Sept. 18, 1923. 1,468,327

G. RINESI

CONSTRUCTION OF OPEN LIFEBOATS WITH PARTIALLY COLLAPSIBLE SIDES

Filed May 28. 1921 2 Sheets-Sheet 1

Fig. 1

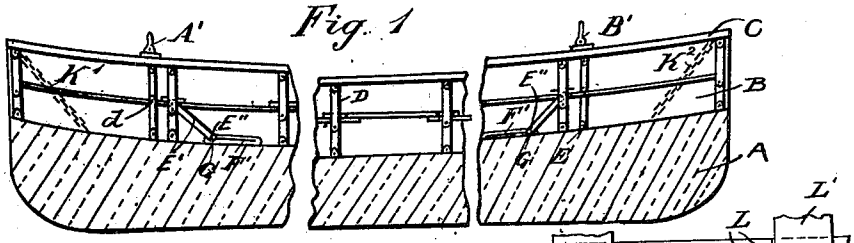


Fig. 2

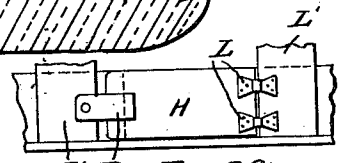


Fig. 2a

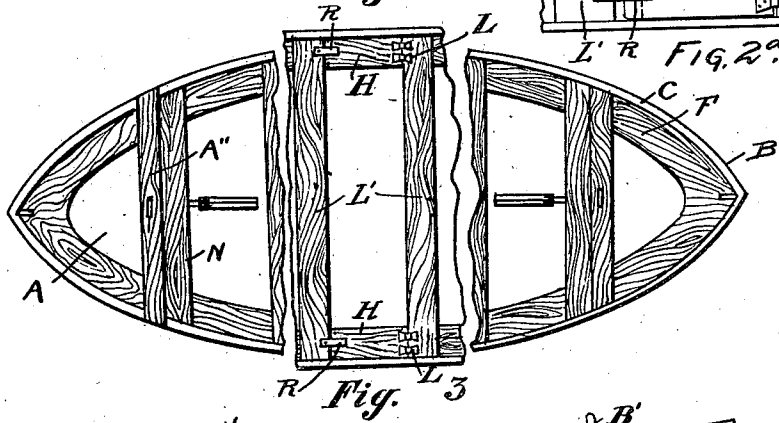


Fig. 3

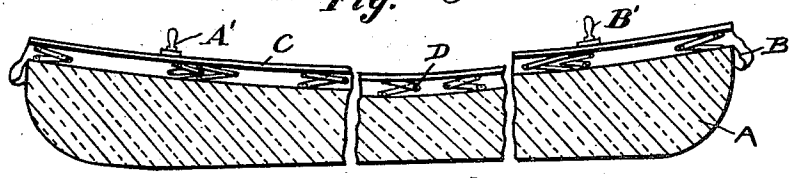
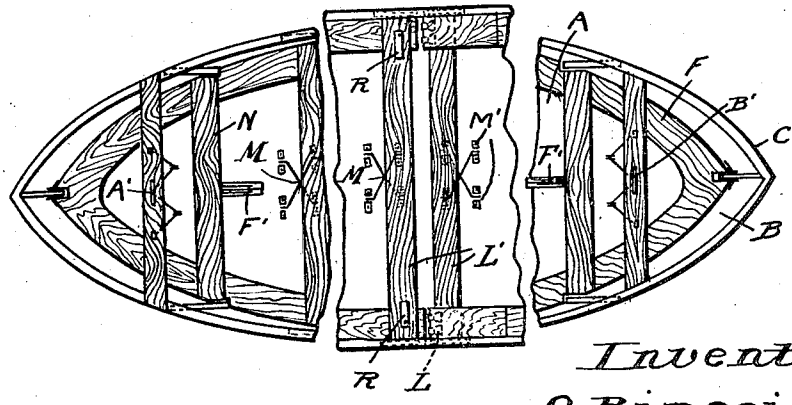


Fig. 4



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Fig. 5

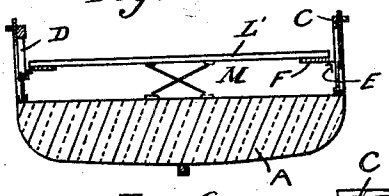


Fig. 6

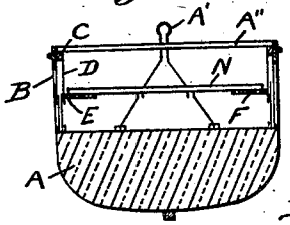


Fig. 8

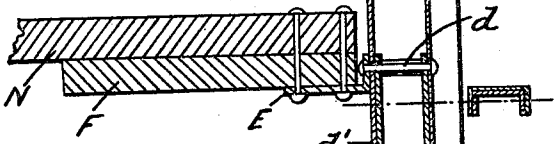


Fig. 7

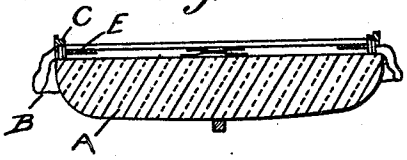
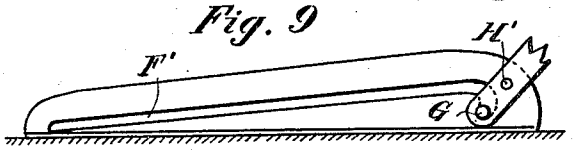


