No. 731,515. PATENTED JUNE 23, 1903.

D. R. & M. N. SHEEN.

OUTRIGGER FOR BOATS.

APPLICATION FILED FEB. 24, 1903.

NO MODEL.

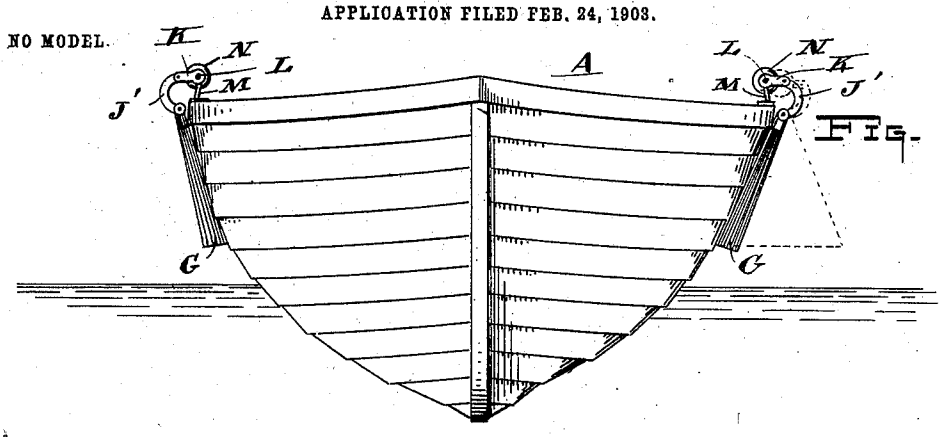
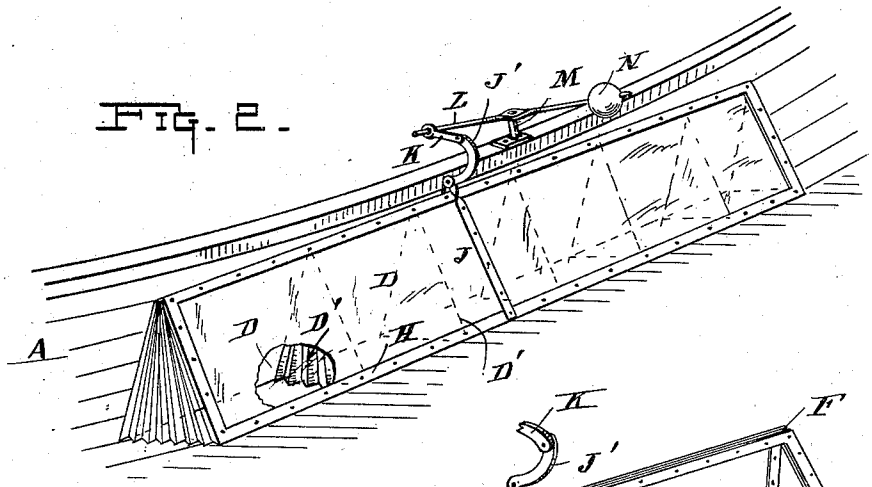


Fig. 1.

Fig. 2.



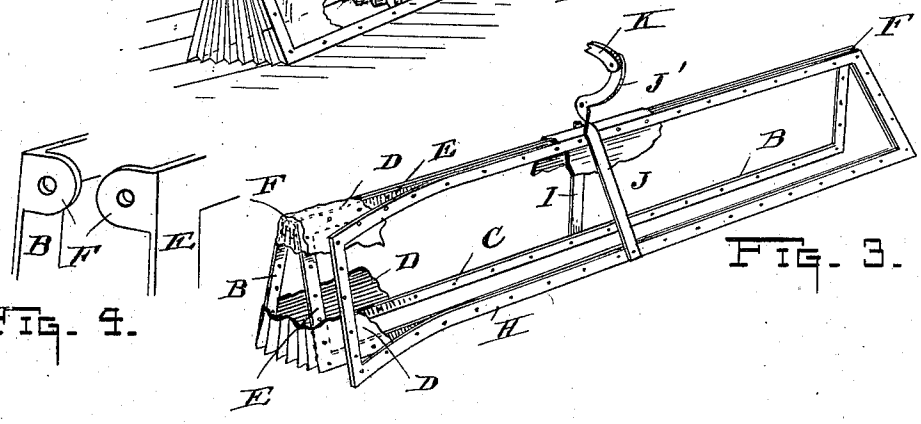


Fig. 3.

