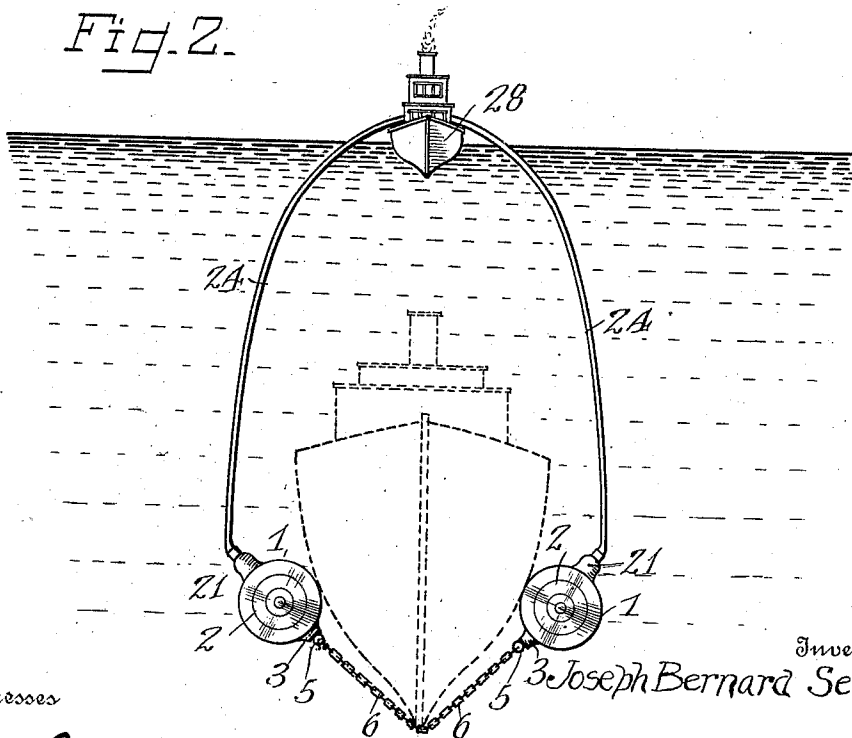
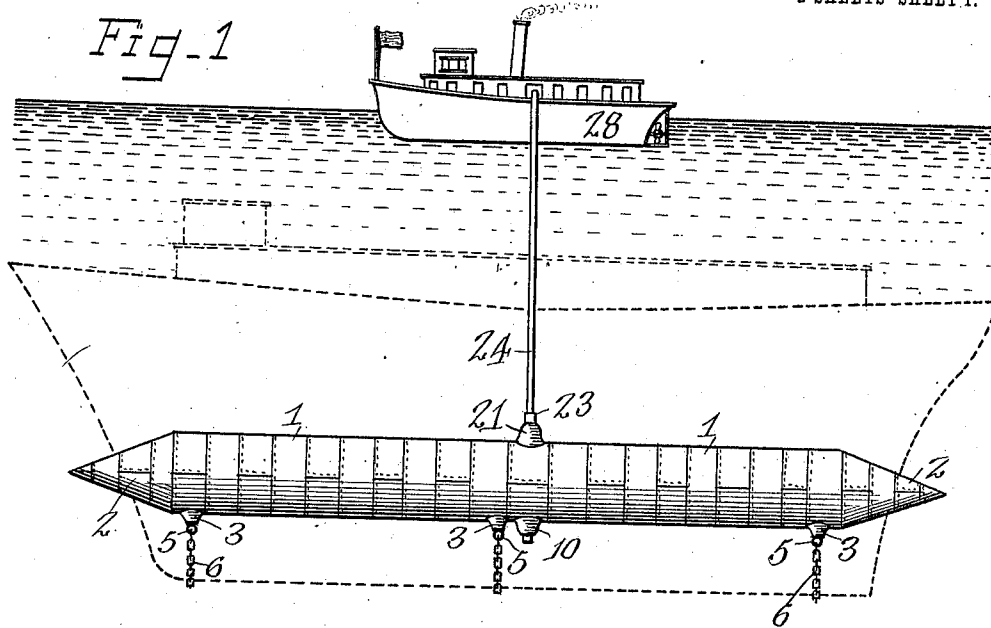


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 APPARATUS FOR RAISING SUNKEN VESSELS.  
 APPLICATION FILED DEC. 24, 1910.

1,002,184.

Patented Aug. 29, 1911.

2 SHEETS-SHEET 1.



Witnesses

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Fig. 3.

