F. OLECHNOWICZ.

BOAT EQUILIBRATOR.

APPLICATION FILED JULY 29, 1913.

1,082,133.

Patented Dec. 23, 1913.

2 SHEETS—SHEET 1.

Fig. 1.

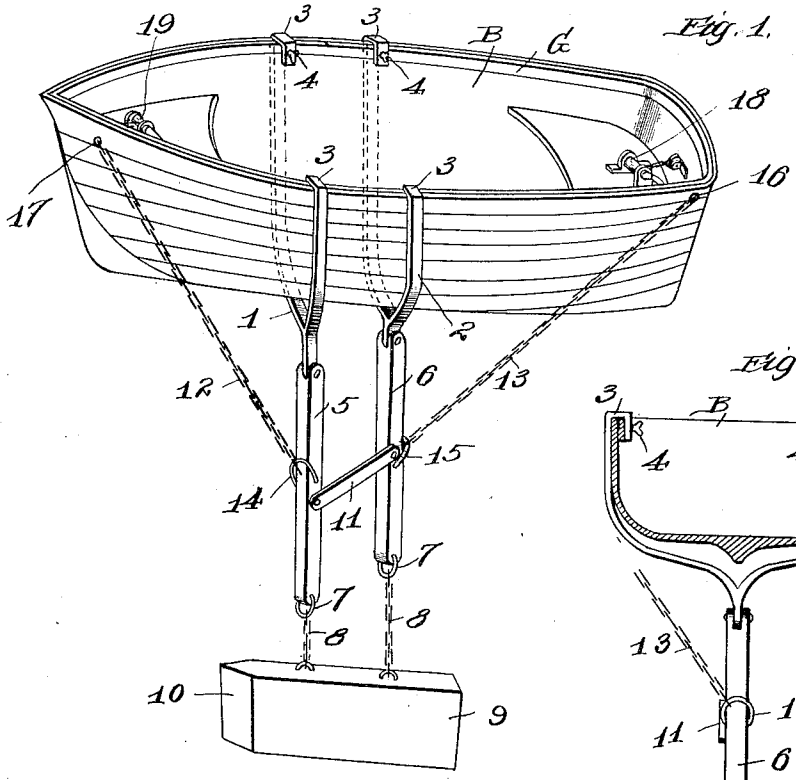


Fig. 3.

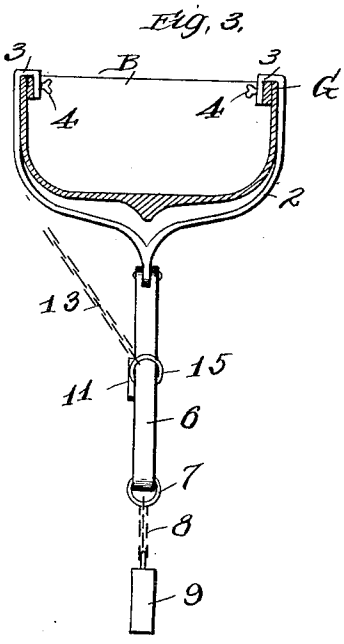
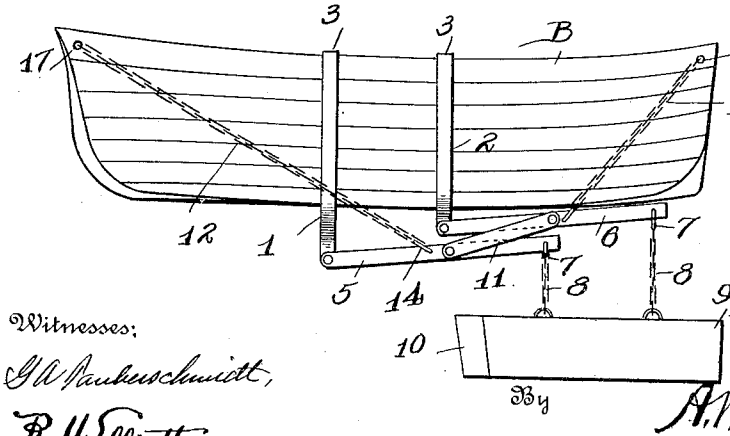


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 4.

