

PUBLISHED
APRIL 27, 1943.

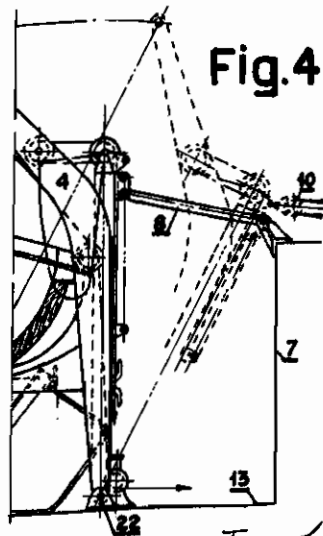
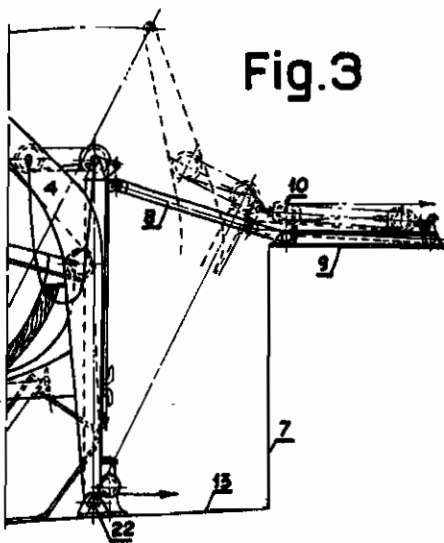
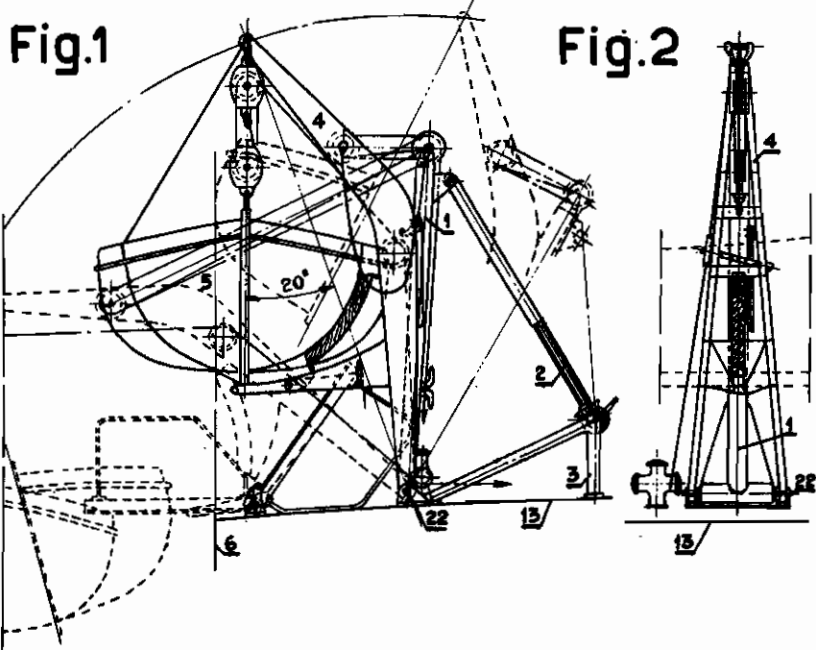
A. PAMPINELLA
TIPPING GRAVITY DAVITS FOR LIFEBOATS

Serial No.
418,094

BY A. P. C

Filed Nov. 6, 1941

5 Sheets—Sheet 1



Inventor,
A. Pampinella
By: *Glascock Downing & Hold*
ATTYS.

