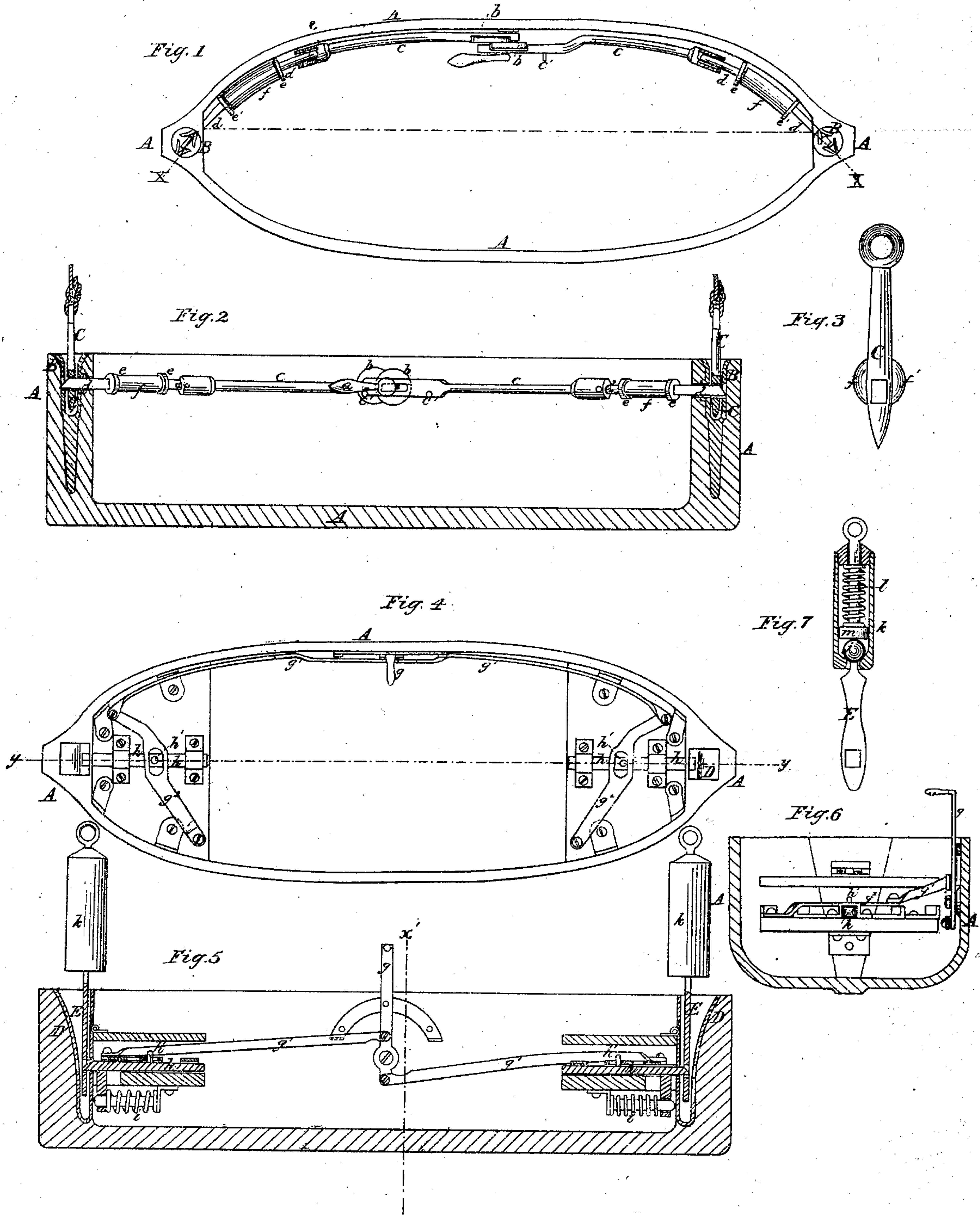


R. Creuzbaur.

Boat- Detaching Apparatus.

N^o 72172

Patented Dec. 17, 1867



Witnesses

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ROBERT CREUZBAUR, OF NEW YORK, N. Y.

Letters Patent No. 72,172, dated December 17, 1867.

C.

IMPROVED BOAT-DETACHING APPARATUS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, ROBERT CREUZBAUR, of New York city, in the county and State of New York, have invented an Improved Attaching and Detaching-Device for Boats; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a top view of a boat having my improved attaching and detaching-device applied to it.

Figure 2 is a longitudinal section through the boat, taken in the vertical planes indicated by the course of red lines *x x*, fig. 1.

Figure 3 is a view of one of the coupling-tongues adapted for the detaching-device of figs. 1 and 2.

Figure 4 is a top view of the boat having a modified form of attaching and detaching-device applied to it.

Figure 5 is a longitudinal section through fig. 4, taken in the vertical plane indicated by red line *y y*.

Figure 6 is a cross-section through fig. 5, taken in the plane indicated by line *x' x'*.

Figure 7 shows a coupling-tongue connected to a spring-box by a swivel-joint.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to certain novel devices, which are designed for facilitating the attachment of a boat to the ends of davit or suspension-ropes, and also for facilitating the detachment of a boat from said ropes, so that the boat may be cast off with safety to the persons in it in a smooth or rough sea. It is intended to employ this invention in connection with the hinged davits, and boat-lowering and raising apparatus, set forth in my specifications marked "A" and "B;" but it is not intended to confine the invention to said mechanism, as it will be found just as useful when in connection with the old modes of raising and lowering ships' boats.

