

No. 705,188.

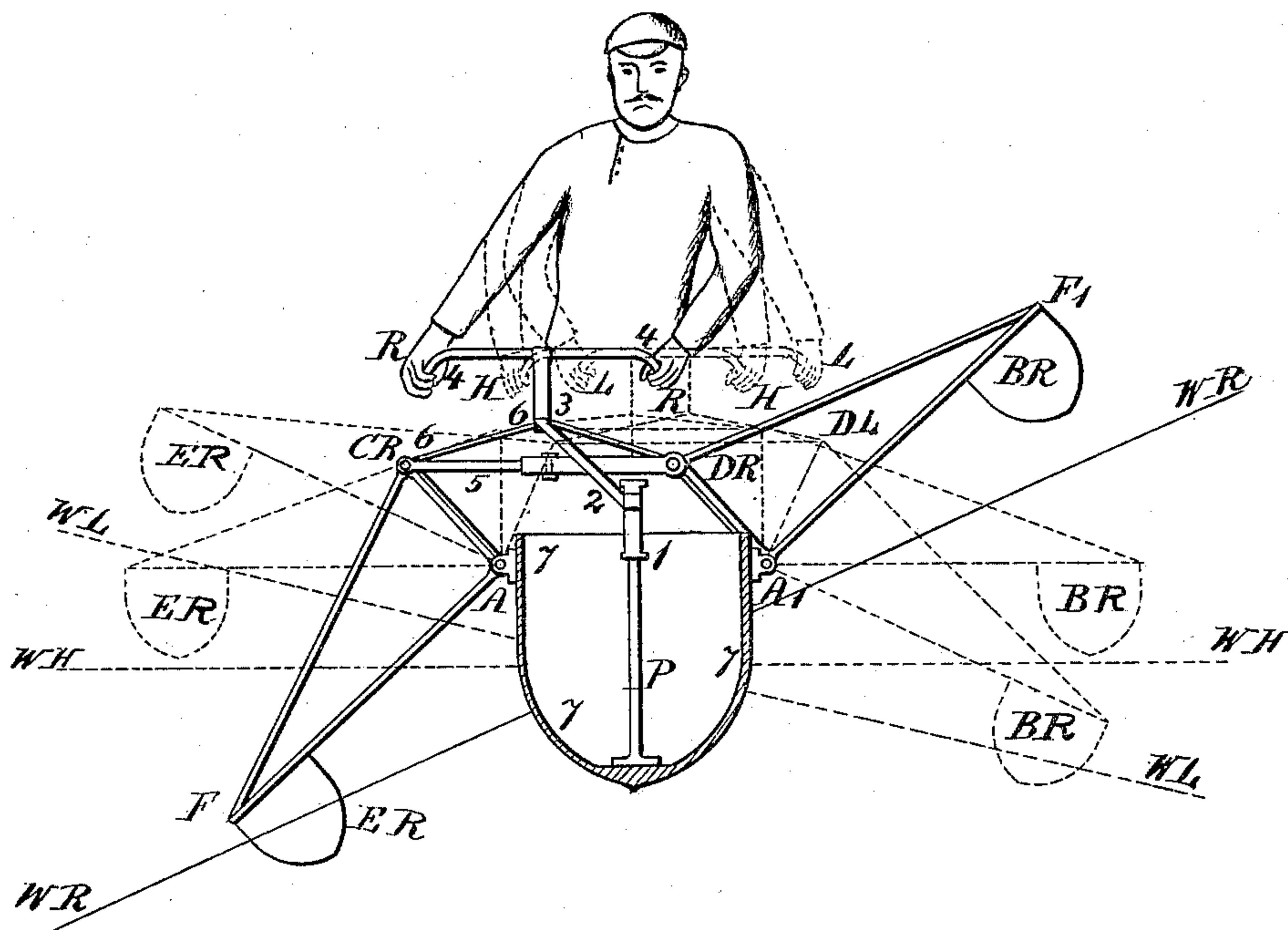
Patented July 22, 1902.

F. W. ZIMER.

ANTICAPSIZING DEVICE FOR BOATS.

(Application filed Dec. 27, 1897. Renewed Feb. 15, 1902.)

(No Model.)



Witnesses.

F. R. Vixen
W. Bottomley

Inventor.

F. W. Zimer

UNITED STATES PATENT OFFICE.

FREDERICK W. ZIMER, OF LONDON, ENGLAND.

ANTICAPSIZING DEVICE FOR BOATS.

SPECIFICATION forming part of Letters Patent No. 705,188, dated July 22, 1902.

Application filed December 27, 1897. Renewed February 15, 1902. Serial No. 94,311. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK WILLIAM ZIMER, a citizen of Germany, residing at 48 Finsbury Pavement, London, England, have
5 invented new and useful Equilibrium or Anticapsizing Devices, (for which I have obtained a patent in Great Britain, No. 18,894, bearing date October 21, 1892,) of which the following is a specification.

