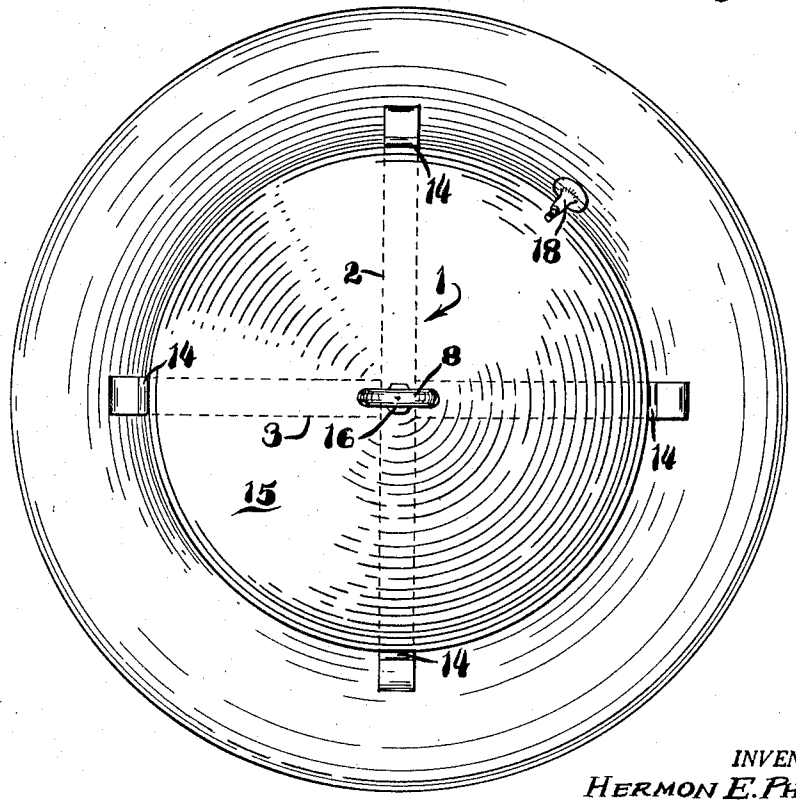


Fig. 2.

INVENTOR.
HERMON E. PHILLIPS,
BY: Harold B. Hood.
ATTORNEY.

Nov. 26, 1957 H. E. PHILLIPS 2,814,054

MOORING BUOY

Filed Feb. 14, 1955 2 Sheets-Sheet 2

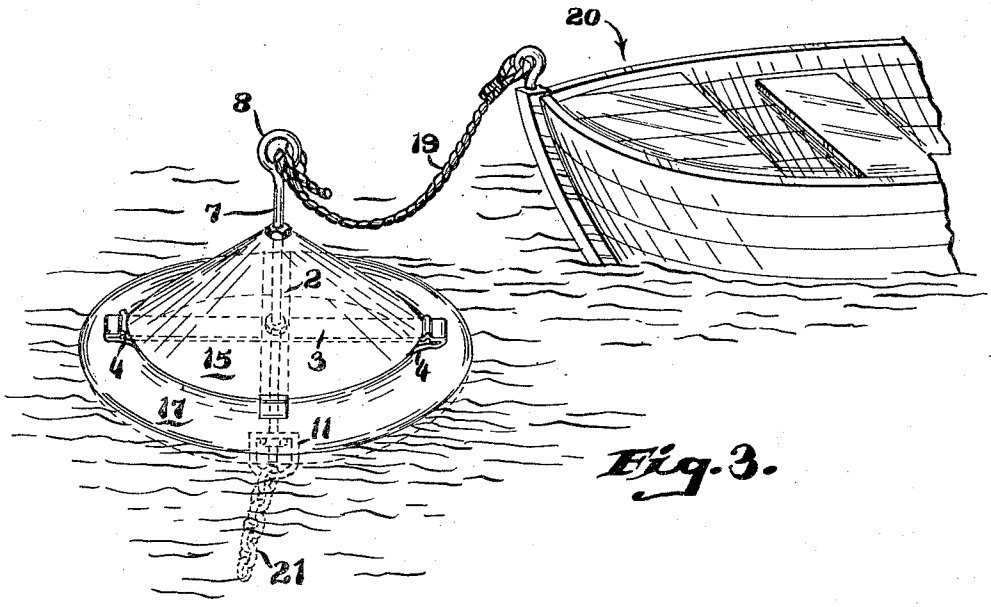


Fig. 3.

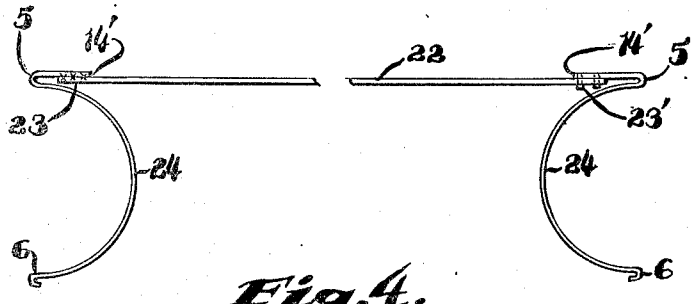


Fig. 4.

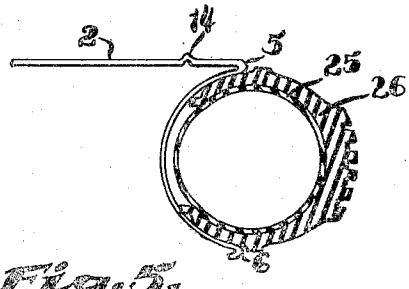


Fig. 5.