The nature of my invention consists mainly in the application of spring-bolts to both ends of a boat, which are adapted for receiving and locking in place coupling-tongues which are fastened to the ends of davit or suspension-ropes, and in the employment, in conjunction therewith, of longitudinally movable rods, and a lever for adjusting them in such manner, that, by a slight movement of said lever, both coupling-tongues can be instantly detached from their bolts and the boat released from the suspension-ropes, as will be hereinafter described.

It also consists in so constructing the entering-sheaths, through which the spring-bolts play, and the coupling-tongues, that the latter will be positively guided into their respective sheaths, and brought into position for receiving the bolts by a simple downward thrust of the said tongues, as will be hereinafter described.

It also consists in the application of suspension-springs to the coupling-tongues, in such manner as to neutralize all shocks and strains upon the boat and its suspension-ropes, as will be hereinafter described.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

In the accompanying drawings, figs. 1 and 2, *a* represents a vibrating hand-lever, which is secured on the inner end of an oscillating pin. This lever and pin are arranged at or near the middle of the length of the boat *A*, and applied to one side thereof, as shown in figs. 1 and 2. Upon the oscillating pin of lever *a*, two eccentrics, *b b*, are secured, which work in recesses formed in the sides and near the ends of the two rods *c c*, and thus by vibrating lever *a*, the rods *c c* will be caused to move endwise in opposite directions. These rods are guided and kept in place at their inner ends, by making longitudinal slots through them, and passing the oscillating pin of lever *a* through said slots, and into a suitable bearing in the side of the boat. The studs or pins *c' c'* on the rods *c c*, allow the lever to be moved one half of a circle, and serve as stops for it. The outer ends of rods *c c* have sockets formed in them for receiving the inner ends of longitudinally moving bolts *d d*, which latter are connected to said rods by pins passing transversely through the socket portions, and also through oblong slots made through the bolts, as shown in fig. 1. The bolts pass through and are guided by the eye-bearings *e e*, and between these bearings and collars *e' e'*, upon the bolt, springs *f* are interposed, which force the bolts outward and keep them in this position. The outer ends of bolts *d d* are bevelled, so as to form latching-noses, and these ends pass through slots which are made through sheaths *B B*, that are secured in the ends of the boat. These sheaths are flaring or bell-mouthed, and they have vertical slots through them, which are in

planes at right angles to the slots through which the bolt-noses pass, as shown in the top view, fig. 1. The sheaths are thus adapted for receiving the coupling-tongues C C, which are secured, by means of eyes formed in their ends, to the davit-ropes. These tongues are pointed as shown, and they have slots or eyes through them, through which the bolts $d d$ pass, as shown in fig. 2. The tongues are also constructed with rounded ears or wings $f' f'$ upon them, arranged at right angles to the slots through which the bolts pass. These ears or wings are received by the vertical slots in the sheaths, and the tongues guided into their sheaths, so that the slots through the former will always be brought in a position for receiving the bolts. By this arrangement, the attachment of a boat to its davit-ropes can be made in the dark as well as in the light. A detachment is effected of both tongues C C simultaneously by moving the lever a so as to draw both bolts toward this lever.

In figs. 4, 5, 6, and 7, a modification is shown for effecting the result above set forth. This plan is as follows: g is a central vibrating hand-lever, which is pivoted to one side of the boat. At a proper distance on each side of the centre of motion of said lever, horizontally moving bars $g^1 g^1$ are pivoted, so that they will have precisely the same amount of motion in opposite directions imparted to them by vibrating the said hand-lever. The outer extremities of these bars g^1 are pivoted to levers g^2 , which are hinged to the stern and bow-seats, underneath the same, so as to be out of the way. The direction of these levers is so arranged that their free ends may, as nearly as practicable, conform to the curve of that part of the boat's side along which they sweep. In the middle of the stern-seat—this description also applies to the other end of the boat as well—a strong bolt, h , is confined within suitable guides, so as to lie in a direction with the keel of the boat. A pin, h' , firmly fastened to this bolt, extends up through a slot through lever g^2 , which controls its movement. Sufficient play should be allowed to this pin within its slot to admit of the forcing back of the bolt when in the position shown in fig. 5, by the slotted tongue-piece E; and, when forced back, the spring i , which is beneath the bolt h , will force the bolt outward through the sheath D, so as to pass through the slot in the suspension-tongue piece E. This tongue-piece E and its corresponding bell-mouthed sheath D, are made tapering, in such manner as to prevent binding of the tongue when it is within the sheath. The upper end of the tongue E is screwed into or otherwise suitably secured to a ball, j , which is placed within the hollow suspension-cylinder k , shown in figs. 5 and 7, so as to form a ball-joint. This cylinder is made elastic by the spring l , which is interposed between the piston m and the cylinder-cap, and which surrounds the piston-rod to which the suspension-rope is fastened. By this mode of attaching the slotted tongue-piece E of each end of the boat to its respective suspension-rope, there will be little or no jar or concussion upon the parts, as the springs $l l$ will yield and neutralize all sudden shocks.

What I claim as new, and desire to secure by Letters Patent, is—

1. Spring-bolts $d d$ or their equivalents, constructed as described, and applied to sheaths, so as to catch and hold the suspension-tongues C C when thrust into said sheath, substantially as described.
2. The employment of eccentrics or cams $b b$, in combination with the rods $c c$ and spring-bolts $d d$, substantially as described.
3. The feathered coupling-tongues C, in combination with grooved and flaring sheaths, substantially as described.
4. The attachment of the coupling-tongues to springs or spring-boxes, substantially as described.

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Witnesses:

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L. J. COMSTOCK.