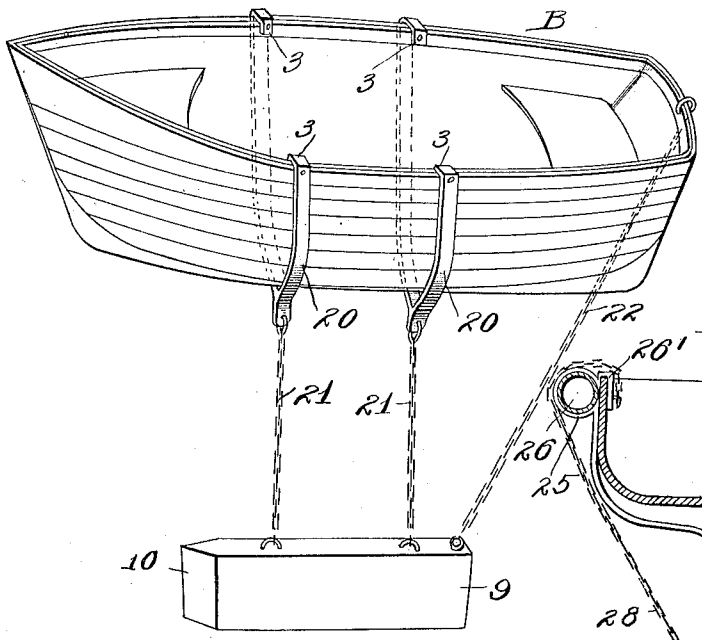
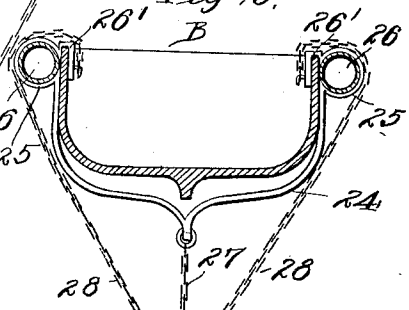


Fig. 6.



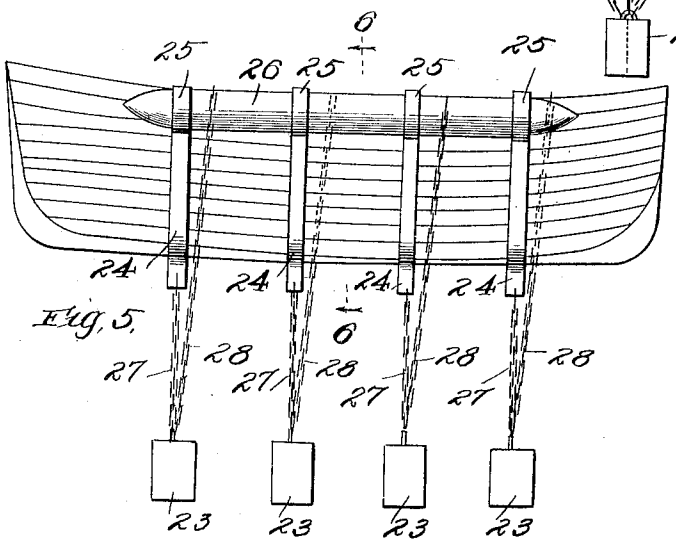


Fig. 5.

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BOAT-EQUILIBRATOR.

1,082,133. Specification of Letters Patent. Patented Dec. 23, 1913.

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To all whom it may concern:

Be it known that I, FRANK OLECHNOWICZ, a subject of the Czar of Russia, residing at Mineola, in the county of Nassau and State of New York, have invented certain new and useful Improvements in Boat-Equilibrators, of which the following is a specification.

This invention relates to equilibrators for boats, and while adapted more particularly for yawls, or row-boats, is equally applicable to larger boats, such as fishing smacks, and the like.

The object of the invention is in a ready and practical manner, to maintain a boat in stable equilibrium, irrespective of wave conditions; positively to prevent capsizing, and to adapt the boat to navigate either deep or shallow water.

With the above and other objects in view, as will appear as the nature of the invention is better understood, the same consists, generally stated, in an equilibrator consisting of a weight suspended from a boat in such manner as to permit of its being raised or lowered, thus causing it to present increased or diminished resistance to wave action, and also to permit the boat to travel in deep or shallow water.

The invention consists further in the various novel details of construction of an equilibrator, as will be hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which like characters of reference indicate corresponding parts: Figure 1 is a view in perspective displaying an ordinary yawl or row-boat equipped with the structure of the present invention, the equilibrator being shown in its lowered position. Fig. 2 is a view in side elevation displaying the equilibrator in raised position. Fig. 3 is a transverse sectional view through the boat shown in Fig. 1. Fig. 4 is a view similar to Fig. 1 displaying a slightly modified form of equilibrator. Fig. 5 is a view in side elevation exhibiting a boat equipped with a plurality of equilibrators and also air cylinders, the latter materially to enhance the buoyancy of the boat. Fig. 6 is a transverse sectional view taken on the line 6—6, Fig. 5.

