

T. TURK.
BOAT DETACHING APPARATUS.

No. 484,648.

Patented Oct. 18, 1892.

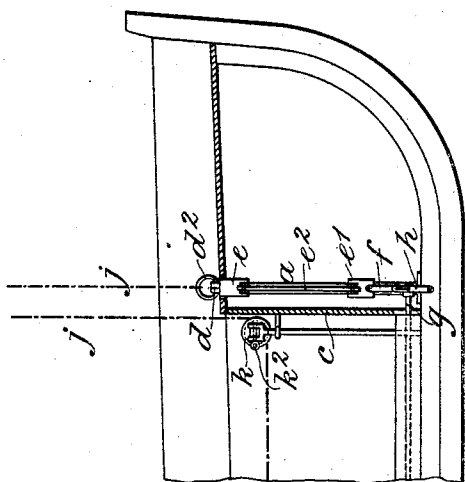


Fig. 2.

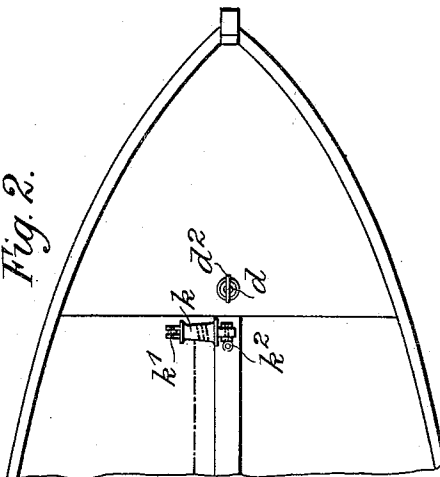
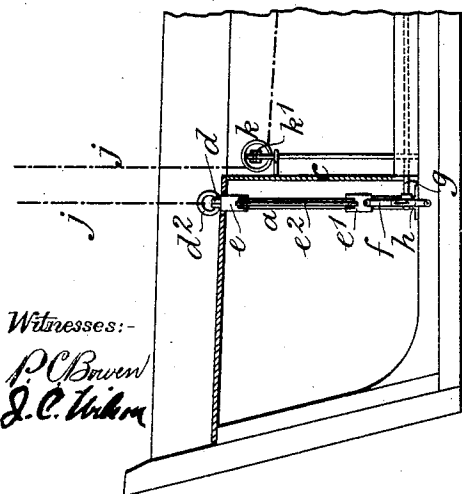
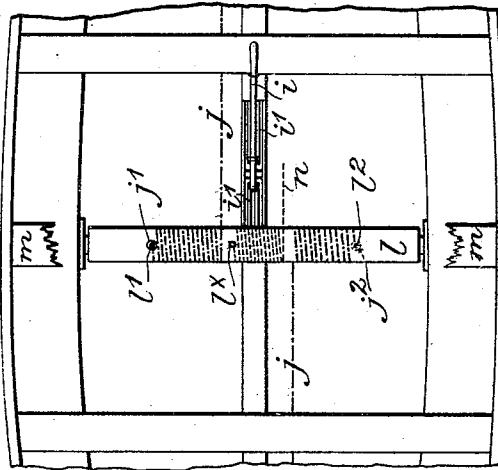
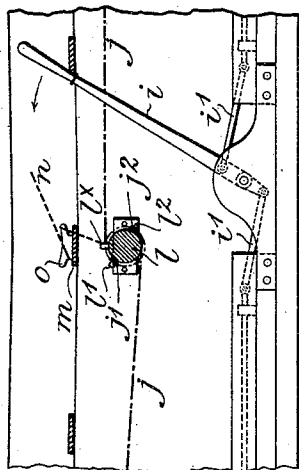
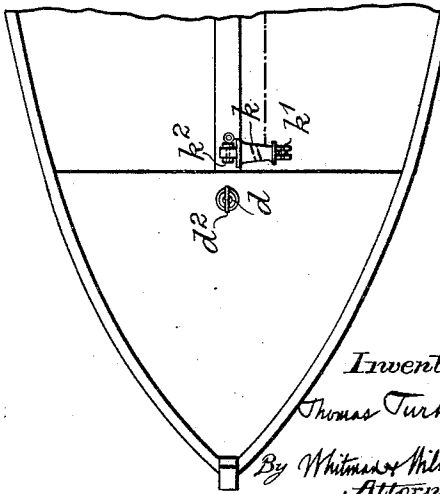


Fig. 1.



