

(No Model.)

2 Sheets—Sheet 1.

N. C. JESSUP.
VESSEL.

No. 543,210.

Patented July 23, 1895.

FIG. 1.

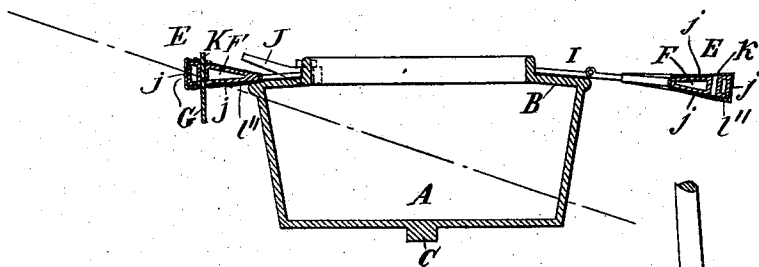


FIG. 2.

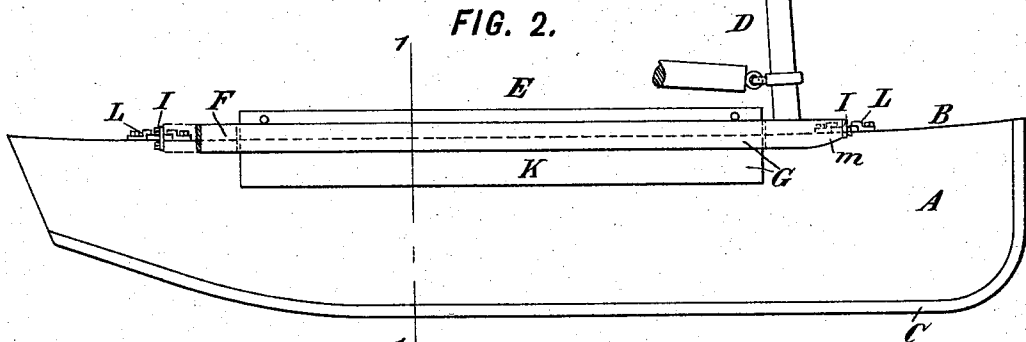
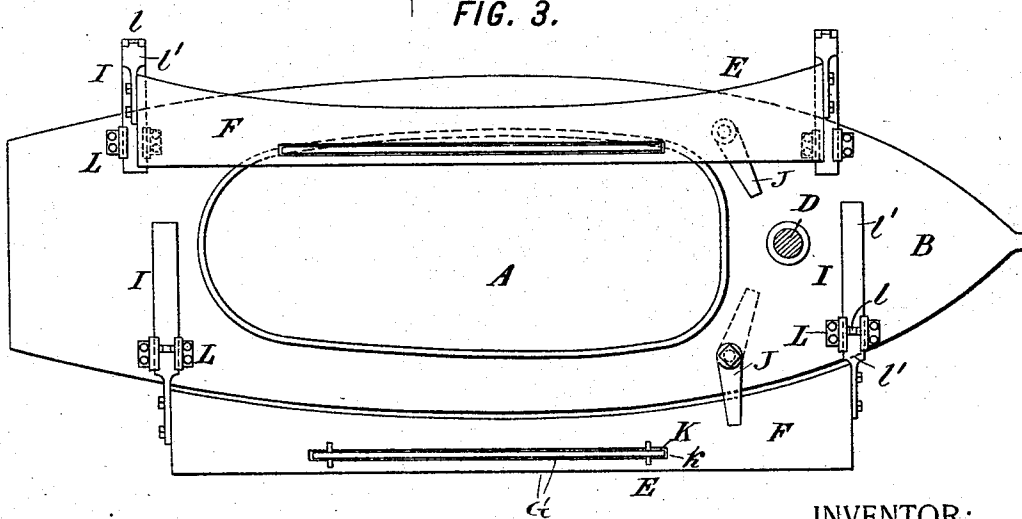


FIG. 3.



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FIG. 4.

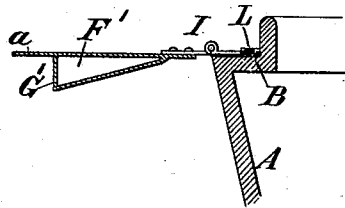


FIG. 5.

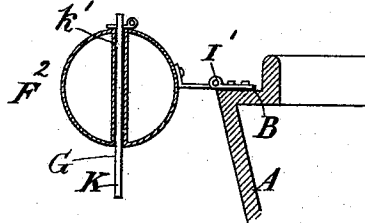


FIG. 8.

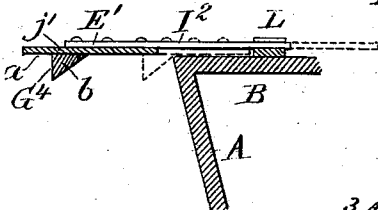


FIG. 6.

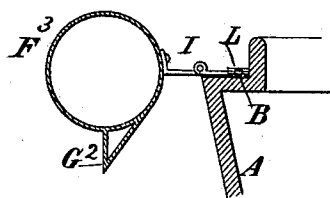


FIG. 7.