Fig.7

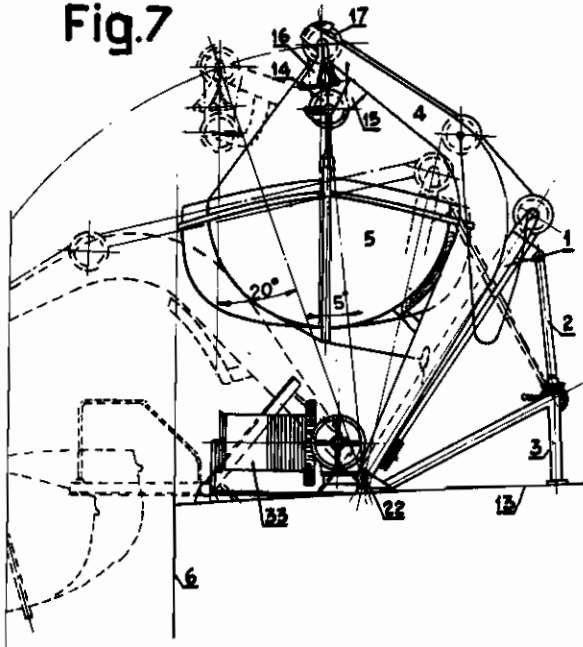


Fig.8

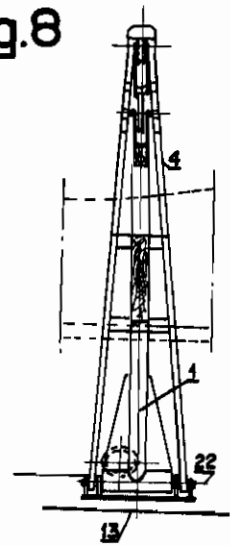


Fig.9

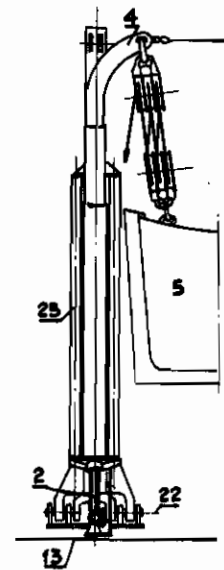
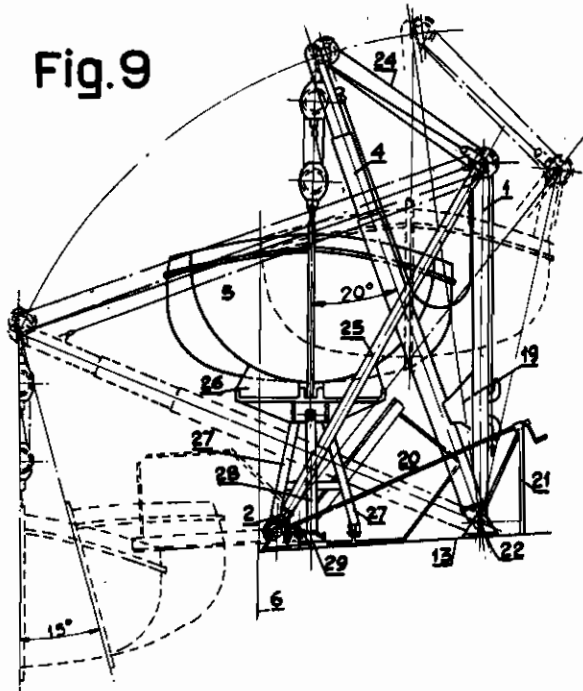


Fig.10

Inventor,
A. Pampinella
By: Glascock, Downing & Seibell
Attorneys.

PUBLISHED
APRIL 27, 1943.
BY A. P. C.