Witnesses:-

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J. C. Wilkin



Inventor:

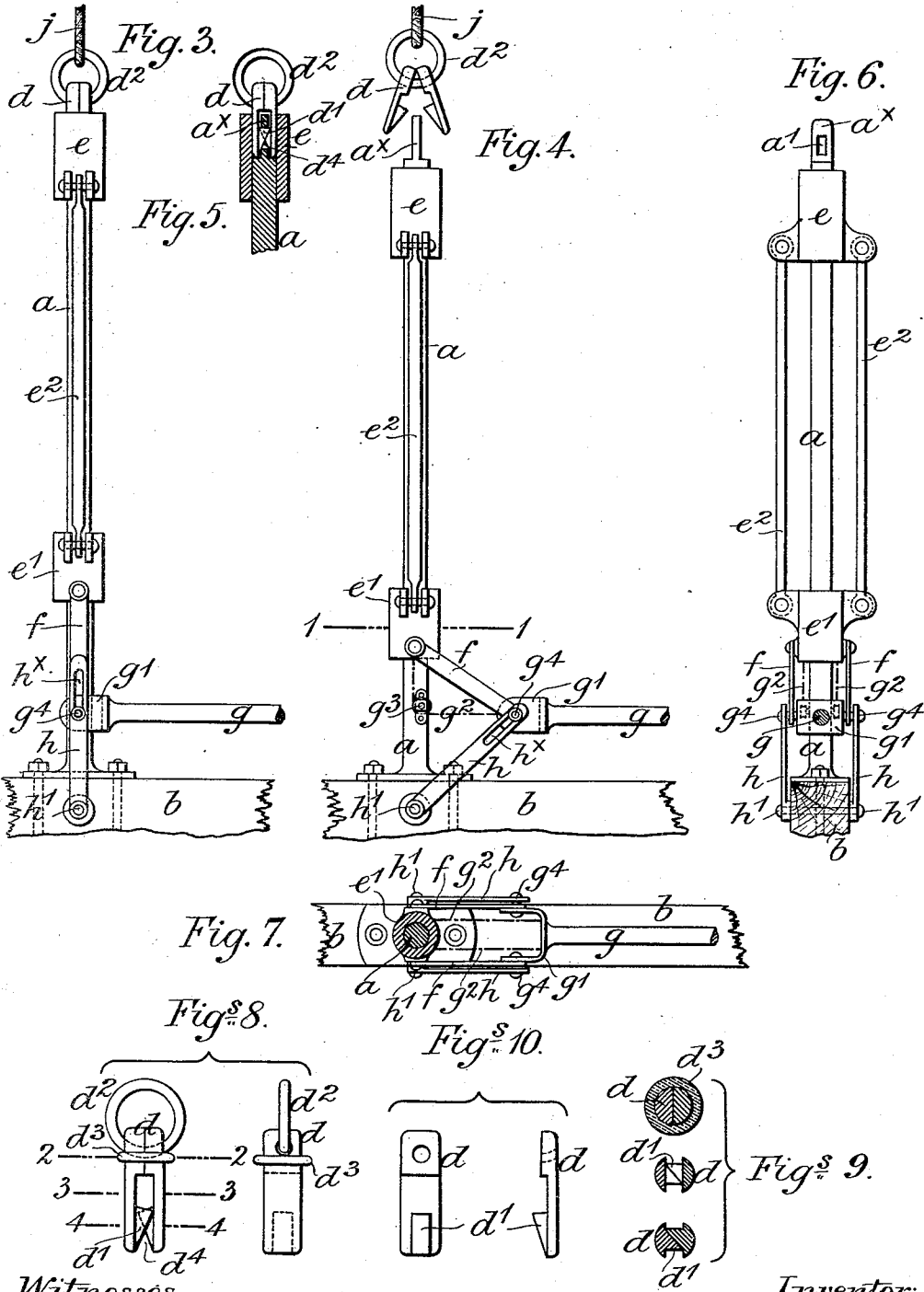
Thomas Turk

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Witnesses
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UNITED STATES PATENT OFFICE.

