P. R. ARNOTT.

CARRYING AND LOWERING OF BOATS TO THE WATER.

APPLICATION FILED JUNE 24, 1912.

1,047,877. Patented Dec. 17, 1912.

2 SHEETS—SHEET 1.

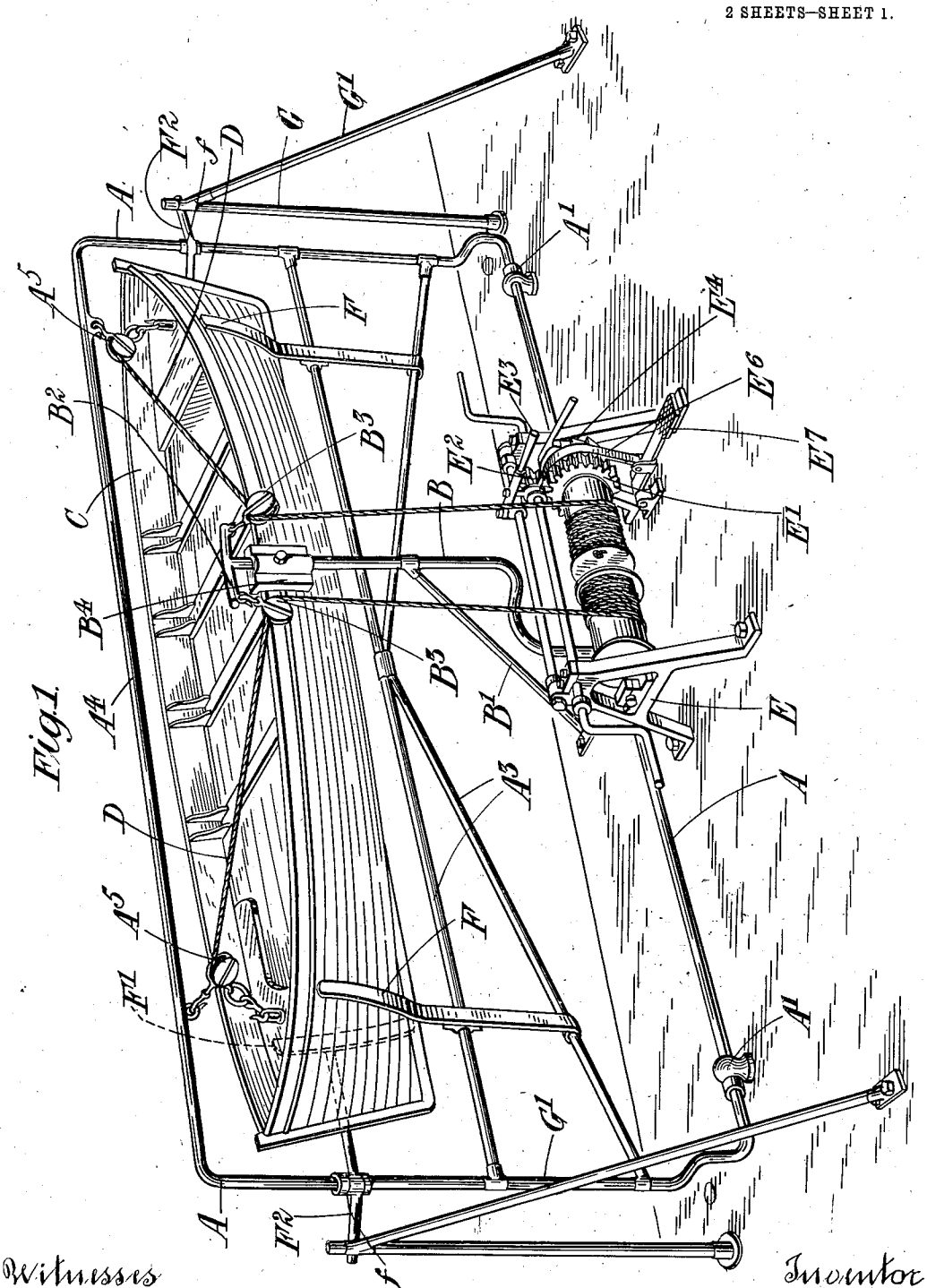

Fig. 1.

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2 SHEETS—SHEET 2.

Fig. 2.

