Oct. 8, 1946. A. J. HARRIS 2,409,040

COMBINED SEA ANCHOR AND STABILIZER FOR BOATS

Filed March 21, 1945

Fig. 1.

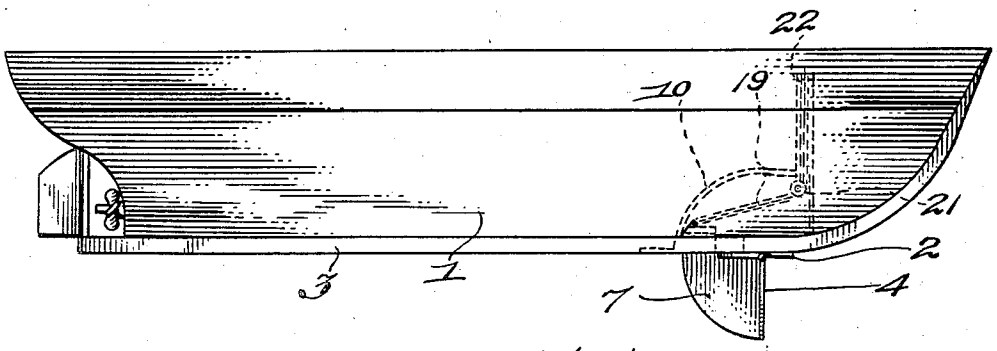


Fig. 3.

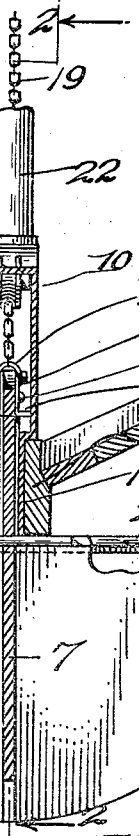


Fig. 2.

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COMBINED SEA ANCHOR AND STABILIZER FOR BOATS

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3 Claims. (Cl. 114—126)

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My invention relates to improvements in combined sea anchors and stabilizers for boats and the like.

The primary object of my invention is to provide simply constructed, inexpensive and efficient means for stopping and holding a boat headed into the wind, and minimizing pitching and rolling, in situations where it is undesirable, or impossible, to use the usual anchor, for instance, because of the violence of the waves, the depth of the water, high winds, and similar factors.

To the accomplishment of the above, and subordinate objects presently appearing, a preferred embodiment of my invention has been illustrated in the accompanying drawing, set forth in detail in the succeeding description, and defined in the claims appended hereto.

In said drawing:

Figure 1 is a view in side elevation of my improved sea anchor and stabilizer applied to a boat,

Figure 2 is a view in vertical longitudinal section, drawn to an enlarged scale, and taken on the line 2—2 of Figure 3,

Figure 3 is a view in transverse section also drawn to an enlarged scale.

Referring to the drawing by numerals, according to my invention, the hull 1 of a boat, such as shown, for the purpose of illustration, is provided forwardly, as close to the prow as is found feasible, with an elongated, straight, horizontal stabilizing fin 2 suitably fixed in its transverse center to the keel 3 to extend crosswise thereof equidistantly upon opposite sides of said keel. As best shown in Figure 3, the horizontal fin 2 is spaced by the keel 3 from the bottom structure of the hull 1.

A drag plate 4, preferably of semi-circular form, with a straight leading edge 5 of the same length as said horizontal fin 2, is hinged at said edge 5 to the rear edge of said fin 2, as illustrated at 6, for vertical swinging adjustment on said fin 2 into elevated and lowered positions, respectively, in which said plate extends crosswise of the keel 3.

A vertical stabilizing fin 7 extends from what constitutes the rear face of the drag plate 4 and is suitably fixed to said plate 4 coplanar with the keel 3. The vertical stabilizing fin 7, where it joins the drag plate 4, is of the same width as said plate and is formed with an arcuate rear edge 8 concentric to the axis of the hinge 6, and with a right angled notch 9 in its upper front corner, all for a purpose presently seen.

An elongated, flat housing 10 is provided in

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the hull 1, for the vertical stabilizing fin 7, and extends along said keel 3 in upstanding position coplanar with the keel and said stabilizing fin 7, and is bolted to the keel 3, as at 11. The housing 10 includes a rear, depending, bottom throat 12 of reduced thickness fitted into a longitudinal vertical slot 13 provided in the keel 3, the throat 12 being open at the bottom of said keel. As shown in Figure 2, the housing 10 is of the same shape as the vertical stabilizing fin 7, and approximately the same size, so that said stabilizing fin may fit, substantially, therein, and the hinge 6 is located rearwardly of the front end of the throat 12 so that said stabilizing fin may be swung upwardly into the housing 10 and thereby swing the drag plate 4 upwardly and rearwardly substantially flat against the keel 3 and into the plane of the horizontal stabilizing fin 2.

