

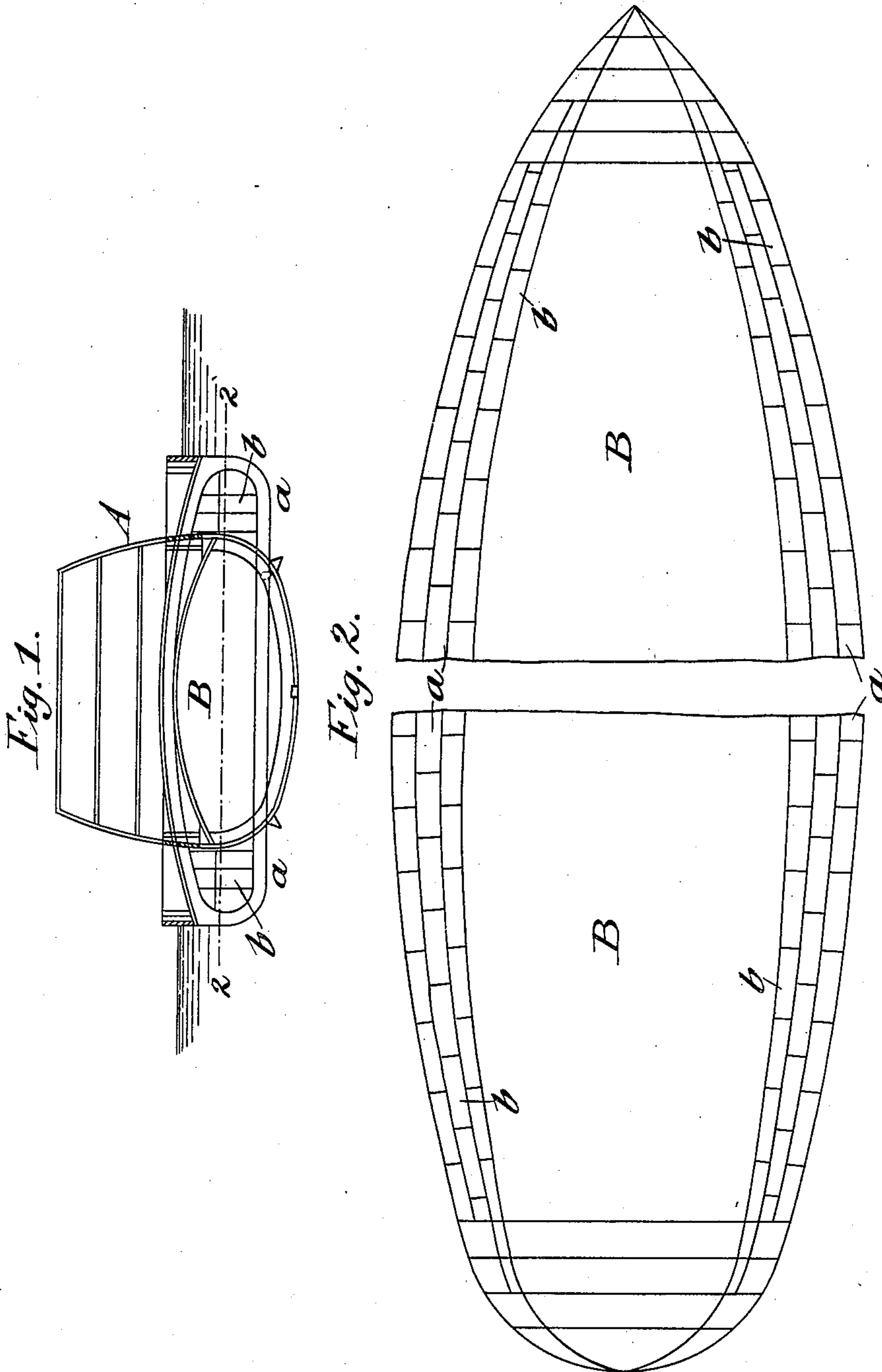
No. 681,962.

Patented Sept. 3, 1901.

E. E. GOULAEFF.
CONSTRUCTION OF VESSELS.

(Application filed Feb. 18, 1901.)

(No Model.)



WITNESSES:

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ERAST E. GOULAEFF, OF ST. PETERSBURG, RUSSIA.

CONSTRUCTION OF VESSELS.

SPECIFICATION forming part of Letters Patent No. 681,962, dated September 3, 1901.

Application filed February 16, 1901. Serial No. 47,556. (No model.)

To all whom it may concern:

Be it known that I, ERAST E. GOULAEFF, a subject of the Czar of Russia, residing at St. Petersburg, Russia, have invented certain
5 new and useful Improvements in the Construction of Vessels, of which the following is a specification.

This invention relates to improvements in ships' hulls; and the object of the invention
10 is to provide a hull suitable for merchant vessels and ships of war by which excessive rolling of the vessels is overcome, and in the case of war vessels the dangers due to near explosion of torpedoes or mines or from ram-
15 ming by another vessel are minimized. For this purpose the invention consists of a ship's hull comprising a portion above water-line and a portion below water-line, said lower portion projecting laterally beyond the upper
20 portion and the projecting part of said lower portion being composed of a plurality of closed water-tight compartments.

In the accompanying drawings, Figure 1 represents a transverse midships section of
25 a ship's hull embodying my invention; and Fig. 2 is a section on line 2 2, Fig. 1.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A indicates that
30 portion of the hull above the water-line, and B the portion below the water-line. The portion B is of greater width than the portion A, and the projecting part *a* of the same is occupied by a plurality of closed water-tight
35 compartments or cells *b*. These cells are included within the shell of the hull, and in the case of warships the armor-belt extends outside of the same, so that they are totally enclosed within the hull. Said projecting por-
40 tion *a* preferably gradually diminishes in width from the middle toward each end of the hull, as clearly shown in Fig. 2. The cells or compartments *b* are preferably arranged in two or more layers, three being
45 shown in Fig. 2.

The advantages of my improved construction of hull are that when applied to passenger-boats excessive rolling motion is eliminated, thereby increasing the comfort of the

passengers. When applied to warships it
50 provides a gun-platform of great stability. The ship is protected from the effects of mine explosions by the water-tight compartments, as they prevent the ship from filling. Foundering of a ship when the same is torpedoed,
55 rammed, or run into is prevented by means of the water-tight compartments running the length of the ship's sides. The compartments offer protection to the engines and boilers and magazines of a warship against
60 projectiles.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A ship's hull, consisting of a portion
65 above water-line and a portion below water-line, said lower portion projecting laterally beyond the upper portion, and the projecting part of said lower portion being composed of a plurality of closed water-tight compart-
70 ments, substantially as set forth.

2. A ship's hull, consisting of a portion
above water-line and a portion below water-line, said lower portion projecting laterally
75 beyond the upper portion, and the projecting part of said lower portion decreasing in width gradually from the middle toward each end
80 of the hull and being composed of a plurality of closed water-tight compartments, substantially as set forth.

3. A ship's hull, consisting of a portion
above water-line and a portion below water-line, said lower portion projecting laterally
85 beyond the upper portion, and the projecting part of said lower portion decreasing in width gradually from the middle toward each end
90 of the hull and being composed of a plurality of closed water-tight compartments arranged in a plurality of layers, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

E. E. GOULAEFF.

Witnesses:

H. LOVIAGUINE,
M. RATNER.