

W. H. DIDLAKE.
SHIP CONSTRUCTION.
APPLICATION FILED OCT. 11, 1912.

1,061,826.

Patented May 13, 1913.

2 SHEETS—SHEET 1.

Fig. 1.

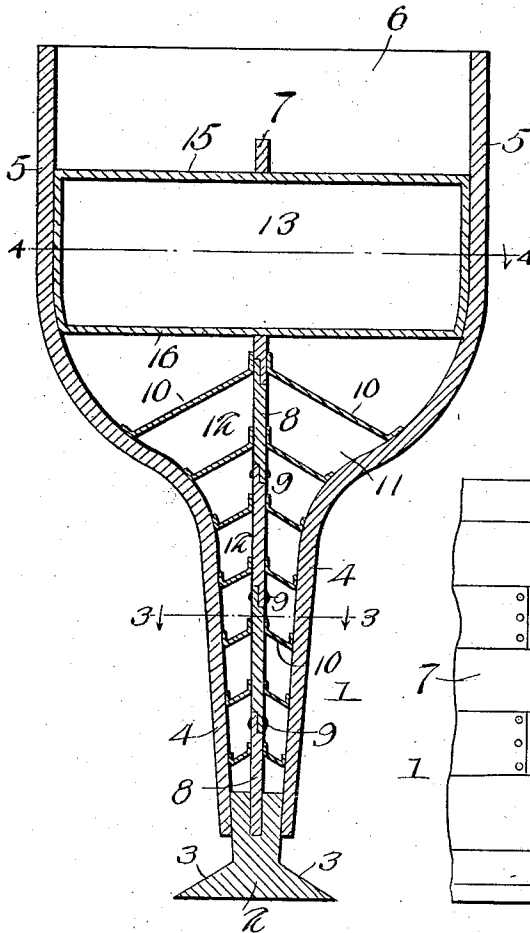


Fig. 3.

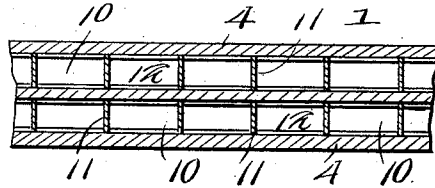


Fig. 4.

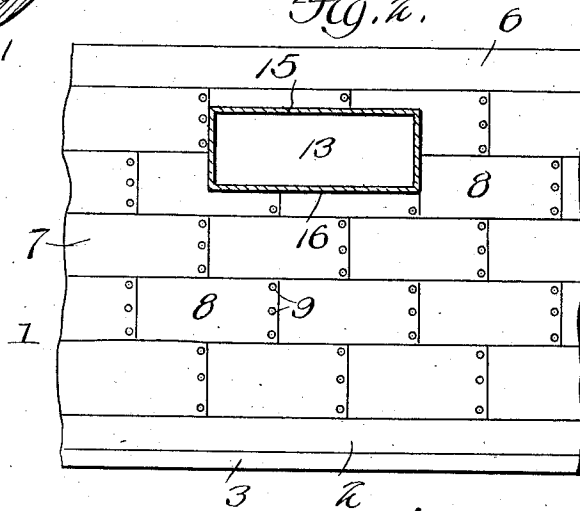
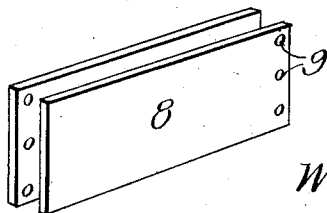


Fig. 7.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 4.