THOMAS TURK, OF LONDON, ENGLAND, ASSIGNOR OF ONE-HALF TO WILLIAM GORDON CROW, OF SAME PLACE.

BOAT-DETACHING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 484,648, dated October 18, 1892.

Application filed June 14, 1892. Serial No. 436,703. (No model.)

To all whom it may concern:

Be it known that I, THOMAS TURK, a subject of the Queen of Great Britain, residing at Stepney, London, in the county of Middlesex, England, have invented a certain new and useful Improvement in Boat Lowering and Detaching Gear, of which the following is a specification.

The invention has for its object an improvement in boat lowering and detaching gear, whereby the boat can be easily lowered and both ends be instantly and simultaneously detached at the required time without any chance of capsizing or swamping the boat. Furthermore, the mechanism for manipulating the lowering and detaching gear is so arranged as to be under the complete control of one man, who is in charge of and within the boat, and consequently it is quite impossible for any excited or other person beside himself to interfere with the gear.

The essential feature of my invention consists in providing at the fore and aft of the boat fixed vertical uprights carrying sliding sockets or ferrules, which latter, by means of suitable lever mechanism, can be caused to simultaneously rise or fall. The upper extremities of the uprights are provided with eyes or slots which are adapted to receive suitably-shaped teeth or projections formed on the interior of divided coupling-pieces which hang from suspension-lines passing over pulley-blocks carried by the davits. When the teeth or projections on the coupling-pieces are brought into engagement with the eyes or slots in the uprights and the sliding sockets or ferrules are caused to ascend, a firm connection is established between these parts by reason of the said sockets or ferrules embracing the coupling-pieces. The boat is thus securely suspended from the davits and can only be disengaged again by operating a lever-handle, so as to cause the sliding sockets or ferrules to descend and release the coupling-pieces. The coupling-pieces then at once open under the weight of the boat and the parts become disconnected simultaneously.

In order to clearly elucidate my invention, I will describe the same more fully with reference to the accompanying drawings.

Figure 1 is a longitudinal section, and Fig.

2 a plan, of a boat provided with my gear. Figs. 3 to 7 show on a larger scale one of the fixed vertical uprights, together with the parts in connection therewith. In these figures, 55 Fig. 3 is an elevation showing the sliding socket or ferrule in its elevated position and encompassing the coupling-piece. Fig. 4 is a similar view, but shows the parts in the position they assume when the socket or ferrule 60 is lowered and the coupling-piece detached. Fig. 5 is a vertical section of the upper portion of Fig. 3. Fig. 6 is an elevation of Fig. 4, as seen from the right, and Fig. 7 is a horizontal section on the line 1 1. Fig. 8 shows 65 the coupling-piece separately. Fig. 9 represents cross-sections thereof taken, respectively, on the lines 2 2, 3 3, and 4 4; and Fig. 10 shows one half of the coupling-piece detached from the other. All these figures are 70 drawn to a still larger scale.

a a are the fixed vertical uprights, which are firmly bolted to the keelson *b* and as near as practicable to the bulk-heads *c*. The upper portion of each upright is reduced in thickness at *a'* and is formed with an eye or slot *a'* for the reception of the internal teeth or projections *d'* on the coupling-pieces *d*, as hereinafter explained.

e e are the sliding sockets or ferrules, which 80 are carried at the upper ends of the uprights and are connected by means of rods *e'*, with short sleeves *e'*, situated near the lower portion of the uprights. To each of the sleeves *e'* is pivoted a pair of links *f*, whose free ends 85 are connected to the forked heads *g'* of the connecting-rods *g*, so that the movement imparted to these connecting-rods when the lever-handle *i* is operated is transmitted to the sliding sockets or ferrules.