A. PAMPINELLA
TIPPING GRAVITY DAVITS FOR LIFEBOATS
Filed Nov. 6, 1941

Serial No.
418,094
5 Sheets-Sheet 4

Fig.11

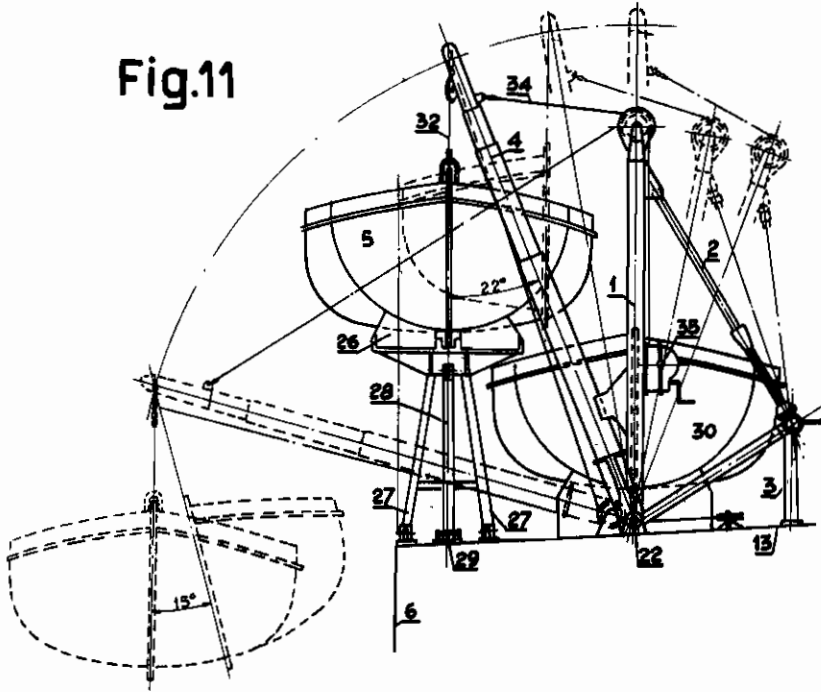
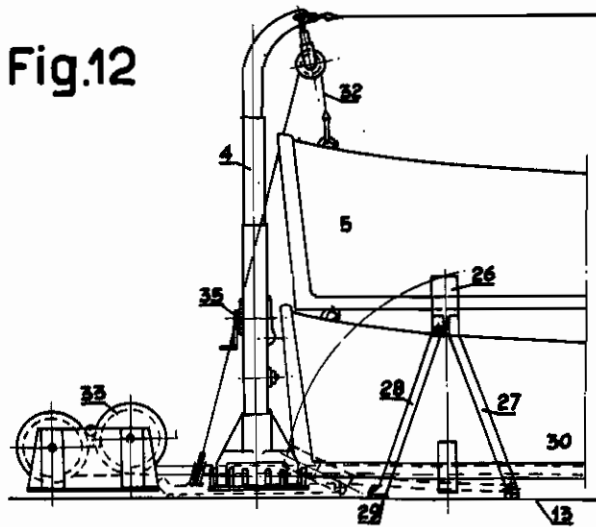


Fig.12



Inventor,
A. Pampinella
By: Glasgow Downing & Selbold

PUBLISHED
APRIL 27, 1943.
BY A. P. C.

A. PAMPINELLA
TIPPING GRAVITY DAVITS FOR LIFEBOATS
Filed Nov. 6, 1941

Serial No.
418,094
5 Sheets-Sheet 5

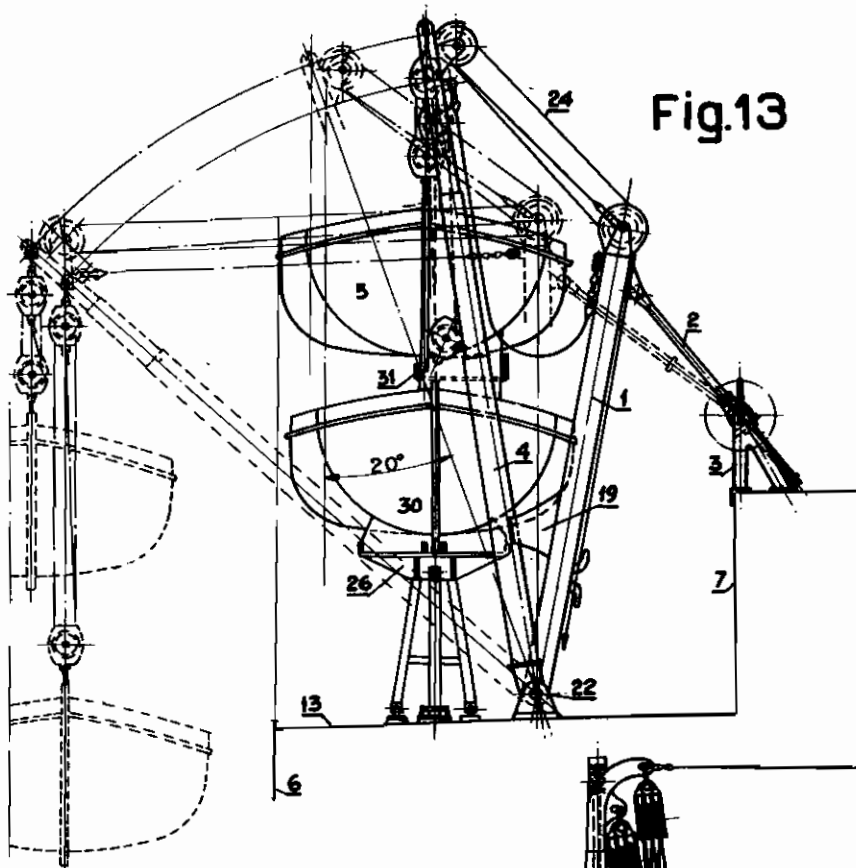
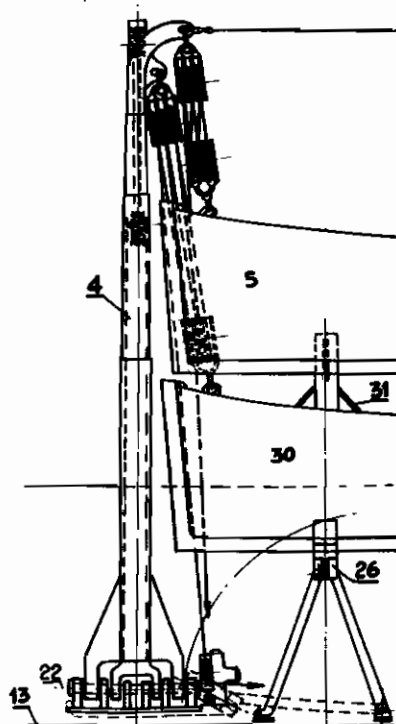


