

W. L. CHAPMAN.

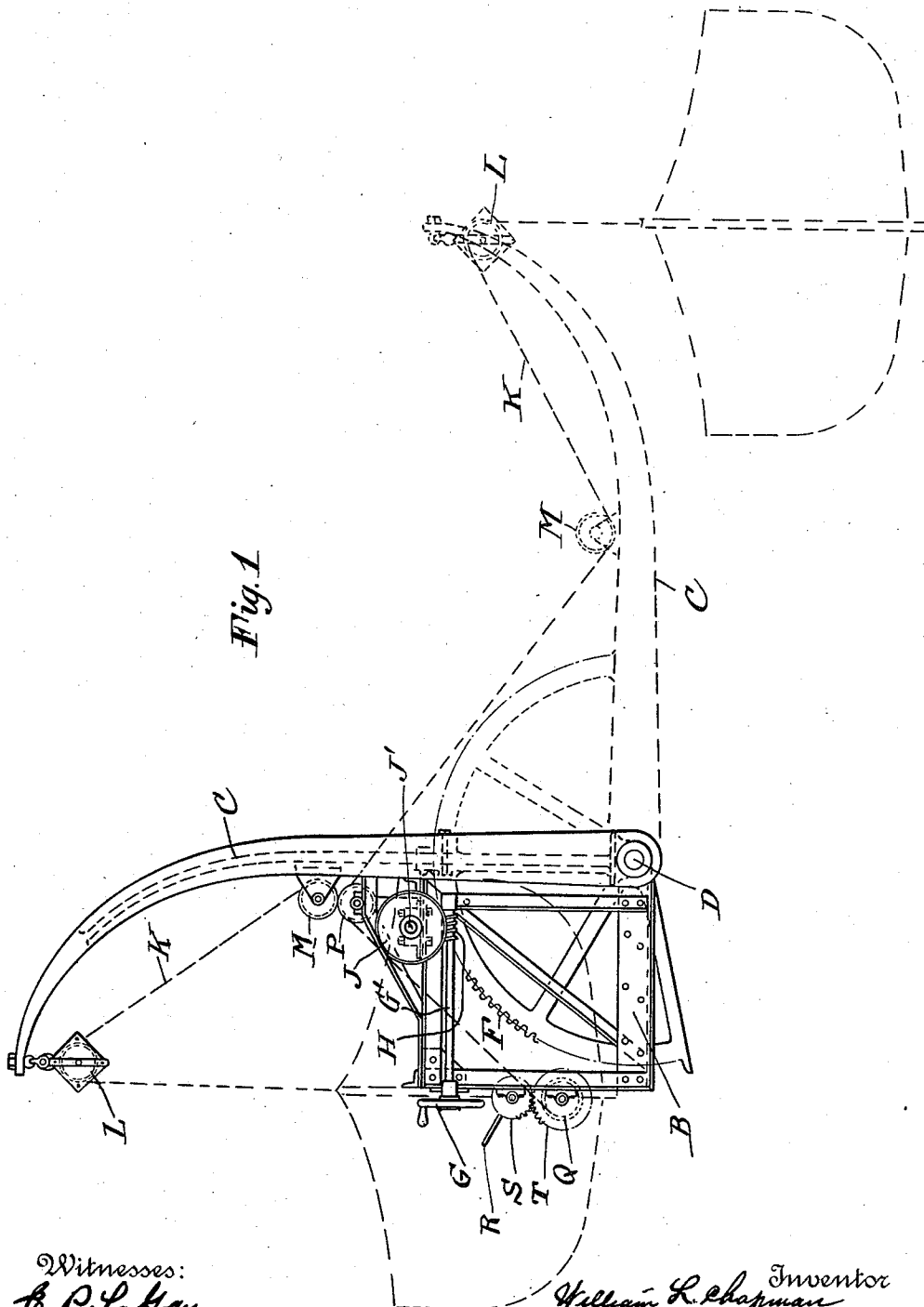
DAVIT.

APPLICATION FILED NOV. 22, 1909.

1,002,032.

Patented Aug. 29, 1911.

2 SHEETS—SHEET 1.



Witnesses:
C. P. Labay
A. Carham

William L. Chapman Inventor
By his Attorneys
Bunney Mastick & Lyden

W. L. CHAPMAN.

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2 SHEETS—SHEET 2.

Fig. 3

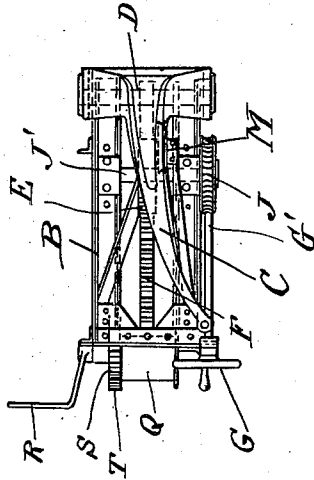
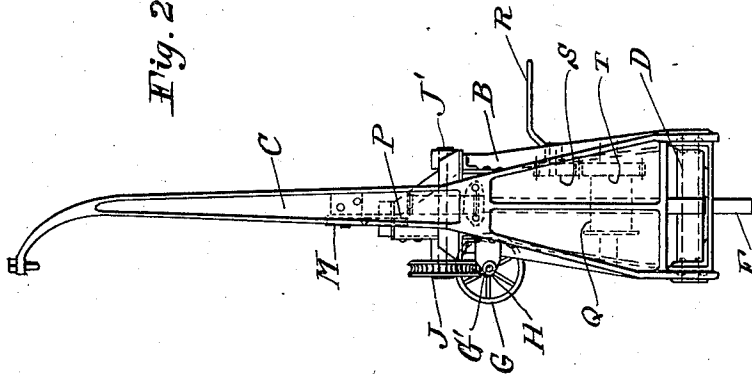


