March 1, 1932. N. D. BRAYMAN ET AL 1,847,551

SEADROME OR AIRPLANE LANDING

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Fig. 1

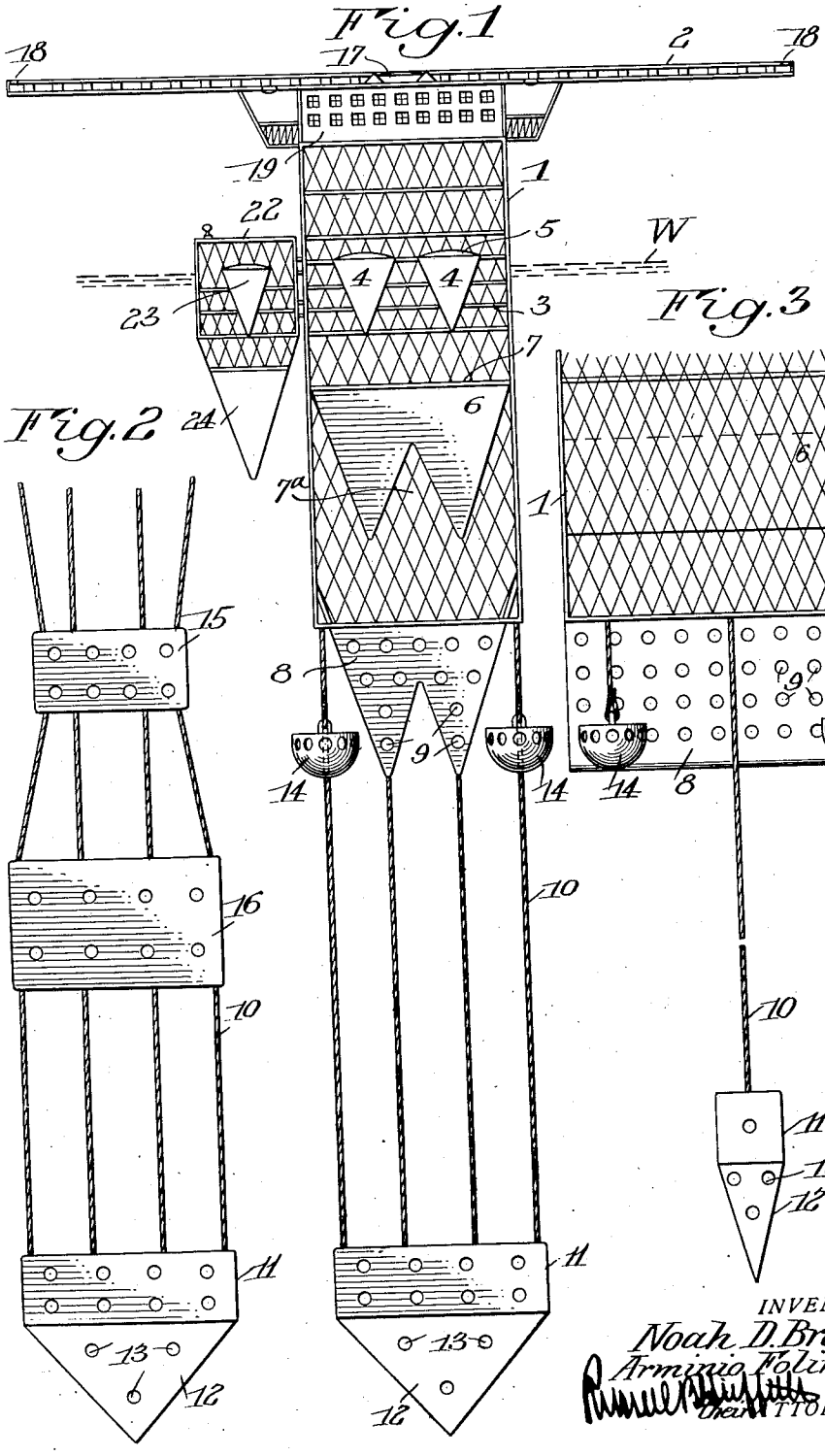

Fig. 2

Fig. 3

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Fig. 4

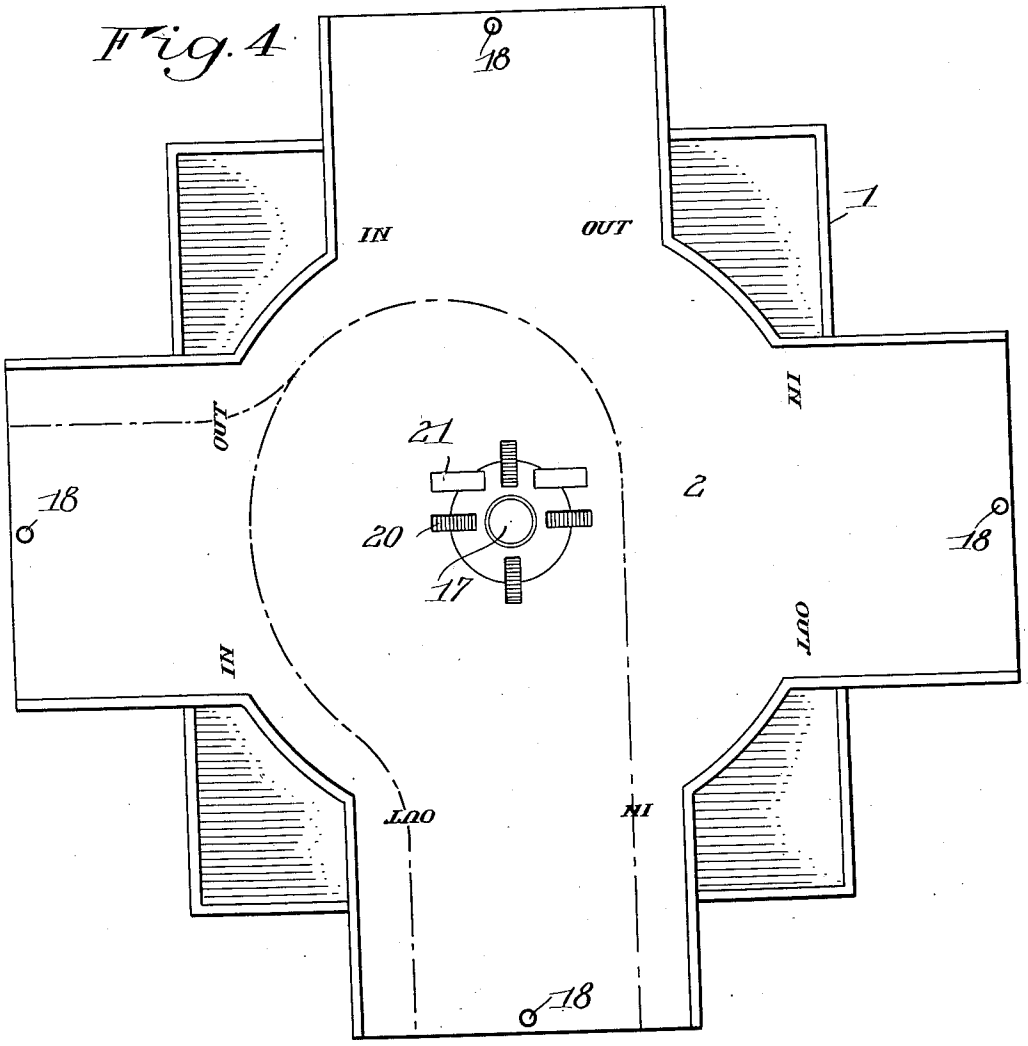


Fig. 5

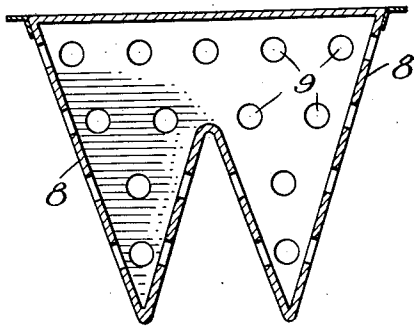
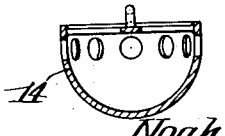


Fig. 6



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UNITED STATES PATENT OFFICE

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SEADROME OR AIRPLANE LANDING

Application filed April 14, 1930. Serial No. 443,936.

Our present invention relates to airplane equipment and more particularly to landing fields therefor, and it has for its object to provide a safe and stable landing field that may be located at sea and anchored in such way as to maintain its position for the landing and taking off of amphibian and land airplanes. Features of the invention have reference to the floating of such a landing field; the anchoring thereof and the stabilizing of the landing platform in connection with these devices, so that the rolling and rocking of the floating structure is reduced to a minimum.

To these and other ends, the invention resides in certain improvements and combinations of parts, all as will be hereinafter more fully described, the novel features being pointed out in the claims at the end of the specification.

