(No Model.) 2 Sheets—Sheet 1.

DE BOSS LENOX.

INCLINED RAILWAY WATER CHUTE.

No. 552,713. Patented Jan. 7, 1896.

Fig. 1.

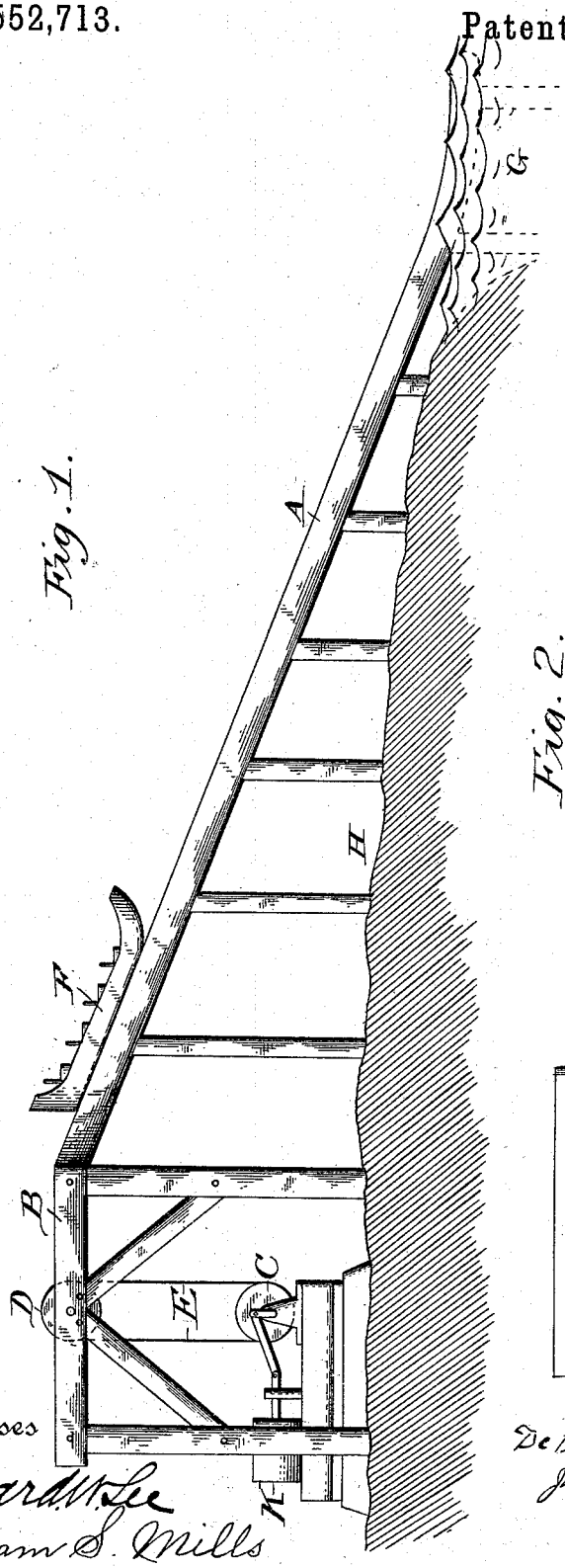
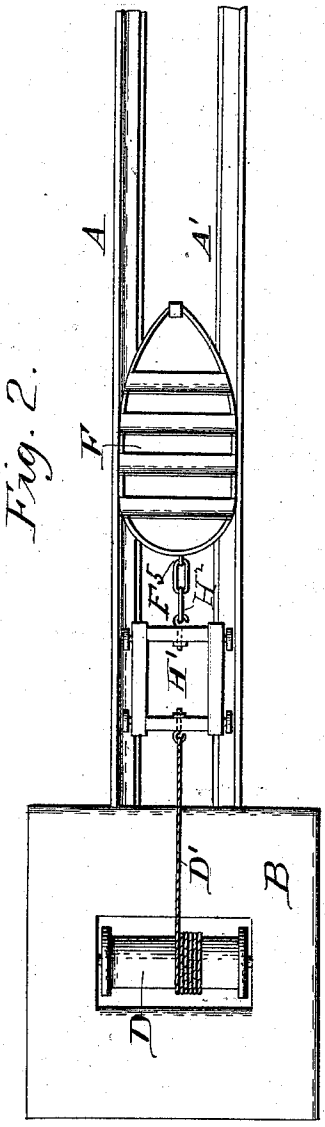


Fig. 2.



