

(No Model.)

2 Sheets—Sheet 1.

H. D. LAYMAN.
INFLATABLE BOAT.

No. 549,923.

Patented Nov. 19, 1895.

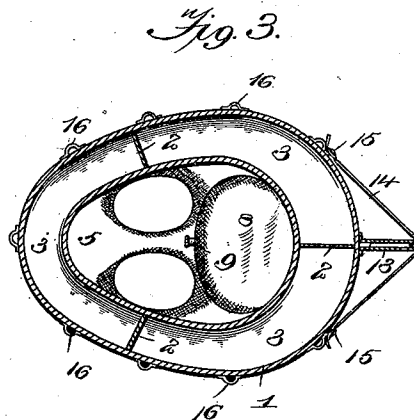
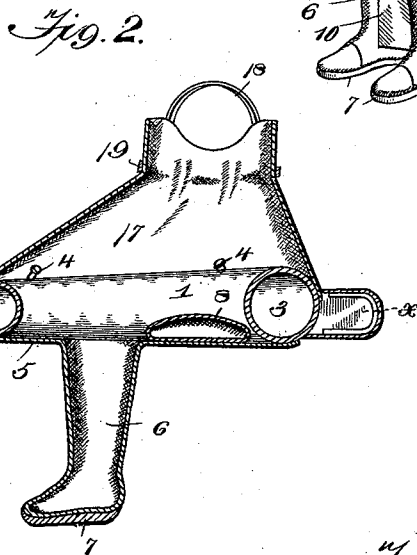
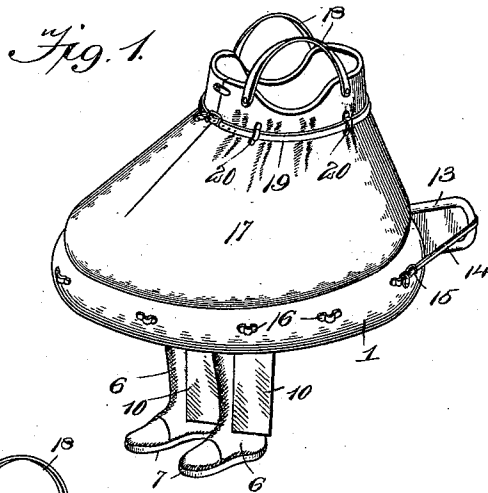
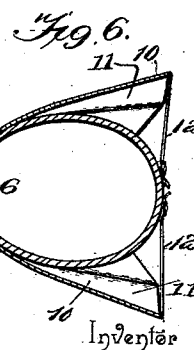
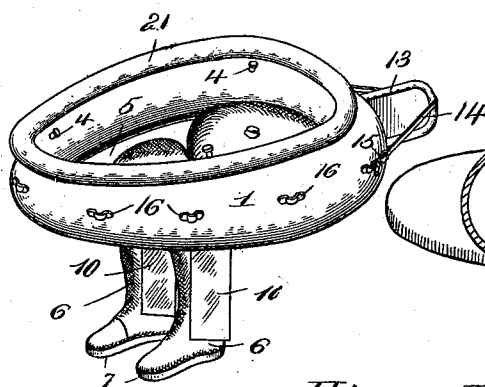


Fig. 4.



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2 Sheets—Sheet 2.

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Fig. 7.