In the drawings:

Fig. 1 is a side elevation of a seadrome constructed in accordance with and illustrating one embodiment of our invention;

Fig. 2 is a fragmentary view of an additional anchoring and stabilizing structure;

Fig. 3 is a fragmentary side view, partly broken away, of the submerged portion of the device, as shown in Fig. 1;

Fig. 4 is a top plan view of the landing field;

Fig. 5 is an enlarged detailed section through one of the stabilizing elements, and

Fig. 6 is an enlarged sectional view through another of the stabilizing elements.

Similar reference numerals throughout the several views indicate the same parts.

The device in general comprises a floating structure; means for rendering it sufficiently buoyant; means for stabilizing it arranged near the surface of the water; and means for anchoring it on the sea bottom.

Referring more particularly to the drawings, 1 indicates a preferably rectangular column composed of a network of structural steel, as shown. Topping it is a landing field or platform 2 hereinafter described. At the water line, indicated at W, there is supported within the column in connection with braces 3, a plurality of cone-shaped air tanks 4 forming floats which are the main source of buoyancy. Their tops are rounded, as indicated at 5, so as to give the least resistance to the waves.

Just below these tanks is a primary stabilizing tank 6, which is filled partly with air and partly with water according to conditions. In other words, by means of an air pump or compressed air lines, air may be forced or withdrawn to expel the proportion of water or admit more water to reach a suitable balance. The top of this stabilizer tank is flat, as indicated at 7, so that it will resist to the greatest degree the rise and fall of the column due to the turbulence of the sea.

Below the primary stabilizer 6, which is of a double V conformation, as shown, to provide a dead body of water in the space 7 tending to prevent lateral motion or swaying is a secondary stabilizer 8, which is of the same general shape. This latter, however, contains no air. On the contrary, its walls are foraminous, as indicated at 9, allowing currents to flow slowly therethrough rather than offering a maximum resistance thereto.

Suspended by cables 10 from the lower end of the column 1 is the bottom anchor 11. This preferably consists of a perforated weight having a cone-shaped bottom or point 12, and the cables 10 are of the proper length to allow this anchor to imbed itself in the sea bottom, the perforations 13 permitting the sand or mud to flow into it laterally and increase its anchoring power.

We may also fit two or more of the cables 10 with upper bell anchors 14 of the construction shown in Fig. 6, which are merely weights arranged at an intermediate point in association with the secondary stabilizer 8.

Other means of weighting the cables 10, where the anchorage is particularly turbulent, are shown in Fig. 2, and consist of perforated steel blocks 15 and 16, through which the cables pass.

The landing field, indicated generally at 2, is, as shown in Fig. 4, in the general shape of a Maltese cross affording a plurality of landing and take-off paths, according to the

direction of the wings. In the center is a beacon light 17, while the ends of the runways are provided centrally with smaller beacons 18, so that the pilot may better judge the space and distance available to him.

It is also contemplated that arriving and departing passengers be provided with accommodations for their stay at the seadrome and their departure therefrom by seagoing vessels. To this end, there is provided beneath the landing field at the head of the column 1 a cabin 19 beneath the landing field 2 which may be reached from the latter by stairways 20 or elevators 21 grouped at the center about the central beacon 17. From thence, the passengers may reach a dock 22 that is suitably moored at the surface to the column 1. To conform with the mechanical arrangement of the rest of the structure, this dock 22 also preferably comprises a structural steel network; air chamber floats 23 and a stabilizer 24. It is further contemplated that this dock 22 may be veered around and attached to the leeward side of the column according to the direction of the prevailing wind.

We claim as our invention:

1. In a seadrome providing landing and take-off facilities for airplanes, the combination with a floating column, a field platform supported thereby, a buoyancy element, an anchoring device, and a stabilizing element arranged between the buoyancy element and the anchoring device, said stabilizing element consisting of a tank in the shape of a double V adapted to trap a dead body of water between its lower projections.

2. In a seadrome providing landing and take-off facilities for airplanes, the combination with a floating column, a field platform supported thereby, a buoyancy element, an anchoring device, and primary and secondary stabilizing elements arranged between the buoyancy element and the anchoring device, the first mentioned comprising an air and water tank and the last mentioned a foraminous tank through which currents of water are adapted to slowly flow.

3. In a seadrome providing landing and take-off facilities for airplanes, the combination with a floating column, a field platform supported thereby, a buoyancy element, an anchoring device comprising a foraminous weight, and cables connecting the anchoring device with the column.

4. In a seadrome providing landing and take-off facilities for airplanes, the combination with a floating column, a field platform supported thereby, a buoyancy element, an anchoring device comprising a foraminous weight, cables connecting the anchoring device with the column, and weights supported by the cables above the anchoring device.

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