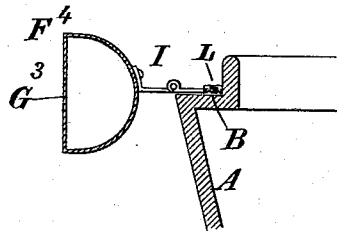
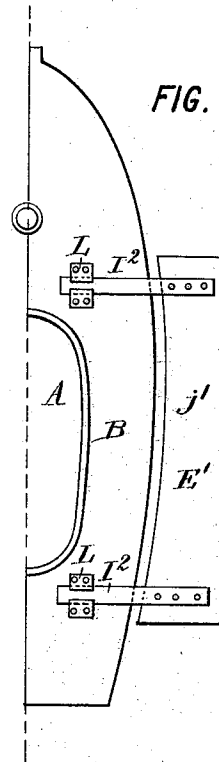


FIG. 9.



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UNITED STATES PATENT OFFICE.

NATHAN C. JESSUP, OF WESTHAMPTON, NEW YORK.

VESSEL.

SPECIFICATION forming part of Letters Patent No. 543,210, dated July 23, 1895.

Application filed September 19, 1892. Serial No. 446,341. (No model.)

To all whom it may concern:

Be it known that I, NATHAN C. JESSUP, a citizen of the United States, residing at Westhampton, in the county of Suffolk and State of New York, have invented certain new and useful Improvements in Vessels, of which the following is a specification.

This invention relates particularly to small vessels and sailing-vessels, and aims to provide means whereby the liability of such to capsize will be decreased and whereby the vessel will sail close to the wind.

Heretofore it has been common to provide a lee-board hinged or fixed to the side of the vessel to contact with the water when the vessel heels, and thereby to prevent leeward movement of the latter. My present invention comprises an improved device of this general character, which will be fully herein-
after set forth.

In the accompanying drawings, Figure 1 is a cross-section on the line 1 1 of Fig. 2 of a flat-bottom sailing-vessel provided with my improvements in their preferred form. The oblique dotted line in this figure indicates the water-level when the boat has heeled to the left. Fig. 2 is a side elevation of the vessel shown in Fig. 1, a portion of the side guard being broken away. Fig. 3 is a plan view thereof, the windward side guard being turned in. Fig. 4 is a fragmentary cross-section of a boat in which a modified form of my improved side guard is applied. Fig. 5 is a similar view showing another modification. Fig. 6 is a similar view of another modification. Fig. 7 is a similar view showing still another modified form of my invention, and Figs. 8 and 9 show other modifications.

Referring to the drawings, let A represent the hull of the vessel; B, the deck; C, the keel; D, the mast, and E my improved side guards as a whole.

The boat A may be of any common construction, that shown in Figs. 1 to 3 being an ordinary flat-bottom sail-boat.

I will now describe the preferred form of my invention as illustrated in Figs. 1 to 3, inclusive, to which reference is made.

According to my invention the side guards are preferably constructed of hollow air-tight shells F, pivotally connected to the upper portion of the hull and adapted to be adjusted

laterally therefrom and to be folded there-against, and of resisting faces G, mounted on or carried by the shells, extending longitudinally substantially parallel with the keel of the vessel and vertically at substantially right angles to the level of the water, whereby the faces in sailing are presented to the water in such manner as to resist leeward movement of the boat. This may be variously accom-
plished.

In the construction shown in Figs. 1 to 3 the shell F consists of thin top, bottom, and outer boards *j*, secured together to form a hollow water-tight member of great light-ness and buoyancy, preferably covered with thin metal *l''* to prevent checking. The outer board *j* of each shell is straight and extends parallel with the keel C of the hull, serving in use as a portion of the resisting-face G. The top and bottom boards in the construction shown are brought together at their inner edges, whereby in cross-section the shell F is wedge-shaped, and this inner edge of the shell is curved to correspond to the curvature of the adjacent side of the hull. The shell is adapted to be adjusted outwardly from the hull at least sufficiently to leave a slight intervening space between the hull and the inner edge of the shell, through which any water on the guard or the adjacent deck may escape. In the construction shown slots or wells *k* are formed through the shell, through which slots plates or boards K may be passed, as shown in Figs. 1 and 2. These boards K, when in position in the slot, depend downwardly beneath the shell substantially perpendicularly thereof, and their outer faces serve as the resisting faces G of the side guard. The plates preferably rest loosely in their slots and are prevented from falling through by small cross-pins, or in any other convenient manner. If desired, only one board K is utilized, this being shifted from one side guard to the other as the course of the vessel is changed.