Fig. 4.

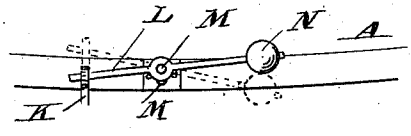


Fig. 5.

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UNITED STATES PATENT OFFICE.

DANIEL R. SHEEN AND MORRIS N. SHEEN, OF PEORIA, ILLINOIS.

OUTRIGGER FOR BOATS.

SPECIFICATION forming part of Letters Patent No. 731,515, dated June 23, 1903.

Application filed February 24, 1903. Serial No. 144,650. (No model.)

To all whom it may concern:

Be it known that we, DANIEL R. SHEEN and MORRIS N. SHEEN, citizens of the United States, residing at Peoria, in the county of Peoria and State of Illinois, have invented certain new and useful Improvements in Outriggers for Boats; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a device for preventing the overturning of skiffs, commonly known as an "outrigger."

The object of the invention is to provide means for attachment to a skiff, which will prevent the overturning thereof.

A further object is to provide a device which can be secured to each side of the skiff and will act automatically when the boat is tipped in either direction to prevent the overturning of said skiff.

A still further object is to furnish an automatic air-container which will be out of the way of the oars when not in use, but which will open instantly when the skiff is unduly tipped to one side or the other.

In the accompanying drawings, Figure 1 is an end view of a boat, showing our devices secured to the sides thereof. Fig. 2 is a perspective view of a portion of one side of the boat, showing one of our improved devices secured thereto and partly open. Fig. 3 is a perspective view of the device removed from the boat, parts being torn away to show construction and arrangement of parts. Fig. 4 is a perspective view, two portions forming hinges. Fig. 5 is a top view of a portion of the gunwale of the boat, showing the means thereon for operating the safety device.

It is quite well known that skiffs of all kinds are very easily tipped over and many lives are lost yearly through this cause, and it is the purpose of our invention to furnish means whereby this will be entirely prevented.

In the figures, A indicates the boat, on each side of which is secured a collapsible air-chamber consisting of a suitable framing and a covering of rubber cloth or other waterproof material—such, for instance, as oiled silk or cloth coated with waterproofing material. The frame consists of a rectangular skeleton member B, affixed to the side of the boat by nails or other fastening means, (indicated at C,) and behind this member is placed a sheet of the waterproof material mentioned and indicated by the letter D, the same being held by the said nails or screws C. Hinged to the member B by ears F at each end, as shown in Fig. 4, is a second similar member E. The waterproof D is now turned down over the two members B and E and secured at its edge to the lower horizontal reach of said member E. The ends of said material are folded after the manner of a bellows-fold, as indicated at G, so that B and E will be permitted to open and close with ease. Outside of the frame E is a third frame H, which corresponds therewith and is fastened to it to clamp the material D between such frame portions. This third frame, however, is not an absolute necessity, and other means may be provided for securing the said material to the frame E. Thus constructed the device forms an inverted pocket free to open and close. We now provide automatic means for opening this pocket in the event that the boat is tipped, so that air will be imprisoned in said pocket and will strike the water in that condition for buoying up the boat at the tipped side. This means consists in providing two strips I and J, hinged together and extending down across the frame B and frames E and H, the hinge being above the waterproof D, so as to interfere with it as little as possible. One of the strips is extended upward into an arm J', to which is pivoted a link K, which in turn is loosely connected with the free end of a lever L, pivoted to swing on a pin M, mounted on the gunwale of the boat. The opposite end of the lever is provided with a weight N, as shown, which operates to open the pocket when needed and which also keeps the same normally closed or in the position shown in Fig. 1. The said pin M is inclined from the vertical, as shown in Figs. 1 and 2, so that the weight N will occupy about the position shown in Fig. 5 in unbroken lines. With said pin slanted, as described, it is natural that the weight will swing inward, thus forcing the arm J' outward, and consequently the strip J inward toward the boat and close the pocket. Now if the boat is tipped to one side the pin M will be first brought to an up-