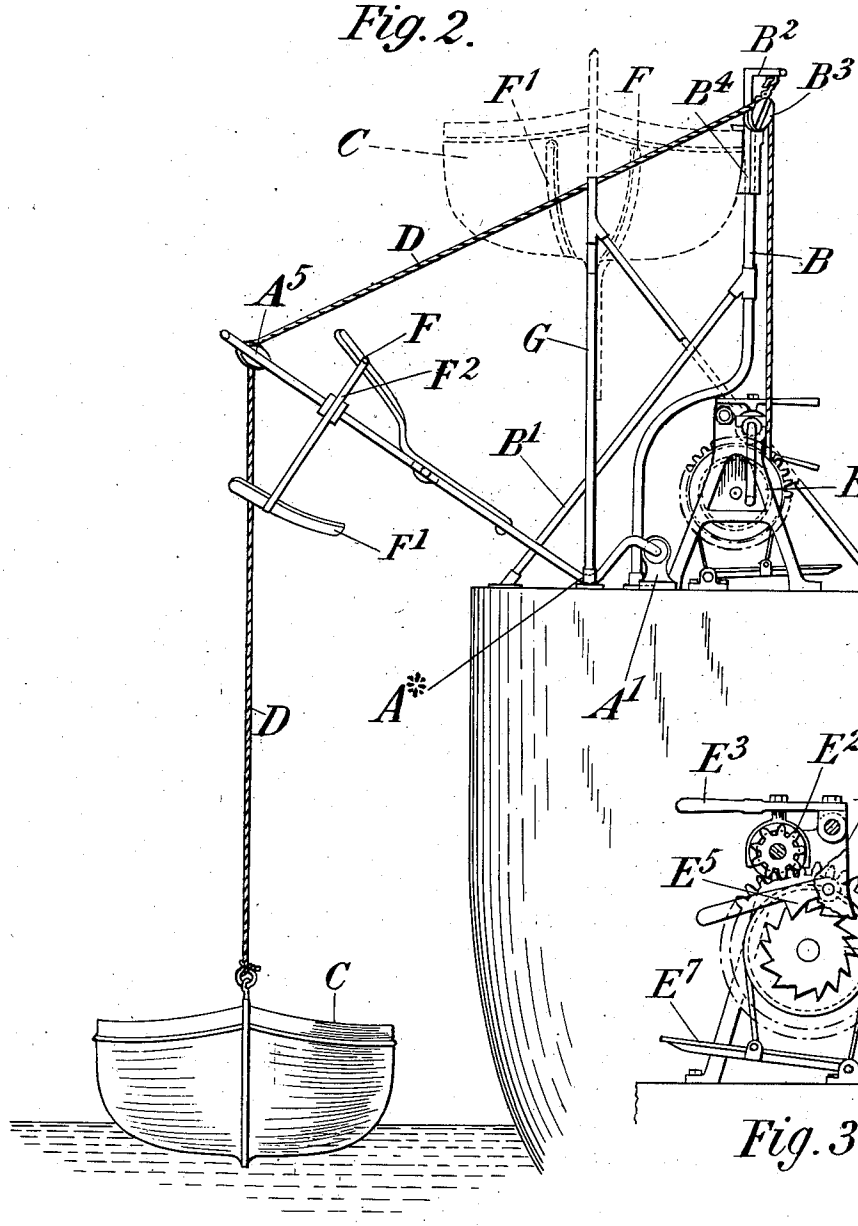

Fig. 3

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UNITED STATES PATENT OFFICE.

PATRICK RAMSAY ARNOTT, OF WESTCLIFF-ON-SEA, ENGLAND.

CARRYING AND LOWERING OF BOATS TO THE WATER.

1,047,877. Specification of Letters Patent. Patented Dec. 17, 1912.

Application filed June 24, 1912. Serial No. 705,599.

To all whom it may concern:

Be it known that I, PATRICK RAMSAY, ARNOTT, a subject of the King of England, residing at Westcliff-on-Sea, Essex, England, have invented certain new and useful Improvements in the Carrying and Lowering of Boats to the Water, of which the following is a specification.

This invention is for improvements in or relating to the carrying and lowering of boats to the water and has for its object to provide a more simple arrangement than those heretofore proposed for lowering a ship's davits and the boat therefrom or raising the boat and swinging the davits inboard.

