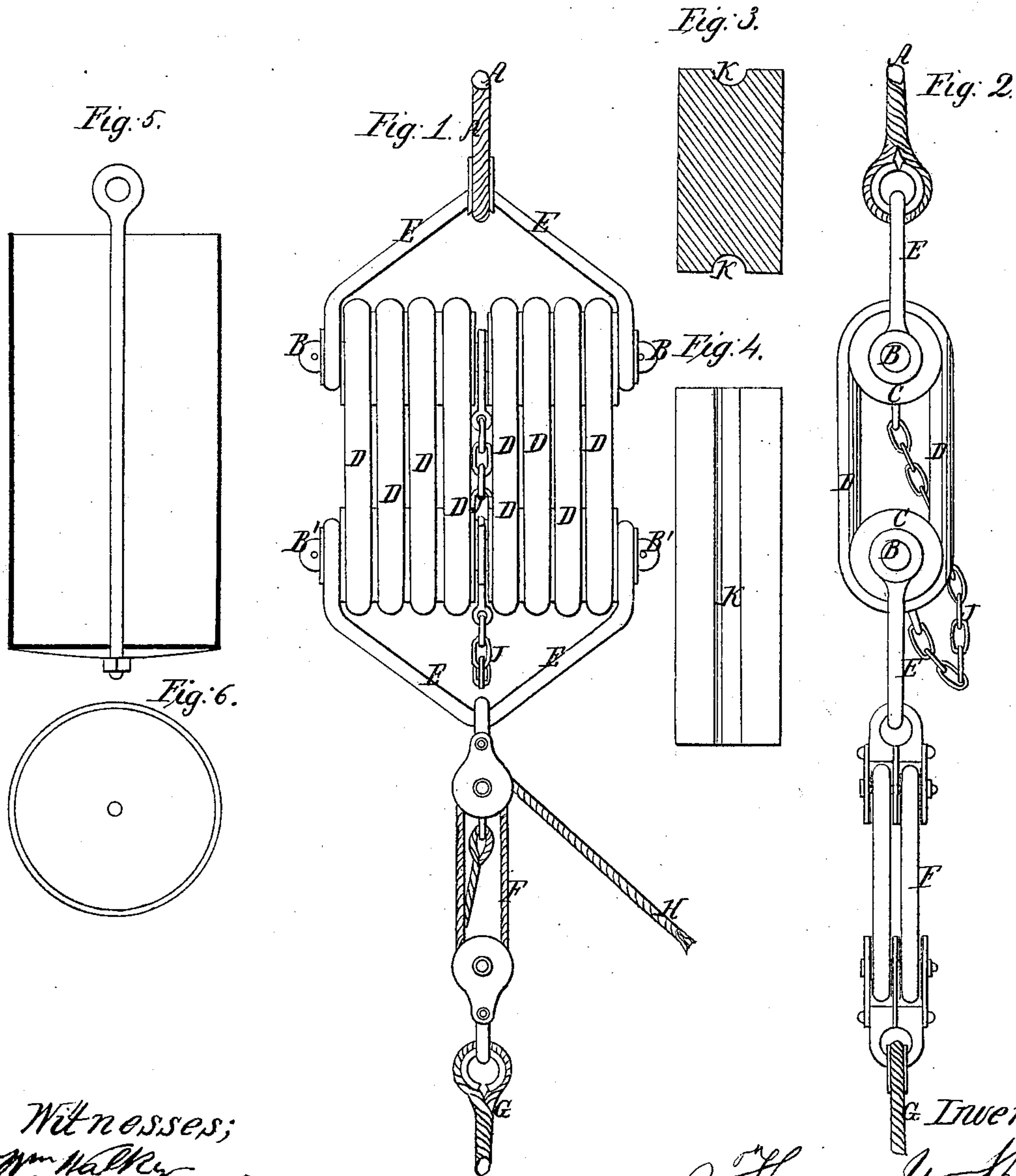


T. W. Roy,
Block and Tackle,
Nº 53,684, *Patented Apr. 3, 1866.*



Witnesses;
Wm. Walker
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UNITED STATES PATENT OFFICE.

THOMAS WELCOME ROYS, OF NEW YORK, N. Y.

IMPROVED TACKLE FOR RAISING SUNKEN WHALES AND OTHER BODIES.

Specification forming part of Letters Patent No. 53,684, dated April 3, 1866.

To all whom it may concern:

Be it known that I, THOMAS WELCOME ROYS, of the city of New York, in the United States of America, but at present residing at 44 Castle street, Liverpool, in the county of Lancaster, master mariner, have invented a certain new and useful Compensator Applicable to the Hoisting or Lifting Tackle for Recovering Sunken Whales or other Submerged Bodies; and I do hereby declare that the following is a full and exact description of my said invention.

In recovering sunken whales and other submerged bodies from the sea it has been found by experience that they may be readily drawn up from considerable depth so long as the rope connected to the whale or other submerged body is of considerable length; but as the rope, whale, or other body is poised, the rope, shortening, has not sufficient elasticity to counteract the rolling or upheaving of the ship or boat, in consequence of the undulation or upheaving of the sea, which causes, in many cases, the harpoon or other fastening instrument to part from its hold.

Now, this invention is to obviate the drawbacks arising from the upheaving and rolling of the ship; and it consists in applying a spring or springs, a weight or weights, or both, to the fall-tackle in such way that the same will elongate or give way on any undue strain being applied to the same, thus counteracting the upheaving and rolling of the ship or vessel on board which the tackle is worked, and insures the whale or other submerged body being drawn to the surface without fear of drawing the harpoon or other fastening-tackle from its hold.

