

March 22, 1927.

E. PETERSEN

1,621,809

MOORING DEVICE

Filed Feb. 4, 1926

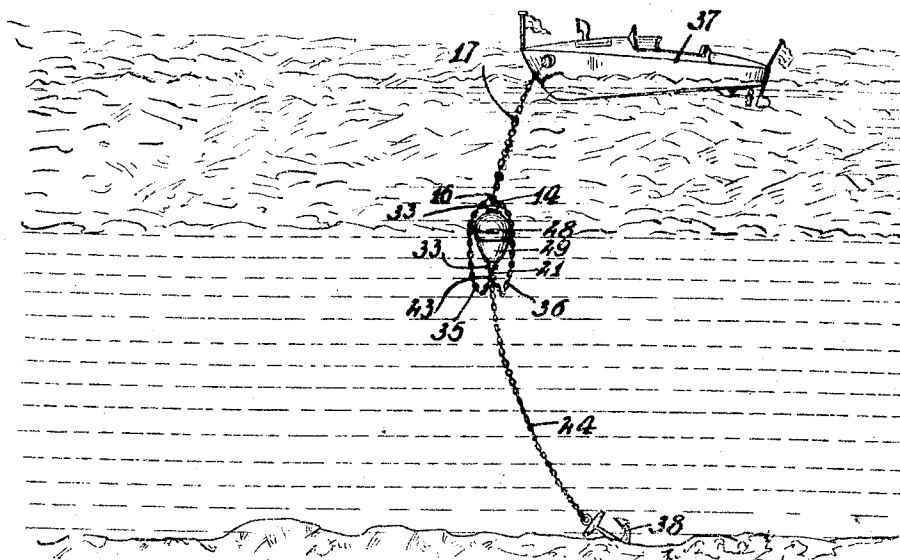


FIG. 1

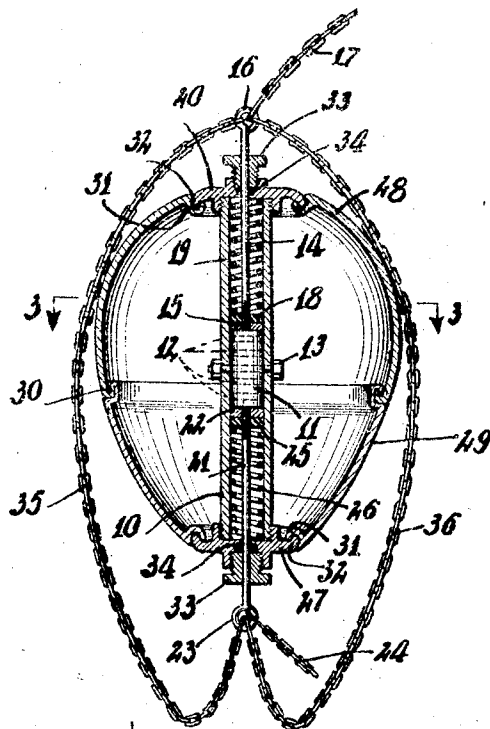


FIG. 2

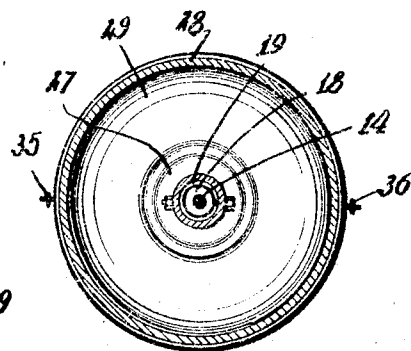


FIG. 3

INVENTOR.
Emil Petersen
BY *Johann H. Polach*
ATTORNEY

UNITED STATES PATENT OFFICE.

EMIL PETERSEN, OF HAMILTON BEACH, NEW YORK, ASSIGNOR OF ONE-HALF TO
EDWARD A. PULASKI, OF NEW YORK, N. Y.

MOORING DEVICE.

Application filed February 4, 1926. Serial No. 85,891.

This invention relates generally to mooring device, the invention having more particular reference to a novel type of extension device for boat anchors.

5 This invention has for an object the provision of an improved mooring device which will prevent the boat anchored thereto from shipping water during a heavy sea, or in rough weather, and to prevent the rope from
10 being under heavy tension which usually causes the plank of the boat to open up.

A further object of the invention is to provide an extension device of novel construction and arrangement of parts, herein-
15 after more fully described, claimed, and illustrated in the accompanying drawings, in which—

Fig. 1 shows a boat anchored with my improved device attached to the anchor line,
20 as it would appear when in use.

Fig. 2 shows an enlarged vertical central sectional view of my improved device.

Fig. 3 shows a longitudinal sectional view taken on the line 3—3 of Fig. 2.

25 As here embodied my improved mooring device comprises a vertical tube 10, preferably of brass, or any non-corrosive metal. The adjustable stop 11, of cylindrical shape, and similar material, is a slidable fit in the
30 vertical tube 10, and has a plurality of longitudinal centrally located apertures 12 to accommodate the bolt 13, or any similar suitable means of attaching the stop 11 to the vertical tube 10, it being understood that the
35 bolt 13 may be passed through any desired one of the heretofore mentioned apertures 12, for the purpose as will be hereinafter set forth.