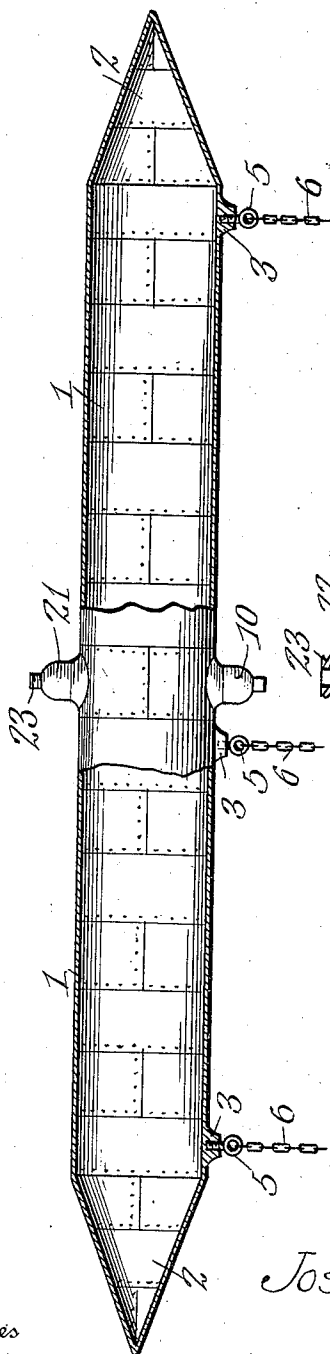
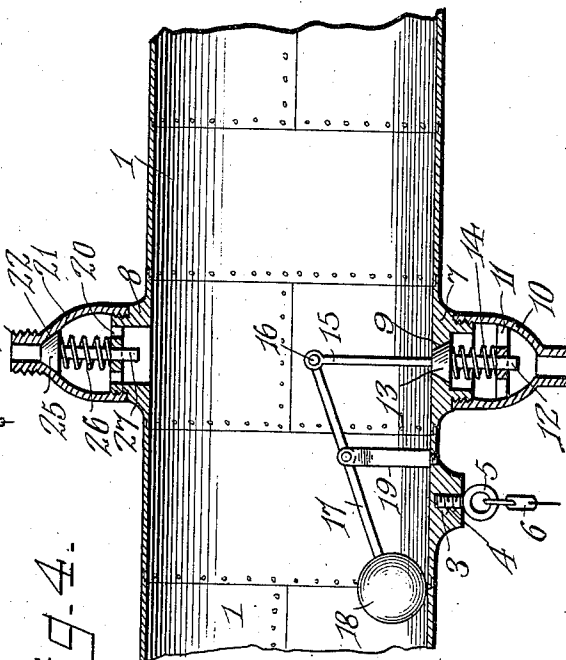


Fig. 4.



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# UNITED STATES PATENT OFFICE.

JOSEPH B. SERRES, OF HOULTONVILLE, LOUISIANA.

APPARATUS FOR RAISING SUNKEN VESSELS.

1,002,184.

Specification of Letters Patent.

Patented Aug. 29, 1911.

Application filed December 24, 1910. Serial No. 599,085.

*To all whom it may concern:*

Be it known that I, JOSEPH BERNARD SERRES, a citizen of the United States, residing at Houlttonville, in the parish of St. Tammany and State of Louisiana, have invented certain new and useful Improvements in Apparatus for Raising Sunken Vessels, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to a device for raising sunken ships, and the principal object of the same is to provide a novel manner of operating the valves which control the inlet and outlet of the pontoons.

This invention is illustrated in the accompanying drawings, wherein:—

Figure 1 is a side elevation of the improved pontoon showing the same as it would appear upon a vessel. Fig. 2 is an end elevation of the improved ship raising means. Fig. 3 is a longitudinal elevational view of the improved pontoon, portions of the same being broken away. Fig. 4 is a fragmentary sectional view through the pontoon and the valves which control the inlet and outlet.

Referring to the accompanying drawings by numerals, it will be seen that the improved ship raising means comprises a pair of cylindrical pontoons 1 and 2. Each of the pontoons is identical in construction with the other one, and, therefore, it is only necessary to describe one of them.

The pontoons are formed of a number of plates, which are connected together by rivets or any other desired means, and the pontoons are preferably provided with tapered ends as shown in Figs. 2 and 3. The pontoons are provided on their under surfaces with a plurality of lugs 3 each of which is provided with a threaded opening 4 in which there is secured a screw eye 5. A length of chain 6 is secured to each of the screw eyes 5, and are provided with hooks at their free ends. These chains are adapted to be passed under the keel of the ship and the hooks secured within the screw eyes of the second pontoon to hold the pontoons together.

