

No. 655,234.

Patented Aug. 7, 1900.

R. M. HOWE & L. A. LEAVITT.

BOAT ATTACHMENT.

(Application filed Mar. 7, 1900.)

(No Model.)

Fig. 1.

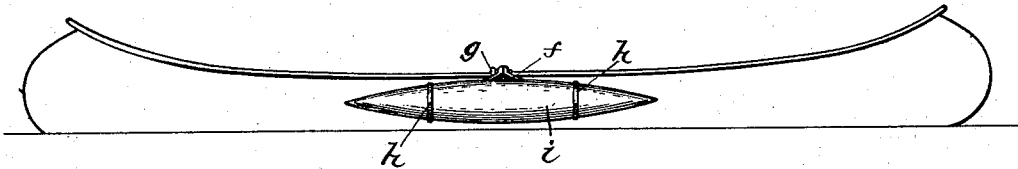


Fig. 2.

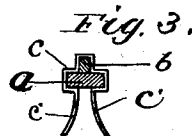
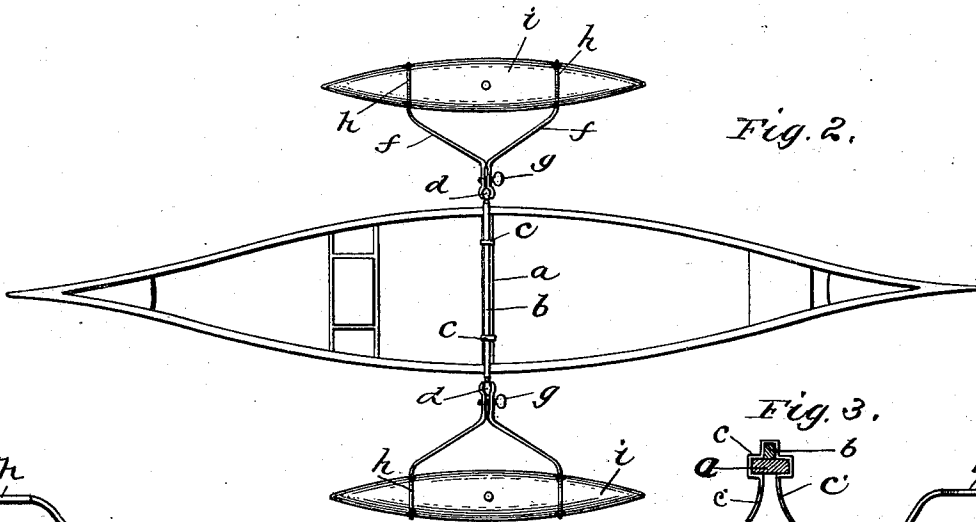


Fig. 4.

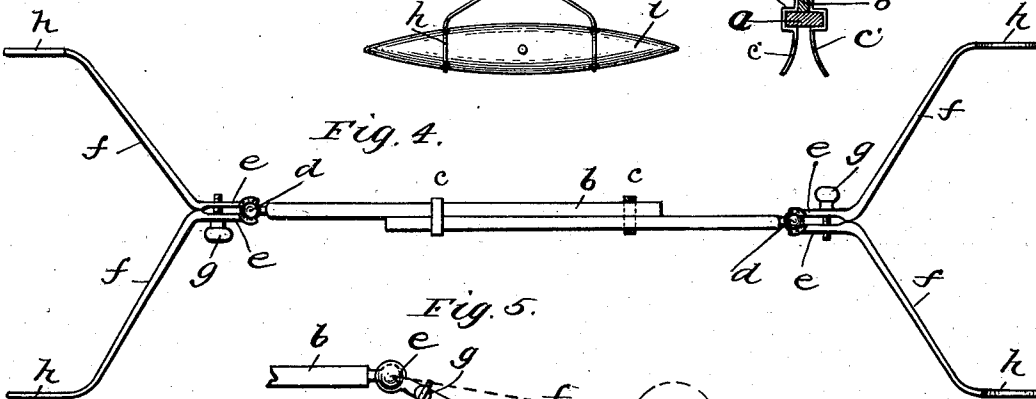
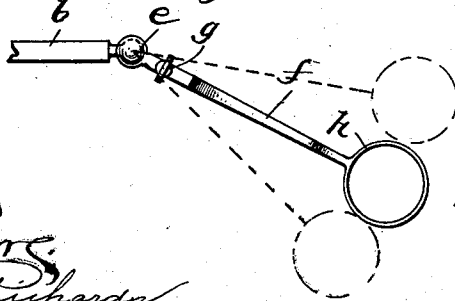


Fig. 5.



Witnesses
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RANDOLPH M. HOWE AND LEWIS A. LEAVITT, OF OLD TOWN, MAINE; SAID
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BOAT ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 655,234, dated August 7, 1900.

Application filed March 7, 1900. Serial No. 7,717. (No model.)

To all whom it may concern:

Be it known that we, RANDOLPH M. HOWE and LEWIS A. LEAVITT, citizens of the United States, and residents of Old Town, county of Penobscot, and State of Maine, have invented certain new and useful Improvements in Boat Attachments, of which the following is a full, clear, and exact specification, reference being had herein to the accompanying drawings, in
10 which—

Figure 1 is a side elevation of a canoe provided with our attachment; Fig. 2, a plan view thereof; Fig. 3, a vertical transverse section through the central cross-bar of the canoe, showing the manner of removably attaching the device to said bar; Fig. 4, a plan of the attachment detached, the air-bag floats being removed from their supports; and Fig. 5, a detail view showing the manner of adjusting the float-supporting arms

The object of the invention is to produce a simple attachment for canoes and other small boats that will prevent the same capsizing by a sudden shifting of the occupants or by the force of violent waves, its essential features lying in its simplicity, inexpensiveness of construction, lightness, adjustability to various sizes of boats, and also as to varying loads, effectiveness, (in that it is almost impossible to upset a boat provided with the attachment,) and its capability of ready attachment and detachment, all these desiderata being obtained without materially affecting the speed or ease of handling the boat or canoe, all as more fully hereinafter set forth.