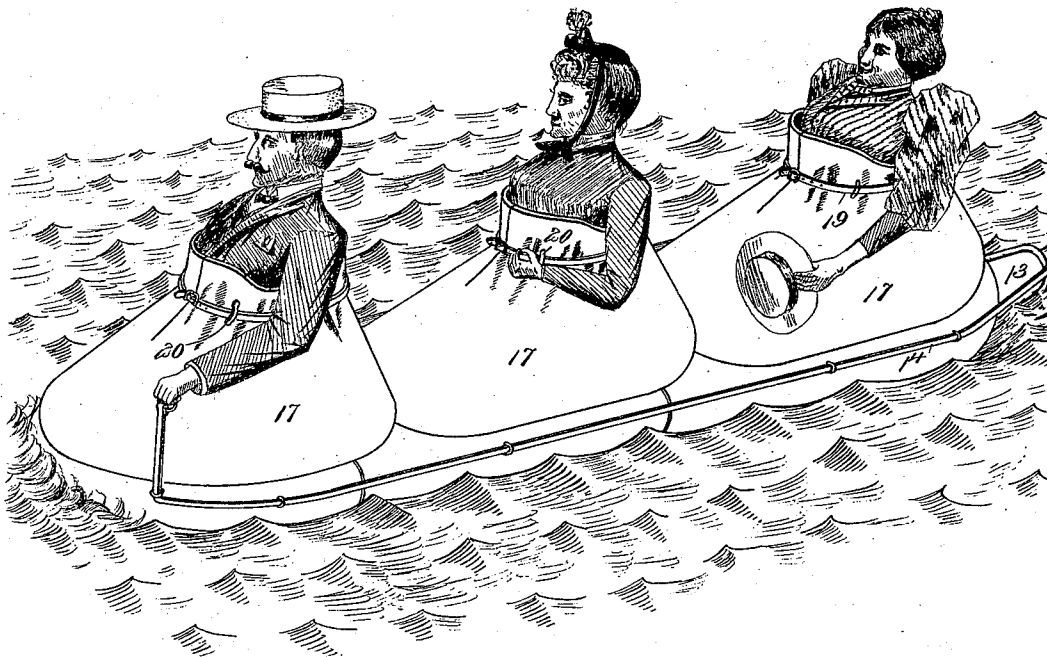
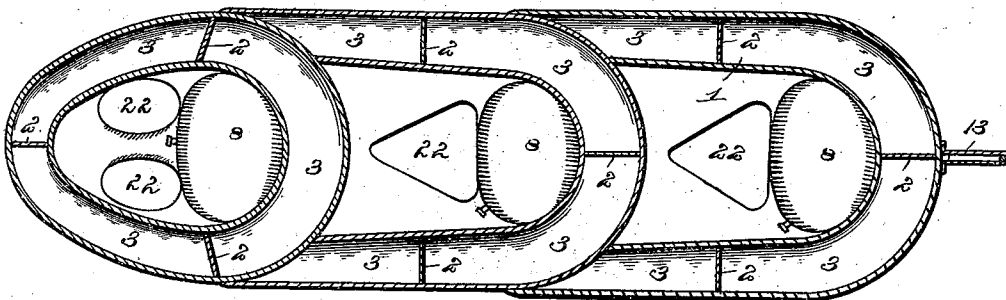


Fig. 8.



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UNITED STATES PATENT OFFICE.

HIRAM D. LAYMAN, OF LITTLE ROCK, ARKANSAS.

INFLATABLE BOAT.

SPECIFICATION forming part of Letters Patent No. 549,923, dated November 19, 1895.

Application filed November 17, 1894. Serial No. 529,181. (No model.)

To all whom it may concern:

Be it known that I, HIRAM D. LAYMAN, a citizen of the United States, residing at Little Rock, in the county of Pulaski and State of Arkansas, have invented a new and useful Boat, of which the following is a specification.

This invention relates to portable boats; and it has for its object to provide a new and useful boat of this character that can be folded up or collapsed into a small compass for being easily carried, while at the same time providing a perfectly-safe and easily-controlled light boat that is especially adapted for hunting and fishing purposes and also for pleasure.

With these and other objects in view, which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

In the drawings, Figure 1 is a perspective view of a portable boat constructed in accordance with this invention. Fig. 2 is a vertical longitudinal sectional view thereof. Fig. 3 is a horizontal sectional view on the line $x x$ of Fig. 2. Fig. 4 is a detail in perspective of a modified form of the boat. Fig. 5 is a detail in perspective of one of the leggins or boots. Fig. 6 is a cross-sectional view on the line $y y$ of Fig. 5. Fig. 7 is a perspective view of a tandem or series form of the boat. Fig. 8 is a horizontal sectional view of the form of boat shown in Fig. 7.