A pair of lift bars 14 are provided along the upper rear corner portion of the vertical stabilizing fin 8, in the rear of the notch 9, upon opposite sides of said portion, and are bolted to said vertical stabilizing fin 7, as at 15, and provided with upstanding apertured ears 16. The bars 14 are of right angled cross section to provide lateral stop ledges 17 thereon adapted to seat on a pair of stop cleats 18 suitably fixed in the housing 10 upon opposite sides of the throat 12, and whereby downward swinging of the vertical stabilizing fin 7 is limited to limit swinging of the drag plate 4 downwardly into substantially vertical position.

A pull chain 19 is secured by a shackle 20 to the ears 16 and extended forwardly and upwardly, in the housing 10, around a pulley 21 fixed in said housing, the chain being trained upwardly from said pulley 21 out of the housing 10 by way of a guide tube 22 rising from the front end of said housing. The pull chain 19 provides manipulative means for swinging the vertical stabilizing fin 7 upwardly and may be suitably secured in the hull 1 to hold said fin, together with the drag plate 4, in upwardly swung position.

Referring now to the use and operation of the described invention, when the pull chain 19 is slackened, the drag plate 4 swings downwardly, under the influence of gravity, into substantially vertical position, as shown in Figure 2, and the vertical stabilizing fin 7 likewise swings downwardly out of the housing 10 into trailing position relative to said drag plate 4, the ledges 17 engaging the stop cleats 18 to establish the down swung position of said drag plate 4 and vertical stabilizing fin 7. In this position of the parts, the horizontal fin 2 functions to check side roll-

ing of the hull 1, the vertical stabilizing fin 7 to check the hull, or boat, against turning broadside to the wind, and the drag plate 4 functioning as a sea anchor to check the hull, or boat 1, against drifting. By pulling on the pull chain 19, the vertical stabilizing fin 7 may be swung upwardly on the hinge 6 into the housing 10, in an ineffective position, thus swinging the drag plate 4 upwardly against the keel 3 into coplanar position relative to the horizontal fin 2. In this upwardly swinging of the vertical stabilizing fin 7, the notch 9 fits over the front end of the throat 12 and the bottom of the housing 10, as shown in Figure 2, illustrating in dotted lines the upswung, or ineffective, position of the vertical stabilizing fin 7. When the drag plate 4 is swung upwardly into the plane of the horizontal fin 2, both the drag plate 4 and said fin 2 function to stabilize the hull 1 and neutralize rolling and pitching, both acting as horizontal stabilizing fins.

The foregoing will, it is believed, suffice to impart a clear understanding of my invention without further explanation.

Manifestly, the invention, as described, is susceptible of modification without departing from the inventive concept, and right is herein reserved to such modifications as fall within the scope of the appended claims.

What I claim is:

1. The combination with the hull of a boat having a keel, of a horizontal stabilizing fin fixed to the bottom of said keel and extending crosswise of the same, and a sea anchor comprising a drag plate hinged to said horizontal fin for swinging upwardly and rearwardly into horizontal position and downwardly into pendent substantially vertical position, and a vertical stabilizing fin extending from one side of said drag plate at a right angle thereto to trail said drag plate when said plate is swung downwardly, the vertical stabilizing fin extending upwardly through said keel for vertical swinging from a down swung position into an ineffective position and to swing the drag plate into horizontal position, and means in said hull to swing said vertical stabilizing fin upwardly.

2. The combination with the hull of a boat having a keel, of a horizontal stabilizing fin fixed to the bottom of said keel and extending crosswise of the same, and a sea anchor comprising a drag plate fixed to said horizontal fin for swinging upwardly and rearwardly into horizontal position and downwardly into pendent substantially vertical position, and a vertical stabilizing fin extending from one side of said drag plate at a right angle thereto to trail said drag plate when said plate is swung downwardly, the vertical stabilizing fin extending upwardly through said keel for vertical swinging from a down swung position into an ineffective position and to swing the drag plate into horizontal position, means in said hull to swing said vertical stabilizing fin upwardly, and a housing in said hull extending along said keel for enclosing said vertical stabilizing fin when the same is swung upwardly.

3. The combination with the hull of a boat having a keel, of a horizontal stabilizing fin fixed to the bottom of said keel and exending crosswise of the same, and a sea anchor comprising a drag plate hinged to said horizontal fin for swinging upwardly and rearwardly into horizontal position and downwardly into pendent substantially vertical position, and a vertical stabilizing fin extending from one side of said drag plate at a right angle thereto to trail said drag plate when said plate is swung downwardly, the vertical stabilizing fin extending upwardly through said keel for vertical swinging from a down swung position into an ineffective position and to swing the drag plate into horizontal position, means in said hull to swing said vertical stabilizing fin upwardly, a housing in said hull extending along said keel for enclosing said vertical stabilizing fin when the same is swung upwardly, and coacting devices in said housing and on the vertical stabilizing fin, respectively, for limiting downward swinging of said vertical fin downwardly to establish the vertical position of said drag plate.

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