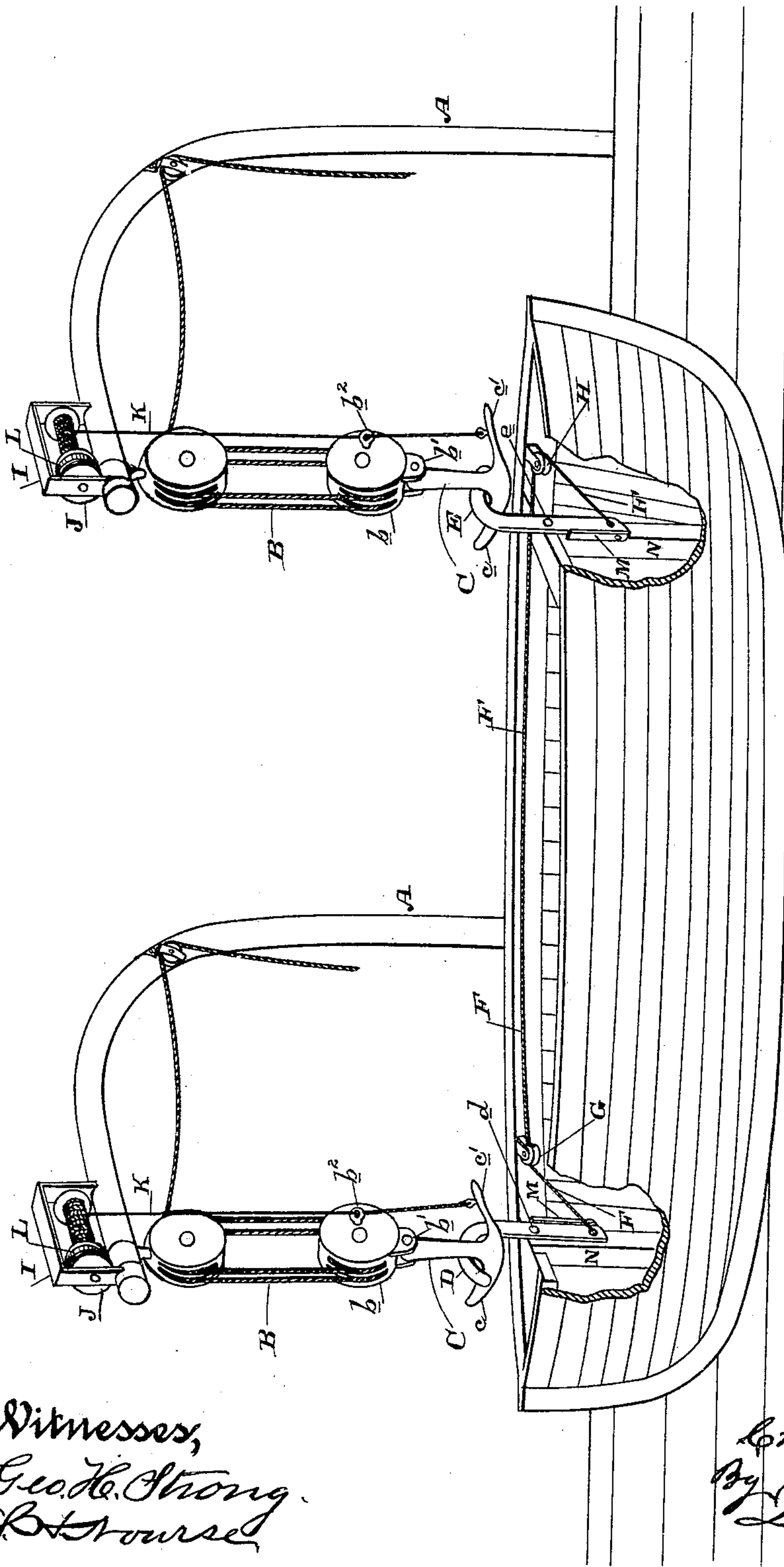


(No Model.)

C. F. RODIN.
BOAT DAVIT ATTACHMENT.

No. 389,410.

Patented Sept. 11, 1888.



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UNITED STATES PATENT OFFICE.

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BOAT-DAVIT ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 389,410, dated September 11, 1888.

Application filed June 2, 1888. Serial No. 275,844. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. RODIN, of the city and county of San Francisco, State of California, have invented an Improvement in Boat-Davit Attachments; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to the class of devices or attachments for lowering away ships' boats and hoisting them again to their davits; and my invention consists in the novel hook-connection between the hoisting-tackle and the boat, and in the spring-actuated trip by which the connection is released, as I shall herein-
after fully describe, together with details of construction.

The object of my invention is to provide a davit attachment which will operate automatically to instantly and simultaneously release both ends of the boat the moment either end finds support in the water.

Referring to the accompanying drawing, the figure is a perspective view of my boat-davit attachment, portions of the sides of the boat being broken away.

