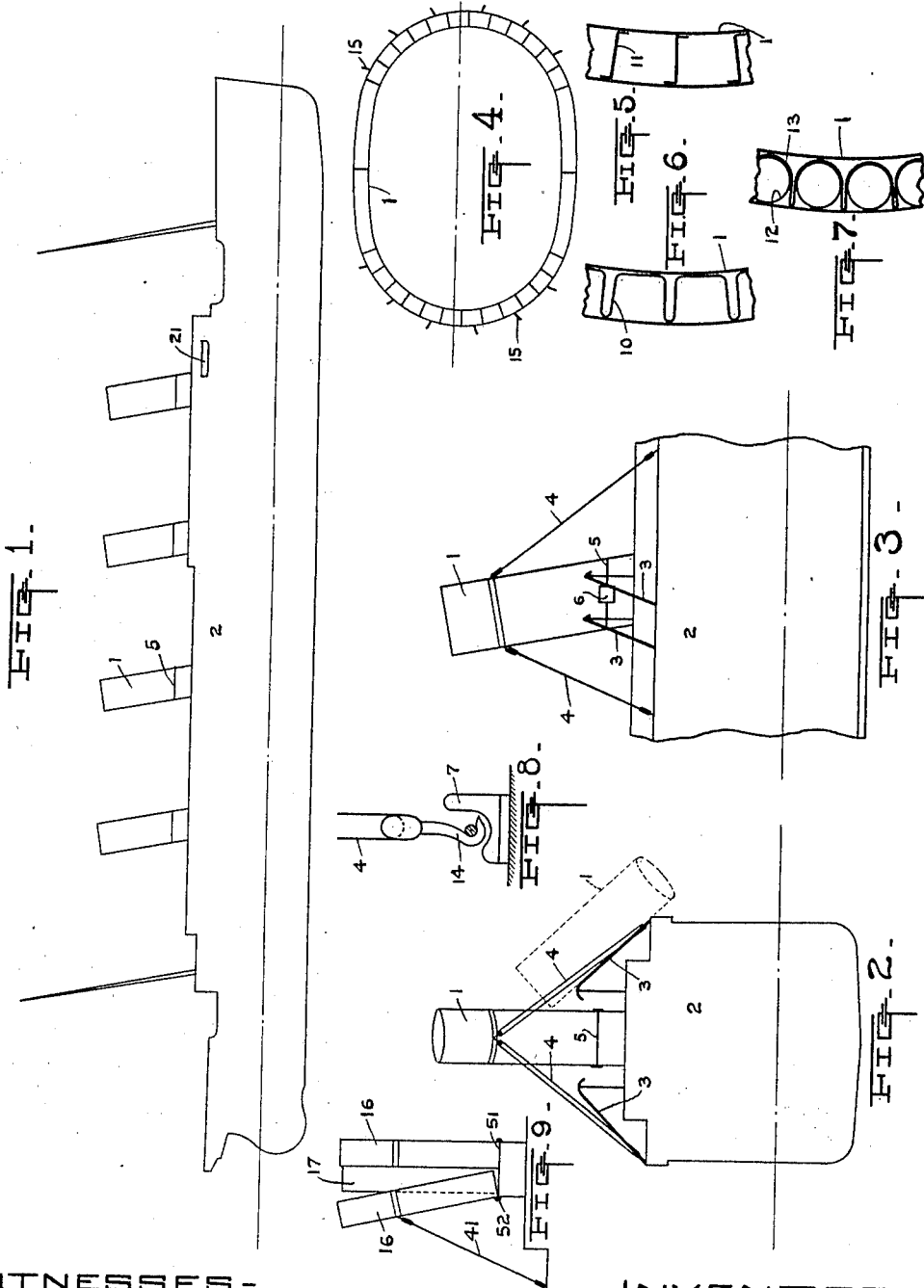


1,061,209.

Patented May 6, 1913.



WITNESSES -

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# UNITED STATES PATENT OFFICE.

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LIFE-SAVING DEVICE.

1,061,209.

Specification of Letters Patent.

Patented May 6, 1913.

Application filed April 22, 1912. Serial No. 692,512.

To all whom it may concern:

Be it known that I, WILLIAM MONROE WHITE, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Life-Saving Devices, of which the following is a specification.

This invention relates to life saving device for use on ship board.

The object of the invention is to provide a life saving device which will be ample in capacity for the full complement of crew and passengers and yet not take up any more than the usual amount of space occupied by the present boat equipment.

