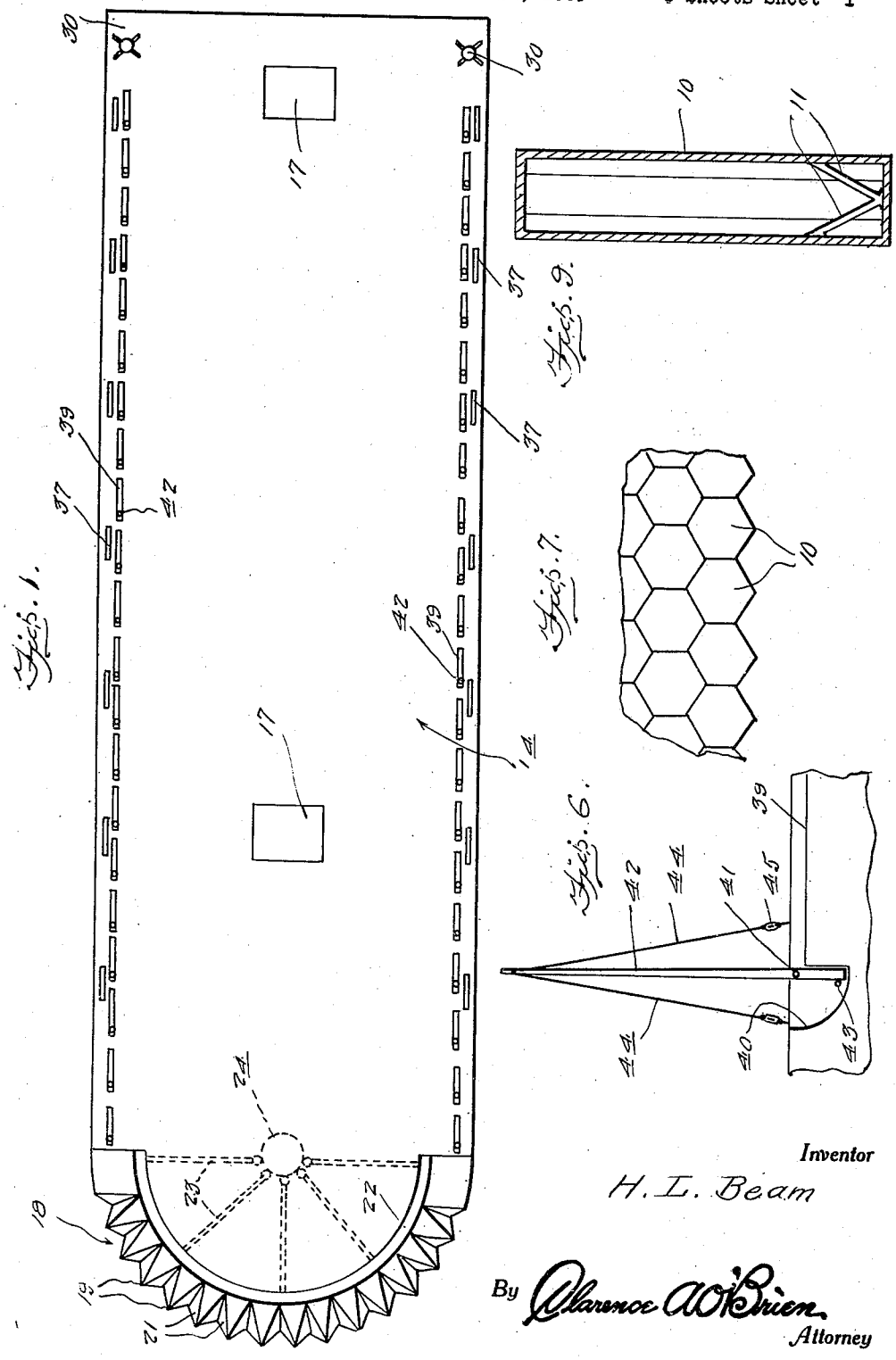
Nov. 1, 1932. H. L. BEAM 1,885,889

AIRCRAFT LANDING FLOAT

Filed Oct. 24, 1931 3 Sheets-Sheet 1



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AIRCRAFT