In order to give steadiness to the to-and-fro movement of the connecting-rods *g*, I employ a second pair of links *h*, which are pivoted to the keelson at *h'*. These links are slotted at *h''*, so that when they are in their 95 vertical position, Fig. 3, the pins *g'*, which connect the links to the forked heads, lie at the bottom of the slots, and thereby prevent the sliding sockets from being accidentally forced down.

In the drawings I have shown chains *g'*, 100 passing around sheaves or pulleys *g'* and con-

necting the sleeves e' with the forked heads of the connecting-rods g , so that the pull transmitted to the sleeves e' may be in a vertical direction; but these chains are not absolutely essential and can, if preferred, be dispensed with.

I do not confine myself to the specific mechanism shown for actuating the sliding sockets, as any suitable mechanism may be employed therefor. In some cases I also form the sliding sockets or ferrules as long tubes, and thus dispense with the sleeves e' and their rods e^2 . The inner ends of the connecting-rods g are coupled to the lever-handle i by means of links i' , so that when said lever-handle is operated the connecting-rods are caused to move concurrently, and to thus simultaneously operate the sliding tubes or ferrules. If desired, means may be provided for retaining the lever-handle locked in its normal position, so that none but authorized persons can actuate it.

The coupling-pieces, as is best seen at Figs. 8, 9, and 10, are each divided longitudinally into two portions which are connected or hinged together near their upper ends by means of a ring d^2 . This ring enables the two portions to be readily separated without their becoming disconnected the one from the other, and also serves as a convenient means for connecting the coupling-pieces to the suspension-lines j .

d^3 is a rubber or other elastic ring, which surrounds each coupling-piece and retains the two portions normally in their closed position. The teeth or projections d' , that stand out on the inside of each portion of the coupling-pieces, are beveled or formed in such a manner that when the coupling-piece is closed they come together and constitute a solid piece which will enter and fit into the eyes or slots a' in the uprights, Fig. 5, and thus form ledges for supporting the bolt.

When it is required to connect the coupling-pieces with the uprights, the lever-handle i is first moved in the direction of the arrow, Fig. 1, thereby operating the connecting-rods g and links $f h$, and thus causing the sliding sockets or ferrules to descend and uncover the eyes or slots a' . The lower ends of the coupling-pieces are then applied to the upper extremities of the uprights and are forcibly pressed downward. By so doing the teeth or projections d' , which are cut away at d^4 , are caused to separate, and the two portions of the coupling-piece to be parted. As the portions separate, the elastic ring d^3 becomes distended, and as soon as the teeth come fairly opposite the eyes or slots in the uprights they are immediately forced into said eyes or slots under the influence of the distended ring. The coupling-pieces are thus temporarily connected to the uprights. The lever-handle i is now pulled back, so as to cause the sliding sockets to rise and embrace the coupling-pieces. The coupling-pieces cannot now by any possible means be disconnected from the

