



No. 724,756.

PATENTED APR. 7, 1903.

A. P. STOKES.  
FLOATING BATTERY.

APPLICATION FILED FEB. 10, 1902.

NO MODEL.

3 SHEETS—SHEET 2.

Fig. 4

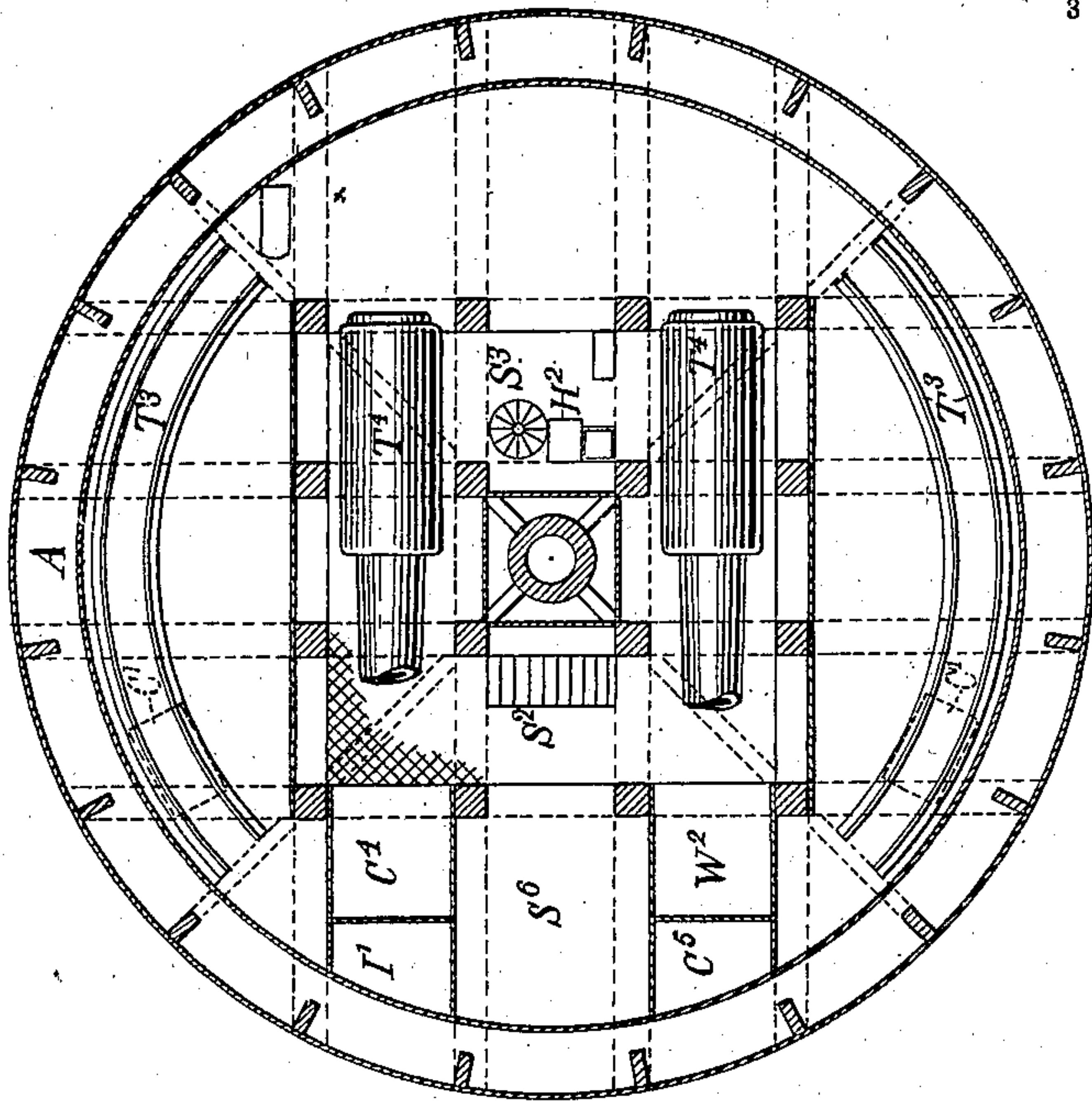
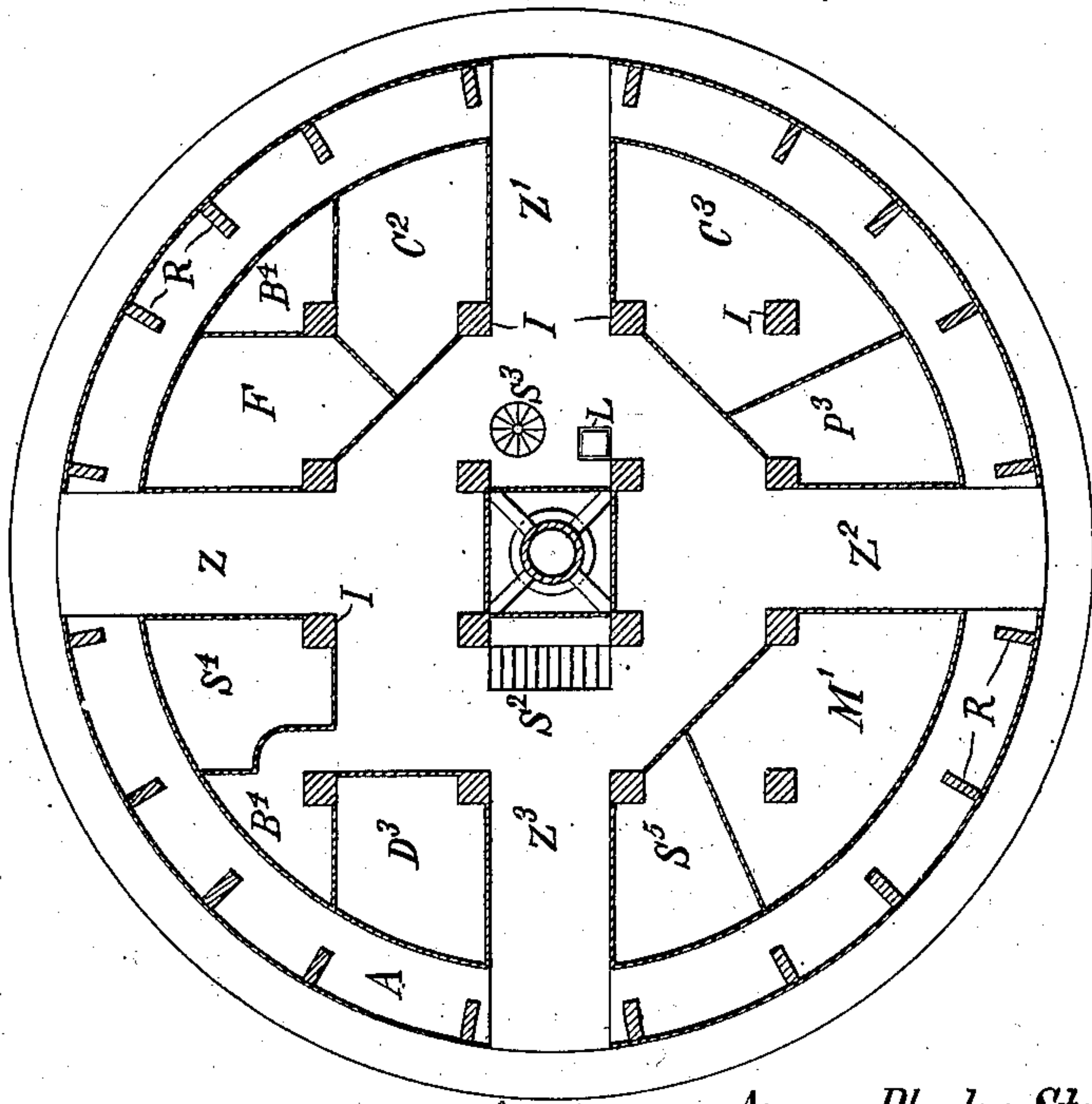


