Dec. 18, 1956 F. R. HARRIS 2,774,322

WATER-BORNE AIRPLANE TERMINAL

Original Filed Aug. 14, 1946

FIG. 1

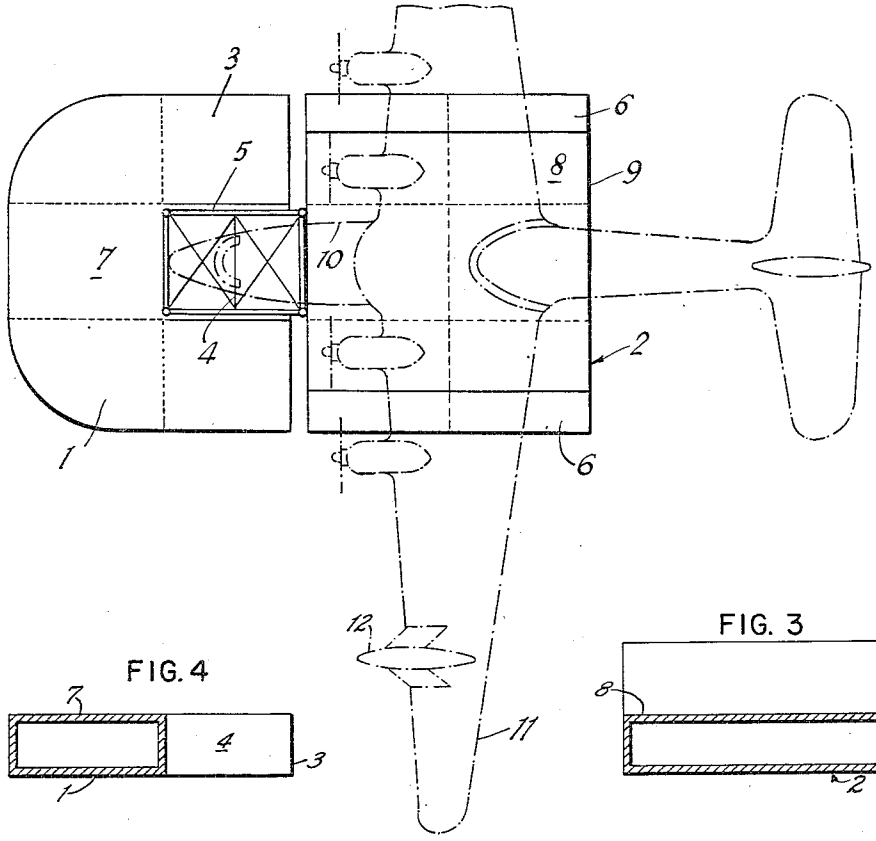
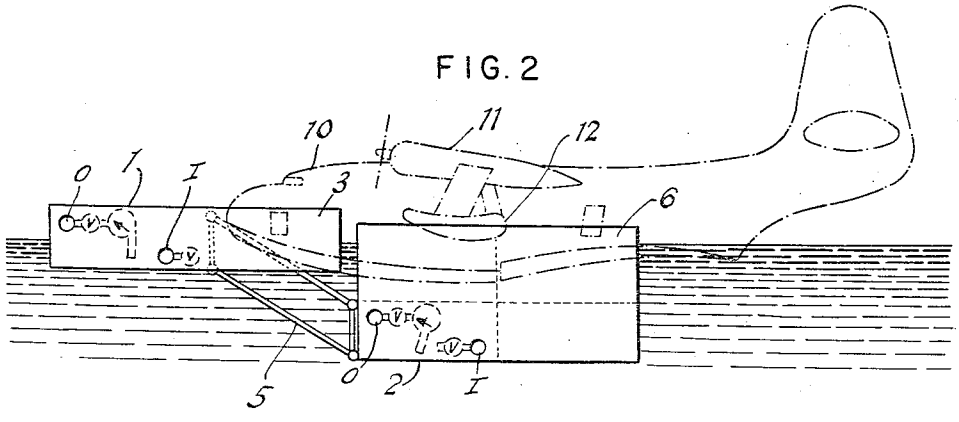


FIG. 4

FIG. 3

FIG. 2



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WATER-BORNE AIRPLANE TERMINAL

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Original application August 14, 1946, Serial No. 610,749. Divided and this application October 14, 1953, Serial No. 386,025

3 Claims. (Cl. 114—46)

This invention is an improvement in water-borne terminals for aircraft, for flights beginning and ending on the surface of a body of water.

It is an object of the invention to provide a seaplane terminal having elevated side structures and a space between them for the body or hull of the plane; the side structures being of such height that the wings of the plane in the terminal may be supported thereon.

An additional object of this invention is to provide a seaplane terminal comprising a member having the general construction of a floating dry dock to be partly submerged when necessary, and raised again in the same manner as in the lifting and repairing of ships and adapted to give the plane and all its parts suitable support therein, when repairs are needed; and another member movably connected to the first for cargo and passengers.

The description and the accompanying drawings disclose a preferred embodiment of the terminal. In practice, the invention is not limited to the parts actually shown herein and variations in minor respects may be adopted, within the general meaning of the terms in which the appended claims are expressed.