Each of the pontoons is provided on its upper and lower surface with the lugs 7 and 8, which are provided with openings which lead into the interior of the pontoon. The wall of the opening through the lug 7 is formed into a valve seat 9 and the outer end

of the lug 7 is reduced and externally threaded to provide a means for securing a cap 10 into place. The cap 10 is provided with a pair of cross bars 11, which are provided with a central opening through which the stem 12 of a valve 13 passes. A coil spring 14 surrounds the valve stem and by having one end resting against the valve head 13, and its other end against the cross bars 11, the valve is securely held in place. A rod 15 is secured to the inner end of the valve 13 and has its inner end formed into an eye 16 in which there is secured a stem 17 having a float 18 mounted upon its free end. The stem 17 is pivotally mounted intermediate its length upon a standard 19 which is formed upon one of the plates of the pontoon, and which is preferably positioned opposite one of the lugs 3.

The end of the lug 8 is provided with a reduced threaded end similar to the end of the lug 7 and with a central opening across the outer end of which there is formed the cross bars 20 provided with a central opening similar to the cross bars 11. The cap 21 is mounted upon the threaded end of the lug 8 and is provided with a valve seat 22 in its interior and with a threaded extension 23 by means of which pipe 24 is attached. A valve 25 has a spiral spring mounted upon the valve stem 27 which passes through the opening secured through the cross bars 20, and the valve is thus kept normally in contact with the valve seat 22.

In the operation of this device the pontoons are towed to the scene of the wreck, and the pipes 24 are secured to the extensions 23. The pipes are connected with a water pump and water is pumped into the pontoons until there is enough water in the pontoons to raise the float 18 and by means of the rods 17 and 15 open the valve 13 and permit the water to enter the interior of the pontoon through the opening formed in the under surface of the pontoon. As the water enters the float 18 is raised and the valve 13 is opened wider, thus permitting the water to enter faster. The valves connected with the openings in the upper ends of the pontoons are held open so that the air can escape thus there will be nothing to keep the water from entering. These pontoons are placed so that when they sink, they will be upon each side of the ship as shown in Fig. 2. The pipes 24 can be removed from the ex-

tensions 23 while the pontoons are filling with water, but before the pontoons are allowed to sink the pipes are replaced and connected with an air pump carried by the tug 28. After the pontoons are sunk divers enter the water and place the chains 6 around the bottom of the boat and secure the hooks within the screw eyes 5, so that the pontoons are connected together and the boat rests upon the chains 6. The air pump is now started and compressed air is forced through the openings in the upper sides of the pontoons into the interior. As the valve 25 is positioned as shown in Fig. 4 the air cannot return through the pipes, but is held within the upper portions of the pontoons and thus forces the water out through the openings in the bottom of the pontoons. As the water gets lower in the pontoons the float 18 descends and draws the valve 13 closer to the seat 9. When all of the water is out of the pontoons, the valve is held closed not only by the weight of the float 18, but also by means of the spring 14. The pontoons will now have a tendency to rise to the surface and in doing so will raise the wreck. If the pontoons are not large enough to raise the wreck entirely to the surface, they will at least raise it enough to permit the towing chains to be secured to the wreck and connected with the tug so that the wreck may be towed under water.

By having the openings arranged as shown with the upper one disposed directly above the lower one, the air and water which are forced into the pontoons through the pipes 24 can act more directly upon the valve 13 and when it is desired to fill the pontoons it will cause the valve to open quicker so as to permit the water to enter sooner than otherwise would be the case.

What I claim is:—

1. In a device of the character described, a pontoon, upper and lower conduits in said pontoon, a valve controlling each of said conduits, the valve of said lower conduit being provided with a rod extending within said pontoon, and a float pivotally mounted within said pontoon, and connected with said rod.

2. In a device of the character described a pontoon, conduits formed in the upper and lower portions of said pontoon, the upper conduit of said pontoon being provided with cross bars having a central opening, a valve having a stem slidably mounted in said opening, a spring mounted upon said valve stem, and engaging said bars, a cap surrounding said valve and having its inner portion formed into a valve seat, and means for securing a pipe to said cap.

3. A device of the character described comprising a plurality of pontoons, said pontoons being provided with conduits in the upper and lower portions, a plurality of lugs formed from the under surface of each of said pontoons, a standard mounted in the interior of said pontoon, and disposed opposite to one of said lugs, a valve controlling said lower conduit, a rod secured to the inner end of said valve, and projecting within said pontoon, a rod pivotally connected with said first mentioned rod, and pivotally mounted upon said standard, a float connected to the free end of said last mentioned rod, and means for connecting said pontoons.

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

JOSEPH B. SERRES.

Witnesses:

Jos. ROTOLO,  
R. E. BYRNES.