INVENTOR.
HERMON E. PHILLIPS,
BY: Harold B. Hood.
ATTORNEY

United States Patent Office 2,814,054 Patented Nov. 26, 1957

2,814,054

MOORING BUOY

Hermon E. Phillips, Angola, Ind.

Application February 14, 1955, Serial No. 487,739

2 Claims. (Cl. 9—8)

This invention relates to a buoy which finds its primary utility as a mooring buoy for use in tethering a boat or other floating craft.

A primary object of this invention is to provide a sturdy mooring buoy which is relatively simple in construction, dependable in use and economical to manufacture.

A further important object of this invention is to provide a mooring buoy which can be quickly and easily dismantled so as to occupy comparatively little space during storage and transportation thereof.

A further object is to provide an extremely inexpensive buoy so constructed as to minimize the hazard of damage to such craft or to the buoy as a result of collision.

Further objects of the invention will become apparent as the description proceeds.

To the accomplishment of the above and related objects, my invention may be embodied in the forms illustrated in the accompanying drawings, attention being called to the fact, however, that the drawings are illustrative only, and that change may be made in the specific constructions illustrated and described, so long as the scope of the appended claims is not violated.

Fig. 1 is a transverse section of one embodiment of my invention;

Fig. 2 is a top view of the embodiment shown in Fig. 1;

Fig. 3 is a perspective view of the embodiment shown in Fig. 1, the buoy being shown in operative relationship with a boat and anchor chain;

Fig. 4 is a side view of a portion of the spider means of another embodiment of my invention; and

Fig. 5 is a side view partly in section of another embodiment of my invention.

Referring more particularly to the drawings, it will be seen that I have provided a main supporting frame, here shown in the form of a spider **1**. The spider has two crossed arms, joined at their centers, and each carrying, at each end, an outwardly-opening, concave seat member **4**, said seat members being arranged in a peripheral series as is most clearly indicated in Figs. 2 and 3. The arms and seats may be of any suitable material such as metal or plastic. Return bent portions **5** and **6** define the outer extremities of the seats **4**. Passing through an opening at the center of each of straps **2** and **3** is a post in the form of a threaded eye-bolt **7** with eye portion **8**, to which a painter or the like is attached, being uppermost. Nuts **9** and **10** clamp straps **2** and **3** to each other in longitudinally adjustable position on the threaded portion of the eye-bolt. Swivelly secured to the lower portion of the eye-bolt **7** is a ring **11** held in adjusted position by means of nut **12** backed by a cotter pin **13**. Ring **11** provides means for connection to an anchor chain **21** or the like.

Spaced radially inwardly from the radially outer extremities of each of the straps of the embodiments shown in Figs. 1 through 3 and 5, respectively, is a transversely extending rib in the form of an upwardly bent protuberance **14**. A brightly-colored, plastic or sheet metal, conical member **15** may be provided which abuts the radially inner edge of each of the ribs **14** at its base and is secured by nut **16** at its top. Obviously, as the nut **16** is turned down on the bolt **7**, it tends to spread the base of member **15** into secure engagement with the ribs **14**.

Mounted in the peripherally arranged set of seats **4** is an annular member **17**. This member is hollow and flexible, and by actuation of a suitable pump connected to valve **18** may be inflated to flex seats **4** to tightly secure it in the seats. Annular member **17** may take the form of an ordinary automobile tire inner tube, or a specially manufactured air-tight bag in the form of a toroid. Still another form which the annular member may take is illustrated in Fig. 5, wherein the annular member is shown as being an inner tube **25** enclosed within a conventional automobile tire casing **26**. Since, in each embodiment of the invention, the extreme radial periphery of the buoy is formed by a flexible, inflated annulus, damage to the buoy or the tethered craft due to collision is minimized.

Fig. 3 shows the embodiment of Fig. 1 with ring **11** connected to an anchor chain **21** and eye **8** connected to boat painter **19** which, in turn, is secured to boat **20** to hold it against drifting.

In Fig. 4, the spider arrangement of another embodiment of my invention is illustrated. In this embodiment two substantially straight, flat straps **22** (one of which is shown in Fig. 4) are provided which are crossed and receive a post through an opening at their respective centers as in the previous embodiment. Seat members are formed by outwardly facing concave straps **24, 24** which are secured in overlapping relation to the upper surface of straps **22** by any suitable means such as spot-welding indicated at **23** or rivets indicated at **23'**. In this embodiment, straps **24, 24** may be of a different material, or the same material as, that of straps **2** and **3**. By way of example, the seats may be of spring brass. Protuberances for the reception of the base of conical member **15** are provided in this embodiment by the inner, transversely extending edges **14, 14'** of the overlapping portion of straps **24, 24**. As in each of the other disclosed embodiments, the upper and lower extremities of each of the seat members are defined by return bent portions **5** and **6**, respectively. The spider arrangement of this embodiment can be used to accommodate any of the several forms of inflatable annuli herein disclosed.

I claim as my invention:

1. A device of the class described comprising a spider means having radially-extending arms and providing a series of peripherally-spaced, outwardly-facing concave seats, a flexible, inflatable annulus supported in said series of seats, a post centrally supported on said spider means, said post having means at the lower portion for attachment to anchor means and means at the upper portion for attachment to a painter, a plurality of transverse ribs on said spider means, and an upright, hollow conical member provided with an opening at its center, said opening surrounding said post, and the base of the conical member being in engagement with each of said ribs.

2. The device of claim 1 wherein each of said seats is formed by a strap return bent adjacent its upper portion and extending radially inwardly in overlapping, fixed relation to the end portion of its associated arm, said overlapping portion of each of the straps terminating in a vertical edge to form said ribs.

References Cited in the file of this patent

UNITED STATES PATENTS

546,057	Richard	Sept. 10, 1895
1,869,186	Davidson	July 26, 1932