Fig. 3



Witnesses:

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*Anson Phelps Stokes, Inventor*

*by Kerr, Page & Cooper, Attys*



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Fig. 6

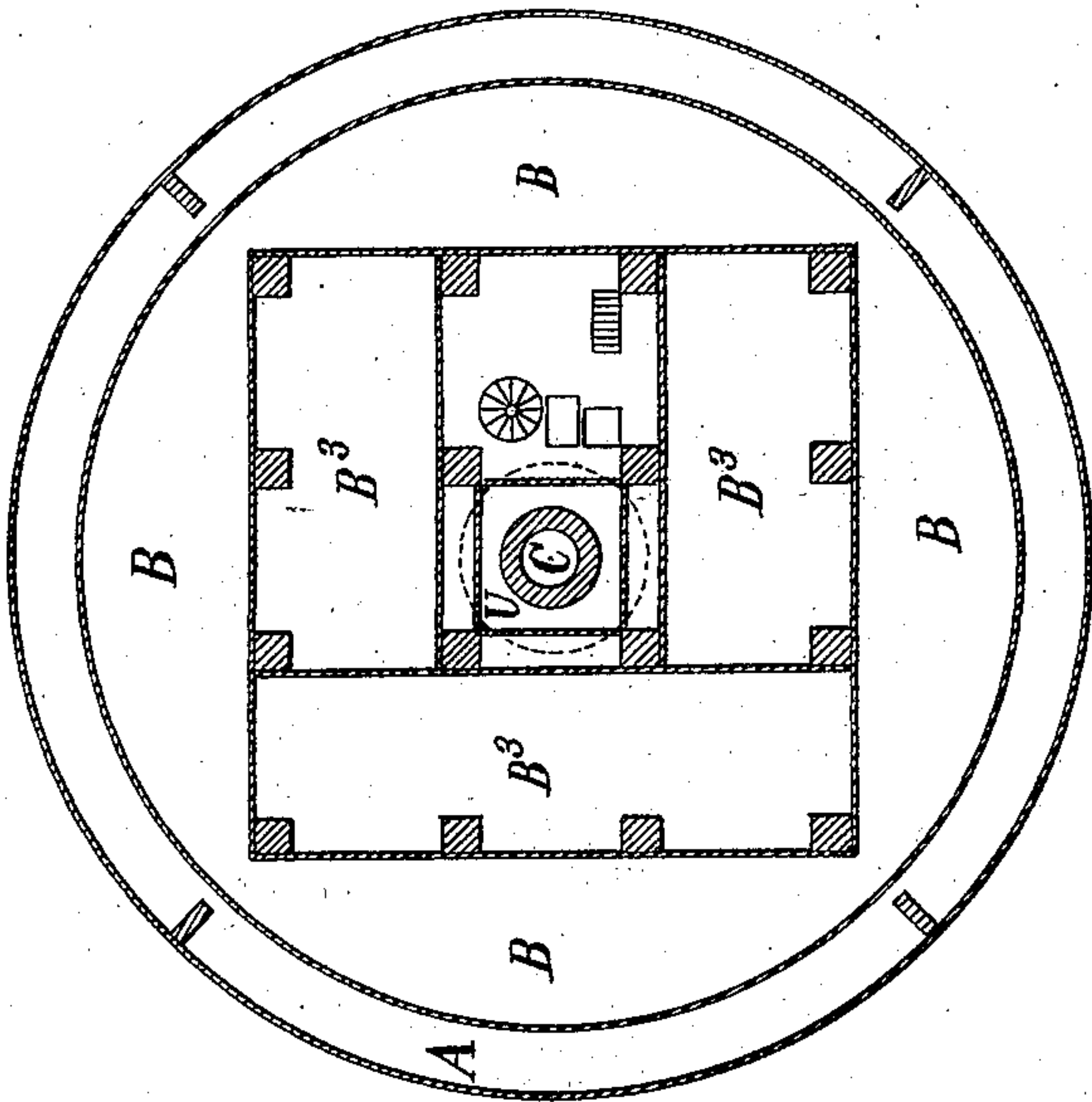
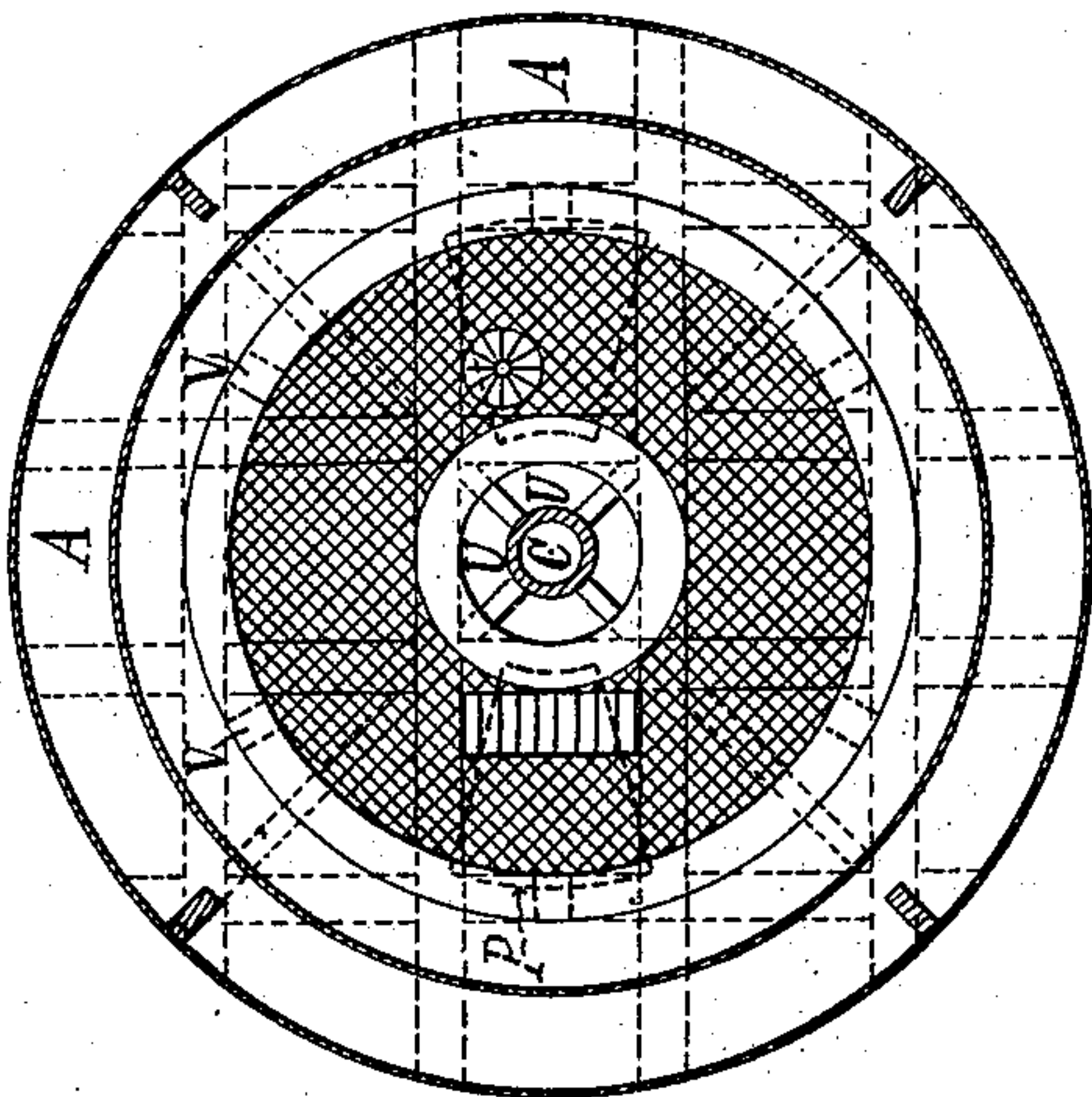