On said drawings:

Figure 1 shows a top plan of a complete sea plane terminal according to this invention;

Figure 2 is a side veiw of same, and

Figures 3 and 4 are respectively longitudinal vertical sections of the member to be submerged and the other member.

The invention of this application is a division of No. 610,749 for patent on Flying Boat Terminal, filed August 14, 1945, now abandoned, the inventor being the same as in this case.

The Figures 1 and 2 show a terminal for a seaplane which comprises two members or sections 1 and 2. The former is U-shaped in plan with arms 3 presented towards the other member or section, and in the central space 4 of the part 1 are paired beams 5 which are pivotally connected at their ends to the members 1 and 2 to couple them together. When this terminal is used, the section 2 is sunk below the water while the part 1 floats thereon. The seaplane passes into one end of the part 2 until its nose enters the central space 4 of the other part. The wings of the seaplane project out over the elevated side structures or walls 6 of the part 2, and can be blocked or jacked up thereon, or lashed thereto. The part 2 is then pumped out to raise it to the level of the part 1. Thus each part or member 1 and 2 cooperates with the other. The terminal can then be moved with the plane to any desired location, or the floating platform provided by the two dock members or parts can be joined by a bridge or gangway to a landing pier on the shore, or a barge or ferry can be used for the purpose. Also, the plane may unload or load in either floating or raised position, with the assistance of the part 1 afloat, and the tops of side walls 6. The part 2 is mainly to lift the plane out of water when inspection or repairs to the hull are needed.

The recess or space 4 extends inward from the transverse edge along the end of the section 1 adjacent the section 2 and is of full depth between the deck and bottom of the section 1 and is open above and below so that the nose 10 of the plane can enter freely. The wings of the plane are shown at 11, and the floats at 12.

The sections 1 and 2 have of course the same width and are of such draft and weight that, when a plane is between the walls, the decks 7 and 8 of the two sections can be maintained in proper relative positions.

The section 2 comprises a pontoon hull 9 with the walls 6 extending along the side of the deck 8 like the wing walls of a floating dry dock. The walls 6 terminate at the ends of the section 2, and the space between them gives easy entrance to the plane. The hull 9 and walls 6 of the section 2 are of course hollow, and so is the section 1, with inlet and outlet openings and a pumping system with operating apparatus, so that the sections can be flooded and weighted with water to the required extent, and emptied to lift the section when necessary. The section 1 has no side walls and its deck 7 extends over the entire top thereof.

The pumps are indicated diagrammatically at P in Figure 2, the inlet at I and the outlets at O.

From the foregoing description it will be apparent this seaplane terminal is well adapted to serve the required purpose and can be readily set up at any place where it may be needed.

The section 2 will be utilized mostly for berthing and lifting the plane for inspection and repairs, but the section 1 may be equipped with the necessary apparatus for partially sinking and raising the section 2, as may be required.

Two beams at each side, one pair on each inner face of the recess 4, can advantageously be utilized to connect the sections 1 and 2. One beam of each pair is disposed adjacent the top of the recess, and the other near the bottom and they remain parallel when the section 2 is lowered.

The walls 6, being hollow, give the member 1 the necessary buoyancy, to raise it after submergence, and are raised above the deck of section 2, so that the walls facilitate reaching the hull and wings for inspection and repairs. Also the beams 5 are shown as having the same length and are pivoted to points at equal vertical distances on the sections 1 and 2. The beams thus form the opposite sides of a parallelogram, and the sections are always coupled together, while the section 2 can be lowered or raised. The U-shape of section 1 with the central recess 4 gives a clear space to receive the nose of the plane when the section 1 is lowered to bring its hatch in the side of the plane close to the deck of the section 1 for boarding and disembarking.

The invention having been described, what is claimed is:

1. A marine terminal for seaplanes comprising a pontoon having a hull having a bottom and a deck with elevated walls at its sides, a second pontoon having a recess in one end of full depth opening through the deck and bottom presented to the first pontoon, and beams in said recess at the sides thereof pivotally linked to both pontoons to permit up and down movement of one with respect to the other.

2. A marine terminal for seaplanes having a section comprising a pontoon hull having a bottom and a deck and walls along its sides rising from said deck and a second section comprising a pontoon having a central recess in one end of full depth opening through the deck and bottom and a flush deck extending over its entire top, said sections being disposed end to end, with said recess presented to the first-named section, and beams at

the sides of said recess pivotally attached to both sections to connect said sections together.

3. A marine terminal for seaplanes having a section comprising a pontoon hull having a bottom and a deck and walls along its sides rising from said deck and a second section comprising a pontoon having a central recess in one of full depth opening through the deck and bottom end and a flush deck extending over its entire top, said sections being disposed end to end with said recess between them, and beams in said recess pivotally attached to both sections, one pair of said beams being at each side of said recess, one near the top and the other near the inner adjacent face of said recess.

References Cited in the file of this patent

UNITED STATES PATENTS

1,300,954	Gray	Apr. 15, 1919
2,234,750	Fleet et al.	Mar. 11, 1941
2,360,690	Koulich	Oct. 17, 1944
2,471,065	Harris	May 24, 1949
2,594,773	Harris	Apr. 29, 1952

FOREIGN PATENTS

425,130	France	June 2, 1911