Fig. 9



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UNITED STATES PATENT OFFICE.

GIOVANNI RINESI, OF GENOA, ITALY.

CONSTRUCTION OF OPEN LIFEBOATS WITH PARTIALLY-COLLAPSIBLE SIDES.

Application filed May 28, 1921. Serial No. 473,301.

To all whom it may concern:

Be it known that I, GIOVANNI RINESI, a subject of the King of Italy, and residing at Genoa, Italy, have invented certain new and useful Improvements in or Relating to the Construction of Open Lifeboats with Partially-Collapsible Sides, of which the following is a specification.

This invention relates to improvements in life boats of the type having collapsible sides and comprises means for rapidly raising or lowering the collapsible portions of the boats. This type differs from the existing types in two particulars, the first of which consists in that no preliminary manual operation is required for moving the collapsible portions from the folded to the extended or set-up position as the collapsible portions are automatically moved to an extended position as soon as the tackles of the main ship are brought into tension, while the second particular regards special hinges fitted medially of the length of the stanchions which act to hold the bulwarks in their extended position. The invention has for an additional object the provision of automatic latching reinforcements or bracing means in combination with longitudinally foldable stanchions.

Other objects as well as the nature, characteristics and scope of the invention will be more readily apparent in the following description taken in connection with the accompanying drawing and pointed out in the claims forming a part of this specification.

The invention is clearly illustrated in the accompanying drawings, in which:—

Figure 1 is a longitudinal section of the improved boat with the bulwarks in an extended or set-up position.

Fig. 2 is a plan view of the boat showing the bulwarks in the same position.

Fig. 2^a is an enlarged fragmentary plan detail of one of the supplementary side pieces.

Fig. 3 is a longitudinal sectional view of the boat with the collapsible portions of the bulwarks in a folded position.

Fig. 4 is a plan view of the boat with the bulwarks collapsed.

Fig. 5 is a transverse section amidship with the bulwarks extended.

Fig. 6 is a cross section through the boat showing the lifting apparatus in elevation.

Fig. 7 is a transverse section amidship with the bulwarks collapsed.

Fig. 8 is an enlarged fragmentary vertical sectional detail of one of the hinged stanchions or struts for holding the bulwarks in an extended position.

Fig. 9 is an enlarged elevational detail of the guide into which slides the end of the inclined stop bar for preventing collapsing of the stanchions and maintaining the bulwarks in an extended position when the tackles are released.

Referring now, more particularly, to the accompanying drawings there is provided a boat having a solid lower portion A and a collapsible upper portion or bulwarks B. The bulwarks in this instance may be formed of suitable flexible material and secured in any suitable manner to the upper edge of the lower solid portion or structure while the upper portion is connected with a gunwale C.

In order that the bulwarks may be maintained in an extended position or allowed to lie in a flattened position, improved means is employed for accomplishing such purpose and in this instance, preferably consisting of collapsible stanchions or struts D. It is preferred that the stanchions be formed in two sections of channel-shape formation in cross section pivoted together as at d above the extended portion d' of the upper strut which receives the lower strut as indicated in Fig. 8 and forms a suitable brace to reinforce the stanchions at this point, while the outer ends of the stanchions are pivoted as at d'' respectively to the gunwale and to the lower solid structure. It is to be particularly observed that the pivotal connection d is such that when folded the stanchion sections move longitudinally of the length of the boat. In fact it is preferred that the fore and aft stanchion move longitudinally and inwardly so that when folded the boat will assume the position indicated in Fig. 3.

In order to provide for the seating of persons in the boat, angle brackets E are pivotally associated with the bolts d and in turn have secured thereto the fore and aft sections of the substantially U-shaped side benches F. In order to provide for the collapsing of these side benches with the boat, supplementary side pieces H are pivotally connected as by hinges L to the adjacent ends of one of the medially cross seats L′ connected to the side benches, while these supplementary side pieces are releasably retained in engagement with the free ends of

the side portions of the other side bench by keepers R which in turn are pivoted to the transverse seat carried in turn by the said last mentioned side seat, this arrangement being clearly indicated in Figs. 2 and 2ª. When it is desired to collapse the boat it is first necessary to move the pivoted keepers R so that the supplementary pieces H may be swung upwardly and rearwardly to the position shown in Fig. 4 so that in consequence, the integral U-shaped side benches may move toward each other with the folding of the stanchions as is apparent.