Fig.13

Fig.14



Inventor,
A. Pampinella
By Mascock Downing & DeBellis

ALIEN PROPERTY CUSTODIAN

TIPPING GRAVITY DAVITS FOR LIFEBOATS

Antonino Pampinella, Rome, Italy; vested in the
the Alien Property Custodian

Application filed November 6, 1941

This invention relates to certain improvements in the tipping gravity device for lifeboats as disclosed in the U. S. Patent application No. 298706 dated the October 9, 1939.

One of the objects of this invention is to dispense with the front and back guy ropes for the auxiliary beam of each of the elementary davits forming the device, also to dispense with the small removable tackle serving to perform the inward tipping movement of the beam and davit together connected.

Another object of these improvements is a better support of the auxiliary beams when the companion of the ship is very near the device.

A further object of the invention is a more suitable shape of the davit proper in the single pivot types, both in the ordinary tackle and in the winch embodiment, said shape having been worked out in such a way as to cause the boat, when fully withdrawn from the ship's side, to be kept in a straight position and not in an inclined position, in its normal trim.

Still another object of the invention is a greater reliability on davit as to its tipping movement with the boat suspended, in the winch type.

In addition to the main objects as hereinbefore described, this invention aims also to affording a lighter davit device, both in the single boat types and in the types for two equal and superposed boats.

In the annexed drawings:

Fig. 1 shows a side view of a supporting screw system controlling the auxiliary beam of each elementary davit;

Fig. 2 shows a front view of the supporting system of Fig. 1;

Fig. 3 shows a side view of a device adapted to give the auxiliary beam a better support when a companion is very near the device;

Fig. 4 shows a side view of a different embodiment of the device of Fig. 3;

Fig. 5 shows a side view of a new shape of the davit proper, as well as a different arrangement of the supporting screw system of Fig. 1;

Fig. 6 shows a side view of an arrangement on the head of the elementary davit, adapted to afford more reliability as to the tipping movement of said davit device;

Fig. 7 shows a side view of the device of Fig. 6, together with the new elementary davit shape as shown in Fig. 5;

Fig. 8 shows a front view of the arrangement of Fig. 7;

Fig. 9 shows a side view of a davit according to the invention formed by tubes located outside

the ends of the boat, instead of being formed by section irons and placed laterally of the boat as shown in the previous figures;

Fig. 10 shows a front view of the arrangement of Fig. 9;

Fig. 11 shows a side view of an arrangement similar to the arrangement shown in Fig. 9, but adapted for two equal and superposed boats, one of the latter being gravity operated whilst the other requires an initial lifting;

Fig. 12 shows a front view of the arrangement of Fig. 11;

Fig. 13 shows a side view of a different embodiment of the arrangement of Fig. 11, both of the boats being gravity operated;

Fig. 14 shows a front view of the arrangement of Fig. 13.