Fig. 5



Witnesses:

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# UNITED STATES PATENT OFFICE.

ANSON PHELPS STOKES, OF NEW YORK, N. Y.

## FLOATING BATTERY.

SPECIFICATION forming part of Letters Patent No. 724,756, dated April 7, 1903.

Application filed February 10, 1902. Serial No. 93,309. (No model.)

*To all whom it may concern:*

Be it known that I, ANSON PHELPS STOKES, a citizen of the United States, residing in the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Floating Batteries, of which the following is a specification.

Heretofore numerous attempts, more or less successful, have been made to produce a floating battery which would prove practically impregnable; but these batteries have all possessed certain disadvantages which, among other objects, it is the purpose of my invention to overcome.

My battery I make substantially spherical or globular in shape, for the reason that this form gives greater strength and safety and greater capacity for the same weight of construction. Other details and advantages of my invention will be hereinafter described, and more particularly pointed out in the claims.

In the accompanying drawings, Figure 1 represents a fore-and-aft midship-section of my battery; Fig. 2, a horizontal section on line *ww*, Fig. 1, showing the main deck and plan. Figs. 3 and 4, on lines *oo* and *gd*, Fig. 1, are plan views of the officers' deck and gun-deck, respectively, omitting, for the sake of clearness, the ribs of the battery and the beams through the rooms. Fig. 5 represents the upper deck on line *o'o'* of Fig. 1; and Fig. 6, the lower deck on line *o<sup>2</sup>o<sup>2</sup>*, Fig. 1.

As will be seen from Fig. 2, my battery, of a general globular shape, has ribs in vertical planes, (shown in section at *RRR*,) which converge above and below and form a very strong and rigid skeleton for the vessel. These ribs are braced for additional strength by the beams *I* and columns *H*, which serve as a framework for the interior rooms and fittings. The skeleton and framework should preferably be made of the best steel. *A* is the armor and backing therefor, of any suitable kind and of the proper thickness. Vertically through the center of the vessel runs a chute *C*, which serves as means for discharging waste material into the sea and the upper part of which serves as a smoke-stack.

Most of the upper deck, Fig. 5, is of heavy grating for ingress of air into the decks below. Air passes into the tops of rooms on

officers' deck through the ventilating-openings *V*. Parts of the upper deck have armor coverings or roofs *P P*, which slide in grooves or rabbets in the top of the circular armor sides or inner and outer walls of the deck. If desired, these armor-coverings may be made stationary. The openings *P' P'* give views of the sea and other surrounding objects. The passages *U U* around the central chute and smoke-stack are for the perfect ventilation of the rest of the vessel, the foul air being forced up and out therefrom and fresh air being drawn down through the gratings in the upper deck to the various decks below.

*D D* are sliding armor-shutters, covering doors and windows opening on the officers' deck and on the main deck. Anchor *X* and boat *X'* may be mounted on suitable supports or davits outside. In the room *R'* may be kept the ship's cutter and launch, which can be launched through a door *D'* of the proper size, covered by sliding armor-shutters *D<sup>2</sup>*.

*L'* indicates a ladder connecting decks.

*S S* are screws for propelling and turning the vessel, which are driven by suitable engines located on the lower deck, Fig. 6. *I* show screws for this purpose, and it is probable that they would usually be the most convenient; but any other means might be advantageously employed, depending upon circumstances.

On the lower deck aft, Fig. 6, are compartments for magazines, stores, fresh water, ballast, water-ballast, &c.

*Q* is a mushroom-anchor of the necessary size and weight for anchoring the battery in position and is suspended by means of a steel cable. (Not shown.) This anchor when drawn up presses equally and firmly on all sides against the bottom of the vessel and may have openings *Q' Q'* through it for the passage of ashes, &c.

On the main deck, Fig. 2, are galley, pantry, fore-castle, and rooms for engineers, gunners, stokers, stewards, &c.

*S<sup>2</sup>, S<sup>3</sup>*, and *L'* are stairs and ladder communicating with the various decks. *T<sup>2</sup>* is a torpedo-tube operated by any desired means.

*N N* are pipes from boilers to smoke-stack. Referring to Figs. 1, 2, and 4, *T<sup>4</sup> T<sup>4</sup>* are two guns of large caliber mounted in approximately the center of the vessel, so that the