Referring to the accompanying drawings, 1 designates a tubular inflatable float-body of an oval or ovoid shape, that is designed to be inflated with air for the purpose of providing a body that will have sufficient buoyancy for floating on water, while at the same time being capable of being easily collapsed and folded into a small compass for being transported. The tubular inflatable oval float-body 1 is made of flexible water-tight material, preferably rubber, and is provided inside of the same with a series of flexible partitions 2, that divide the interior of the body into a number of air-compartments 3, with each of which connects an ordinary valved filling-tube 4, providing means for separately inflating and discharging the air from the compartments, and the provision of a number of separate air-

compartments 3 renders the boat perfectly safe, inasmuch as the puncture or impairment of one air-compartment will not affect the inflation of the other compartment.

The oval or ovoid shape of the float-body 1 provides the body with a narrow and a wide end, the narrow end forming the prow or point of the boat, in order to present as little resistance to the water as possible, while the wide end of the body forms the stern end of the boat and accommodates therein the seated portion of a person. By reason of the fact that the weight of the person seated within the open body 1 is placed on the wide stern end thereof such end of the body is larger or of a greater diameter than the narrow prow end, as clearly illustrated in Figs. 2 and 3 of the drawings, thereby providing a construction of float-body that will easily sustain the weight of a person seated therein, while at the same time maintaining a horizontal floating position on the water and offering as little resistance as possible to propulsion through the water. The inner oval space of said float-body is entirely open at the top to allow a person to be seated therein, but is closed at the bottom by the flexible water-tight bottom piece 5. The flexible bottom piece 5 is preferably made of the same material as the float-body 1 and is joined at its edges to the bottom side of said float-body by water-tight seams, and said bottom piece 5 provides a perfectly water-tight bottom for the float-body and has extended therefrom the flexible water-tight leggins or boots 6, provided on their soles with the weights 7, that assist to hold the float-body correctly positioned in the water. The pair of leggins or boots 6 are sufficiently long and of such a size as to easily accommodate the feet and legs of a person seated within the float-body, and arranged on top of the bottom piece 5, in rear of the openings for the leggins or boots 6, is the inflatable cushion-seat 8, provided with a valved filling-tube 9 and forming a soft seat for the person using the boat. It is to be noted that the seat 8 is disposed within the wide stern end of the continuous inflatable float-body 1 in order that the weight of the person may be placed on the said stern end of the body.

The water-tight leggins or boots 6, ex-

tended from and below the bottom piece 5, are perfectly flexible in order to allow the person in the boat the free use of the legs to provide for the propulsion of the boat, and to secure this result each leggin or boot is provided on opposite sides and near the foot thereof with the opposite feathering paddles 10. The paddles 10 consist of suitable lengths of flexible material secured at their front edges to the sides of the leggins or boots and provided at their upper and lower ends with the triangularly-shaped folding end flaps 11, that are also secured to the sides of the leggins or boots and serve to limit the opening of the paddles, while at the same time permitting the same to close or feather against the sides of the leggins or boots. At their moving rear edges the said feathering paddles 10 have attached thereto the limiting-straps 12, also connected to the leggins or boots to positively limit the opening of the paddles 10 and to brace the same when full of water. It will be obvious that by moving the leggins or boots 6 backward and forward the paddles 10 will alternately catch the water and feather therein to provide for the propulsion of the boat through the water.

The continuous tubular oval-shaped float-body 1 has attached on the outside thereof, at the stern end, the longitudinally-disposed rudder-plate 13, to the outer end of which are connected the opposite strap portions 14, buckled at their front ends, as at 15, to the outside of the body 1, on opposite sides of the rudder-plate, to provide means for rigidly holding the rudder properly positioned, so that the float-body is prevented from spinning about in the water or from too easily turning.

When used for hunting purposes, the body 1 of the boat is preferably provided with an exterior series of keepers or loops 16, in which may be inserted a pole or staff carrying a screen or "cover" to conceal the gunner from view, and the other necessary appurtenances for gunning and fishing may be readily carried by the boat.