LANDING FLOAT

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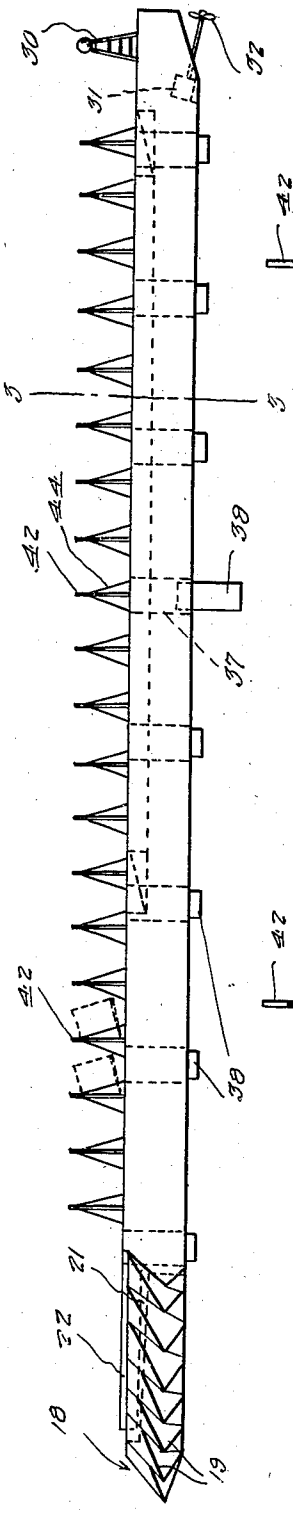


Fig. 2.

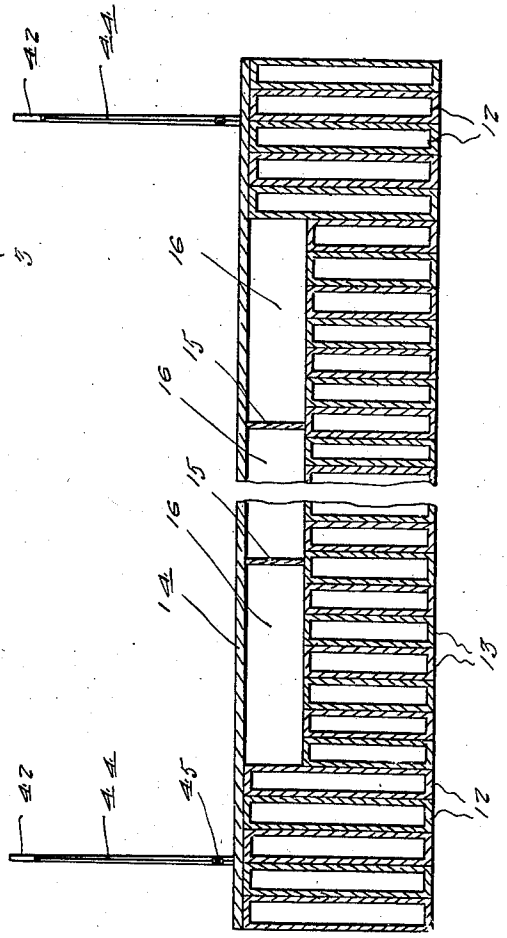


Fig. 3.