Only the parts involving an improvement or a different embodiment in respect of the types of davit forming the subject matter of said Patent application will be hereinafter described, reference being made to that Patent application for the remainder.

It will be understood that the kind, shape and arrangement of the parts which make up the devices according to the improvements herein disclosed may largely be varied without departing from the scope of this invention, provided that the essential features, as set forth in this specification and appended claims, are not altered.

The first of the improvements in question consists in that the auxiliary beam 1 of each of the two elementary davits forming the device (Fig. 1) is supported by the screw system which is mounted on a special trestle 3. This screw system serves at a time both as a tension and compression member for the beam, and the position of the latter is controlled by screwing or unscrewing the screw. In the embodiment shown in Fig. 1 the normal trim of the davit 4, in which the boat is suspended and partially protrudes from the ship's side 6, is kept when the screw is fully unscrewed, the latter on the contrary being screwed on to accomplish the inboard tipping movement of beam and davit together connected and then to said boat in (dotted lines). The same applies to the embodiments shown in Figs. 9 and 11, and the reverse takes place with the embodiments of Figs. 5, 7, and 13, according to which embodiment the boat are fully withdrawn from the ship's side in their normal trim. In the latter instance, the screw requires to be unscrewed only when the ship is unfavourably listed. The embodiment shown in Figs. 9, 11, and

13 will be dealt with more particularly herein-after. It will be apparent, therefore, that the use of guy steel cables for the auxiliary beam, as set forth in the principal Patent application is no longer required when making recourse to the support screw system as hereinbefore disclosed, so that the first of the objects of the invention, as described in the introductory paragraphs of this specification, is fully achieved.

A second improvement, in the embodiments in which the boat partially protrudes from the ship's side, consists in substituting simple arms 8 (Figs. 3 and 4) for said screw system, when the companion 7 is near the device. These arms 8 are placed on the back of the beam of which they form a support, and they are also movable: if the roof of the companion is not encumbered, each movable arm may be made to glide in a special rail 9 (Fig. 3) when the davit goes in-board again. The rail 9 is arranged on the roof of the companion and is furnished with special stops which permit the boat to be kept either in its normal trim, in which it projects from the ship's side, or in the trim in which it is withdrawn from the ship's side as desired. If however the roof of the companion is not free, the movable arm will be disengaged and bent downwards during the withdrawing operation, and a special blocking member, fixed on the edge of the companion, will limit withdrawing movement, while stopping the beam (Fig. 4). In both instances the withdrawing movement of the davit beam unit will be accomplished by means of a small removable tackle 10 (Figs. 3 and 4).

A further improvement according to this invention, with regard to the types in which, as in the previous ones, the beam and davit are both pivoted on the same pivot 22, relates to the shape of davit 4 (Fig. 5), which has been made sufficiently curved, so that the davit beam unit keeps bending inboard as in the withdrawn boat instance of Fig. 1 (dotted lines). It follows that the boat, unlike said instance, keeps straight and fully withdrawn from the ship's side 6; the boat may further be gravity tipped outboard when the vessel is on even keel, as gravity slightly prevails in this case, viz. by 5 degrees on the suspension point of davit head with respect to the rotation axis of davit. Should the ship be unfavourably listed, it will be necessary to actuate the screw system 2; this system therefore cannot be dispensed with to carry out the improvements in question.

From Fig. 5 it will also be seen that when a companion 7 is available, the trestle 3 of Fig. 1 may be dispensed with, and the companion itself may serve as a support for the screw system. Moreover, the operating crank of the screw system may be made adapted to be controlled from the deck 13 through suitable transmission members.

Another improvement according to this invention relates to the winch types of davit in which the boat is suspended from a two line steel cable tackle. To ensure the outboard tipping movement of davit in the most effective way while preventing any possibility for a backward movement of same during operation, a hook 15 has been provided, which is integral with the davit head and supports the movable pulley 14 (Fig. 6) up to a certain extent of tipping movement of the davit. This hook is in the form of a small fork, to comprehend said movable pulley 14 between its two branches while supporting same at both ends of its rotation pivot. A special tri-

angular device 16 will engage said movable pulley 14 when the latter will go up again; this device comprises a pair of checks having a triangular shape which at their upper vertex are pivoted on the pivot of the fixed pulley 17 and whose lower sides, viz. the sides opposite to said vertex, are connected together by three rollers between which the two lines of the tackle find their way.

