

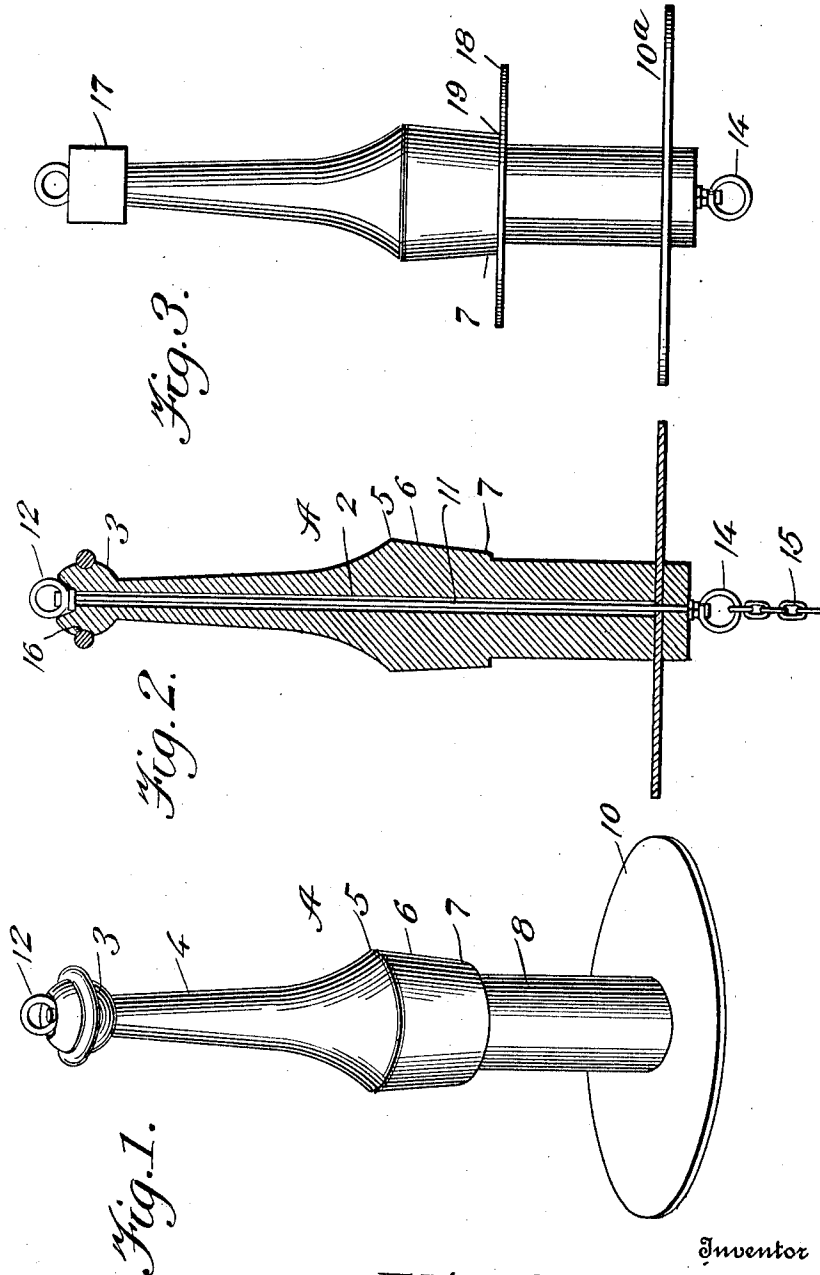
E. S. FIDLER.

BUOY.

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1,048,671.

Patented Dec. 31, 1912.



Witnesses
Geo. Ackman Jr
R. B. Carausz

Inventor
Elias S. Fidler
By *Victor J. Evans*
Attorney

UNITED STATES PATENT OFFICE.

ELIAS SHULZE FIDLER, OF SUPERIOR, WISCONSIN.

BUOY.

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To all whom it may concern:

Be it known that I, ELIAS SHULZE FIDLER, a citizen of the United States of America, residing at Superior, in the county of Douglas and State of Wisconsin, have invented new and useful Improvements in Buoys, of which the following is a specification.

This invention relates to buoys and has particular application to certain novel and useful improvements in boat and channel buoys.

In carrying out my invention, it is my purpose to provide a buoy which will remain erect under all conditions of tides, currents or swells, which is a particular advantage in the case of a boat buoy, inasmuch, as the mooring may be operated from any direction, for the purpose of making the boat fast.

Another object of my invention is to provide an improved buoy having an opening extending centrally through the body portion so that the buoy is prevented from checking when moored.

Still a further object of the invention is to provide a buoy having means for relieving the strain on all the connections so that when a boat is anchored to the buoy and is straining to its mooring from a heavy wind or strong current or tide, the buoy will not surge out of the water and add to the strain on the boat and mooring, but on the contrary will tend to relieve such strain. Furthermore, in regaining its normal position, the buoy will take up the strain easily from the boat end, thereby relieving the pull on the chocks and bits.