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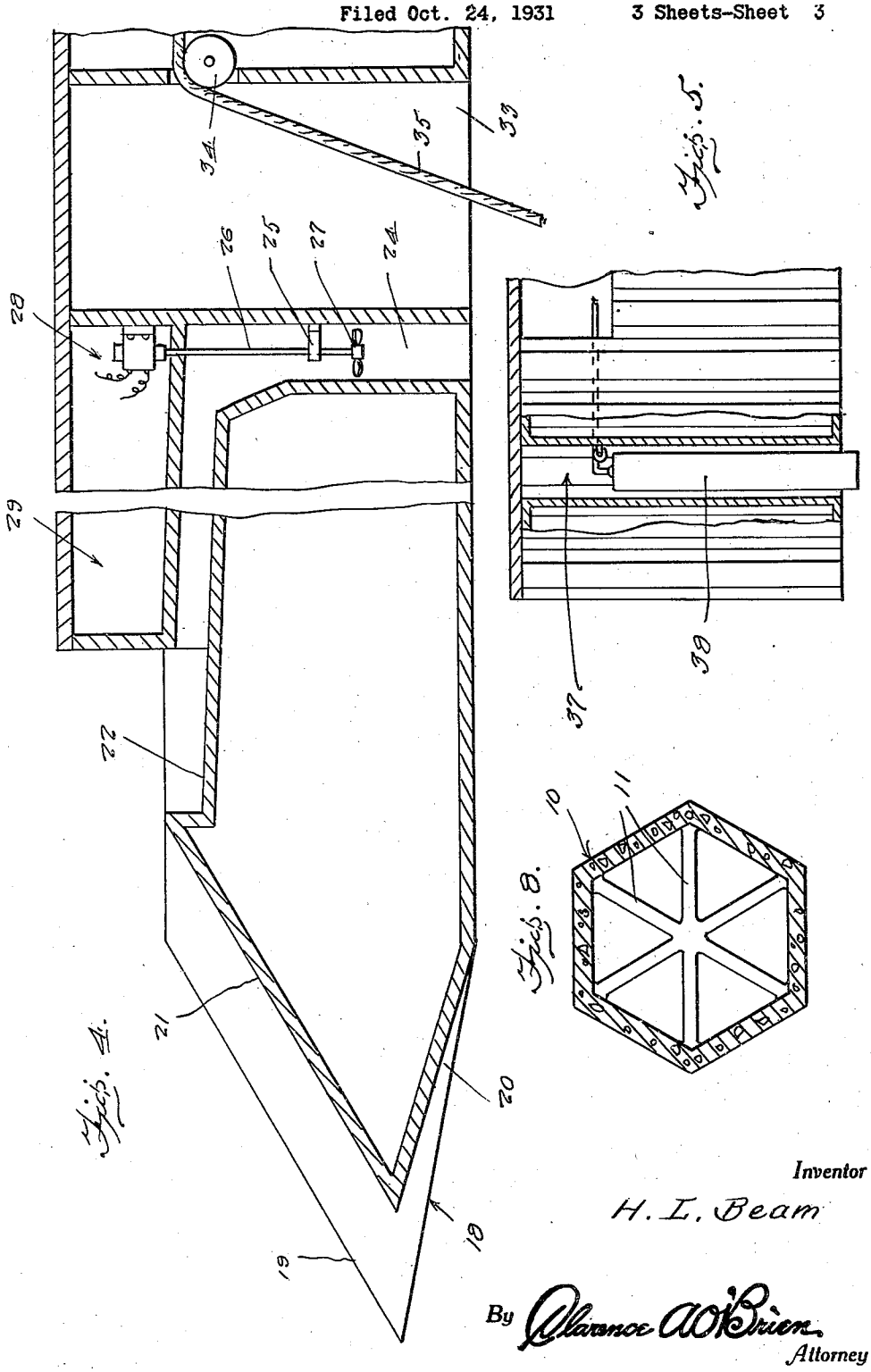
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AIRCRAFT LANDING FLOAT

Filed Oct. 24, 1931 3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE

HARRY L. BEAM, OF OTTER, MONTANA

AIRCRAFT LANDING FLOAT

Application filed October 24, 1931. Serial No. 570,934.

This invention relates to an improved landing field or platform for use on the high seas in the nature of a portable float.

The purpose of the invention is to provide a novel cellular concrete structure equipped with suitable appurtenances and accommodations and characterized primarily by a huge platform functioning as a novel landing field for airplanes and the like.

I have been inspired to developing the inventive conception to provide a strong and dependable structure possessing many features of merit from a standpoint of use, and an equal number of advantages from a standpoint of economical construction.

The various devices and features constituting the cardinal factors of importance will become more specifically evident and understood from the following description and drawings.

The drawings, though somewhat diagrammatic in general principle will suffice to give a pictorial illustration of the fundamental parts and means thought necessary in the development of a practical assembly.

In the drawings:

Figure 1 is a top plan view showing the preferred configuration and the approximate relative positions of certain of the features.

Figure 2 is a side view of Figure 1.

Figure 3 is a transverse vertical section taken on the plane of the line 3—3 of Figure 2.

Figure 4 is an enlarged fragmentary sectional view through the stern and frontal portion of the structure.

Figure 5 is a fragmentary view in section and elevation disclosing the unit formation of the body portion of the structure.

