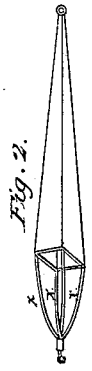
P. E. Falcon.

Raising Sunken Vessels.

No. 49,026. Patented Jul. 25, 1865.



Witnesses;
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UNITED STATES PATENT OFFICE.

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

IMPROVED APPARATUS FOR DISCHARGING THE CARGO OF A SUNKEN VESSEL.

Specification forming part of Letters Patent No. **49,026**, dated July 25, 1865.

To all whom it may concern:

Be it known that I, PETER E. FALCON, of Cohasset, in the county of Norfolk and State of Massachusetts, have made a new and useful invention for discharging from the hold of a submerged vessel loose matters, such as coal or grain; and I do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, in which—

A denotes a lighter or vessel floating at the surface *v v* of the water, and B represents a vessel submerged or sunk, the hull of the vessel being exhibited in longitudinal section in order to more clearly represent the application of my invention.

If we suppose *t* and *u* to be the hatchways of the sunken vessel, I drive down through the deck and into the mass of cargo and the bottom of the hold two iron bars, *p q*, which I arrange with reference to the two hatchways in manner as shown in the drawings. To the forward bar, *p*, and in the hold I attach a ring, *o*, or a pulley or block, if preferred, and I carry a rope, *m*, down from the lighter, or a belaying-pin, *f*, applied to its mast *a*. This rope I reeve through the eye *o* and attach it to a block, *l*. Next, from the handle 2 at the mouth of a tub, *k*, placed in the hold, I lead a rope, *h*, through the block and thence upward to the lighter, or, in other words, through two blocks, *c d*, suspended from a boom, *b*, projecting from the mast. The rope *h* should be led from the block *d* to a windlass, *e*, situated at the deck of the lighter. To the rear end of the tub *k* I fasten a back-draft line or rope, *s*, which I run through a block, *r*, affixed to the bar *q*, and from thence such rope should be led upward to the lighther, where it may be made fast or be belayed to a belaying-pin, *g*.

In operating with the above-described invention the rope *h* should first be slackened and the rope *s* should be pulled upward, so as to draw the tub backward over the mass of coal C until the tub may reach the block *r*. Next the windlass should be revolved so as to wind the rope *h* thereon, the rope *s* being slackened so as to allow the tub to be drawn mouth forward along the coal and up to the block *l*. On the handle of the tub having reached the block *l* the rope *m* should be slackened and the windlass be further revolved, so as to draw the tub and the block *l* out of the hatchway *t* and upward to the deck of the lighter. The tub, while being drawn mouth foremost along the coal, will fill with or take up a portion thereof, which, on being drawn above the surface of the water, may be discharged from the tub and into the hold or on the deck of the lighter, or into a scow or vessel alongside of such lighter. Next by pulling on the rope *m* and lowering the tub into the water such tub, with the block *l*, will be drawn back into the hold. After the tub may have reached the hold, and the block *l* been drawn nearly, if not quite, up to ring *o*, the rope *m* should be made fast to the belaying-pin *f*. Next the rope *s* should be pulled on, so as to draw the tub backward over the mass of coal and to the block *r*, after which the operation necessary to draw the tub forward and out of the hold and up to the lighter may be repeated. The rear end of the tub should have one or more holes in it to let water escape from the tub after it may have been drawn up to the lighter.

The above-described plan of discharging the cargo of a submerged vessel has been found in practice to be very successful and advantageous.

Each of the bars *p p*, preparatory to the attachment of the eye *o* or the hook *r* thereto, is to be fixed in place by a submarine diver.

I would remark that the form of the tub may be conical, or it may be pyramidal, as shown in Figure 2, and be provided with bent rods *x x*, arranged in its mouth in manner as shown in such figure, such rods being united together where the rope is to be attached to them. A tub so made will not be likely to be caught and stopped against the deck-beams or any projection of the cargo.

What I claim as my invention is—

1. The combination and arrangement of the ropes *s*, *h*, and *m* with the tub *k*, the eye *o*, and blocks *r* and *l*, or their equivalents, the whole being applied to a submerged vessel, and a

lighter or its equivalent, as explained, so as to enable the tub to be drawn through the hold of the vessel and out of the same and to the surface of the water, and afterward be drawn back again into the hold and through the same, substantially as specified.

2. The combination of one or more bars, *p q*, with the said ropes *h* and *m*, the tub *k*, the eye *o*, and the back-draft rope *s*, such bar or bars being applied to the submerged vessel in manner and to support the eye or one or more blocks substantially as specified.

3. The tub made and provided with the guide-rods *x x*, as represented in Fig. 2, and as above described.

PETER E. FALCON.

Witnesses:
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