A A are the boat-davits, from which are suspended in the usual manner the block and tackle B, of which *b* is the lower block. Pivoted or hinged to a lug, *b'*, on the end of block *b* is a hook, C, having a curved end, *c*, and a backwardly-extending arm, *c'*.

Upon the forward end of the boat is pivoted on a bolt or pin, *d*, a hook, D, and upon the rear end is pivoted, on a bolt or pin, *e*, a similar hook, E, which, however, is arranged in a reverse manner to that in which the hook D is arranged—that is to say, these hooks are so arranged that in order to unhook they must move in opposite directions. A small flexible wire rope, F, is connected with the end of one hook—say D—and thence runs to the side of the boat and through a block, G, thereon; thence under the inside of the boat-rail, right aft, and through another block, H, and thence to hook E, to the end of which it is attached, whereby both hooks operate simultaneously in opposite directions.

Upon each davit is secured a bearing, I, in which is mounted a roller, J, to which is attached a small chain, K, which passes down

and is rove through a fair-leader, *b²*, on the side of lower block, *b*, of the block and tackle, and thence passes to and is connected with the arm *c'* of hook C. Upon one end of each roller J is a spring, L, so arranged that as the small chain pulls off the roller it is wound up.

The operation is as follows: When the boat is hung up at the davits, it is suspended by the engagement of the hooks C with the hooks D and E of the boat, said hooks remaining in proper position under the weight of the boat. When the boat is lowered away and one end reaches the water first, then the moment it finds support in the water and the strain is relieved, the spring L of the roller J on the davit above, which has been wound up by the paying out of the chain K as it went down with the block *b*, exerts its power to wind up the chain again. The first effect of this strain on the chain is to pull up the pivoted hook C from its engagement with the hook on the boat, and the next is to jerk the block *b* up out of the way, so that it is prevented from catching under the boat-rail and capsizing her; but the hook C, in disengaging itself from the hook on the boat, pulls the latter hook back on its pivoted center, and this movement of said hook, through the connecting-rope F, pulls the other hook on the boat back and releases it from the other hook C, which is instantly jerked up by its spring-actuated chain and roller. These movements take place so rapidly as to be practically simultaneous, and thus the boat is prevented from dipping one end underneath.

Upon the lower end of each hook D and E is pivoted a bar, M, which, when turned to one side, may serve as a handle to adjust the hooks in position to receive the hooks C when the boat is to be hoisted to the davits, or, when turned to the other side, may serve as a pawl by coming in contact with the fixed strip N on the boat, when the hooks are to be held permanently, or it may be turned in line with the hook to be out of the way when not in use.

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

1. In combination with the hoisting-tackle of the davits, the pivoted reversed hooks on

the boat, with which the hoisting-tackle engages, the trips carried by the lower tackle-block, spring-actuated winding-drums carried by the davits, and a connection between said
5 drums on the trips, substantially as herein described.

2. In combination with hooks on the boat, the hoisting-tackle secured to the davits, hooks pivoted to the lower blocks of said tackle
10 and engaging the hooks on the boat, and the trip for releasing the hooks, consisting of the rollers on the davits, the chains connecting the block-hooks with the rollers, and the springs for winding up the chains, substantially as herein described.
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3. In combination with hooks on the boat, the hoisting-tackle secured to the davits, hooks pivoted to the lower blocks of said tackle and engaging the hooks on the boat, and the trip for
20 releasing the hooks and jerking up the tackle-blocks out of the way, consisting of the rollers on the davits, the chains passing from the rollers through fair-leaderson the lower tackle-blocks and connected with their pivoted hooks,
25 and the springs for rotating the rollers, whereby they wind up the chains, substantially as herein described.

4. The pivoted reversed hooks on the boat and the cord connecting them, whereby they
30 operate simultaneously, in combination with the hoisting-tackle secured to the davits, the hooks pivoted to the lower blocks of the tackle for engaging the hooks on the

boat, and a trip mechanism secured to the pivoted hooks on the blocks, whereby they
35 are pulled from their engagement with the hooks on the boat and the latter released simultaneously as either end of the boat finds support in the water, substantially as herein described.
40

5. The pivoted reversed hooks on the boat and the cord connecting them, whereby they operate simultaneously, in combination with the hoisting-tackle secured to the davits, the
45 hooks pivoted to the lower blocks of the tackle for engaging the hooks on the boat, and the trip for releasing the hooks the moment either end of the boat finds support in the water, consisting of the spring-controlled rollers on the davits, and the chains connecting the
50 rollers with the hooks on the tackle-blocks, substantially as herein described.

6. In combination with the hoisting-tackle of the davits, the pivoted reversed and connected hooks on the boat, whereby it is suspended, and the pivoted bar on said hooks,
55 serving as a handle for primarily adjusting them and as a pawl for holding them, substantially as herein described.

In witness whereof I have hereunto set my
hand. 60

CHARLES F. RODIN.

Witnesses:

FRANK MCGOWAN,
E. RUSEVE.