Figure 6 is a detail view illustrating a collapsible mast.

Figure 7 is a fragmentary plan view showing the nested arrangement of the cells or perpendicular constructional unit.

Figure 8 is a cross section through one of said units.

Figure 9 is a longitudinal sectional view therethrough.

The structure may well be assembled and constructed on the bank of a suitable body of water. I have found it practical and economical to accomplish this by building a dam at the mouth of an appropriate tidewater inlet or small bay which preferably has a normal nine foot high water mark.

The trapped water is pumped out and the ground graded to the desired proportions and shape. This graded area of ground is covered or coated with cement to provide a suitable base or concrete foundation to accommodate the attendants, workmen and apparatus employed for complete building purposes.

The marginal portion of the float may be constructed from precast concrete units but is preferably made from units cast on said concrete foundation. As seen in Figure 3, there are two sets of perpendicular or vertical units and each unit is broadly designated by the numeral 10 and as seen in Figures 8 and 9, the unit is hexagonal in cross sectional shape and provided with internal reinforcing spiders 11.

For sake of distinction in Figure 3 the marginal units are distinguished by the numerals 12 while the shorter nucleus units are denoted by the numerals 13. The shorter nucleus units co-operate with the main top or platform 14 and an appropriate arrangement of partitions 15 in defining a multiplicity of general utility compartments 16.

I have not attempted to detail the various compartments in shape, it being understood that these will be longitudinally and transversely disposed and that the main central corridor from which the other corridors and passages branch will be provided with appropriate entrances having removable trap doors or closures 17, as seen for example in Figure 1.

This assemblage of hexagon units 10 pro-

vides a buoyant ensemble which in bottom plan resembles a honeycomb ensemble, it being understood that the units are suitably sealed or fastened together so as to provide a substantially flat bottom. The marginal edges of the outermost unit may be cement filled, so that the longitudinal side walls and stern will be substantially flat.

The bow of the float is generally distinguished by the numeral 18 and as illustrated in the drawings substantially semi-circular in configuration. It is so constructed as to provide a multiplicity of companion teeth 19 which function to provide a novel breakwater. The pointed ends of the teeth are preferably disposed so as to occupy a plane elevated above the bottom of the structure and to assume a level substantially even with the normal low-water line, this being desirable to facilitate navigation and to allow the float to ride the waves, so to speak.

The spaces or grooves betwen the teeth are shown in Figure 4, the lower groove 20 being substantially shallow and the upper groove 21 much deeper. The grooves 20 facilitate the aforesaid riding action while the grooves 21, serve as inlets for conducting the surface water and waves into a segmental channel 22 which functions as a trough and which discharges the overflow water into a multiplicity of radial ducts 23 formed in the structure and communicating with an open bottom perpendicular chamber 24.

There is a suitable bearing 25 in this chamber to accommodate a shaft 26 carrying a propeller 7 of appropriate form, said propeller and shaft serving as a source of power to operate an electricity generator 28 in the closed frontal compartment 29. Obviously the generator is employed for various power purposes.

For example, on the aft of the float may be one or more beacon lights 30 to facilitate taking off and landing of planes. At the stern of the float I provide a gang of electric motors 31 having retractable propellers 32 arranged for propulsion purposes, said motors being supplied current from the aforesaid generator 28.

In one of the compartments designated by the numeral 33 in Figure 4, I provide one or more sheaves 34 to accommodate a windlass cable 35 for an anchor 36 (see Figure 5 also). I also call attention to the numerals 37 which designate wells to accommodate lee boards 38 raised and lowered by suitable hoisting means (not shown) to serve as baffles to avoid undue side drift of the float.

It is obvious of course, that the float as a unit is capable of propulsion from place to place through the provision of the electric motors and propellers.

To further facilitate the navigation I provide sails and suitable rigging and in this connection I invite attention to Figure 6. In this figure it will be observed that the numeral 39 designate recesses at one end of which are formed countersunk pockets 40. Pivotally mounted as at 41 in the pocket is a mast 42, the mast being retained in erect position by removable pins 43 fitting into an associated socket in one wall of the pocket.

The numerals 44 designate stays having adjustable turnbuckles 45. These masts serve to accommodate sails (not shown) or wireless apparatus, and when not in use are allowed to fold down into the recesses 39.

