(No Model.)

F. ENCH, H. FÜGEL, J. L. COOKE & G. F. W. SCHULTZE.

AUTOMATIC BOAT DAVIT.

No. 522,787. Patented July 10, 1894.

Fig. 1.

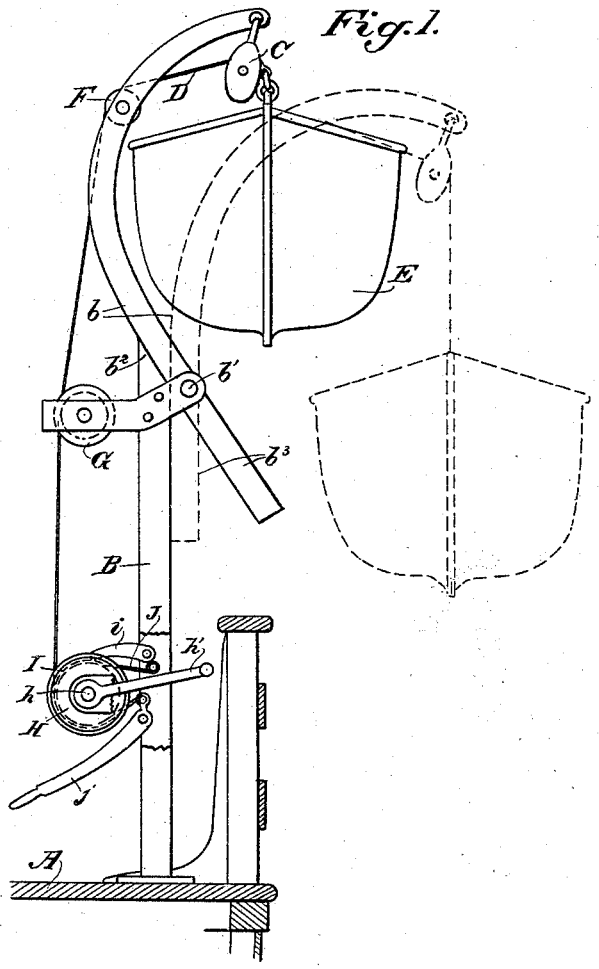
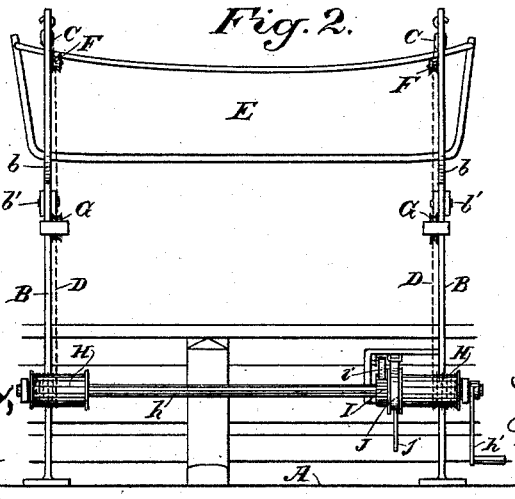


Fig. 2.



Witnesses,
J. L. Bruce
W. F. Ascheck

Inventors,
Frank Ench
Hugo Fügel
John L. Cooke
Gustav F. W. Schultze
by Dewey & Co.
Attys.

UNITED STATES PATENT OFFICE.

FRANK ENCH, HUGO FÜGEL, AND JOHN L. COOKE, OF OAKLAND, AND GUSTAV F. W. SCHULTZE, OF BERKELEY, CALIFORNIA; SAID COOKE ASSIGNOR OF ONE-HALF HIS RIGHT TO JOHN DOLBEER, OF SAN FRANCISCO, CALIFORNIA.

AUTOMATIC BOAT-DAVIT.

SPECIFICATION forming part of Letters Patent No. 522,787, dated July 10, 1894.

Application filed August 14, 1893. Serial No. 483,125. (No model.)

To all whom it may concern:

Be it known that we, FRANK ENCH, HUGO FÜGEL, and JOHN L. COOKE, residing at Oakland, and GUSTAV F. W. SCHULTZE, residing at Berkeley, Alameda county, State of California, citizens of the United States, have invented an Improvement in Automatic Boat-Davits; and we hereby declare the following to be a full, clear, and exact description of the same.

Our invention relates to that class of boat or ship davits in which the boat is suspended from arms or sections of the davits hinged or jointed, and adapted to swing in order to carry the boat inboard or outboard.

Our invention consists in the novel construction and arrangement of the swinging or jointed arms of the davits, the means for limiting their movement, and the means for effecting their movement automatically by the raising and lowering of the boat, whereby the latter is swung inboard and outboard as required, and as we shall hereinafter fully describe and claim.

The object of our invention is to provide boat or ship davits of simple construction and effective and rapid in operation, whereby the boat may be quickly swung outboard and lowered into the water, and upon being raised again may be easily withdrawn inboard.

Referring to the accompanying drawings for a more complete explanation of our invention,—Figure 1 is an elevation of the davit, the dotted lines showing the out-board position. Fig. 2 is a front view.

A represents the deck of a vessel, to which are firmly secured in suitable manner the lower sections of the davits B. These davits are made with swinging upper sections *b* which are jointed or hinged to the lower sections at the points *b'*.

The lower or fixed sections of the davits have their upper ends beveled or inclined backwardly, whereby said ends form stops b^2 against which the upper sections rest at a backward inclination, and are limited in their inward movement, in which position they hold the boat inboard. The upper sections have extensions below their hinge connections, said extensions forming stops b^3 which are adapted to come in contact with the fixed lower sections when said upper sections are swung outwardly to carry the boat outboard, and thereby form a means for limiting the outward movement of said upper sections. The outer ends of the upper sections carry blocks C through which pass the lines or falls D which suspend the boat E.