Any suitable spring or springs, a weight or weights, may be used, to which the upper block of the fall is connected, but the description of elastic tackle or spring which it is preferred to use consists of a horizontal axle or beam, on which are fitted a plain or grooved roller, or, by preference, with any required number of grooved pulleys, which it is preferred should be free to turn on their axis to save the chafing on the india-rubber bands or rings. This beam or axle, with its plain or grooved roller or pulleys, is suspended to the mast of the ship or other convenient situation by suspender

braces, rods, or shackles, and is fitted with a number of stout vulcanized india-rubber rings or endless bands, which pass over the top of the grooved pulleys and under a second set of grooved pulleys or plain or fluted rollers, mounted upon a second axle or beam, the same as the first hereinbefore described, and which is also fitted with suspender-braces or their mechanical equivalent, to which the upper block of the fall-tackle is attached.

If preferred, the improved spring or springs hereinbefore described may be attached to the deck or made fast in the hold of the vessel, and, a stout line being attached thereto, may be carried over grooved pulleys to any position that it may be required to place the fall-tackle to. The spindle is so fitted that it will slide through the eyes on the ends of the suspender-braces, that the same may be removed for the purpose of adding or taking off any number of the india-rubber rings or endless bands for regulating the power of the spring or springs.

The principle of this improvement consists in its power of elongation when undue strain is placed upon the fall-tackle consequent on the upheaving and rolling of the vessel where the same is used, and counteracting the resistance of the water against the body in the act of being drawn up on the upheaving of the vessel, thus overcoming the motion of the upheaving and rolling of the ship. It is preferred to connect the upper and lower axle or beams by means of a rope or chain, which is of sufficient length to allow the springs to expand to the utmost point that they can be stretched to with safety, which rope or chain will prevent the parting of the two beams in the event of the india-rubber rings or endless bands breaking, and prevents their receiving an undue strain.

In addition to the springs a heavy weight may be used, which works up and down between guides, and to which is attached a rope or chain, or it may be a fall-tackle, the outer end of which is carried over a grooved pulley placed in the position immediately above the hoisting fall-tackle, and the upper block of which is attached to the outer end of the said rope or chain; and when both spring and weights are used they are connected together at any

convenient point in rear of the hoisting-tackle to which they are attached. In this arrangement the weight should be provided with an elastic bed, so that the same, on falling down, will do so harmlessly.

That this, my said invention, may be the more readily seen and understood, I will now proceed to describe one modification, showing the practical application of the same by the aid of the accompanying drawings, like letters and figures marked thereon being used to denote similar parts.

Figure 1 is a front elevation of what I believe the best spring-instrument for carrying out the objects of this my said invention, and Fig. 2 is a side elevation or edge view of the same.

A is the point of suspension. B and B' are two parallel axles or beams, on which are mounted (C) a series of grooved pulleys, around which pass (D) india-rubber rings or endless bands; E, suspender-braces, the upper one of which is used to suspend the apparatus, and to the lower one of which is hooked (F) the fall-tackle; G, the point of suspension of the weight to be lifted; H, the end of the fall to which the lifting power is applied, which may be carried to a winch, windlass, or capstan, shown in the drawings broken off; J, a chain to prevent the parallel axles or beams being drawn too far apart.

Fig. 3 is a plan, and Fig. 4 is a side elevation, of a weight formed with K-grooves in the side, to receive vertical guide-rods.

Fig. 5 is a sectional elevation, and Fig. 6 is a plan of a cylindrical box, made of iron, with a rod passing through the center of the bottom, and provided at the top with an eye for the purpose of attaching the chain or rope for suspending the same. This box will be found a convenient substitute for the weight shown in Figs. 3 and 4, as the same may be loaded with the chain-cable or any other weighty substance, thus avoiding the necessity of the ship having to carry extra weight for that purpose.

It will be observed that there are eight india-rubber rings shown in this modification, but the axles may be made sufficiently long to re-

ceive any number of grooved pulleys or any length of grooved or plain rollers for receiving any number of additional endless bands or rings that may be required.

In the model the standard of suspension is jointed at the bottom, so that it may be drawn backward to resemble the rolling of the ship, and illustrates the mode of using both the spring-gear and weight, but either may be used separately.

Having now fully described and ascertained the nature of this, my said invention, and the best means I am acquainted with for carrying the same into practical effect, I wish it to be understood that I do not confine myself to the precise details, relative proportions, or dimensions hereinbefore described and set forth, as it will be readily seen the same may be considerably varied without departing from the invention; but

What I claim as new and my invention is—

1. The yielding connecting-link, substantially as illustrated in Figs. 1 and 2, introduced between the suspension-rope and tackle-block, or in the suspension-rope on either side of the blocks, substantially as shown and described.

2. The use of a weight working within guides in combination with the said spring or springs, as above, substantially in the manner and for the purposes hereinbefore described and set forth.

3. The combination and use of the two horizontal bars or axles, B and B' with the grooved pulleys, plain or fluted rollers C, and india-rubber rings or endless bands D, and suspender-braces E, substantially in the manner and for the purposes hereinbefore described and set forth.

In witness whereof I, the said THOMAS WELCOME ROYS, have hereunto set my hand and affixed my seal.

THOMAS WELCOME ROYS. [L. S.]

Witnesses:

WILLIAM WALKER,

44 Castle street, Liverpool.

JOHN HAMILTON REDMOND,

Secretary to the above William Walker.