10 My invention has special reference to the application to boats and the like propelled by treadle mechanism of improved arrangements of anticapsizing devices designed to preserve the equilibrium of the operator propelling, steering, or otherwise managing the
15 boat and operated by the instinctive movement to support himself of the operator on his feeling any tendency to lose his balance, and rendered effective in attaining such object by the external buoyancy or support
20 brought in operation by their being more or less immersed in or borne on the water supporting the boat, so enabling the operator to maintain or recover his equilibrium. The
25 improved devices may, however, be applied in conjunction with other means of propulsion, or may also be applied independently of any means for propelling or managing the boat, and may be operated by any occupant
30 of the boat. The device may also be applied to balloons or the like supported by the air, and may then be effective in presenting inclined planes to the resistance of the air for the purpose of the invention, or they may be
35 applied to locomotive or stationary apparatus supported in a balancing position by *terra firma* or by anything supported thereby in such position, and may then be effective in operating directly against such support or the
40 air for the purpose of the invention.

In carrying out the invention I movably attach to the boat or other balanced frame on which the operator stands, sits, or otherwise rests, at each side thereof, a float, (or set of
45 floats,) the said floats being connected directly or indirectly with one another in such a manner as to move in opposite direction to each other with respect to the surface of the water on the operator instinctively operating
50 the handle-bar of the propelling mechanism or its equivalent in such a manner as to bring

them into action on his feeling any tendency to lose his balance.

In order to enable my invention to be fully understood, I will describe how it can be carried into practice by reference to the accompanying drawing, which represents a transverse section of a boat 7, carrying at A and A' two movable frames F A CR and F' A' DR, with floats ER and BR. The frames at the
55 points CR and DR are connected with each other by means of an adjustable cross-bar 5, provided with a knuckle-joint at each end. On raising one float the opposite float is at the same time pushed by the cross-bar in a
60 downward direction, and vice versa.

P is a post firmly fixed to the boat, with a head 1 rotating around it. The head carries a handle-bar 4 on rigid arms 2 and 3. The handle-bar, or in the case of this drawing its
70 supporting-frame, is connected by wires, ropes, chains, or other suitable connecting means 6 to the ends of the cross-bar 5 in such a manner as that any movement of the floats turns the handle-bar, and vice versa.

75 EH and BH show a position of the floats ER and BR when the water-line WH is horizontal. The floats are shown here above the water in their normal or horizontal position; but by means of a telescoping cross-bar 5, provided with a number of holes, (not shown,) and a bolt or by means of other convenient
80 devices the floats can be adjusted more or less out of or in the water in their normal position, the connecting means 6 being made
85 likewise adjustable. The corresponding position of the operator's hands is denoted by the letter H, placed against them.

A wave or swell approaching the boat will reach one of the floats first, push it up, and
90 consequently the other one down, at the same time turning the handle-bar if held yieldingly. The whole boat is thus generally placed in a proper balancing position by the action of the waves themselves and the top-
95 heavy condition of the operator is further instrumental in depressing the float on that side toward which the boat is inclined to turn over, with the tendency of keeping the main boat in a vertical position, thus preventing
100 or lessening side rolling.

When the boat is on a wave, as WR, the

floats ER and BR will assume the position shown in full lines in the drawing, and the corresponding position of the operator's hands is denoted by the letter R, placed against them.

5 When the water is in a horizontal position, as shown in dotted lines at WH, the floats will assume a correspondingly-horizontal position, and the corresponding position of the operator's hands is denoted by the letter H.

10 When the boat is on a wave, as WL, (shown in dotted lines,) the floats will assume the dotted position, and the corresponding position of the operator's hands is denoted by the letter L, placed against them.

15 The construction may be varied considerably as regards the attachment of the floats and the connection between them, as well as the means of transferring the power of the operators or occupants of the floats.

20 What I claim, and desire to secure by Letters Patent of the United States, is—

1. A boat provided with float-supports hinged to the sides of same, a float carried by each of said supports, and a connecting-rod
25 joining the float-support on one side of boat with the corresponding support on opposite side of boat, substantially as described.

2. In a non-capsizable boat, a float carried by a supporting-frame hinged to one side of
30 the boat, a similar float carried by a frame hinged to the opposite side of the boat, a rod or bar connecting the two float-supporting frames, said rod or bar so constructed that it

may be shortened or lengthened at will, substantially as described. 35

3. In a boat of the kind described, frames carrying floats, hinged connections between said frames and the sides of the boat, an adjustable connection between the frames
40 on one side of boat and the corresponding frame on the opposite side of boat, a handle-bar suitably connected with each of the float-supporting frames, a suitable support attached to the boat and carrying a revolving
45 collar, and a connection between said revolving collar and handle-bar, substantially as shown and described.

4. A boat provided with anticapsizing devices hinged to its sides and a connecting rod
50 or bar between these anticapsizing devices, such rod or bar being so connected to the said devices that when one of said devices is moved upward the other will be forced downward, and vice versa, substantially as described. 55

5. A boat provided with anticapsizing devices hinged or movably attached to the sides of same and so connected with each other that the rising of the float on one side of the boat will lower the float on the other side, and vice
60 versa, substantially as described.

F. W. ZIMER.

Witnesses:

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H. ADAMS.