right position and will then incline outward or in the opposite direction from that usually held, and in consequence thereof the weight will fall toward the outside of the boat and in doing so pull the arm J′ toward the side of the boat, which action throws the strip J outward to open the pocket, as indicated in Fig. 2 and in Fig. 1 in broken lines. As the boat continues its downward motion the pocket reaches the water and being full of air will prevent further downward movement by reason of its buoying qualities. The number of cubic inches of air for sustaining a given weight can be easily ascertained by figures, and the required size of pocket for each side of the boat can then be provided. It will be seen that as constructed the pocket is normally kept close to the side of the boat entirely out of the way of the oars or from being injured in passing through narrow places; but when the boat is tipped in the slightest degree the weight at once opens the pocket to prevent further tipping. Being entirely automatic in its action, no attention is paid to the device whatever.

The frame B may be fastened against the side of the boat, as explained, or may be held away from it by means of blocks, so that the frame will occupy a straight position in order that the hinges will not be twisted, and thus set up undue friction to be overcome by the weight.

We do not confine ourselves to any particular construction, but wish to claim, broadly, the use of an air-chamber to be opened automatically for the purposes explained.

Within the receptacle are partitions D′, adapted to fold together in the same manner as the ends. By the use of these said partitions several separate cells are created, so that if one end or the other of the boat is heavily loaded and the boat is tipped each of the cells as it reaches the water will imprison the air, and thus serve to buoy the boat up; otherwise the air would rush to the elevated end of the receptacle, if there were no partitions, and would pass out of such elevated end, and consequently permit the water to enter and allow the boat to overturn. Again, if one or more of the cells did not hold the air there would still be others to imprison the air and hold the boat upright, as before.

It is possible to hang the receiver free of the side of the boat in a pivotal manner by a support at its middle, so that if the boat is higher at one end than at the other said receiver will constantly retain a horizontal position, and in case the boat is tipped the receiver will descend to the water and meet the same its entire length. By arranging the device in this manner the compartments described will not be necessary, as will be understood.

We claim—

1. In a device for preventing the tipping of boats, the combination of the boat, a collapsible air-receiver secured to each side thereof and means for automatically opening and closing said receiver for the purposes indicated.

2. In a device for preventing the tipping of boats, the combination of the boat, a collapsible air-receiver secured thereto, and means for automatically keeping the same close to the side of the boat when not in use, such means also adapted for opening the same for the purposes described when the boat is tipped.

3. In a device of the character described, the boat, a collapsible waterproof pocket secured to the same at each side, a weight attached to the boat and adapted to swing by gravity, and connection between the weight and the pocket for opening and closing the same in the manner described and shown.

4. In a device of the character described, the boat, a waterproof air-receiver secured to the side thereof, a frame for carrying the outer portion thereof, said frame hinged to form a collapsing receiver as described, and a weighted arm for swinging said frame open or shut, the direction of such swinging movement being determined by the movements of the boat.

5. In a device of the character described, the boat, the waterproof receiver, the frame B for securing it to the side of the boat, the frame E hinged at its top to the said frame B, the strips I and J attached to the said frame substantially as described, the arm J′ formed with the strip J, the link K pivoted to the arm J′, the lever L pivoted on the boat and the weight on said lever all arranged substantially as described and adapted to prevent tipping of the boat and operated automatically as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

DANIEL R. SHEEN.
MORRIS N. SHEEN.

Witnesses:
E. J. ABERSOL,
L. M. THURLOW.