

T. M. CURTISS.

Means for Raising Sunken Vessels.

No. 152,035.

Patented June 16, 1874.

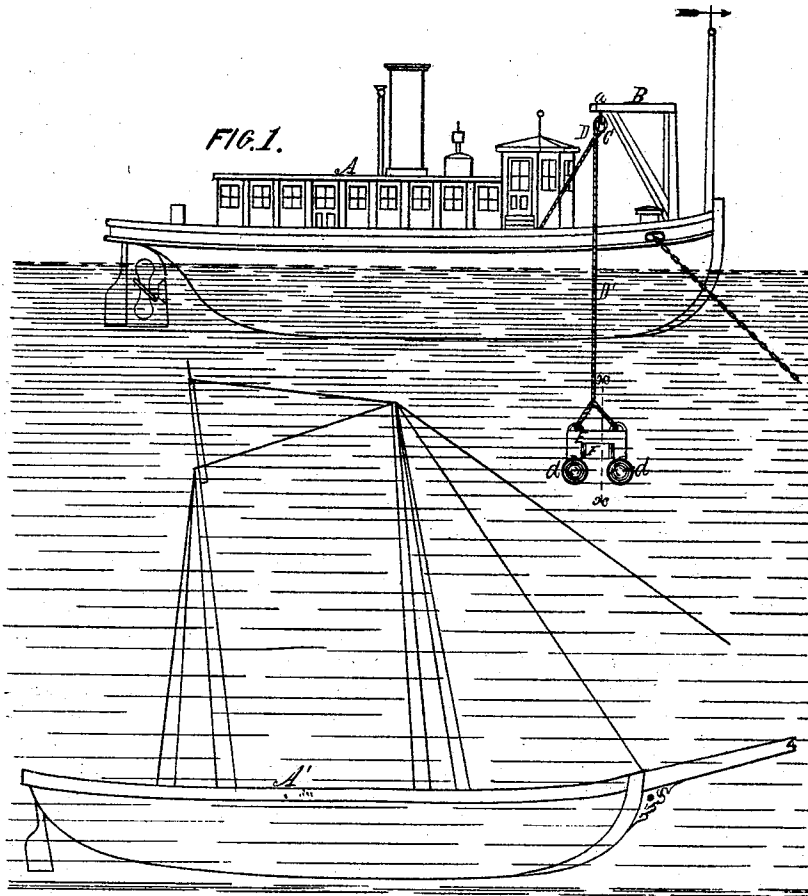
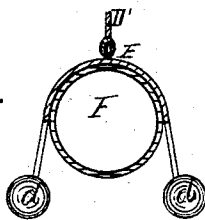


FIG. 2.



Witnesses

C. H. Sherburne
H. H. Ladd

inventor,

Timothy M. Curtiss
By Sherburne & Co
his Attorneys

UNITED STATES PATENT OFFICE.

TIMOTHY M. CURTISS, OF CHICAGO, ILL., ASSIGNOR OF TWO-THIRDS HIS RIGHT TO LEWIS W. BRIGGS AND HENRY H. LADD, OF SAME PLACE.

IMPROVEMENT IN THE MEANS FOR RAISING SUNKEN VESSELS.

Specification forming part of Letters Patent No. **152,035**, dated June 16, 1874; application filed January 23, 1874.

To all whom it may concern :

Be it known that I, TIMOTHY M. CURTISS, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Devices for Raising Sunken Vessels; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to which my invention appertains to make and use the same, reference being had to the accompanying drawing forming part of this specification.

My invention relates to the method of raising sunken vessels by means of empty barrels, which are secured to the sides of the vessel, the buoyancy of the barrels acting to raise the vessel to the surface of the water; and the object of my invention is to provide a device for conveying the barrels to the sunken vessel. To that end it consists, in connection with a movable crane, rope, and pulley-blocks, of a weighted saddle, under which the barrels are loosely placed, and in such a manner as to be forced downward, through the water, by the gravity of the saddle, as will be more fully understood by the following description.

In the drawing, Figure 1 is a side elevation of a sunken vessel, showing its position, and the mechanism employed for conveying the barrels thereto; and Fig. 2 is an enlarged transverse section of the device employed in holding and sinking the barrels, taken on the line *x x*, drawn in Fig. 1.

Similar letters of reference indicate like parts in both figures of the drawing.

A represents the vessel, which is upon the surface of the water, and A' the sunken vessel. B is an ordinary crane, which is affixed to the deck of the vessel A at or near its bow. This crane is so arranged as to admit of being changed to any desired position relative to the sides of the vessel. C is a pulley-block, which is attached to the arm *a* of the crane in the usual manner. D is a rope, which loosely passes around or over the pulley of block C, and adapted to move freely thereon. One end of this rope passes over the side of the vessel, as shown at D', Fig. 1, and the other end passes around or under a second pulley, (not shown,) which is secured to the deck of the vessel. E is a metal saddle, which is per-

manently attached to the end D' of the rope. The upper portion of this saddle is so shaped as to encircle or fit around the circumference of the barrel F, as shown in Fig. 2, and is provided on each side with depending weights *d d*, permanently attached thereto. The size of these weights is such as to cause their gravity to overbalance the buoyancy of the air within the barrel, thereby causing the same to sink when the rope is allowed a free movement on its pulleys.

By this arrangement, the barrels can be readily conveyed to the desired point to which they are to be secured to the sunken vessel, the arrangement of the crane being such as to turn upon its point of support, thereby enabling the barrels to be moved laterally.

It will be observed, by reference to the drawing, that the lower portion of the saddle is made open, and that the distance between the weights laterally is slightly greater than the diameter of the barrel, the object being to allow the saddle to be readily drawn from the barrel after the same has been secured to the sunken vessel.

The manner of using my invention is as follows: The vessel carrying the crane is anchored immediately over the sunken vessel, and the saddle suspended over the side of the vessel. The barrel to be attached to the sunken vessel is placed upon the surface of the water. Rope D is then allowed to move upon the pulleys, and the saddle is lowered down upon the barrel, and, by its gravity, the barrel is forced downward to the sunken vessel, and the diver makes it fast thereto by any suitable and known means; and when a sufficient number of barrels have been secured to the sides of the vessel, the same is raised to the surface of the water by the buoyancy of the barrels.

Having described my invention, I claim—

The open saddle E, adapted to fit the circumference of the upper portion of the barrel, and provided with the weights *d d*, whereby the barrel is made to descend through the water by the gravity of the weights, as specified.

TIMOTHY M. CURTISS.

Witnesses:

N. H. SHERBURNE,
H. H. LADD.