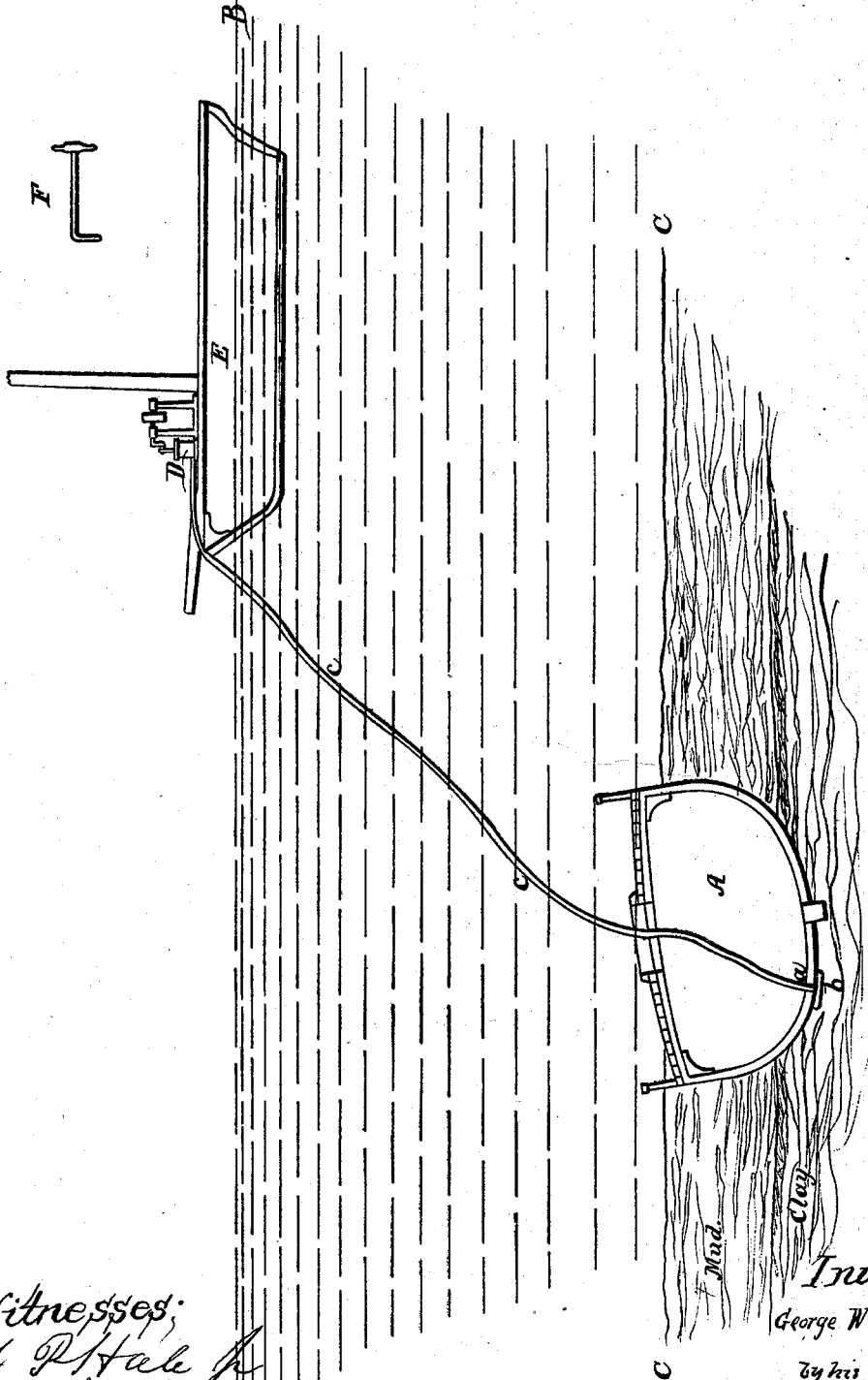


G. W. Fuller.

Device for Raising Sunken Vessels.

N^o 49,342.

Patented Aug. 8, 1865.



Witnesses;
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G. H. Washburn

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UNITED STATES PATENT OFFICE.

GEORGE W. FULLER, OF CHELSEA, ASSIGNOR TO HIMSELF AND PETER E. FALCON, OF COHASSET, MASSACHUSETTS.

IMPROVED DEVICE FOR RAISING SUNKEN VESSELS.

Specification forming part of Letters Patent No. 49,342, dated August 8, 1865.

To all whom it may concern:

Be it known that I, GEORGE W. FULLER, of Chelsea, in the county of Suffolk and State of Massachusetts, have invented a new and useful mode or process of overcoming the adhesion of a wrecked or sunken vessel to the mud or earth in which she may be embedded; and I do hereby declare the nature of my invention, and the manner in which it is to be performed, to be described as follows:

In course of an extensive practice as a submarine diver and a raiser of sunken wrecks I have frequently found that after having applied to a vessel all and much more than all the buoyant power deemed necessary to float her she would not come to the surface of the water, and I have reason to believe that under analogous circumstances many a wreck has been abandoned or deemed impossible to be raised which could have been easily saved had the cause of her remaining at the bottom of the water been properly understood and my means of overcoming that cause been employed. This cause is adhesion of the hull of the vessel to the mud or bottom on which such hull may rest, and in which it may be more or less embedded. Not only is the vessel pressed down upon such mud by the weight of herself and cargo, less the weight of the water displaced thereby, but by the pressure of the atmosphere on the surface embedded. As there can be little or no air between the mud and that part of the hull which may be sunk thereon, any attempt to raise the vessel off the mud must be resisted by the pressure of the atmosphere on the surface within the mud.

To overcome this suction of the vessel to the mud is the object of my invention, which may be accomplished as follows:

A submarine diver should enter the hold of the vessel and bore a hole through the hull as near to the keel as possible. After having done this he should, by means of a bent rod of iron

passed through the said hull, form a chamber in the mud immediately contiguous to the hole and against the outside surface of the vessel. This chamber may be about twenty-four inches in diameter, and should be against the external surface of the vessel, or as close to the same as it may be possible to make it. Next, the implement forming the chamber should be withdrawn from the hole leading into such chamber, and the end of a pipe of a powerful air-forcing apparatus situated above the surface of the water should be fixed in the hole in such manner as to enable such apparatus or pump when worked to force air into the said chamber without any possibility of such air escaping backward therefrom through the hole. This air so forced into the space or chamber in the mud will spread therefrom between the adhesive surfaces of the vessel and the mud, and to such extent as to effectually destroy or overcome their adhesion and enable the air vessels, floats, or pontoons, or means used in elevating the vessel, to raise her to the top surface.

Practice has demonstrated the practicability and great advantage of my invention, as by means of it I have successfully overcome the adhesion of an iron-laden vessel to the bottom or mud on or in which she reposed when submerged when I could not accomplish this by the pontoons or air-floats applied to and which were more than sufficient to raise her had there been no adhesion of the hull to the bottom or ground.

What I claim as my invention is—

The mode, substantially as above described, of overcoming the adhesion of a submerged vessel to the mud or ground on which she may be deposited.

GEO. W. FULLER.

Witnesses:

R. H. EDDY,
F. P. HALE, Jr.