The upper vertical rod 14 has attached, by
40 threads, or any similar suitable method, at its lower extremity a disc 15, a slidable fit in the vertical tube 10. The said upper vertical rod 14 extends beyond the upper extremity of the mooring buoy, and is bent, formed,
45 or has attached thereto a suitable eye 16 to which the mooring rope 17, chain or any other suitable flexible member is attached.

The cushion 18, of cylindrical shape, preferably of rubber or any similar resilient material, a slidable fit in the vertical tube 10,
50 is also threadedly attached to the lower extremity of the upper vertical rod 14, directly above the heretofore mentioned disc 15. The upper coil spring 19, preferably of manganese bronze, or any similar suitable mate-

rial is superimposed between the cushion 18 and the upper cap 20, and is located in the vertical tube 10, so as to normally hold the upper vertical rod 14, in the position as
60 clearly shown in Fig. 2, of the accompanying drawing.

The lower vertical rod 21, the disc 22, the eye 23, to which the anchor rope 24, chain or any suitable flexible member is attached, the cushion 25, the lower coil spring 26, and
65 the lower cap 27, are similarly arranged and located, as the above mentioned similar named and described parts.

The mooring device body comprises an upper member 28, and a lower member 29,
70 of hollow construction, preferably stamped or pressed non-corrosive metal, preferably pear shaped, and rigidly attached to one another, as at 30, by any suitable rolled seam, as is ordinarily used for joining sheet
75 metal tanks, and the like. The upper member 28, and the lower member 29, have bent, or otherwise formed therein a groove 31, suitably located to receive the rim 32 of the heretofore mentioned upper cap 20, and
80 lower cap 27, which are threadedly attached to the extremities of the heretofore mentioned vertical tube 10.

It being understood that the joint formed at the grooves 32, will be coated with any
85 suitable water proof cement or the like to prevent leakage of water into my improved device.

It will be further understood, that the upper cap 20, and the lower cap 27, are provided with packing nuts 33, by means of
90 which the packing 34, may be forced against the upper vertical rod 14, and the lower vertical rod 21, to prevent leakage of water into the vertical tube 10.

It will be also understood that the eye 16 of the upper vertical rod 14, and the eye 23 of the lower vertical rod 21, are attached to each other by means of the chains 35 and 36,
100 or any suitable flexible members, of sufficient free length, to allow the said upper vertical rod 14 and the said lower vertical rod, to be extended.

It will be also understood that the heretofore mentioned bolt 13 may be placed in
105 any desired one of the heretofore mentioned apertures 12, so as to increase the stroke of one piston while decreasing the stroke of the other. The piston having the greater stroke will thus be more free to
110

move against its expanded spring and will accordingly take up the tension on the rope attached thereto without causing the other piston to be moved. This relation will exist only up to a certain limit when equal compression is present in both springs and under such conditions both pistons will be equally affected by tension in the ropes.

Referring in particular to Fig. 1 of the accompanying drawing, it will be understood, that the heretobefore mentioned mooring rope 17 is attached to the boat to be anchored, as designated by the reference numeral 37, and that the heretobefore mentioned anchor rope 24, will be attached to an anchor, as designated by the reference numeral 38.

It is obvious that the boat, moored to my improved device, in a heavy sea, or the like, will extend the upper vertical rod 14 and the lower vertical rod 21, and will therefore "ride" the waves.

While I have above described the preferred form, construction, and arrangement of the several elements employed, it will be understood that the device is, nevertheless, susceptible of considerable modification therein, and I therefore reserve the privilege of resorting to all such changes as may be fairly embodied within the spirit and scope of the invention as claimed.

Having thus described my invention what I claim as new and desire to protect by Letters Patent of the United States is as follows:

1. In a device of the class described, a vertical tube, an upper vertical rod and a lower vertical rod disposed in said tube, said rods having attached thereto at one of their extremities discs slidably fitting in said vertical tube, a stop attached at the center of the said vertical tube, springs interposed between the said disc and the extremity of the said vertical tube, as a means of holding the said rods in a normally unextended posi-

tion, a water tight casing surrounding said vertical tube having openings at the ends thereof to accommodate the ends of said tube, and sealing caps disposed in the ends of said tube having openings therein adapted to provide water tight fittings for said vertical rods.

2. A mooring device comprising a vertical tube, an upper member and a lower member attached to each other substantially enclosing said tube, a groove formed at the upper extremity of the said upper member, and a similar groove formed at the lower extremity of the said lower member, to receive caps threadedly attached to the extremities of said vertical tube, an upper vertical rod and a lower vertical rod, having discs attached thereto, slidably fitting in the said vertical tube, springs located in the said vertical tube and interposed between the said discs and the said caps, so as to normally hold the said discs against a stop attached to the center of the said vertical tube, and a means of adjusting the said stop.

3. A mooring device comprising an outer sectional casing having open upper and lower ends, a vertical tube positioned centrally in said casing having its extremities disposed in said openings, a stop adjustably secured intermediate the extremities of said tube, pistons disposed in said tube adjacent opposite ends of said stop, springs engaging said pistons normally holding the latter against said stop, rods attached to said pistons and extending outside of said casing, said rods being adapted to be attached to mooring ropes, said rods and pistons being movable in opposite directions to provide in a resiliently extensible tension absorber, and water tight sealing means disposed in the ends of said tube adapted to permit the passage of said rods therethrough.

In testimony whereof I have affixed my signature.

EMIL PETERSEN.