Fore and aft transverse benches N are carried by the side benches, while coacting with the same is improved means for assisting in the preventing of accidental collapsing of the boat. In reducing this feature of the invention to practice, braces E′ have their upper ends pivotally associated with the lower surface of the transverse benches N while the lower ends carry pins E″ and these pins operate through guides F′ secured on the upper surface of the lower solid structure A. Each guide consists of a base portion with an upright longitudinally disposed web portion, the latter being provided with an inclined slot F′, the upper end of which is curved downwardly as indicated at G to form a stop seat for the pin E″. The operation is simultaneous with the raising or extending of the collapsible side portions B. When these side portions are raised in a manner that will be hereinafter described, inasmuch as the braces E′ are positively connected to the transverse seats N, during the extending movement, the pins E″ slide through the slots F′ and finally engage the seats G at which point they are automatically latched, as indicated in Figs. 1 and 9. If desired, stop locking pins H′ may be removably arranged through alining openings in the web portion of the guide and in the adjacent brace E′.

In order to further prevent the accidental collapsing of the boat, cross braces M are arranged beneath the transverse seats L′ and the upper surface of the solid structure A, the angle ends M′ of said braces being arranged between keepers M″ respectively mounted on the outer surface of the seats L′ and the upper surface of the solid lower structure A as indicated in Figs. 4 and 5.

Suitable means may be employed for supporting the boat from davits (not shown), such means also acting in conjunction with the weight of the lower solid structure A in automatically extending the collapsible or folding portion B. In the present instance, this means may be said to consist of hooks A′ and B′ arranged through suitable apertures in transverse bars A″, B″ carried in turn by the gunwale, these hooks being connected with the upper surface of the solid structure through the instrumentality of foldable links as indicated. The mode of operation of the present invention may be reviewed as follows: Assuming that the parts have been assembled in the manner described and as indicated in the drawings, upon the swinging of the boat outwardly from the deck of the main ship, assuming that the same is suspended from the hooks A′—B′, the weight of the lower solid structure acts to extend the several stanchions D and inasmuch as these stanchions are all connected with the side benches, the latter will move to assume the position indicated in Fig. 1. During the extending of the side portions B and the stanchions D carrying the side benches, inasmuch as the cross seats N are carried by the latter and have connection with the braces E′, the braces are extended to assume the position indicated in Figs. 1 to 9. The supplementary side pieces or benches H are swung to assume the position indicated in Figs. 2 and 4 and subsequently the catches or pawls R are moved to latch these supplementary pieces in the position indicated. If desired, the cross braces M may be applied and these in addition to facilitating the maintenance of the boat in extended position, also act to prevent transverse movement thereof. Stop chains K^1 and K^2 are connected respectively at the bow and stern and with the solid structure to prevent accidental longitudinal movement of the parts. In collapsing the boat, it is only necessary to reverse the operation.

It is believed in view of the foregoing that a further detail description of the operation of the invention is entirely unnecessary, likewise it is believed that the advantages of the invention will be readily apparent.

I claim as my invention:

1. A boat of the character described including a lower solid structure and a collapsible upper portion, a gunwale carried by the upper portion, longitudinally foldable stanchions between the gunwale and the lower solid structure, brackets mounted at the folding points of the stanchions, substantially U-shaped side benches carried by the brackets, transverse seats carried at the adjacent ends of the U-shaped side benches and also by the side benches near the bow and stern of the boat, supplementary side pieces forming benches operatively mounted between the adjacent ends of the U-shaped side benches, means for removably latching the supplementary side benches when in set-up position, guides carried by the upper surface of the lower structure, braces pivoted to the transverse benches near the bow and stern operating in the guides and adapted to be latched in the guides upon the extending of the collapsible upper portion of the boat, and means for removably locking the braces in their latched positions.

2. An arrangement as claimed in claim 1, wherein transverse bars are arranged on the gunwale, suspending hooks operably arranged through the bars and operatively connected with the upper surface of the lower structure for facilitating the automatic extending of the seats.

3. An arrangement as claimed in claim 1, wherein the stanchions each consist of a pair of sections of U-shaped channel formation in cross section, means for pivoting one of the sections to lie in nesting relation with the other section at a point slightly remote from its free end whereby the portion between the pivot pin and the free end will act as a brace to prevent collapsing of the sections.

In testimony whereof I have hereunto signed my name in the presence of two witnesses.

GIOVANNI RINESI.

Witnesses:
GUZETSTUN DRIN.
AUGUSTO DE MARTIN.