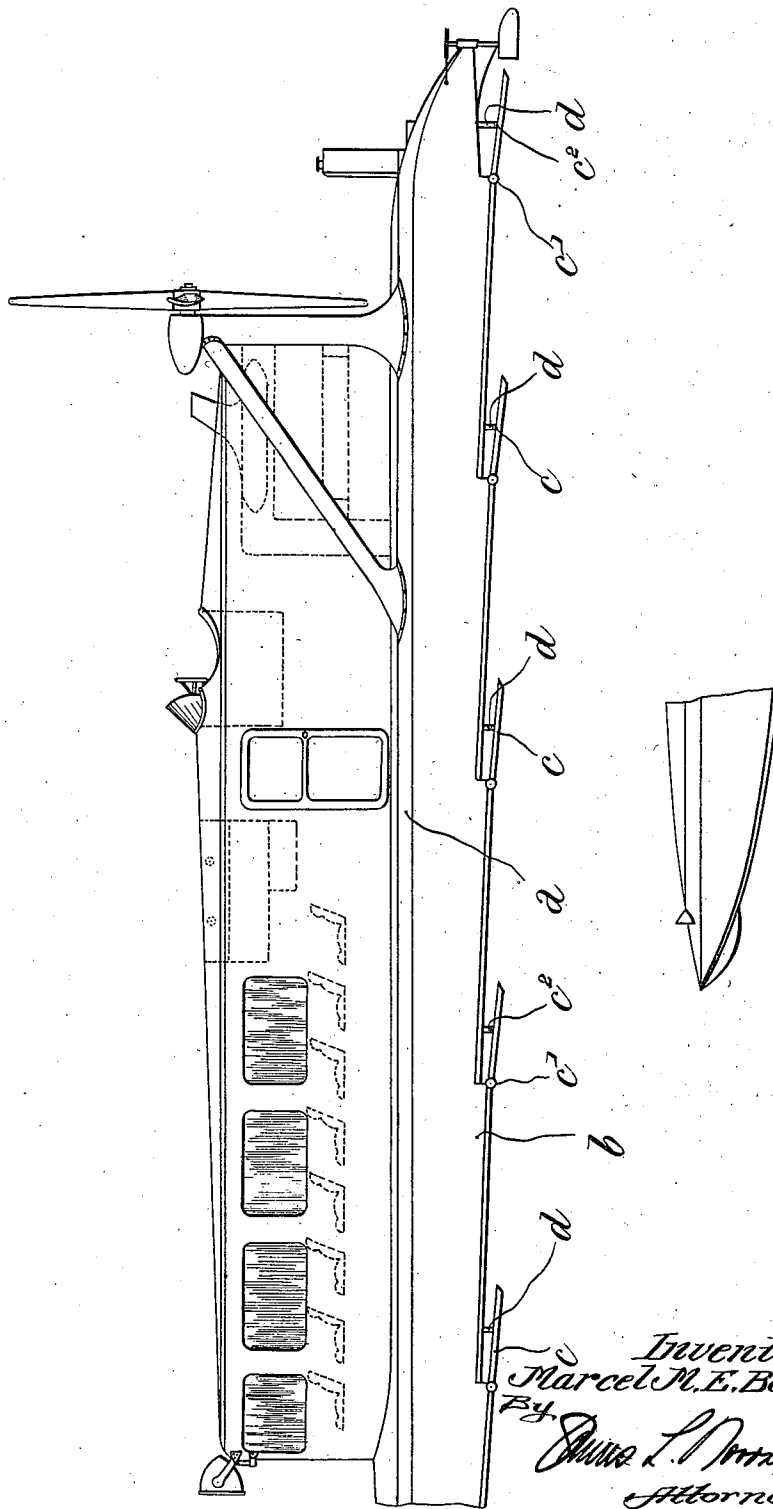


M. M. E. BESSON.
GLIDING BOAT.
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1,413,383.

Patented Apr. 18, 1922.
3 SHEETS—SHEET 1.

Fig. 1.



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Fig. 2.