It will be seen from the construction thus far described that the operation is as follows:—Assuming the boat to be raised, its position is then inboard, and the upper sections *b* of the davits are thrown backwardly and rest against the stops b^2 of the lower sections. Now, upon letting go the lines or falls, the boat descends and by its weight will pull outwardly the upper sections *b* until said sections are limited by their stops b^3 coming in contact with the fixed sections, and this movement of the upper sections carries the boat outboard, and it can be lowered into the water. Now, upon hoisting the boat again it rises freely until it comes chock-a-block, whereupon, continued hoisting will cause the upper sections *b* to swing inwardly until they are limited in their first position by the stops b^2 of the lower sections, and in this position, as before mentioned, the boat is inboard. The course of the hoisting lines or falls is such as to effect this result being, as here shown, through directing pulleys F on the upper sections, and down by guide pulleys G on the lower sections.

Any suitable means may be employed to operate the hoisting lines or falls, and we have here shown them as attached to drums H upon a shaft *h* having a crank *h'* by which it is operated. A ratchet I upon this shaft is engaged by a retaining pawl *i* whereby it is held and the boat is maintained in its normal elevated position inboard.

In order to control the descent of the boat, we have a strap brake J applied to the shaft, said brake being operated by a lever *j* in the usual manner.

It will thus be seen that the carrying of the boat outboard and inboard is automatic, the first result being due to the weight of the boat

in its descent, and the second to its contact upon its upward limit with the blocks of the swinging sections of the davits.

The whole construction is a simple one, not liable to get out of order, and adapted to be readily operated and controlled, all resulting in a rapid lowering of the boat when required.

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

1. Boat davits consisting of a lower fixed section, an upper swinging section hinged thereto at a point between the overlapping ends of the two sections, and stops between the two sections to limit the movement of the upper sections in swinging the boat outboard and inboard, in combination with falls or lines suspending the boat from the upper sections and adapted when lowering the boat to allow said sections to automatically swing outwardly under the weight of the boat, and to pull and hold inwardly said sections by hoisting the boat to its place, substantially as herein described.

2. Boat davits consisting of a lower fixed section and an upper swinging section hinged thereto at a pivotal point intermediate of the overlapping ends of the two sections whereby stops are formed to limit the movement of the upper section, in combination with falls or lines suspending the boat from the upper sections and adapted when lowering the boat to allow said sections to automatically swing outwardly under the weight of the boat, and to pull and hold inwardly said sections by hoisting the boat to its place, substantially as herein described.

3. Boat davits consisting of a lower fixed section having a backwardly beveled top forming a stop, and an upper swinging section hinged or jointed to the front of the lower fixed section and having an extension forming a stop, whereby said upper section is adapted to swing backwardly to and rest upon the stop of the lower section and to swing forwardly and be limited by the contact of its extension with said section, substantially as described.

4. Boat davits consisting of a lower fixed section having a backwardly beveled top forming a stop, and an upper swinging section hinged or jointed to the front of the lower fixed section and having an extension forming a stop, whereby said upper section is adapted to swing backwardly to and rest upon the stop of the lower section and to swing forwardly and be limited by the contact of its extension with said section, in combination with falls or lines suspending the boat from the swinging section and adapted when lowering the boat to allow said section to swing outwardly under the weight of the boat and to pull and hold inwardly said section by hoisting the boat to its place, substantially as herein described.

5. Boat davits consisting of the lower fixed sections and the swinging upper sections jointed thereto at a point intermediate of the overlapping ends of the two sections, and limited by stops, as described, in combination with the blocks of the upper sections and the hoisting lines or falls suspending the boat from said blocks and guided downwardly, whereby through the raising and lowering of the boat the upper sections are swung in and out automatically, substantially as herein described.

6. Boat davits consisting of the lower fixed sections and the swinging upper sections jointed thereto, at a point intermediate of the overlapping ends of the two sections and limited by stops formed by an extension of each section, as described, in combination with the blocks of the upper sections, the hoisting lines or falls suspending the boat from said blocks and guided downwardly whereby through the raising and lowering of the boat the upper sections are swung in and out automatically, and a winding shaft with drums to which the lines or falls are attached, substantially as herein described.

7. Boat davits consisting of the lower fixed sections and the swinging upper sections jointed thereto, at a point intermediate of the overlapping ends of the two sections and limited by stops formed by an extension of each section, as described, in combination with the blocks of the upper sections, the hoisting lines or falls suspending the boat from said blocks and guided downwardly whereby through the raising and lowering of the boat the upper sections are swung in and out automatically, a winding shaft with drums to which the lines or falls are attached, and a retaining pawl and ratchet by which the winding shaft is held, substantially as herein described.

8. Boat davits consisting of the lower fixed sections and the swinging upper sections jointed thereto at a point intermediate of the overlapping ends of the two sections, and limited by stops formed by an extension of each section, as described, in combination with the blocks of the upper sections, the hoisting lines or falls suspending the boat from said blocks and guided downwardly whereby through the raising and lowering of the boat the upper sections are swung in and out automatically, a winding shaft with drums to which the lines or falls are attached, a retaining pawl and ratchet by which the winding shaft is held, and a brake applied to said winding shaft to control the descent of the boat, substantially as herein described.

In witness whereof we have hereunto set our hands.

FRANK ENCH.
HUGO FÜGEL.
JOHN L. COOKE.
GUSTAV F. W. SCHULTZE.

Witnesses:
L. MEININGER,
M. SUMMER.