(No Model.)

C. M. HOLLINGSWORTH.

ROTARY PAVILION.

No. 474,659. Patented May 10, 1892.

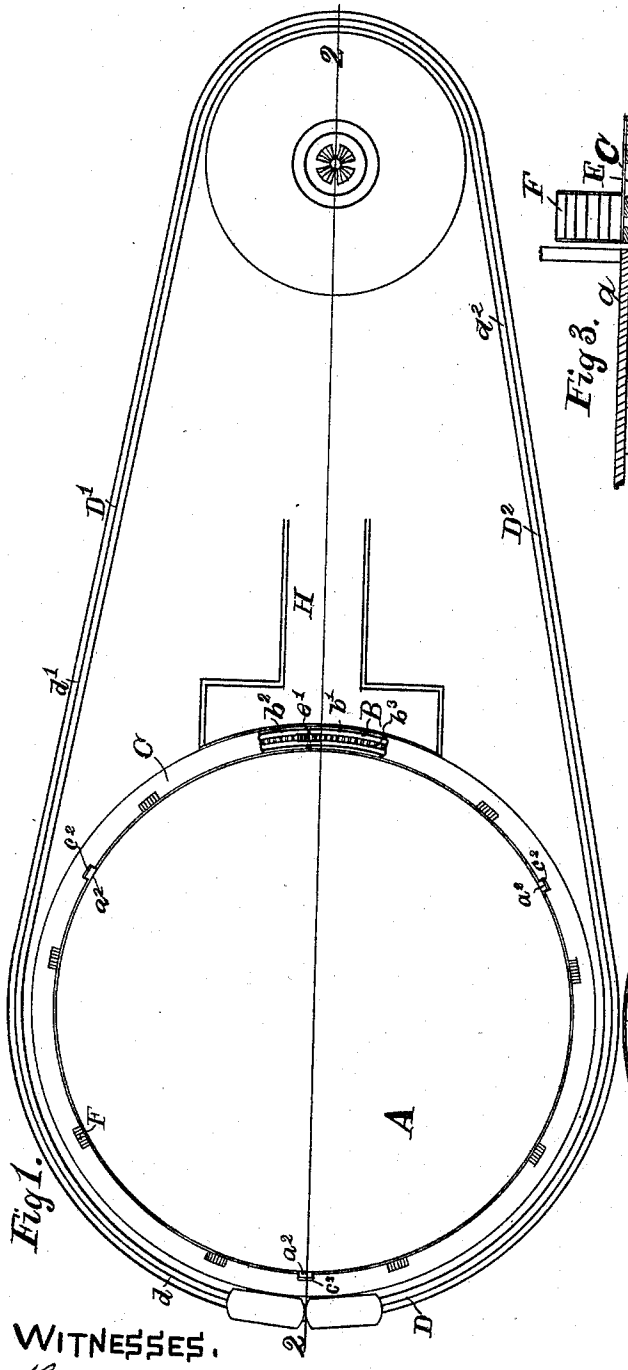

Fig 1.

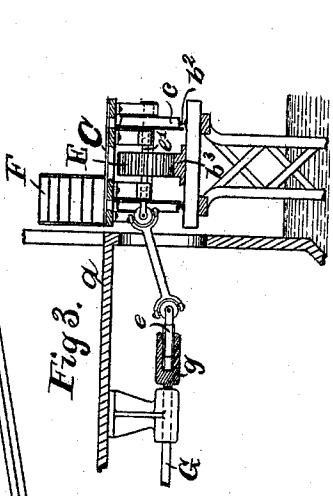

Fig 3.