Witnesses

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William S. Mills

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(No Model.) 2 Sheets—Sheet 2.

DE BOSS LENOX.

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Fig. 4.

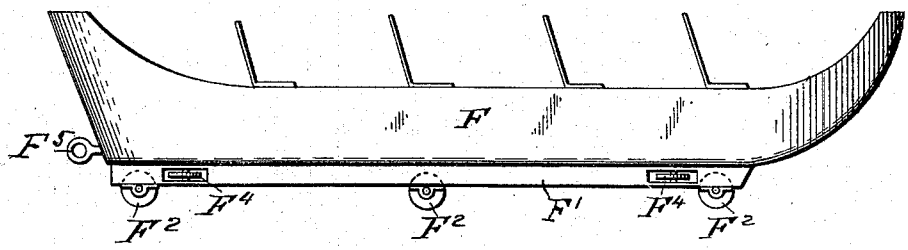


Fig. 3.

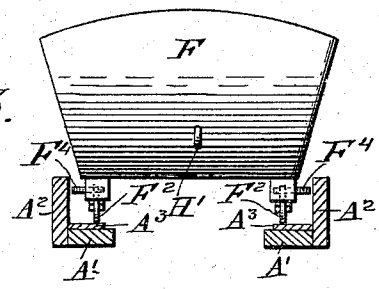
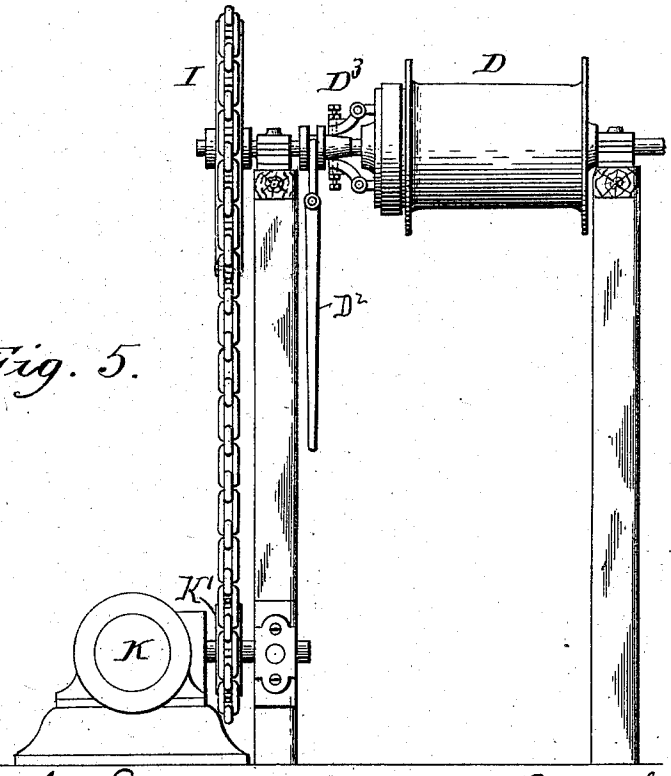


Fig. 5.



Witnesses
Edward W. Lee
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UNITED STATES PATENT OFFICE.

DE BOSS LENOX, OF TRENTON, NEW JERSEY.

INCLINED-RAILWAY WATER-CHUTE.

SPECIFICATION forming part of Letters Patent No. 552,713, dated January 7, 1896.

Application filed September 26, 1895. Serial No. 563,694. (No model.)

To all whom it may concern:

Be it known that I, DE BOSS LENOX, a citizen of the United States of America, residing at Trenton, in the county of Mercer and State of New Jersey, have invented certain new and useful Improvements in Inclined-Railway Water-Chutes, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to that class of inclined pleasure railways or chutes in which an inclined track is erected near a body of water in such a manner that a boat or boat-shaped carriage travels by gravity down the inclined chute, and reaching the water at the foot of the chute, by its own momentum floats out upon the water. In such constructions heretofore the apparatus for guiding the boats down the chute and returning them to the starting-point have been complicated, slow in operation, and costly in construction. The object of my invention is to provide a simple, inexpensive, and easily operated apparatus for guiding and sustaining the boat down the chute and returning it readily to its place ready for another descent. I do this by means of the mechanism shown in the accompanying drawings.