Referring to the drawings by reference-letters, *a* designates the central cross-bar of the canoe, and *b* the main supporting-bar of the attachment, which is clamped upon the upper side of the cross-bar *a* by means of two or more spring-clamps *c*, which embrace both bars and hold them securely together against endwise or other movement independently of each other, said clips being readily attached and detached by simply spreading their depending diverging lips *c'*.

On each end of the bar *b* is formed or secured a ball *d*, which forms one member of a ball-and-socket joint, the other member being constituted by the concaved inner ends of the float-supporting arms *e*, these arms

being clamped together upon the ball by means of a clamping-screw *g*, whereby the arms *e* have a pivotal or universal adjustment with reference to the supporting-bar *b*. The arms *e* extend outward from the side of the boat and are spread apart laterally from a point just beyond the clamp-screw, these outward-diverging parts *f* each carrying a ring *h* at its outer extremity. In each pair of rings *h* is a cigar-shaped float *i*, preferably constructed of air-tight flexible fabric, which may be inflated with air and deflated at will.

It will be observed that the bar *b* is constructed of two overlapping sections clamped together by the clips *c*, whereby the bar is rendered endwise expansible in order to permit the device to be properly adjusted for canoes or other boats of various widths, it being essential that the ball-and-socket joints shall lie just beyond the gunwales, as shown.

As will be observed, the provision for vertically adjusting the floats enables them to be adjusted so that they shall with any given weight lie normally above the surface of the water, so that under normal conditions the floats will not contact with the water, and thereby impede progress, although in some cases it may be advisable that the floats shall normally lie upon the water. When properly adjusted and firmly clamped and in place, these floats will render it practically impossible for the boat to be capsized, either by the violence of the waves or by the unequal distribution or sudden shifting of the weight of the occupants, thereby rendering it of great value for light sensitive pleasure-boats, such as canoes. It will be observed that the device may be quickly attached and detached and may be adjusted to suit boats of various widths. It will also be observed that the device may be packed into a compact package for transportation, the arms *e* being readily detachable from the supporting-bar and the floats being readily detachable from the supporting-rings. It will be noted also that the floats are securely fastened in the rings by simply inflating them, the pressure on the rings caused by the expanded air-bag, together with the oppositely-tapering form of the float, being sufficient to hold them securely in the rings. It will be

noted further that the ball-and-socket joints enable the floats to be adjusted not only up and down, as stated, but also obliquely with respect to the canoe or boat, so that the device may be readily adjusted to suit the varying conditions of use.

What we claim, and desire to secure by Letters Patent, is—

1. A boat attachment comprising a bar and means for attaching it transversely to a boat, said bar being provided at each end with a ball, a pair of float-supporting arms pivotally attached to each ball, the inner ends of these arms being formed into sockets adapted to engage the ball and the outer ends of the arms being spread apart laterally and provided with rings vertically arranged, and a float carried by each pair of rings.

2. A boat attachment, comprising an endwise-extensible bar, means for fastening said bar transversely of a boat, a float-supporting device attached to each end of said bar, and a float carried by each device at its outer end.

3. In combination with a boat, a pair of outward-extending arms projecting from each side of the boat and carrying rings at their outer ends, and inflatable floats supported in said rings, and secured therein by their inflation.

4. A boat attachment comprising an outward-extending float-carrying device, a pair of vertical rings at the outer end of said float-carrying device, means for securing the inner end of said float-carrying device to the boat, and an inflatable float supported in said rings and held therein by its expansion.

5. A boat attachment, comprising a bar extending transversely of the boat and projecting on either side thereof, means for detachably connecting this bar to the boat, and a float-carrying device adjustably clamped to each projecting end of said rod, for the purposes set forth.

6. A boat attachment comprising a support adapted to be secured to a boat, a pair of float-carrying arms pivotally and detachably connected to the outer end of said support, their outer ends being separated and carrying vertical rings, a clamp-screw to clamp said arms to the support and hold them against pivotal motion, and a float secured in the rings of the float-carrying arms.

7. A boat attachment comprising a float-supporting device provided with separated vertical rings at its outer end, an inflatable cigar-shaped float fitting said rings, and having its largest diameter at a point between the rings, whereby when inflated it will be held against endwise movement through the rings, and means adapted to secure the float-supporting device to the float.

8. A boat attachment, comprising a bar adapted to extend transversely of the boat, means for attaching this bar to a transverse bar of the boat, and a float-carrying device adjustably clamped to each end of said bar, substantially as set forth.

9. In a boat attachment the combination of a support adapted to be secured to a boat, two float-carrying arms separated at their outer ends and brought together at their inner ends, a single connecting device for adjustably securing said float-carrying arms at their converged ends to the support, whereby both arms may be adjusted from the same point and by the manipulation of a single adjusting device, and a float carried by the float-carrying arms at their separated ends.

In testimony whereof we hereunto affix our signatures, in the presence of two witnesses, this 6th day of March, 1900.

RANDOLPH M. HOWE.
LEWIS A. LEAVITT.

Witnesses:

F. W. KNOWLTON,
CHARLES A. LOWE.