Through the medium of proper adjustment of motor driven propellers and sails and rigging, it is evident that the structure may be moved from place to place or when it has drifted from its predetermined point of anchorage, can be returned to said point for dependable landing conditions. The sails and rigging will also be found desirable in stormy weather.

Many other desirable features for accommodation and safeguard may be provided in actual practice in order to add to the refinements and improvements of the structure as a whole. It is believed however that the foregoing description and drawings will suffice to give the reader a clear impression and understanding of the fundamental parts and essential features believed to be necessary in providing a practical water landing field for aircraft.

It is thought from the foregoing description that the advantages and novel features of the invention will be readily apparent.

It is to be understood that changes may be made in the construction and in the combination and arrangement of the several parts provided that such changes fall within the scope of the appended claims.

I claim:

1. An aircraft landing structure for water usage comprising a horizontally elongated cellular concrete float, said float being fashioned at its bow to provide a substantially semi-circular breakwater embodying a plurality of pointed spaced teeth whose pointed ends are disposed on a plane calculated to be substantially above or even with the normal water level.

2. An aircraft landing structure for water usage comprising a horizontally elongated cellular concrete float, said float being fashioned at its bow to provide a substantially semi-circular breakwater embodying a plurality of pointed spaced teeth whose pointed ends are disposed on a plane calculated to be substantially above or even with the normal water level, and the spaces between said teeth functioning as water intake grooves for conveying overflow surface water onto the frontal portion of the deck of the float, said frontal portion of the deck having a segmental channel constituting a trough for collection of said overflow water, said frontal

portion being further provided with an open bottom chamber, and a multiplicity of ducts affording communication between the trough and chamber, that portion of the deck above said chamber being fashioned to provide a compartment, an electricity generator in said compartment, a power shaft connected with the generator and depending into said chamber and provided at its bottom with a propeller whereby to utilize the overflow return water to operate the generator.

3. An aircraft landing structure for water usage comprising a horizontally elongated cellular concrete float, said float being fashioned at its bow to provide a substantially semi-circular breakwater embodying a plurality of spaced pointed teeth whose pointed ends are disposed on a plane calculated to be substantially above or even with the normal water level, and the spaces between the teeth functioning as water intake grooves for conveying overflow surface water onto the frontal portion of the deck of the float, said frontal portion of the deck having a segmental channel constituting a trough for collection of said overflow water, said frontal portion being further provided with an open bottom chamber and a multiplicity of ducts affording communication between the trough and chamber, that portion of the deck above said chamber being fashioned to provide a compartment, an electricity generator in said compartment, a power shaft connected with the generator and depending into said chamber and provided at its bottom with a propeller whereby to utilize the overflow return water to operate the generator, a multiplicity of electric motors mounted on the stern of the float and having propellers adapted to be submerged in the water, said motors being operable from current supplied from the aforesaid generator.

4. An aircraft landing field for sea usage comprising a buoyant body constructed of a multiplicity of perpendicular units assembled in nested relation and secured together, the outer or marginal unit extending from top to bottom of the structure and the nucleus of inner units being somewhat shorter, all of said units being preferably hexagonal in configuration, having flat top and bottom ends, a concrete platform secured to the marginal unit, partitions interposed between said platform and upper ends of the nucleus units and defining a multiplicity of passages and compartments.

5. A buoyant body formed of a plurality of vertically arranged hollow bodies connected together in contacting relation with the outer bodies of greater length than the inner bodies with the upper ends of the outer bodies projecting beyond the plane of the upper ends of the inner bodies to form a recess, the bottom of which is formed by the upper ends of the inner bodies.

6. A device of the class described comprising a buoyant body having its front part lower than the rest of the body whereby waves will break over said front part, a well in the body opening out through the bottom thereof, means for directing water from said front part into the well, a water wheel in the well actuated by the water flowing through the same and means for utilizing the motion of said water wheel.

7. A device of the class described comprising an elongated buoyant body having a semi-circular break water at its front end, said break water embodying a plurality of pointed spaced teeth whose pointed ends are disposed on a plane substantially even with the normal water level.

In testimony whereof I affix my signature.

HARRY L. BEAM.