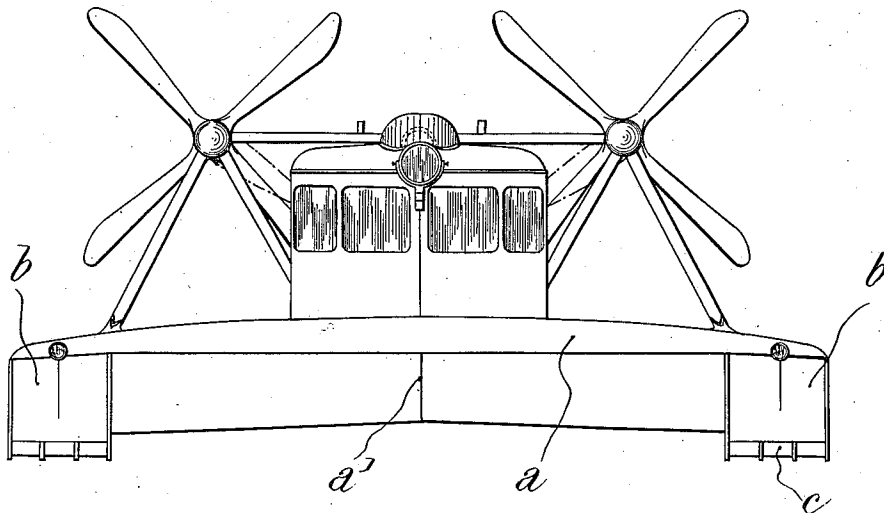
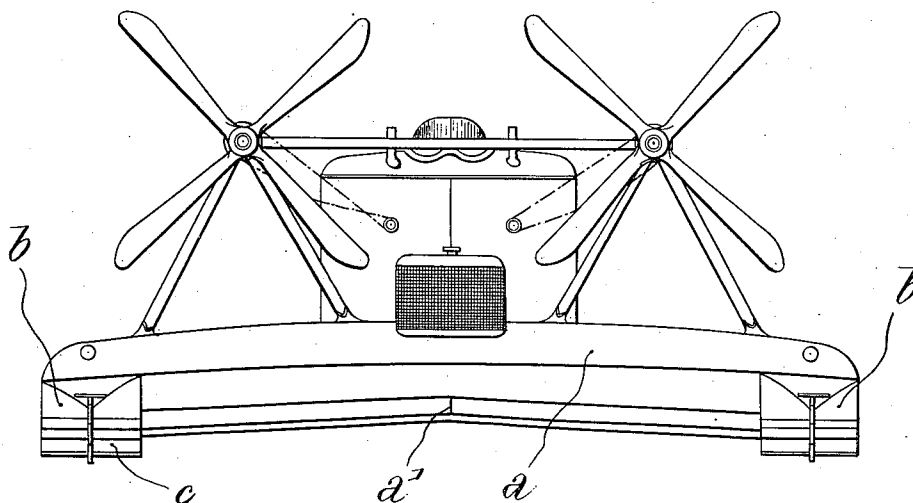


Fig. 3.

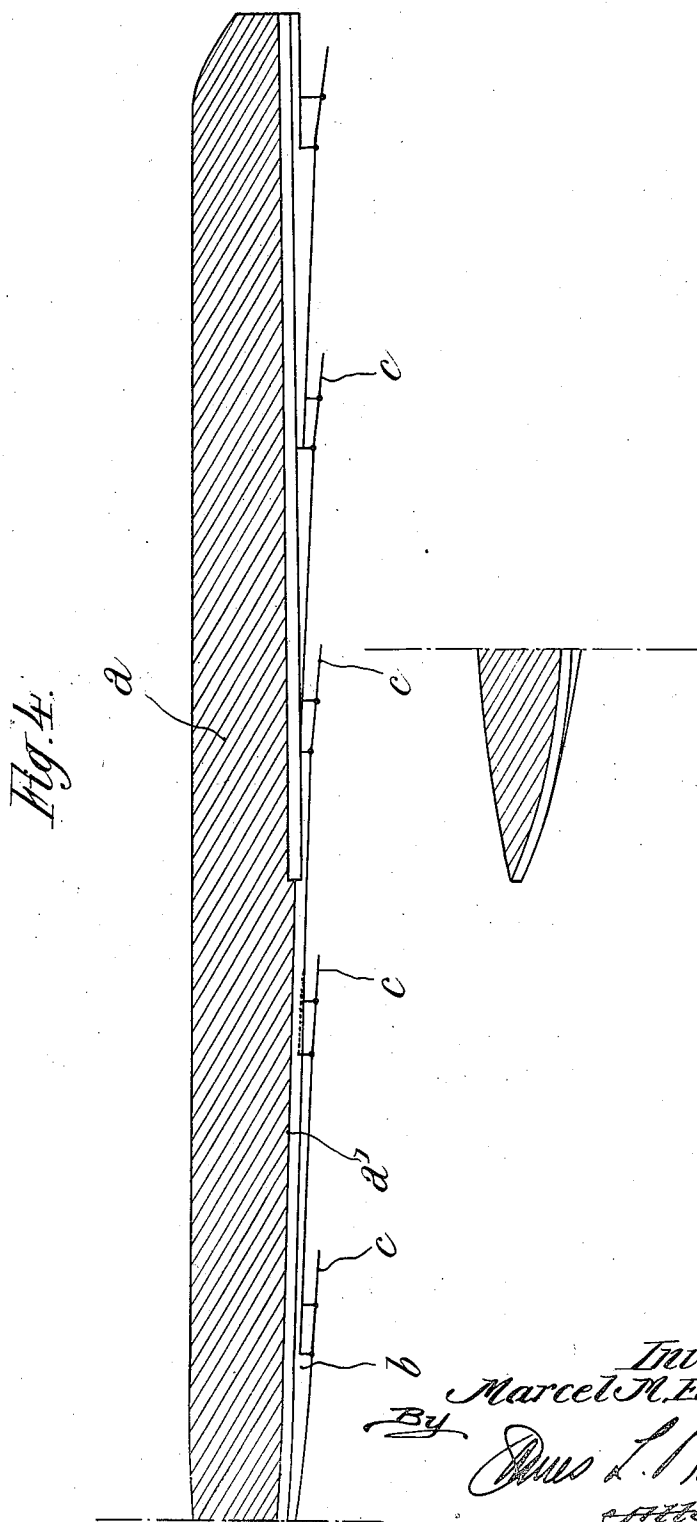


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UNITED STATES PATENT OFFICE.