A further improvement has been brought about by placing the two elementary davits of the pair outside the ends of the boat 5 (Figs. 9 and 10). In this case the davit 4 (Fig. 9) is formed by straight tubes which are preferably reduced at their end. As in the previous instances, the beam 1 is still formed by tubes, and is provided with an engagement bracket 18 to keep a proper inclination of davit with respect to the beam.

The davits according to the improvements in question are fitted with gravity saddles 26 (Fig. 9) to prevent an initial rising of the boat. Two of such saddles have been provided, in order to keep the boat properly raised at its ends. Each of them comprises a saddle proper 26 and a forked foot 27 the two branches of which are integral with the saddle at the top and are pivotally connected to the deck 13 (Fig. 12) at their lower end, while a second simple foot 28 (Figs. 9 and 12), which is pivoted under the saddle, rests on deck, where it is stopped by a special escaping stop 29 easy to take away. Both the forked and the simple foot are properly kept apart with respect to the vertical direction passing through the centre of the saddle, so that on removing the stop 29 the saddle will fall down on deck owing to its own weight and will leave the boat free to accomplish its gravity tipping movement.

Still an improvement according to this invention relates to the operation of two equal and superposed boats by means of davits formed by tubes of the kind just described. Two embodiments of this improvement will hereinafter be set forth. The first of them is shown in Figs. 11 and 12; there keeps ready to be gravity lowered the only upper boat 5, corresponding to the boat of the single boat type of davit, while the lower boat 30 has first to be raised from the deck on which it rests in its normal trim. The second embodiment is shown in Figs. 13 and 14, and according to this embodiment both of the boats keep ready to accomplish a gravity outboard swinging movement simultaneously: the lower boat will rest on the gravity saddles 26 already described, and the upper one will rest on the half saddles 31, which are supported by said boat and are easily taken away on the falling down of the gravity ones. Each boat is fitted with its own tackles which serve to lower the boats to the sea successively, viz. the lower one 30 first, and the upper 4 afterwards (Fig. 13, dotted lines).

In the arrangement shown in Figs. 11 and 12 it will be seen that the pulling rope 32 may consist of a single steel cable in connection with an operating winch 33. In this case, the upper boat 5 having been lowered, the pulling rope is recovered to engage and then to hoist the lower boat 30, so that the latter may further swing outboard by gravity and then be lowered to the sea. In said figures it will also be observed that the tipping movement is controlled by a single line steel cable 34 (Fig. 11) operated by a small windlass 35 fixed to the beam; the length of this cable is so proportioned that the latter may also serve as a guy rope for the davit when this has accomplished its tipping movement. Two drums on the control winch 33 (Fig. 12) may be sub-

stituted for the two windlasses on the beams of the pair, the winch being provided with a special interlocking and unlocking member; said windlasses may also be replaced by the usual tipping tackles 24 (Figs. 9 and 13), the single line steel cables for operating the boat being however unchanged.

The supporting screw system 2 may be located either before the beam, as shown in Figs. 9 and 10, or behind it, as shown in Figs. 11 and 13. The first arrangement should be preferred whenever it is not wanted to encumber the deck, and a companion is not available; in this case a special transmission rod 20, fitted with a hand crank and supported by a trestle 21, will provide for a distance control of the screw system.

The screw system, when arranged before the beam, requires a forked support 20 (Figs. 9 and 10), between the two branches of which the davit 4 may swing. The upper ends of these branches

stay the beam 1 (Fig. 13) on the pivot of the pulleys on the beam head, and at the lower junction of the fork the screw system 2 proper is arranged for remote control in the same way as in the previous instance.

The operation of the tube davits is quite similar to the operation of the single pivoted davits formed by section irons. The arrangements just described with reference to Figs. 11 to 14, in which the two elementary tube davits are placed outside the ends of the boat, allow for a greater lightness of the whole of the device for two boats, as compared with the section davits for two boats which are disclosed in said Patent application.

It will be seen that all the objects of the invention, which have been described in the introductory paragraphs of this specification, are fully achieved through the different improvements as hereinbefore disclosed.

ANTONINO PAMPINELLA.