I prefer to connect the side guards pivotally and adjustably to the side of the vessel. Preferably this is accomplished by means of the rods I, which in this construction have butt-hinges *l* intermediate of their ends and flattened portions *l'* beyond said hinges, the flattened portions taking into shoes L, secured to

the top of the deck B and constructed with overhung grooves, in which the rods may slide in such manner that when the hinges are within the shoes, as shown in the lower half of Fig. 3, the guides are rigidly held relatively to the hull, but when these hinges are beyond the shoes, as shown in the upper half of the figure, the guards are free to oscillate relatively to the hull and can be folded over against the deck. The outer ends of the rods I are preferably connected to the ends of the shells F of the side guards and their inner ends are free to move through the shoes as the guards are adjusted. Preferably the guards are rounded at their forward ends, as shown in Fig. 2 at m, to avoid catching against the water. Pivoted stops J overhang the guards when turned out and limit their movement. By this construction the side guards can be adjusted outwardly until they will swing freely on the surface of the water as the boat heels, in which case they will merely serve as lee-boards, or they can be adjusted so that they will stand rigidly relatively to the hull, in which case they will be submerged when the boat heels and by reason of their great buoyancy will prevent its capsizing.

In sailing, the windward-guard may be folded over onto the deck, as shown in Fig. 3, or it may be left projecting to windward, in which case it will tend to prevent flying spray from falling on the deck. When circumstances render it desirable the leeward-guard will be adjusted outwardly until it is free to swing on its hinges, whereupon the guard will float upon the water and always present its outer edge perpendicular to the level thereof, so that this edge will serve as a resisting face or lee-board for the boat. When but little resisting surface is required, the board K need not be used, as the outer face of the shell F will answer in ordinary sailing. When there is great danger of excessive heeling the guard will be adjusted to the rigid position, whereupon it will firmly resist any tendency to capsize.

It will be seen that my invention provides a sailing-vessel which can sail close to the wind, and which is not liable to capsize, and that it accomplishes this without modifying the ordinary construction of the hull of the vessel, and by means simple in construction and operation and easy of manipulation.

It will be understood that the invention is not limited to the specific details set forth as constituting its preferred form, since these may be modified in certain respects without departing from its essential features.

Fig. 4 shows a side guard in which the shell, here lettered F', has no socket, but is a closed sheet-metal shell having a resisting face G' at its outer edge and an overhanging flange a flush with its top.

Fig. 5 shows another modification in which the shell, here lettered F², is a closed metal cylinder traversed by a vertical well K',

through which may be passed the board K. In this construction the side face of the board K constitutes the vertical resisting face of the lee-board. The side guard is here shown as hinged directly to the deck B by a plain hinge I'.

Fig. 6 shows a hollow cylindrical shell (lettered F³) having a resisting face G² formed on its lower side.

Fig. 7 shows a hollow metallic shell (lettered F⁴) having a flat or vertical outer face, (lettered G³,) constituting its resisting face.

In the constructions shown in Figs. 6 and 7, and also in that shown in Fig. 4, the side guard is hinged to the boat in the manner described with reference to Figs. 1 to 3.

Figs. 8 and 9 illustrate another modification.

In this construction the side guards, here lettered E', consist of a flat board j', having an outwardly-projecting portion a and constructed with a resisting face G⁴, formed on the under side, some distance from the outer edge of the board j'. This resisting face is preferably formed by placing a cleat b of triangular cross-section against the under side of the board j'. In this construction the side guard is movable laterally toward and from the hull, but immovable vertically relative thereto. This is preferably accomplished by constructing the connecting-rods, here lettered I², as rigid bars engaged by and sliding in the shoes L. To adjust the guards they are slid in over the deck, as indicated in dotted lines in Fig. 8, when not required for use, and are slid outwardly to the position illustrated in full lines when used as lee-boards. When the lee-boards are thus constructed the windward-board may be left projected and used as a support for those ballasting the boat.

When the side guard is constructed with a substantially flat horizontal board and a substantially-vertical resisting face, the horizontal board serves to resist a capsizing movement, while the resisting face prevents lee movement.

What I claim is the following-defined novel features and combinations, substantially as hereinbefore set forth, namely:

1. In a vessel, the hull in combination with a side guard carried at the side of the hull and contacting with the water when the vessel heels, and a connection between said guard and hull permitting free movement of said guard when the latter is in one position, and holding said guard rigidly relatively to the hull when said guard is in another position.

2. In a vessel, the combination with the hull of a side guard connected to the upper part thereof above the water line and having a substantially horizontal portion contacting with the water when the vessel heels and preventing capsizing and a substantially vertical face beneath this portion serving as a lee-board.

3. In a vessel, the combination with the hull A, of the side guard E, consisting of a hollow

closed buoyant shell F, and a resisting face G, said guard connected to the hull and contacting with the water when the vessel heels and preventing capsizing and leeway.

5 4. In a vessel, the hull in combination with the side guard E, shoes L, carried by the vessel, and rods carrying the side guard said shoes engaging said rods and thereby connecting the side guard to the vessel, said rods
10 permitting the adjustment of the side guards laterally toward and from the vessel.

5. In a vessel, the combination with the hull and a side guard pivoted thereto and contacting with the water when the vessel heels, of a

stop J, limiting the upward movement of said 15 guard.

6. In a vessel a side guard consisting of a hollow buoyant closed shell, having a socket $\frac{1}{2}$, in combination with a lee-board K mounted in said socket when in use. 20

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

NATHAN C. JESSUP.

Witnesses:

GEORGE H. FRASER,
CHARLES K. FRASER.