Fig. 2



Witnesses:
E. P. Lathay
A. Carham

William L. Chapman Inventor

By his Attorneys
Coney, Mastick & Ogden

UNITED STATES PATENT OFFICE.

WILLIAM L. CHAPMAN, OF NEW YORK, N. Y.

DAVIT.

1,002,032.

Specification of Letters Patent.

Patented Aug. 29, 1911.

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To all whom it may concern:

Be it known that I, WILLIAM L. CHAPMAN, a citizen of the United States of America, and a resident of the city and State of New York, have invented certain new and useful Improvements in Davits, of which the following is a specification, illustrated by drawings. It will be understood that they are specifically for davits.

10 Generically the invention is applicable to some other hoisting and handling appliances, but I will describe it in the best form now known to me as embodied in the davit illustrated in the accompanying drawings, 15 wherein—

Figure 1 represents an end elevation of a davit apparatus embodying the improvement and seen at right angles to the plane of movement. Fig. 2 is a view of one of the davits at right angles thereto. Fig. 3 is a plan view of the same.

A stationary frame B constitutes the base of this davit apparatus. A davit arm C is pivoted about a fixed horizontal axis D disposed at the lower outboard corner of said frame. This arm carries a toothed sector F in fixed relation thereto. A shaft J' is journaled in the upper part of the frame B and provided with a pinion E which engages with said toothed sector. A worm wheel J is fixed on said shaft. A worm shaft G' is disposed at right angles to the shaft J' and provided with a worm H which meshes with said worm wheel J. A hand wheel G is fixed at the outer end of said shaft G'. I prefer this actuating mechanism for operating the davit arm C as it requires less applied force than if the worm H meshed directly with the toothed sector F.

40 The boat is handled at each end by the wire rope K which is rolled through the pulley L swiveled to the upper end of the davit and then through the idler wheel M mounted on the davit arm and over the fixed idler P mounted on the stationary frame. Thence the rope K leads onto the winch barrel Q actuated by a hand crank R and pinion and gear S, T. The bending toward each other of said arms brings the lines of suspension for the opposite ends of the boat between said arms on the outboard movement thereof and permits the boat to swing freely past said arms, and the inboard bend brings said lines of suspension inboard past the center of oscillation of the davit arms and causes the boat to be lifted automati-

cally off its chock by drawing on the wire ropes as K at the beginning of the outboard swing. The falls or wire ropes K of the davits are slacked away as needed, during and after this outboard movement of the davit. But it will be seen that the position of the idler pulleys and length of the falls or wire rope K can be calculated to raise the boat from the chocks and swing it to any particular position within a considerable range by the mere movement of the davit arms without slacking away on the falls.

Instead of making the davit arms in a straight line between the axis D and the upper free end of the arm, I curve the davit in an inboard direction, as seen in Fig. 1 and laterally or toward the boat, as seen in Fig. 2, in order that the lower portion of the davit arm may stand vertically and present the ship-shape appearance shown in the figures. The bifurcation of the lower end of the davit arm so as to straddle the frame work and give a wide bearing for it, is plain from the figures without additional description. Manifestly the outboard motion of the davit arm at first raises and then lowers the upper end of the arm from which the boat is hung.

Without describing the modifications from the form of the invention illustrated, as being the best known to me, I desire to claim the following parts or points of my invention, meaning thereby to include many modifications that do not depart from the principles of operation.

I claim—

1. In a davit apparatus, the combination of frames adapted for attachment to a vessel or support, davits fulcrumed on horizontal pivots at approximately the lower and outer limit of said frames, the upper extremities of said davits extending both inboard and toward each other, whereby the initial outboard movement of the davits tends to raise the boat from its chocks, and whereby the ends of the boat may readily swing past the davit, toothed sectors in fixed relation to said davits respectively and extending upward and inboard from the pivots thereof, and gearing engaging said sectors for swinging the said davits outboard.

2. In a davit apparatus, the combination of frames adapted for attachment to a vessel or support, davits fulcrumed on hori-

zontal pivots at approximately the lower and outer limit of said frames, the upper extremities of said davits extending both inboard and toward each other, suspension means connected with said extremities, and means for swinging said davits outboard, said suspension means comprising a winding mechanism mounted on the frames, falls or ropes and pulleys therefor located on said davit arms in position to take up on the ropes as the bent ends of the arms start outboard, whereby the said falls or

ropes and the inboard bends of the arms both act to raise the boat from inboard position while the lateral bends allow the boat to pass by the arms when turning on their horizontal pivots. 15

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WM. L. CHAPMAN.

Witnesses:

JAS. S. F. McLEOD,
ROBERT ELLIOTT.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."