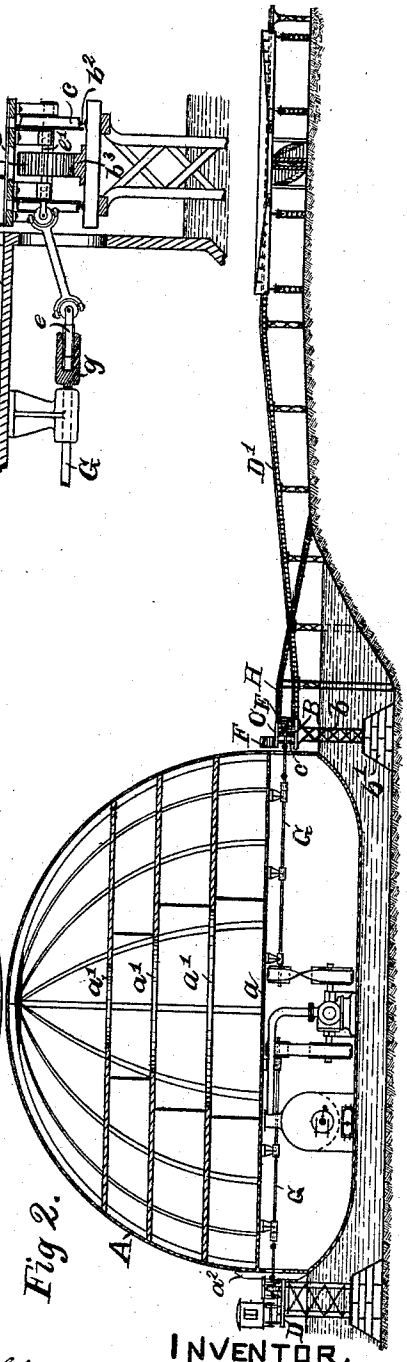

Fig 2.

WITNESSES.

Frank. Miller.

Albert H. Bates

INVENTOR.

Charles M. Hollingsworth

By his attorney

E. L. Thurston

UNITED STATES PATENT OFFICE.

CHARLES M. HOLLINGSWORTH, OF CLEVELAND, OHIO.

ROTARY PAVILION.

SPECIFICATION forming part of Letters Patent No. 474,659, dated May 10, 1892.

Application filed July 20, 1891. Serial No. 400,159. (No model.)

To all whom it may concern:

Be it known that I, CHARLES M. HOLLINGSWORTH, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Rotary Pavilions, of which the following is a specification.

My invention relates to rotating pavilions; and it consists of a floating vessel and the means for revolving it about a fixed center and for getting to and from it, as hereinafter described, and definitely pointed out in the claims.

In the drawings, Figure 1 is a plan view of said pavilion and its accessories. Fig. 2 is a vertical sectional view of the same on line 2 2. Fig. 3 is a detached sectional view showing a part of the mechanism for rotating the pavilion.

Referring to the parts by letters, A represents a circular vessel adapted to float on the water. It is surmounted by a dome-shaped top or covering, which, however, is not essential to the broad invention. It is provided with one main floor *a* and as many additional floors or galleries *a'* as may be desired or as the nature of the structure will permit. Surrounding the vessel A is a fixed ring-shaped support, (shown in the form of a trestle B,) which is supported on columns *b*, secured to suitable sunken foundations *b'*.

C represents a ring-shaped platform, which is mounted on wheels *c*, and these wheels travel on tracks b^2, which are laid on the trestle B. Were it not that some provision should be made to compensate for variations in the water-level and variations in the depth to which the vessel will sink in the water, due to differences in the load on the vessel, the platform C might be rigidly secured to the vessel. Such variations are likely to occur, however, and I therefore connect said platform C with the vessel A by means of the vertical tongues a^2 and the grooves c^2, in which said tongues are slidable. Whatever be the level of the vessel relative to the platform C, they are so connected together that the rotary motion of one is transmitted to the other.

Extending from a suitable station on the shore outward toward the floating vessel are two elevated trestles D' D^2, which are connected by means of a curved trestle D, concentric with the axis of the floating vessel. Tracks *d d'* d^2 are laid on said trestle, and a car is run out on the track *d'* around the curved track *d* and back again on the track d^2. The trestle D is placed in such relation to the trestle B that persons may easily step from the car on the track *d* to the platform C.

The method of getting to and from the platform C which I intend to employ in connection with the above-described device, is substantially that which is described in my copending application, Serial No. 400,157. It consists in moving the car and the platform C at substantially the same angular rate during the time the car is on the curved track, whereby the car and platform remain in fixed juxtaposition during such time. Persons may therefore without danger pass from one to the other during the time they remain in this fixed relation. It is desirable, however, to provide some means for getting to and from the vessel A, which may be employed in case it becomes impossible or undesirable to use the cars or the trestles on which they run for this purpose. I therefore provide a pier H or other equivalent structure, which extends from the land outward to a point so close to the edge of the platform C that persons may step from one to the other. This means for reaching the vessel could be used when the vessel A was moving slowly or had been brought to rest; and the method of operating the structure could be so far varied as to move the platform at a slow rate or bring it to rest at intervals, so that persons who do not wish to go to or from it by the moving trains may do so by way of the said pier H.