center of gravity of the guns is approximately at the center of gravity of the vessel. They extend through the main deck to the gun-deck, from which they are loaded. If desired, the battery may have only one great gun, in which case the chute, cable, and pipes from boilers to smoke-stack must be carried around it. The guns are rigidly held, not by a complicated and costly carriage but by the framework of the vessel itself. To enable the guns to be trained, in lieu of the usual carriage mechanism I have provided counterpoises, one of which, C', is shown in Fig. 1. These counterpoises are of lead or other material of sufficient weight and are movably mounted on arc-shaped tracks T<sup>3</sup> T<sup>3</sup>, Fig. 4. When it is desired to lift the muzzles of the guns, the counterpoises are run aft, with the effect that the center of gravity of the vessel is shifted and the whole vessel goes down by the stern. The muzzles of the guns are of course thus lifted, the degree of elevation being regulated by varying the positions of the counterpoises. This effect may also be obtained to some extent by regulating the water-ballast. To depress the guns, the counterpoises are simply run forward the distance necessary to effect the desired depression. Other guns may be mounted on the officers' deck, preferably in the positions Z Z' Z<sup>2</sup> Z<sup>3</sup>, ports therefor being of course made in the armor and fitted with armor-shutters. These guns should have carriages of some common type and can therefore be worked independently of the great guns in the center. Ammunition is supplied to the guns by the lift L.

In Fig. 3 I have shown officers' quarters C<sup>2</sup>, F, S<sup>4</sup>, and D<sup>3</sup> for the commander, first officer, second officer, doctor, &c., respectively. B<sup>4</sup> B<sup>4</sup> are baths, &c., while the cabin is indicated at C<sup>3</sup>. M' is the officers' mess, and P<sup>3</sup> S<sup>5</sup> pantry and store-rooms.

Rooms B<sup>3</sup> (shown in Fig. 6) are for engines, windlass, dynamos, and other machinery. On the gun-deck forward, Fig. 4, are rooms I', C<sup>4</sup>, C<sup>5</sup>, W<sup>2</sup>, and S<sup>6</sup> for ice, cold-storage, coal, water, and stores. Ammunition from the lower deck is supplied through the hatch H<sup>2</sup> and lift L.

It will be seen that by reason of the spherical shape of my battery or vessel considerable weight is saved in construction, and from this and especially by allowing the guns to extend across most of the vessel much heavier guns can be carried. Considerable economy in the cost of construction results from the spherical shape of the battery, for the reason that a large number of the parts are mere duplicates of each other and for other reasons obvious to a naval constructor. Another item of economy results from the fact that no gun-carriage is used to hold the large guns. These carriages must necessarily be very expensive, and their omission not only saves a considerable expense, but produces a safer and more secure mount for the

heaviest guns. The heavy armor covering for doors, windows, port-holes, &c., can be more easily supported and more safely moved on the upper part of a spherical surface than on the vertical or nearly-vertical sides of an ordinary ship. The spherical form of most of the vessel, combined with the bulging or frusto-conical bottom and its conical openings and the placing of the center of gravity of the guns at or near that of the vessel, gives additional stability, which is not found in vessels of the ordinary type. The launch and cutter are carried within the protection of the heavy armor and may be easily launched by depressing the port by means of the counterpoises.

Thus all the features of my invention combine to produce a floating battery that is economical in construction and maintenance, of great power in offensive operations, and practically impregnable.

Having now fully described my invention, what I claim is—

1. In a substantially spherical floating battery, the combination with air-ports, and gratings in superposed decks, through which fresh air from the exterior passes downward into the battery, of a smoke-stack located at the center of the battery, and a channel around said stack open at its top to the exterior through which foul air is discharged by the draft created by the heat of the stack, substantially as and for the purposes set forth.

2. In a substantially spherical floating battery, the combination with an upper deck of annular shape, and inner and outer walls on said deck, of one or more armor-shields arranged overhead extending from the inner to the outer wall, substantially as and for the purposes set forth.

3. In a substantially spherical floating battery, the combination with an exposed upper deck of annular shape, and inner and outer walls on said deck, of one or more armor-shields overhead extending from wall to wall and movable thereon horizontally, substantially as and for the purposes set forth.

4. The combination with a substantially spherical floating battery, of one or more guns rigidly mounted near the center thereof, and means for elevating or depressing said guns by shifting the position of the battery in a vertical plane, substantially as and for the purposes set forth.

5. The combination with a floating battery of substantially spherical shape, of one or more guns rigidly mounted near the center thereof, arc-shaped tracks, and counterpoises movable horizontally on said tracks, whereby the center of gravity of the battery may be shifted to elevate or depress the muzzles of the guns, substantially as and for the purposes set forth.

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Witnesses:

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CHARLES E. FRANCIS.