uprights until the sliding sockets are again drawn down. The inner extremities of the suspension-lines j after being passed around conical guide-pulleys k , located close to the bulk-heads c , are wound onto a roller l , situated beneath the thwart m , the said inner extremities of the suspension-lines being furnished with loops or eyes j' j^2 , which are loosely coupled to pins l' l^2 , projecting from the roller l . The conical guide-pulleys k are pivoted at k' , Figs. 1 and 2, so as to permit of their being readily turned into a vertical position when the retaining-pin l^2 is withdrawn, and to thus facilitate the leading of the suspension-lines around them. Wound around the middle part of the roller l is another line n , which is secured at its inner end to a staple l^3 on the roller, while its free end after being passed around the cleat o , carried by the thwart m , is held by the man in charge of the boat. By means of this line the man can regulate the speed of rotation of the roller l , and consequently the unwinding of the suspension-lines j . He can thus effectually control the descent of the boat onto the surface of the water. Immediately the boat becomes water-borne the man operates the lever-handle i , thereby simultaneously drawing down the sliding sockets or ferrules, as already explained, and he at the same time releases the line n . The weight of the boat, which is constantly acting on the upper portions of the teeth d' , through the intervention of the uprights a now forces open the coupling-pieces and both ends of the boat become simultaneously disengaged and the boat falls perfectly level onto the water. Meanwhile, the suspension-lines j , being no longer restrained, run freely off the roller l and disconnect themselves from the pins l' l^2 . The boat is thus rendered entirely free from all connection with the davits and tackle.

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

1. In boat lowering and detaching gear, the means, substantially as described, for enabling both ends of the boat to be simultaneously detached, consisting of sliding sockets or ferrules carried by vertical uprights situated at the fore and aft of the boat and adapted to be simultaneously raised or lowered by suitable lever mechanism, in combination with divided coupling-pieces adapted to engage with slots or eyes formed in the upper ends of the uprights, whereby when said sliding sockets or ferrules are elevated they will embrace the coupling-pieces and keep them in engagement with the uprights, but when said sliding sockets or ferrules are lowered they will uncover the coupling-pieces and allow the weight of the boat to cause the coupling-pieces to open and so disengage themselves from the uprights.

2. In boat lowering and detaching gear, the means, substantially as described, for enabling the lowering of the boat to be controlled,

consisting in the combination, with the divided coupling-pieces, of suspension-lines j , furnished with eyes or loops $j^1 j^2$ and passing over pivoted conical guide-pulleys k and around a roller l , furnished with pins $l^1 l^2$, adapted to receive the eyes or loops $j^1 j^2$ of the suspension-lines j , the said roller l being, also, provided with a line n , one end of which is made fast to the roller and the other end passed around a cleat o and held by the man in charge of the boat, so as to permit him to regulate the speed of rotation of the roller l and the paying out of the suspension-lines.

3. In a boat lowering and detaching gear, the combination, with the sliding sockets or ferrules e , connected to sleeves e' , of links f , pivoted to the sleeves e' and to the heads of the connecting-rods g , of links h , pivoted to the keelson and formed with slots h^x , engaging with pins g^4 on the said connecting-rods, and of lever mechanism for operating the connecting-rods, substantially as herein described and shown, and for the purpose specified.

4. In a boat lowering and detaching gear, the combination, with a hooking device connected to the boat's falls, of rigid piece attached to the boat and having an eye in the upper end thereof adapted to engage said hooking device, of a ferrule adapted to slide up and down on said rigid piece and to lock and unlock said hooking device, a sleeve attached to said ferrule and adapted to move therewith, a toggle-joint having its ends se-

cured to the said sleeve and to the boat, respectively, and a hand-rod for actuating said toggle-joint and so raising and lowering said sleeve and ferrule, substantially as and for the purposes described.

5. In a boat lowering and detaching gear, the combination, with a hooking device connected to the boat's falls, of rigid piece attached to the boat and having an eye in the upper end thereof adapted to engage said hooking device, of a ferrule adapted to slide up and down on said rigid piece and to lock and unlock said hooking device, a sleeve attached to said ferrule and adapted to move therewith, a toggle-joint having its ends secured to the said sleeve and to the boat, respectively, and a hand-rod for actuating said toggle-joint and so raising and lowering said sleeve and ferrule, and a chain connected at one end to said hand-rod and at the other to said sleeve and passing beneath a pulley secured beneath said sleeve, thus relieving or assisting said toggle-joint in lowering said sleeve and ferrule, as and for the purposes described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

THOMAS TURK.

Witnesses:

GEO. J. B. FRANKLIN,

THOMAS LAKE,

Both of 17 Gracechurch Street, London, E. C.