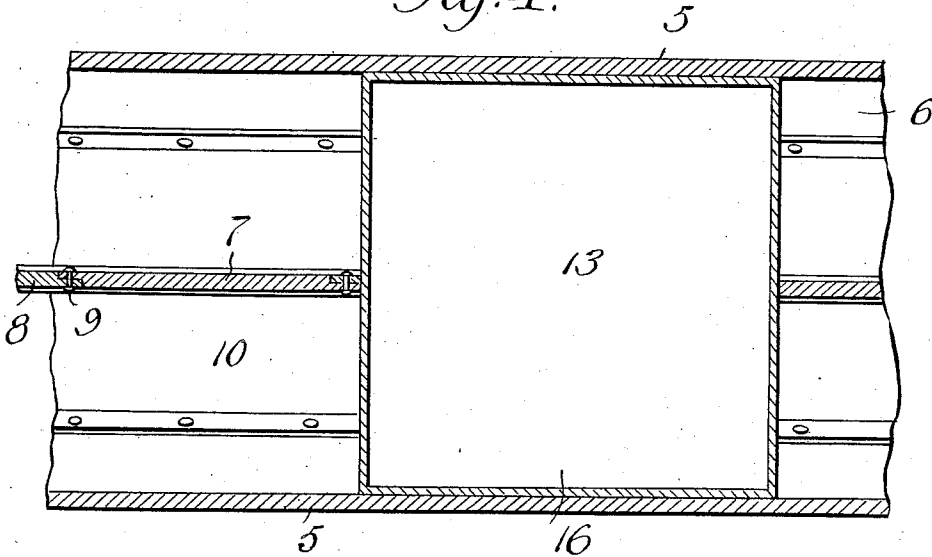


Fig. 5.

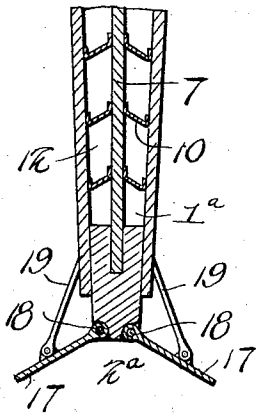
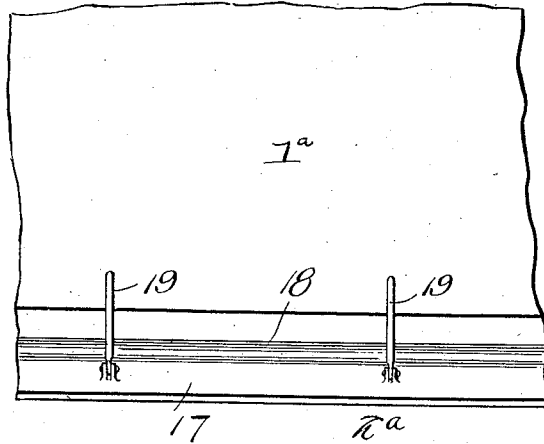


Fig. 6.



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SHIP CONSTRUCTION.

1,061,826.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM H. DIDLAKE, a citizen of the United States, residing at Crystal Springs, in the county of Copiah and State of Mississippi, have invented new and useful Improvements in Ship Constructions, of which the following is a specification.

10 An object of the invention is to provide means for strengthening the vessel longitudinally of its keel and from stem to stern thereof and to prevent buckling of the vessel through impact or through excessive loading.

15 Another object of the invention is to provide means extending throughout the length of the keel for resisting pressure of the water during storms and for minimizing the tossing and rocking movements of the vessel when the latter is subjected to sea disturbances.

20 With these and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts, as will be hereinafter described, illustrated and claimed.

25 In the accompanying drawings:—Figure 1 is a vertical section through a portion of a vessel, showing the application of the invention thereto; Fig. 2 is a longitudinal section therethrough; Fig. 3 is a section on line 3—3 of Fig. 1; Fig. 4 is a section on line 4—4 of Fig. 1; Fig. 5 is a section similar to Fig. 1, showing a slightly modified form of the invention; and Fig. 6 is a side view of a portion of the vessel, illustrating the modification shown in Fig. 5. Fig. 7 is a perspective view of two of the sections of the plate.

30 It is the purpose of the invention to provide means extending through the keel of the vessel and lying from stem to stern thereof for strengthening the keel longitudinally and against vertical pressure in an upward or downward direction so as to guard against the destruction of the keel through boiler explosions or outside forces. I further contemplate the provision of a boiler room which will be associated with the reinforcing element of the keel construction whereby the element will serve to resist explosive forces from the weak portions or lines of the boiler room.

