

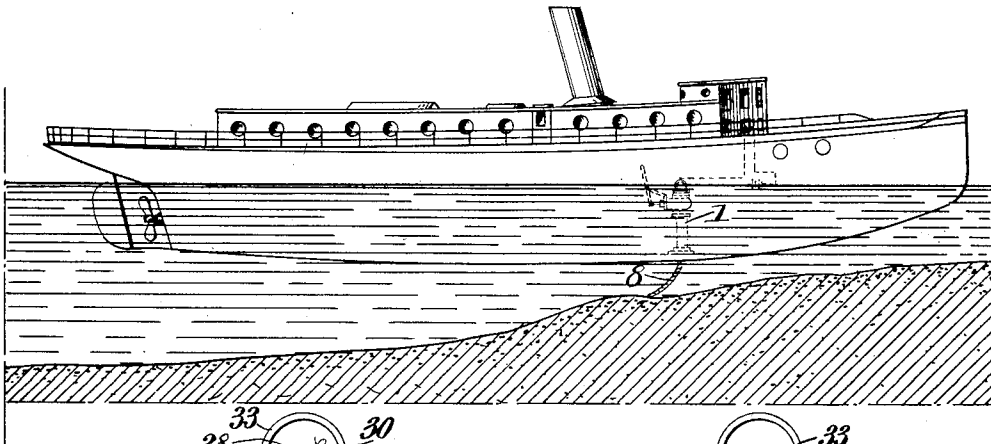
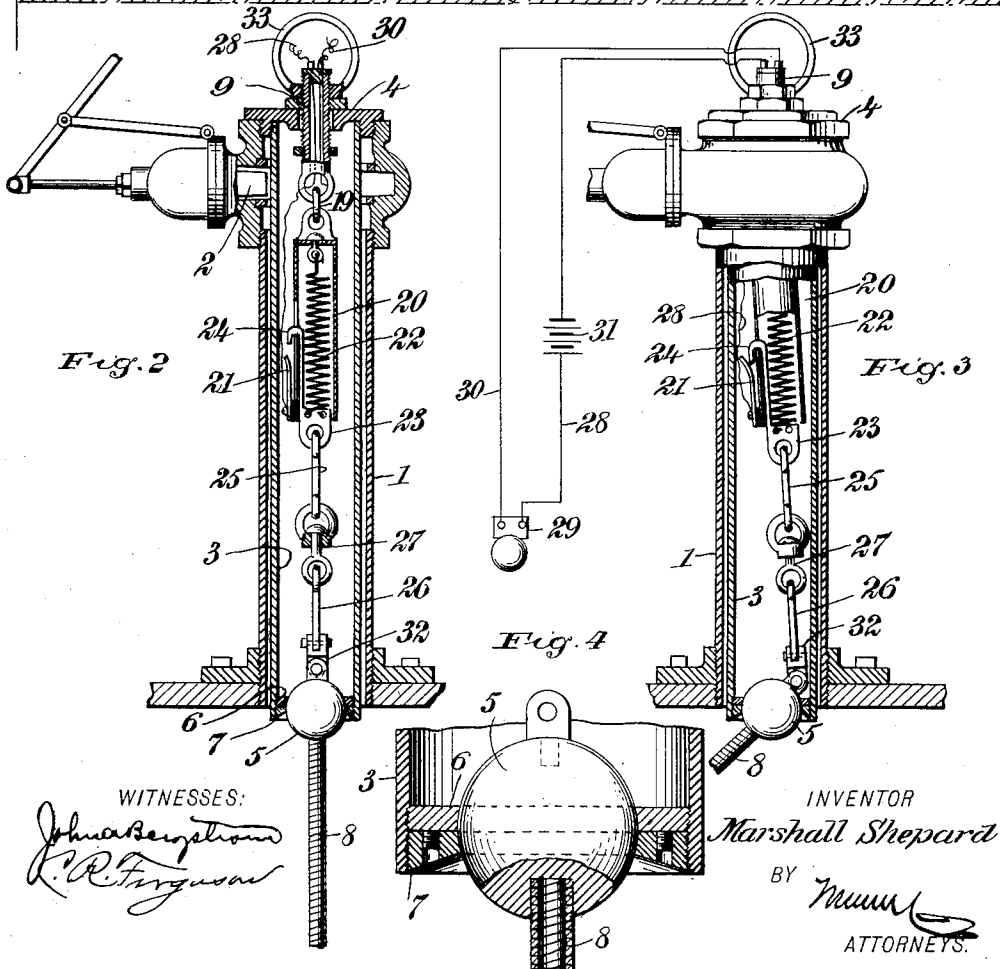
No. 743,939.

PATENTED NOV. 10, 1903.

M. SHEPARD.
SAFETY ALARM DEVICE FOR MARINE VESSELS.
APPLICATION FILED DEC. 9, 1902.

NO MODEL.

Fig. 1



UNITED STATES PATENT OFFICE.

MARSHALL SHEPARD, OF EDGARTOWN, MASSACHUSETTS.

SAFETY-ALARM DEVICE FOR MARINE VESSELS.

SPECIFICATION forming part of Letters Patent No. 743,989, dated November 10, 1903.

Application filed December 9, 1902. Serial No. 134,523. (No model.)

To all whom it may concern:

Be it known that I, MARSHALL SHEPARD, a citizen of the United States, and a resident of Edgartown, in the county of Dukes and State of Massachusetts, have invented a new and Improved Safety-Alarm Device for Marine Vessels, of which the following is a full, clear, and exact description.