The invention relates to apparatus of the type wherein the davits are made in the form of a hinged frame and arranged to swing in and out from a single centrally-disposed stanchion over which the fall-ropes are carried, the said fall-ropes being employed both to swing the davits in and out and also to lower the boat therefrom or raise it as required.

According to the present invention the central stanchion in ships' davits of the type described is arranged to constitute a stop against which the boat is brought when swung into the inboard position. For this purpose the stanchion may carry a plate shaped to that part of the boat which will rest against it, and if desired said plate may have an overhanging lip to project over the gunwale of the boat for the purpose of steadying the same. Outer chocks may be operatively connected with the davits in such manner that they are automatically brought into position to support the boat or release it therefrom by the inboard or outboard movement of the davits respectively, and in addition to the plate referred to as carried by the central stanchion, inner chocks may be used, said chocks being carried by and rigidly secured to the swinging frame constituting the davits.

In the accompanying drawings which illustrate one method of carrying out this invention:—Figure 1 is a perspective view of the davits and boat in the raised position; Fig. 2 is an end view of the davits thrown outward and the boat lowered; and Fig. 3 is an end view of the windlass shown in Fig. 2 but on a larger scale and from the opposite end.

Like letters indicate like parts throughout the drawings.

The davits A are hinged to supports A^1 on the deck and are cross-connected by members A^2, A^3 and A^4 so that they move as one. Secured to the deck on the in-board side is a stanchion B having a strengthening stay B^1. This projects above the level of the boat C when the latter is in the stowed position and has at its top a T-head B^2 whereon pulley blocks B^3 are suspended. The davits carry other pulley-blocks A^5 and the fall-ropes D, which are attached in the usual manner to opposite ends of the boat, pass over the blocks A^5 and over the blocks B^3 down to a double-drummed windlass E. The windlass is planted under the space occupied by the boat when raised so that the fall-ropes can haul straight down from the pulley-blocks B^3 on to the drums of the windlass. The two drums are carried fast on one spindle and driven by the usual toothed wheel E^1 and pinion E^2. The pinion can be slid into and out of gear by a lever E^3 in the usual manner and a ratchet-wheel E^4 is provided on the drum spindle for engagement with a locking pawl E^5. The drum spindle also carries a band-brake E^6 operated by a pedal E^7.

Fast to the members A^3 on the in-board side of the davits A are two chocks F and pivoted at *f* to the davits on the outside are two chocks F^1. The chocks F^1 are each provided with an extension or tail-piece F^2. On each side of the davits are secured stanchions G supported by stays G^1 and these serve as stops for the extensions of the chocks F^1 as hereinafter described.

With the parts in the position shown in Fig. 1 all that is necessary for lowering the boat is to apply the brake E^6 by means of the pedal E^7 and release the locking pawl E^5. The stanchion B is so placed that when the boat is brought against it, the center of gravity of the whole apparatus is on the outer side and thus as soon as the fall-ropes are fed out by the windlass, the davits will swing out-board with the boat thereon. This carries the extensions F^2 of the chocks F^1 away from the stops G so that the chocks are free and can be pushed aside by the boat as

this swings out under the action of gravity and the same movement of the boat carries it away from the chocks F. The davits are each provided with a knee A*, which knees, when the davits are brought into the position shown in Fig. 2, arrest their further movement outward; continued feeding out of the fall-ropes then causes the boat to be lowered away from the davits. Thus it will be seen that the davits can be swung out, the outside chocks displaced and the boat lowered all by the operation of the fall-ropes. To bring the boat again into position upon the davits the action is reversed, the pinion E^2 of the windlass is brought into mesh with the wheel E^1 and the windlass operated to wind the fall-ropes in. This will first have the effect of raising the boat to the level of the davits and then further operation will draw the davits in until the boat is brought against the inside chocks F and against a plate B^4 carried by the stanchion B. Further progress is then arrested and the apparatus is in such position that the center of gravity is on the outer side of the hinges A^1. During the inward movement of the davits and after the boat has assumed a position more or less vertically below the connecting member A^4 of the davits, the extensions F^2 of the outside chocks F^1 are brought against the stops or stanchions G so that the further inward movement of the davits causes the chocks to be swung around into proper position for supporting the boat. When the parts have been brought into the position shown in Fig. 1, they can be locked by any convenient means if desired so that the fall-ropes can be released allowing the boat to rest entirely upon the chocks F, F^1. Such a locking device may take the form of a hooked or other connection between the stanchion B and the connecting members A^3 of the davits, and the davits being thus held against outward movement, in their turn hold the outer chocks F^1 against outward movement so that a rigid support is provided for the boat. The plate B^4 has an overhanging lip at its upper end which serves to properly level the boat as it swings into position against the chocks F.