35 In view of the above, it is said that the keel 1 of the vessel herein shown is of hollow construction, longitudinally terminating

along its lower portion in a substantially dove-tail resisting element 2, constituting the extreme base of the keel and including downwardly diverging plates 3 which extend the full length of the keel where they will serve to resist the forces of the water at the time of sea disturbances and to effectually minimize the tossing and rolling of the vessel. The relatively spaced walls 4 of the keel gradually merge into the side walls 5 of the hold 6 of the vessel.

40 With a view to longitudinally reinforcing the keel for dividing the same into a number of air compartments, for preventing the ship from buckling between its ends and for presenting resisting surfaces to boiler explosions whereby the force of the explosion will be held against disturbing the keel, I provide a longitudinal wall 7, which is directly interposed between the spaced walls 4 of the keel and which terminates at its lower end in the extreme base 2 of the keel and at its upper end at a point above or substantially in line with the water line. Said plate may be constructed of sheet steel or any other suitable well known material that may be found desirable for the purpose intended, and it is shown to be composed of a plurality of sections 8, which are riveted or otherwise suitably secured, as at 9. Horizontally-disposed plates 10 are disposed at the opposite sides of the centrally located reinforcing plate 7 and as illustrated the plates 10 at one side are arranged in downwardly diverging relation with the similar plates 10 at the other side of said central plate 7. Vertical plates 11 are associated with the center line plate 7 and the plates 10, so that all of the plates define air compartments 12, throughout the vertical and longitudinal planes of the keel. From this construction, it is evident that the vessel is rendered buoyant and the keel divided into separate and distinct portions so that the vessel is not seriously affected when a particular part of the keel is destroyed or injured to such extent that one or more of the air compartments is flooded with water.

45 A rectangular or other desired shaped boiler room 13 is built in the center line plate 7 at a point immediately above the keel so that a portion 14 of said plate 7 extends longitudinally along the wall 15 of the boiler room, while a portion of the said plate 7 extends longitudinally beneath the wall 16 of the boiler room, so as to

strengthen the room at its weak points and to resist forces at the time of a boiler explosion.

- In the modified form of the invention 5 shown in Figs. 5 and 6, the dove-tail base 2^a of the keel 1^a is shown to include plates or surfaces 17, which are similar to the portions 3 of the base 2 of the keel described in the preferred embodiment of the invention.
- 10 Said plates or surfaces 17 are adjustably mounted at 18 to the longitudinal edges of the keel and as shown they are connected with actuating means 19, whereby they may be adjusted to lie at different angles with 15 relation to the vertical plane of the keel, so as to promote or encourage the resisting efficiency of the keel, and to minimize the rocking or tossing of the vessel on rough sea.
- 20 It is to be further understood that the general principle of construction may be applied to large sea going vessels, to life boats, or to any type or size of water craft, whatsoever.
- 25 From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring more extended explanation.
- 30 Various changes in the form, proportion and the minor details of construction may be

resorted to without departing from the principle or sacrificing any of the advantages of this invention, as claimed.

Having thus described my invention, 35 what I claim is:—

1. A vessel having a hollow keel and a longitudinally disposed vertical plate extending between the walls of the keel and from stem to stern thereof and terminating 40 substantially on the water line of the vessel, and other plates associated with the first plate and with the opposite side walls of the keel whereby to define separate compartments throughout the longitudinal and 45 vertical planes of the keel.

2. A vessel provided with a hollow keel, a vertical plate located between the walls of the keel and extending from stem to stern of the keel and terminating at substantially 50 the water line of the vessel, and a boiler room entirely through said plate at a point immediately above the keel whereby portions of the plate are disposed above and 55 below the room respectively.

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

WILLIAM H. DIDLAKE.

Witnesses:

E. C. GODMAN,
P. T. JOHNSON.

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