In the drawings similar letters of reference indicate similar parts.

In the drawings, Figure 1 is a side view of my chute with boat thereon and attached platform. Fig. 2 is a top view of the same. Fig. 3 is a view in section of my chute, with end view of boat thereon. Fig. 4 is an enlarged side view of the boat, showing supporting and guide rollers; and Fig. 5 is a front view of friction-drum, showing connection with the steam-engine.

In Fig. 1, A is the ways or incline. B is the platform in rear thereof. C is the steam-engine for operating the mechanism for returning the boat. D is a friction-drum. E is the band connecting the band-wheel of the engine with the band-wheel of the friction-drum. F is the boat, shown free and in the act of descending. G is the water, and H the firm ground.

In Fig. 2, H′ is the carriage connected by rope D′ with friction-drum D. This drawing also shows hook F^5 at end of boat F, which connects the boat with carriage H′.

In Fig. 3 is shown in section the ways of chute A. A′ A′ are bottom ways, composed of pieces of timber supported as is shown in Fig. 1 on trestle-work or in any convenient manner. Secured to these, and preferably bolted to the sides of ways A′ A′, are upright guiding timbers or planking A^2 A^2. I preferably let these timbers reach down along the sides of the ways A′ A′ and bolt them thereto to secure greater firmness and stiffness of construction. Upon the ways A′ A′, I place iron or steel plates A^3, upon which run the rollers or wheels supporting boat F.

In Fig. 4, which is a side view of my boat F, F′ F′ are skids or battens fastened to the bottom of the boat. In these play freely rollers or small wheels F^2 F^2, adapted to run upon plates A^3. In the sides of these skids are placed other recesses in which play freely friction rollers or wheels F^4, which, bearing against guide-planking A^2, keep the boat upon its track. These friction-rollers can be dispensed with, the battens F^3 bearing directly against the guide-planking; but preferably I employ the friction-rollers.

In Fig. 5, D is the friction-roller. I is the band-wheel upon the shaft of the same, connected by band E with band-wheel C of the steam-engine. K is the head of the engine. D^3 is the clutch for throwing the roller D in and out of connection, and D^2 is the handle for operating the clutch.

The operation of my mechanism is as follows: The boat F being upon the platform B the passengers embark and the boat is shoved forward upon the ways of the chute A. It descends rapidly by gravity to the water and by its momentum floats out upon the water. In descending the rollers F^2 bear upon the plates A^3, and the guide-rolls F^4, bearing against the guide-planking A^2, keep the boat upon the ways. As soon as the boat has descended, the carriage H′, attached to the rope D′, passing over the friction-drum D, is let run down the ways, carrying the rope with it. The boat is brought back to the foot of the chute and the carriage H′ is attached by coupling H^2 to ring F^5 in rear end of the boat. By means of the handle D^2 clutch D^3 is thrown together and the drum D is revolved by the action of wheel I, actuated by engine K, by means of band-wheels K′ and band E, and

the rope winding around the drum D brings the boat and load up the chute again to the starting-point, landing the passengers at the top of the chute ready to take another ride if desired without the fatigue of intermediately mounting the stairs to the platform B, or if desired the boat can disembark its passengers upon the firm ground H and then return to the foot of the chute to be pulled up again into position for loading.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In an inclined pleasure chute in combination with an inclined track or way, having its foot in or immediately at the edge of a body of water, the steam-power actuated drum D. with carriage H'. and rope D. and the boat F. provided with supporting rollers adapted to run upon the ways A'. and with guide rolls F^4. substantially as shown and described.

2. In an inclined pleasure chute, the raised platform B. the inclined ways A'. provided with plates A^3. and upright guide planking A^2. reaching from such platform down to a body of water, and provided with drum D. and actuating mechanism, and carriage H'. and rope D'. in combination with boat F. provided with rollers F^2. upon the bottom and guide rolls F^4. upon its sides, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

DE BOSS LENOX

Witnesses:

WILLIAM S. MILLS,

EDWARD W. LEE.