In order to provide means whereby persons may pass from the platform C, which always remains at a constant level, to the main floor of the floating vessel, the level of which is variable, I erect at suitable intervals on the platform C the steps or inclined planes F. The platform C is originally so placed that it will be in the same horizontal plane as the main floor *a* when the latter is at or near its lowest calculated level. When the two floors are in this relation, persons may pass from one to the other without aid of the steps; but when the floor *a* is higher than the floor of the plat-

form C the steps may be used in passing from one to the other.

The means provided for revolving the vessel A and the connected platform C are shown in Figs. 2 and 3. On the upper side of the trestle B and between the tracks b' are placed cogs, thereby forming one great curved track b^2. Journaled to the platform C, beneath its floor, are the shafts e', to which are rigidly secured the pinions E, which engage with this rack. On the vessel A are mounted the shafts G, which are driven by a motor carried on the vessel. These shafts are suitably connected with the pinions E, whereby the pinions are driven and the platform C and vessel A are caused to revolve by the engagement of the pinions with the fixed rack b^3.

In order that the connections between the shafts G and pinions E may be operated at the different levels the vessel A may assume, I provide on the end of the shaft G a sleeve g, adapted to receive the short shaft e. This shaft e connects with the sleeve by a spline and groove. The ends of the shafts e and e' are connected by a universal joint, as shown in Fig. 3.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of a circular floating vessel and means for rotating the same about a vertical axis with the curved track d, the connecting-tracks d' d^2, and a car adapted to travel on said tracks, substantially as and for the purpose specified.

2. The combination of a circular floating vessel, a ring-shaped trestle or other equivalent platform-support surrounding it, a ring-shaped platform suitably connected with said vessel and adapted to ride on said support, with means for revolving said vessel and platform, substantially as and for the purpose specified.

3. The combination of a circular floating vessel, a ring-shaped platform-support surrounding it and having a track on its upper surface, a ring-shaped platform mounted on wheels which run on said tracks, and suitable connections between the platform and vessel with the curved tracks d in the described relation to said platform, and connecting-tracks d' d^2, placed on suitable supports, and means for revolving said platform and vessel, substantially as and for the purpose specified.

4. The combination of a circular floating vessel, a fixed ring-shaped trestle surrounding it, a ring-shaped platform mounted on wheels adapted to run on said trestle, and tongue-and-grooved connections between said vessel and platform, and means for revolving said platform and vessel, substantially as and for the purpose specified.

5. The combination of a circular floating vessel, a fixed ring-shaped trestle surrounding it, a ring-shaped platform adapted to ride on said trestle, and suitable connections between the platform and vessel with a curved rack on said trestle, a shaft journaled to said platform having secured to it a pinion which engages said rack, a shaft and means for revolving the same carried on said vessel, and suitable connections between said shaft and the pinion-shaft, substantially as and for the purpose specified.

6. The combination of a circular floating vessel, a fixed ring-shaped trestle surrounding it, a ring-shaped platform mounted on wheels which ride on said trestle, and vertical tongue-and-groove connections between said platform and vessel, with a curved rack on said trestle, a pinion, the shaft of which is mounted on the platform, a shaft and means for revolving it carried by the vessel, and a universal joint connecting said shaft and the pinion-shaft, substantially as and for the purpose specified.

7. The combination of a circular floating vessel, a fixed ring-shaped platform-support surrounding it, a ring-shaped platform mounted on wheels which are adapted to travel on said platform-support, and tongue-and-groove connections between said platform and vessel with steps or their equivalent mounted on said platform, and means for revolving said platform and vessel about a fixed vertical axis, substantially as and for the purpose specified.

8. The combination of a circular floating vessel and a fixed ring-shaped trestle encircling it, with means for revolving said vessel about a vertical axis, substantially as and for the purpose specified.

9. The combination of a circular floating vessel, a fixed trestle outside said vessel and engaging therewith, and means for revolving said vessel about a vertical axis, with a fixed pier arranged, substantially as described, with reference to said vessel, for the purpose specified.

CHARLES M. HOLLINGSWORTH.

Witnesses:
E. L. THURSTON,
FRANK. MILLER.