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GLIDING BOAT.

1,413,383.

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To all whom it may concern:

Be it known that I, MARCEL MATHIEU ETIENNE BESSON, a citizen of the French Republic, residing at Boulogne-on-the-Seine, Department of Seine, France, have invented certain new and useful Improvements in Gliding Boats, of which the following is a specification.

The invention relates to gliding boats or similar machines, more particularly to those in which the inclined planes provided in the bottom, are arranged so as to be able to yield elastically under the action of shocks.

The invention has for its object to enable machines of the kind in question to be so arranged that during the running at a given speed, their bearing power and their balance should be better than hitherto.

The object of the invention is attained by providing the hull of machines of the kind in question with a central hull element between two lateral hull elements, the bottoms of which are at a lower level than that of the first element; in so inclining the bottoms of the various elements that when the machine glides, it tends to rise under the action of the resistance of the water; and in so arranging the system that the whole of the elements are submerged to a certain extent when the machine is in working order and at rest, whereas the bottom of the central element should be raised out of the water when the machine glides at a given speed, thus resting on a mass of air which is compressed between the water and the said bottom and which escapes then aft. The central element could be in certain cases raised to a sufficient extent so as never to be submerged.

Apart from this chief arrangement, there are certain other arrangements more explicitly referred to hereinafter.

The invention will be in any case clearly understood from the following additional description, as well as from the accompanying drawings, which additional description and drawings are given, of course, merely by way of example.

Figures 1-3 of the said drawing show diagrammatically, respectively in side elevation, in end view looking from the front, and in end view looking from the back, a glider according to the present invention.

Figure 4 is a diagrammatic vertical section of the said glider.

The hull comprises a central float *a* dihedrally angled as at *a*¹ and out board runners *b* extending below the central float and having stepped bottoms, the bottoms having a downward inclination of 2° between the steps.

The entire float displaces water when at rest but when up to speed it rests on the out-board runners, air being compressed under the central connecting float and thus assisting in the support of the craft.

It will be understood that, in these conditions, the glider starting from its position of rest on water, in which its three hull elements are partly immersed in water, will have the tendency, beginning with a certain speed, to rise owing to the inclination of its bottoms; and that when the speed will become sufficient, the central element *a* will no longer be in contact with water; the machine being then supported, on water by the lateral elements *b* and on air, owing to the bottom of the central element resting, like a bearing surface of an aeroplane, on the mass of air which is compressed under the said bottom; the said mass of air escaping aft of the apparatus.

Each bottom portion of the wings or runners *b* is provided at its rear end with a plate *c* pivoted at *c*¹ adjacent the step about a horizontal pin.

Aft of this pin, the plates are each provided with a rod or tube *d*, extending into the float and serving as a support for a compression spring.

The plates are passed against these springs when the float is at speed, so that the plates are practically in line with the portion of the bottom to which they are connected.

It goes without saying that the invention is by no means limited to that of the method of applying or of carrying it out, which has been more particularly described, but comprises on the contrary any modifications, namely that in which the central element is subdivided into a certain number of raised elements separated by elements of a similar shape and submerging in the same manner as the lateral elements.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A gliding boat or the like, the hull of

which comprises a central float dihedrally angled and out-board runners extending below said central float and having stepped bottoms.

5 2. A gliding boat or the like, the hull of which comprises a central float dihedrally angled and out-board runners extending below said central float the stepped bottoms of which have a downward inclination between
10 the steps.

3. A gliding boat or the like, the hull of which comprises a central float dihedrally angled and out-board runners extending below said central float, each stepped bottom
15 of the runners being provided at its rear end with a plate.

4. A gliding boat or the like, comprising

in combination a hull with dihedrally angled central float, out-board runners having stepped bottoms, a plate at the rear end of
20 each bottom, said plates being pivoted adjacent to the step about a horizontal pin.

5. A gliding boat or the like, comprising in combination a hull with dihedrally angled central float, out-board runners having
25 stepped bottoms, a plate pivoted about a horizontal pin at the rear end of each bottom and adjacent to the step, each of said plates being provided with a rod or tube
30 extending into the float and serving as a support for a compression spring.

In testimony whereof I have hereunto set my hand.

MARCEL MATHIEU ETIENNE BESSON.