Briefly stated the invention comprises a detachable buoyant stack of a ship and means for launching same over the side of the ship into the sea. The stack is made buoyant by providing air tight compartments therein. Ship stacks usually consist of an inner shell forming the smoke pipe of the steam boiler furnace, and an outer shell surrounding said smoke stack and spaced therefrom to form a non-conducting air jacket. It is proposed that such a stack be made detachable at or near the surface of the deck and that air tight compartments in the form of cells be attached to the outer shell between the smoke pipe proper and the outer shell. These air tight compartments may however, be formed in the space between the two shells in any convenient manner. As a modification it is proposed that the stack be made up of the inner shell or smoke pipe and the outer shell vertically divided into halves, each of said halves having attached thereto, as before, a plurality of cells forming air tight compartments. In either case, this detachable section of the stack as a whole, or the detachable section of the stack as an outer half, is capable of being tipped over, preferably so as to fall onto launching ways which will deliver same over the side of the ship into the sea. At the same time it is proposed to have automatically detachable the tackle used for tipping the stack section.

The recent disaster in the loss of the steamship *Titanic* April 15, 1912, accompanied by the enormous loss of human life indicates very clearly the insufficiency in the capacity of the life saving devices with which that ship was equipped, and the necessity for more adequate protection for the entire num-

ber of persons on board. In presenting this invention, this recent disaster is clearly in mind and a comparison is made to the life saving devices with which such ship was equipped and their capacity as contra-distinguished to the capacity of the life saving device, the subject of this invention, when applied to a ship of like size.

The stacks of the *Titanic* were four in number and each was 24 feet by 18 feet in outside diameter, and 70 feet long above deck. The inner and outer shells of the stack were spaced apart about 18 inches. With these dimensions it is found upon computation that the buoyant effort of each of stacks of like size when filled with the air tight compartments, would be sufficient to sustain 700 people. Four such stacks would therefore sustain 2,800 people, which would be more than sufficient to take care of the maximum number of people intended at any time to be aboard a ship of like size. This would be entirely additional to the ordinary life boat protection that was provided on that particular ship, this having been 16 regular life boats of a capacity of 65 each, besides a few collapsible boats and a few rafts.

This invention is illustrated in one embodiment in the accompanying drawing, in which,

Figure 1 is a side elevation in outline of a vessel equipped with the invention and to scale of the ill-fated *Titanic* to afford a comparison therewith. Fig. 2 is a cross section amidships, also in outline, of a ship with the present invention applied thereto. Fig. 3 is an enlarged fragmentary side view amidships, of the same ship with the invention applied thereto. Fig. 4 is an end view of the stack showing its relation to the water line when afloat. Fig. 5 is a fragmentary cross section of the stack showing one mode of construction of the air tight compartments. Figs. 6 and 7 are similar views of modifications. Fig. 8 is a detailed view of the automatic means for releasing the tipping tackle from its connection to near the ship side; and Fig. 9 is a front elevation of a modification in which the stack sections are produced by vertically dividing the stack.

Referring to the drawing, the ship 2 is provided with four stacks 1, and has 16 life boats 21, of which but one is indicated in Fig. 1.

Referring more particularly to Figs. 2,

3 and 4, the stack 1 is detachable along a line 5 near the deck surface, and thus is detachable. It is held in place at this line 5 by means of a separable hinge 6 on each side, so that the part that is detachable may be tipped over and bodily separated from the remainder of the stack. Tackle 4 is provided which is attached to the front and rear part of the upper end of the stack 1, and to the sides of the ship. This attachment of the tackle 4 to a point near the sides of the ship is detachable by a means more clearly shown in Fig. 8. Launching ways 3 are provided extending to a point near the side of the ship and on either side of each of the stacks 1. The attachment of the tackle to the side of the ship, more clearly shown in Fig. 8, consists of a hook 14 extending from the lower tackle block and taking over an eye fixed adjacent a fulcrum piece 7 securely fastened to the ship's deck near the side thereof.

Referring more particularly to Figs. 4, 5, 6 and 7, the outer and inner shells of the stack, more clearly shown in Fig. 4, are separated by a space which is formed into or occupied by air tight compartments of multi-cellular construction. These are more particularly shown in Fig. 4 to be distributed into two groups, each of which is located along each of the two more flexed sides of the stack 1, which in its ordinary construction is flattened with its major axis extending parallel to the length of the ship. In Fig. 5, these multi-cellular compartments are formed by transverse connecting strips 11 fastened at their edges to the inner and outer shells of the stack 1. In Fig. 6 they are formed by bending strips 10 to a channel section and fastening same along their edges to the outer shell of the stack 1. In Fig. 7 these are formed by individual cylindrical cells 12, each of which is fastened to the outer shell of the stack 1 by means of strips of metal 13. In all three of these forms of multi-cellular construction of air tight compartments, the cells have their ends closed in any convenient manner and are formed of any convenient length. The particular object of the constructions shown in Figs. 6 and 7, is to avoid the corrosion that always takes place rapidly in parts directly subjected to furnace gases.