Referring to the drawings and to Figs. 1, 2, and 3 thereof, B designates a boat which may be of any preferred construction, shown in the present instance, as an ordinary yawl or row-boat, such as would be employed by a fisherman.

Combined with the boat are two yokes 1 and 2, the upper terminals of which are provided with clamps 3 that fit over the gunwales G, and are held combined therewith for adjustable movements by winged nuts 4. If preferred, the clamps may be permanently secured to the gunwales but in order to increase the efficiency of the structure, thus to permit it to retain the boat on an even keel, irrespective of the weight at the bow or stern, it will be preferred, generally, to have the yokes longitudinally adjustable as shown.

Pivotally connected with the lower ends of the yokes are the upper ends of rods or bars 5 and 6, the lower ends of which carry links 7, to each of which is connected the upper end of a chain 8, the lower end of each of which is suitably connected with a weight or counterpoise 9, preferably having an angular forward end 10 to reduce resistance to passage through the water. The two bars are pivotally connected by a link 11 which serves to maintain them in parallelism, but will permit of their being swung either bowward or stern-ward as may be preferred, in order to elevate the weight and bring it to the position shown in Fig. 2. In order to swing the bars 5 and 6 in either direction, two chains 12 and 13 are employed, one end of each of which is secured to a ring or shackle 14 and 15 respectively, carried by the bars, the other ends of the chains being passed through openings 16 and 17 located, respectively, at the stern and bow of the boat, and wound upon windlasses 18 and 19 respectively. These windlasses may be operated by hand as shown, or may be power driven, and as the latter will readily be understood, detailed illustration of any motor mechanism is omitted.

Where the boat is traveling in relatively deep water, the counterpoise 9 will occupy the position shown in Fig. 1, so that any tendency of the boat to capsize will be counteracted by the counterpoise, and will be maintained substantially on an even keel. Should the boat approach shallow water, the counterpoise may be elevated to the position shown in Fig. 2 either at the stern or the bow, according to which part of the boat maintains the greatest weight. As will be obvious, should the boat be a motor driven

one, the tendency of the weight of the engine and the helmsman would be to tilt the bow of the boat a greater distance out of the water than would probably be best or safest, and to obviate this, the adjustment of the yokes 1 and 2 before referred to may be employed to shift the counterpoise toward the bow, and thus maintain the boat at the most effective level.

In the form of invention shown in Fig. 4, the counterpoise 9 is suspended from the yokes 20 by two chains 21, the yokes in this instance, being shown as rigidly secured to the gunwale, and a single chain 22, which may be located at the bow or stern of the boat is utilized in elevating the counterpoise.

In the form of the invention shown in Figs. 5 and 6, a plurality of counterpoises 23 are employed, in this instance, four, which are suspended from yokes 24, that are formed at their upper ends into bands 25 to secure in position air cylinders 26, which may be of rubber or metal, and which will add such buoyancy to the boat as to render it practically one of the life-saving type. In addition to the bands 25, each yoke is provided at its terminals with a pair of clamps 26′ similar to the clamps 3 shown in Fig. 3, and which embrace the gunwales of the boat and are rigidly secured thereto. Each of the counterpoises is suspended from the center of the yoke by a chain 27, and in addition, each counterpoise has connected with it one end of a chain 28, the other end of which passes around the cylinder, and is secured in any preferred manner to the boat or to the clamp. These chains 28, as clearly shown in Fig. 5, are arranged in alternate order, that is to say, the chain on the counterpoise at the bow of the boat will be on the left hand side, the next succeeding one on the right hand side, and so on throughout the series, so that when the counterpoises are to be raised, there will be no danger of disturbing the equilibrium of the boat, with attending danger of capsizing.

From the foregoing description, it will be seen that by the employment of the equilibrators herein described, that a boat may be caused to float and maintain itself safely in water where, in the absence of the attachment, it could not live, so that an added safety is imparted to surf boats in particular, which will materially enhance their usefulness.

What is claimed is:—

1. The combination with a boat, of a pair of yokes adjustably secured to the gunwales thereof, an equilibrator flexibly supported by the yokes, and means for raising or lowering the equilibrator.

2. The combination with a boat, of a pair of yokes, bars pivotally-supported by the yokes, an equilibrator flexibly-suspended from the bars, a link connecting the bars, a pair of chains, one of which is connected to each of the bars, and means for shortening either chain to cause the equilibrator to be brought into juxtaposition either to the stern or the bow portion of the keel of the boat.

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

FRANK OLECHNOWICZ.

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