This invention relates to improvements in safety-alarms for marine vessels, the object being to provide a device for this purpose that may be readily attached to a vessel and that will operate to sound or display a signal to notify the pilot should the vessel approach shallow water, thus giving time to change the course or reverse the engines and prevent possible accident by grounding.

I will describe a safety-alarm device for marine vessels embodying my invention, and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of a vessel with an alarm device embodying my invention attached thereto. Figs. 2 and 3 are sectional views showing an electric-circuit-controlling mechanism employed, and Fig. 4 is a sectional detail showing a ball-joint employed.

Referring to the drawings, 1 designates a cylinder designed to be arranged at a suitable point within a vessel and opening through the hull, and arranged at the upper portion of the cylinder 1 is a cut-off valve 2, the purpose of which will be hereinafter described.

Arranged in the outer cylinder or casing 1 is an inner cylinder 3, which is closed at the top by means of a cap 4, this cap also serving as a closure for the cylinder or casing 1. Arranged on the lower end of the cylinder 3 is a universal or ball joint 5, which operates in a seat consisting of two ring-like members 6 7, which engage, respectively, above and below the transverse center line of the ball, thus holding it in place and making a waterproof joint. Depending from the ball 5 is an operating-rod 8. As here shown, this operating-rod is formed of a close coil of suitable material—such, for instance, as bronze—

and by thus forming the rod it will have sufficient yield or spring to prevent breaking when it comes in contact with the ground or other obstruction, but will have sufficient rigidity to turn the ball for closing the circuit.

Extended through the cap 4 is a small tube 9, and having swinging connection with the inner end of this tube through the medium of a ring 19 is a metal shell or thimble 20, on which is mounted a sliding electrical contact 21, the said contact being insulated from the shell or thimble. Arranged in the shell or thimble and connected at one end with the upper end thereof is a spring 22, on the lower end of which is a block 23, which carries a contact 24, movable in a slot formed in one side of the shell or thimble. This block 23 is connected to the ball 5 by means of links 25 26, the said links being connected by a swivel-joint 27. From the contact 21 a wire 28 extends upward through the tube 9 to an alarm device 29, which will be arranged in the pilot-house, and the contact 24 is connected with said alarm device through the thimble 20, as here shown, and through a wire 30, and arranged in the electric circuit is a battery 31.

In the operation under normal conditions the rod 8 will hang downward in a substantially vertical line, so that the contact is broken through the contacts 21 and 24, as indicated in Fig. 2. Should the rod 8 strike the ground or bed of the waterway or strike other obstruction, it will be deflected, drawing the contact 24 downward into engagement with the contact 21, as shown in Fig. 3. Thus the circuit will be closed and the alarm sounded.

It will be noted that the link 26 has a double-joint connection 32 with a lug or lugs on the inner side of the ball 5. By these several universal joints the rod will be permitted to swing freely and yet insure the closing of the circuit. When it is desired to remove the device from the cylinder or casing 1 for the purpose of repairing or the like, after releasing the cap 4 from the cylinder or casing 1 a suitable hoisting-tackle may be engaged with a ring 33 and the device lifted out. When lifted out, the valve 2 is to be moved to closed position to prevent the entrance of water.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. An alarm device for marine vessels, comprising an electric alarm, an electric circuit in which the alarm is located, a circuit-closure in the vessel, a rod having swinging connection with the vessel, and a swivel-link connection between said rod and the circuit-closure.

2. An alarm device for marine vessels, comprising an electric alarm arranged in the vessel, an electric circuit, a cylinder projected through the hull of the vessel, a rod having universal swinging connection with the lower end of said cylinder, and a circuit-closure in the cylinder and operated by means of said rod.

3. An alarm device for marine vessels, comprising an electric alarm arranged in the vessel, a cylinder extended through the hull of the vessel, a depending rod having a ball-joint connection with the lower end of said cylinder, a shell or thimble arranged in said casing, a contact carried by said shell or thimble and insulated therefrom, an electric connection between said contact and the alarm, a spring-held contact operating in said shell or thimble, and connected with the ball, and an electric connection between said last-named contact and the alarm.

4. An alarm for marine vessels, comprising a casing secured in the hull of the vessel and opening through the same, a valve for closing said casing, a cylinder removably placed

in the casing, a depending rod having swinging connection with said cylinder, an alarm device in the vessel, and a circuit-closure in the cylinder, movable to closing position by the movement of said rod.

5. An alarm device for marine vessels, comprising a casing arranged in the hull of the vessel and opening therethrough, a valve for closing said casing, a cylinder removably arranged in the casing, a thimble arranged in the cylinder, a contact on said thimble and insulated therefrom, a spring arranged in the thimble, a contact carried by said spring, a rod mounted to swing in the lower end of the cylinder, and a universal-joint connection between said last-named contact and the rod.

6. An alarm device for marine vessels, comprising a casing arranged in the hull of the vessel and opening therethrough, a valve for closing said casing, a cylinder removably arranged in the casing, a thimble arranged in the cylinder, a contact on said thimble and insulated therefrom, a spring arranged in the thimble, a contact carried by said spring, a rod mounted to swing in the lower end of the cylinder, said rod being spring yielding, and a universal-joint connection between said last-named contact and the rod.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MARSHALL SHEPARD.

Witnesses:

JNO. M. RITTER,

F. W. HANAFORD.