The modification shown in Fig. 9 contemplates the formation of the stack into longitudinal halves 16, 16, surrounding the smoke pipe 17 proper. These halves 16 are separable from each other, from the smoke pipe 17 and from the remainder of the stack, and have separable hinges 52, as before, at the line 51 adjacent the ship deck. The tackle 41 for tipping the halves 16 of the stack is in all respects similar to the tackle 4 of the other construction.

In operation, the stack 1 is tipped by

means of the tackle 4, to either side of the ship as may be more desirable, and in falling drops onto the ways 3 as more particularly shown in dotted lines in Fig. 2. It separates from the remainder of the stack at the line 5 by means of the separable hinges 6. The stack 1 is then launched over the side of the ship into the sea, sliding along the ways 3 by gravity, and as it goes over the side of the ship the tackle 4 swings the hook 14 against the fulcrum 7 and automatically detaches the hook 14 from its fastening eye, thus detaching the tackle 4 from the ship. A similar detachable connection may be used between the tackle 4 and the stack 1, if found desirable, but it may be more useful to have the tackle 4 remain connected with the stack 1 after the same has been launched.

The operation of launching the sections 16 of the modification shown in Fig. 9 is entirely similar to that just described, and it has been deemed unnecessary to show the launching ways in said figure. These halves 16 will float with their concave sides either up or down.

In each of the constructions shown numerous hand-holes 15 are provided for the convenience of survivors, although these are shown only in Fig. 4. Also in each of the constructions the multi-cellular air tight compartments are preferably located in two groups distantly removed the one from the other for the purpose of providing greater stability in the flotation of the stacks or stack sections.

It should be understood that it is not desired to be limited to the exact details of construction shown and described, for obvious modifications will occur to a person skilled in the art.

It is claimed and desired to secure by Letters Patent,—

1. As a life saving device, a detachable buoyant ship stack.

2. As a life saving device, a detachable ship stack having an air tight compartment.

3. As a life saving device, a detachable stack having two opposite air tight compartments.

4. As a life saving device, a detachable flattened stack having an air tight compartment at each of its two more flexed sides.

5. As a life saving device, a detachable stack having multi-cellular air tight compartments.

6. As a life saving device, a detachable stack having oppositely located multi-cellular compartments.

7. As a life saving device, a detachable flattened stack having multi-cellular air tight compartments along each of its two more flexed sides.

8. As a life saving device, a detachable stack formed of an outer and an inner shell,

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and an air tight compartment between said shells.

9. As a life saving device, a detachable stack formed of an outer and an inner shell, and a plurality of multi-cellular compartments between said shells.

10. As a life saving device, a detachable stack formed of an outer and an inner shell and an air tight compartment between said shells and fastened to said outer shell.

11. As a life saving device, a detachable stack formed of an outer and an inner shell, and a plurality of multi-cellular compartments between said shells and fastened to said outer shell.

12. In a life saving device, the combination of a ship and a detachable buoyant stack.

13. In a life saving device, the combination of a ship, a detachable buoyant stack, and means for launching said stack.

14. In a life saving device, the combination of a ship and a stack having a detachable buoyant section.

15. In a life saving device, the combination of a ship, a stack having a detachable buoyant section, and means for launching said detachable section.

16. In a life saving device, the combination of a ship, a detachable buoyant stack and contractible means connecting said stack and ship whereby said stack may be tipped from normal position.

17. In a life saving device, the combination of a ship, a detachable buoyant stack, and contractible means connecting said stack to a point near the side of said ship whereby said stack may be tipped from normal position, over the side of said ship into the sea.

18. In a life saving device, the combination of a ship, a detachable buoyant stack, and contractible means automatically detachably connecting said stack to a point near the side of said ship whereby said stack

may be tipped from normal position, over the side of said ship into the sea.

19. In a life saving device, the combination of a ship, a detachable buoyant stack, and ways extending to the side of said ship for launching said stack into the sea.

20. In a life saving device, the combination of a ship, a stack having a detachable buoyant section, and ways extending to the side of said ship for launching said detachable section into the sea.

21. In a life saving device, the combination of a ship, a detachable buoyant stack, launching ways extending to the side of said ship, and contractible means connecting said stack and ship whereby said stack may be tipped from normal position onto said ways for launching said stack into the sea.

22. In a life saving device, the combination of a ship, a detachable buoyant stack, launching ways extending to the side of said ship, and contractible means connecting said stack to a point near the side of said ship whereby said stack may be tipped from normal position onto said ways to launch said stack over the side of said ship into the sea.

23. In a life saving device, the combination of a ship, a stack having a detachable buoyant section, launching ways extending to the side of said ship, and contractible means automatically detachably connecting said section to a point near the side of said ship whereby said section may be tipped from normal position onto said ways to launch said section over the side of said ship into the sea.

In testimony whereof, I affix my signature hereto in the presence of two witnesses.

WM. MONROE WHITE.

Witnesses:

D. E. JOHNSON,  
G. F. DE WEIN.