It will be appreciated that this invention may be variously modified in detail without departing from the spirit of the invention, for example, instead of gravity being relied upon to give an outward start to the apparatus when the fall-tackle is released, or in addition thereto, springs may be employed which aways tend to force the davits outward.

It will be observed that as the fall-ropes D are connected to the windlass, the blocks A^5 and B^3 can be single pulley-blocks instead of multiple pulley-blocks such as are usually employed, as the windlass constitutes the power-multiplying device so that the blocks do not have to serve this purpose but merely constitute running pulleys for giving the necessary lead to the fall-ropes.

What I claim as my invention and desire to secure by Letters Patent is:—

1. In ships' davits the combination of a swinging frame constituting the davits proper, a single stanchion centrally disposed relatively to the length of the frame, and fall-ropes which extend from the boat and over pulleys on the stanchion, which fall-ropes constitute the sole operating means for the davits and boat and which stanchion constitutes the sole stop for the boat and davits, substantially as set forth.

2. In ships' davits the combination of a swinging frame constituting the davits proper, a single stanchion centrally disposed relatively to the length of the frame, fall ropes which extend from the boat and over pulleys on the stanchion, which fall-ropes constitute the sole operating means for the davits and boat and which stanchion constitutes the sole stop for the boat and davits, and a plate (B^4) carried by the stanchion and constituting a chock for the boat to rest against, substantially as set forth.

3. In ships' davits the combination of a swinging frame constituting the davits proper, a single stanchion centrally disposed relatively to the length of the frame, fall-ropes which extend from the boat and over pulleys on the stanchion, which fall-ropes constitute the sole operating means for the davits and boat and which stanchion constitutes the sole stop for the boat and davits, and a plate (B^4) carried by the stanchion, shaped as a chock to arrest the boat when in the in-board position and having a lip that overhangs the gunwale of the boat when in the inboard position, substantially as set forth.

4. In ships' davits the combination of a swinging frame constituting the davits proper, a single stanchion centrally disposed relatively to the length of the frame, fall-ropes which extend from the boat and over pulleys on the stanchion, which fall-ropes constitute the sole operating means for the davits and boat and which stanchion constitute the sole stop for the boat and davits, outer chocks movably mounted on the frame constituting the davits and means operatively connecting the chocks with members that are stationary relatively to the stanchion so that as the davits are swung into the inboard position the chocks are automatically swung into place on the outboard side of the boat and vice versa, substantially as set forth.

5. In ships' davits the combination of a swinging frame constituting the davits proper, a single stanchion centrally disposed relatively to the length of the frame, fall-ropes which extend from the boat and over

pulleys on the stanchion, which fall-ropes constitute the sole operating means for the davits and boat and which stanchion constitutes the sole stop for the boat and davits, outer chocks movably mounted on the frame constituting the davits, means operatively connecting the chocks with members that are stationary relatively to the stanchion so that as the davits are swung into the inboard position the chocks are automatically swung into place on the outboard side of the boat and vice versa, and inner chocks carried by the davits and movable therewith, substantially as set forth.

6. In ships' davits the combination of a swinging frame constituting the davits proper, a single stanchion centrally disposed relatively to the length of the frame, fall-ropes which extend from the boat and over pulleys on the stanchion, which fall-ropes constitute the sole operating means for the davits and boat and which stanchion constitutes the sole stop for the boat and davits, outer chocks (F^1) pivoted to the frame constituting the davits and having extensions (F^2) and stop-members (G) which are stationary relatively to the stanchion and lie in the path of the extensions of the chocks so that as the davits are swung into the inboard position the extensions are brought against the stop-members and the chocks swung into and held in operative position, substantially as set forth.

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

PATRICK RAMSAY ARNOTT.

Witnesses:

O. J. WORTH,

C. P. LIDDON.