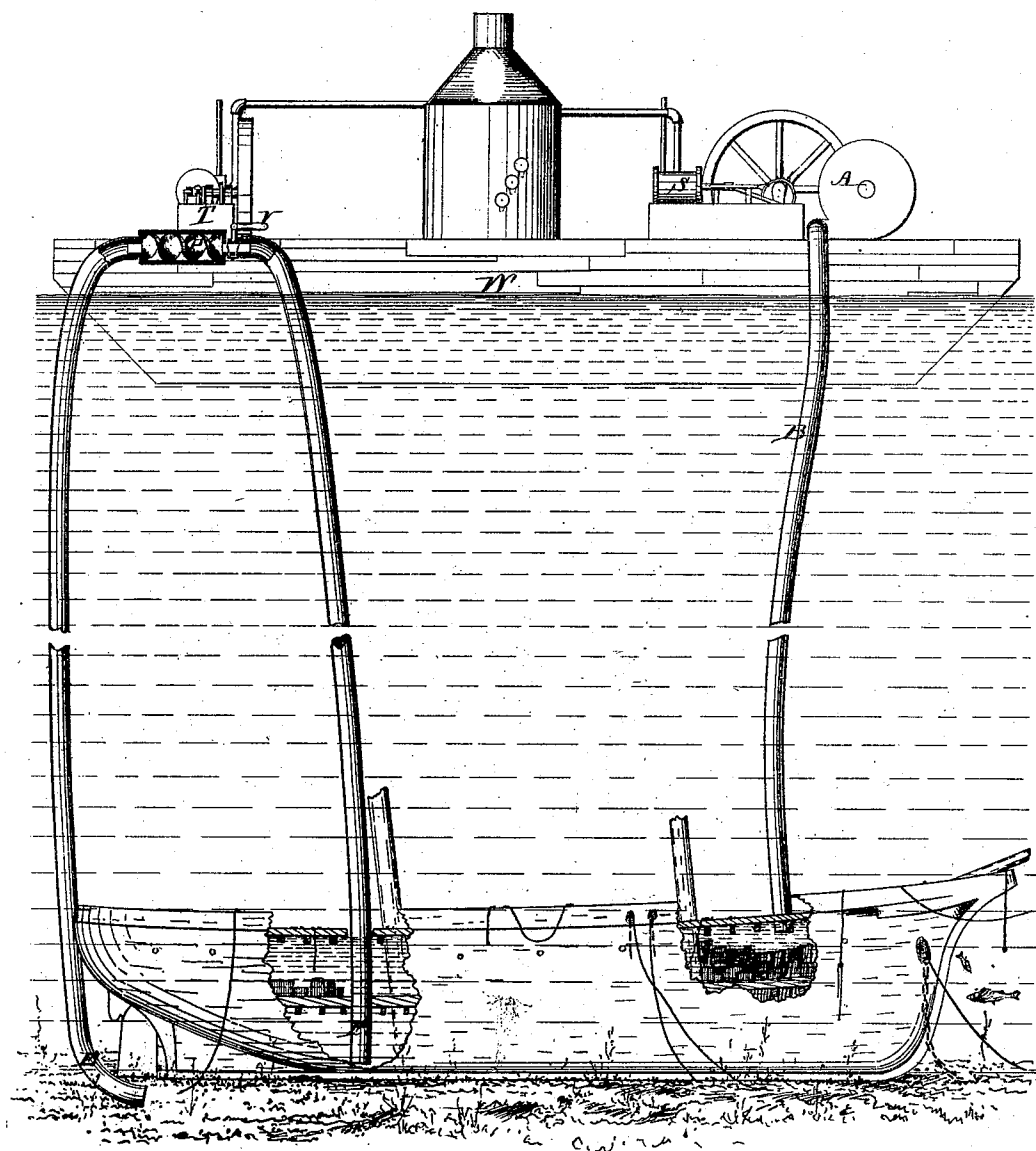


EMILY E. TASSEY.

APPARATUS FOR RAISING SUNKEN VESSELS.

No. 180,286.

Patented July 25, 1876.



Witnesses

Mary J. Schultz
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UNITED STATES PATENT OFFICE.

EMILY E. TASSEY, OF McKEESPORT, PENNSYLVANIA.

IMPROVEMENT IN APPARATUS FOR RAISING SUNKEN VESSELS.

Specification forming part of Letters Patent No. **180,286**, dated July 25, 1876; application filed June 17, 1876.

To all whom it may concern:

Be it known that I, EMILY E. TASSEY, of the borough of McKeesport, county of Allegheny, State of Pennsylvania, have invented and Apparatus for Raising Sunken Vessels, being a combination of my siphon propeller-pump with condensed-air chamber; and I do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention without further invention or experiment.

In order to accomplish this I employ an air-pump, moved by steam or other power, connected with the sunken vessel by means of an air-tight tube fitting in an orifice in the deck of the vessel, the hatches and other openings of the vessel being closed. Through another orifice in the deck of the vessel is an air-tight tube, extending from the bottom of the hull of the vessel upward to the surface or near the surface of the water, thence curving downward to the same level or lower than the hull of the boat. At or near the surface of the water is a screw-propeller, the action of which is to impel the water from the hull of the vessel and discharge it at the end of the curved tube, the air-pump simultaneously filling the hull with condensed air. When all the water is discharged from the hull of the vessel and its space refilled with condensed air the vessel will easily be raised.

Referring to the drawings to more fully illustrate and describe my invention, A represents an air-pump, moved by steam-engine S. B is a tube (air-tight) connecting with the hull of the vessel. E P F is a curved tube, reaching from the bottom of the hold of the vessel upward to the engine T on the surface of the water W. At P is a screw-propeller, moved by the steam-engine T. At V

is a valve to cut off the course of the water or air when desirable. Steam-power being applied to the air-pump A and to the propeller P at the same time, the effect of their action is reciprocal. The propeller, forcing the water outward at E, tends to form a vacuum in the vessel, while the air from the air-pump fills that vacuum, and, furthermore, being condensed in the hull in the air-chamber formed by the egress of the water, presses on the whole surface of the water in the vessel, and forces it through the discharge-pipe with increased velocity, according to the law of transmitted pressure. Let the distance from the orifice E to the surface of the water W be thirty feet. The pressure of this perpendicular column of water, fifteen pounds to the square inch, is what prevents the natural siphon-flow of the water from F to E, and the power required from the propeller to overcome this pressure is but fifteen pounds to the square inch. Also, the water in the opposite arms of the curved tube being in equilibrium, the weight of the descending column E P assists in bringing up the ascending column F P, making a high velocity easily attained.

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

As an improvement in devices for raising sunken vessels, the combination of the air-pump A and conducting-tube B with the curved water-discharge tube F P E, containing the screw-propeller P, substantially as and for the purposes set forth.

In testimony whereof I, the said EMILY E. TASSEY, have hereunto set my hand.

EMILY E. TASSEY.

Witnesses:

HARRY J. SCHLUTZ,
CHAS. SCHOELLER.