A further object of the invention is to provide a buoy, which will embody the desired features of simplicity, durability and strength and, furthermore, the buoy is capable of withstanding a great amount of rough usage, to which it is liable to be subjected. For instance, the buoy may be struck by a passing boat, or by other objects, without being so injured as to effect its usefulness.

Another object of my invention is to shape the buoy and provide means for preventing the scoring or marring of the boat when struck by the buoy.

With the above recited objects and others of a similar nature in view, the invention consists in the construction, combination and arrangement of parts set forth in and falling within the scope of the appended claims.

In the accompanying drawings:—Figure 1 is a perspective view of a boat buoy embodying my improvements. Fig. 2 is a vertical longitudinal sectional view, taken through the same. Fig. 3 is a view in side elevation of a modified form of channeled buoy embodying my improvements.

Referring now to the accompanying drawings in detail, Figs. 1 and 2 show the construction of a single disk buoy for mooring boats. This buoy comprises a body portion indicated as an entirety by the letter A, and preferably formed of wood, such as cedar or the like, said body portion being bored longitudinally and centrally as at 2. The wooden portion of the buoy is constructed with a ball 3 at the top thereof, the ball being carried by the reduced tapered post portion 4 of the buoy, the latter gradually flaring outward as at 5, so that it merges into the enlarged portion 6 of the wooden body, the latter being slightly tapered as at 7. The numeral 8 indicates the lower portion of the wooden body, which is approximately cylindrical in form and has at its lower end thereof a relatively large circular disk 10, of sheet metal or other suitable substances. The numeral 11 designates an iron rod of suitable construction and dimension, which extends entirely through the wooden body of the buoy, the upper end of said rod, which terminates at the ball of the buoy carrying the swiveled eye 12 to which may be secured the chain or cable of the boat or the like, while at the lower end said rod projects through the metallic disk 10 and through the weighted disk 13, the end of said rod carrying a swiveled eye 14 to which may be connected the mooring chain or cable 15. The longitudinal bore extending through the wooden body of the buoy is preferably wide enough to form an air space around the rod so that the air will surround the rod to its submersion depth. It will further be noted that the swivels will prevent the twisting of the mooring chains or cables.

From the above description, taken in connection with the accompanying drawings, the construction and manner of employing my improved boat buoy will be readily apparent, and the advantages of the same manifest. In anchoring the boat the chain may be run through the ring at the top or ball of the buoy and then back to the boat so that the latter will be securely locked and

at the same time the rod passing through the buoy, and having, as it does, a separate connection with a steel disk on the bottom of the buoy, relieves all strain upon the connections. Furthermore, the buoy is so shaped between the ball and the widest portion thereof that it conforms to the slope or shape of the boat. As the sides of the boat slope making a shorter waterline width than the overall width, the buoy cannot strike the boat a solid blow, as the body of such buoy also slopes. Therefore, the portion of the buoy to strike the boat will be the ball thereof, and for the purpose of preventing the marring or marking of the boat, I provide said ball with a circumferential groove within which is seated a ring of rubber or other resilient material, forming a buffer. Thus, when the buoy and the boat contact, the buoy will strike the boat at the rubber ring and prevent any marring or scoring of the boat which is liable to occur with the ordinary buoys now in use.

In Fig. 3, I have shown a slightly modified form of my invention, in this case the buoy being designed for a channel buoy. Instead of employing a ball at the top of the buoy post or body, I make use of a square block having the channel or buoy number painted on the sides thereof, while I provide an additional steel disk 18, similar to the lower disk 10^a, said upper disk being of less diameter than the lower disk and is fastened to the body of the buoy at the point 19, that is, where the lower cylindrical portion of the body joins the enlarged part thereof.

It will be seen that I have provided an exceedingly safe and durable form of buoy, which is not liable to be injured or broken to such an extent as to render it useless. While I have herein shown and described

the preferred embodiment of the invention, by way of illustration, I wish it to be understood that I do not confine myself to any precise form or proportion of parts, or to all the details of construction herein set forth, as modification and variation may be made without departing from the spirit of the invention or exceeding the scope of the claims.

Having thus described the invention, I claim:—

1. A buoy comprising a wooden body portion formed with a lower end portion, an upper tapered portion and an intermediate portion wider than the tapered portion and the lower end portion, said body having a bore extending therethrough, a rod extending through said bore, a plate or disk at the lower end of the rod, and mooring cable connections at the ends of the rod.

2. A buoy comprising a body portion, a rod extending therethrough and carrying mooring cable connections, a metallic disk at the lower end of the rod, and a second disk carried by the buoy body spaced apart from the first-mentioned disk.

3. A buoy comprising a body portion, mooring connections at the ends of the body portion, and a plurality of disks spaced apart at the lower portion of the body.

4. A buoy comprising a body portion, mooring connections at the ends of the body portion, and a plurality of disks at the lower portion of said body, one of said disks being weighted.

In testimony whereof I affix my signature in presence of two witnesses.

ELIAS SHULZE FIDLER.

Witnesses:

F. STERN,

L. MORTENSEN.