Where the boat is used in rough water, the same has attached to the top edges thereof a conical breakwater-cape 17, made of flexible water-tight material and joined to the outer upper edges of the float-body by a water-tight seam. The said breakwater-cape 17 is adapted to encircle or cover the body of the person in the boat below the arms, and attached to the upper edges of the cape, to opposite sides thereof, are ordinary shoulder-straps 18, and below said shoulder-straps the said cape 17 is encircled by a body-strap 19, passed through the guide-loops 20 on the cape and adapted to be strapped to the body of the person in the boat in order that such person may be entirely protected from the wash of the rough water. In smooth water the cape 17 is not necessary for a breakwater, and in lieu thereof the oval-shaped float-body 1 is provided at the top thereof with an inflatable breakwater-

rim 21, of the same configuration as the body 1, and therefore following the contour thereof, to provide means for acting in the capacity of a breakwater or dam to prevent the water from washing over the top of the float-body inside of the same upon the person seated therein.

The herein-described boat may not only be used in a single form, as described, but may be employed in a tandem or series form, as shown in Figs. 7 and 8 of the drawings, in which form the boat is employed principally for pleasure. In the tandem or series form a series of the tubular inflatable float-bodies are joined together longitudinally by watertight seams, and the float-bodies in rear of the foremost float-body approximate as nearly as possible the shape of such foremost body; but at the stern end all of the float-bodies of the tandem or series form are of a greater diameter than at their front ends, as already described, for the purpose of sustaining the weight of the person seated therein. The tandem or series form of boat is provided within each float-body with the leg-openings 22, which may open into either single leggins or boots for the reception of both legs or into a pair of leggins or boots, as already described, and in this form of the boat either the cape or rim breakwater may be employed, and steering-straps 23 may be guided from the rudder along both sides of the boat up to the foremost body, where the same may conveniently be controlled by the person seated at the front of the boat.

Changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

1. A boat having a continuous tubular inflatable oval shaped float body of a greater diameter at the wide stern end than at the narrow prow end, substantially as set forth.

2. In a boat, a continuous tubular inflatable oval-shaped float body of a greater diameter at the wide stern end than at the narrow prow end, and a water tight bottom piece attached to the bottom of said float body and provided with water tight leggins or boots continuous with and depending therefrom, substantially as set forth.

3. In a boat, a tubular inflatable body of a greater diameter at its rear end than at the front end, a water tight bottom piece inclosing the bottom of the central open space of said body and having depending water tight leggins or boots extended below the same, and an inflatable cushion seat arranged on said bottom piece within the wide end portion of said body, substantially as set forth.

4. In a boat, a tubular inflatable oval shaped body of a greater diameter at its rear end than at the narrow prow end, and a water

tight bottom piece inclosing the bottom of the central open space of the body, and having integral water tight leggins or boots continuous and depending therefrom and provided with weighted shoes, and an inflatable cushion seat arranged on the bottom piece in rear of the leggin or boot openings within the wide end portion of the body, substantially as set forth.

5. In a boat, a tubular inflatable oval shaped body provided with a water tight bottom piece having a cushion seat and water tight leggins or boots depending from the same in front of said boots, a rudder attached to the rear end of said body, and rudder straps connected to the said rudder and to the body at opposite sides of the rudder, substantially as set forth.

6. In a boat, the combination of a tubular continuous inflatable float body provided with a water tight bottom piece having depending flexible leggins or boots, opposite feathering paddles attached at their front edges to opposite sides of said leggins or boots and provided at their upper and lower ends with triangularly shaped folding end flaps also attached to the sides of the leggins or boots,

and limiting straps attached to the leggins or boots and to the moving edges of said paddles, substantially as set forth.

7. In a boat, a tubular inflatable oval shaped body provided with a water tight bottom piece having depending leggins or boots, and a conical water tight break-water cape joined at its wide lower end to the outer upper edges of said float body and adapted to be secured at its narrow upper end around the body of a person, substantially as set forth.

8. In a boat, a tubular inflatable oval shaped body provided with a water tight bottom piece having depending leggins or boots, and a conical water tight break-water cape joined at its wide lower end to the outer upper edges of said float body and provided at its upper end with shoulder straps and an encircling body strap below the shoulder straps, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

HIRAM D. LAYMAN.

Witnesses:

JOHN H. SIGGERS,
HAROLD H. SIMMS.