

J. A. BRUCE.
WHIRLPOOL FOR PUBLIC AMUSEMENT.
APPLICATION FILED MAY 4, 1904.

2 SHEETS—SHEET 1.

Fig. 1,

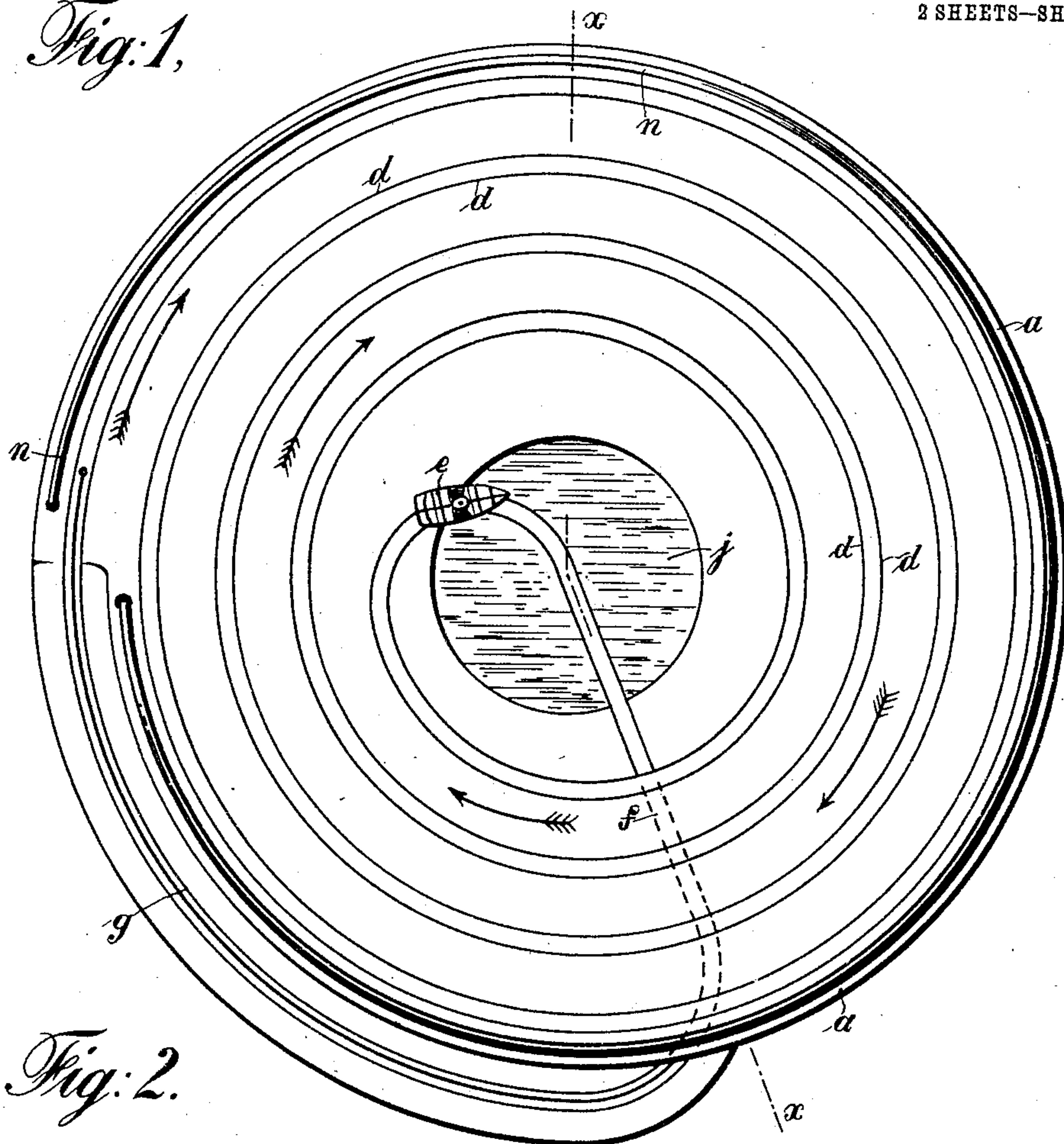
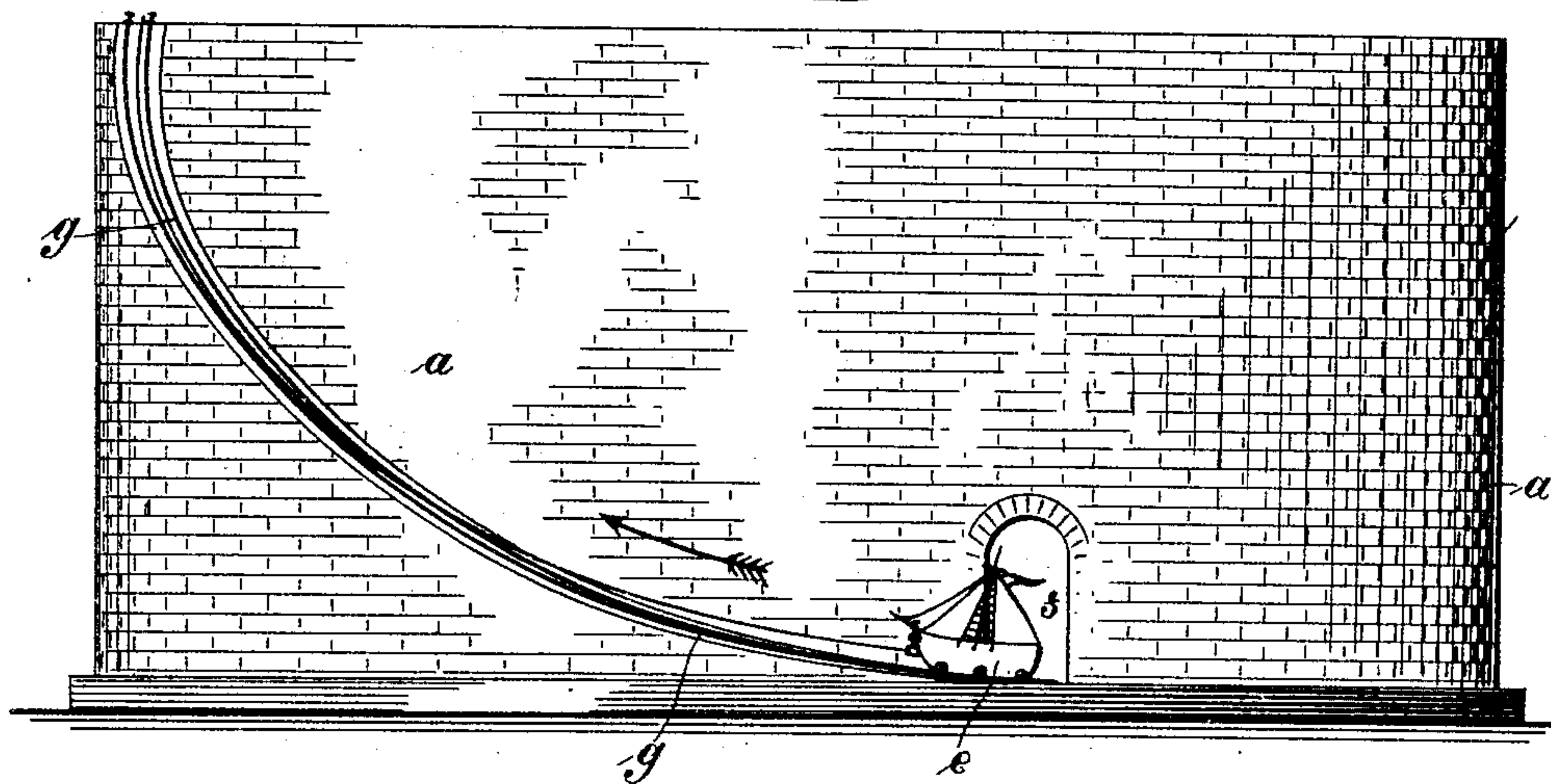


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

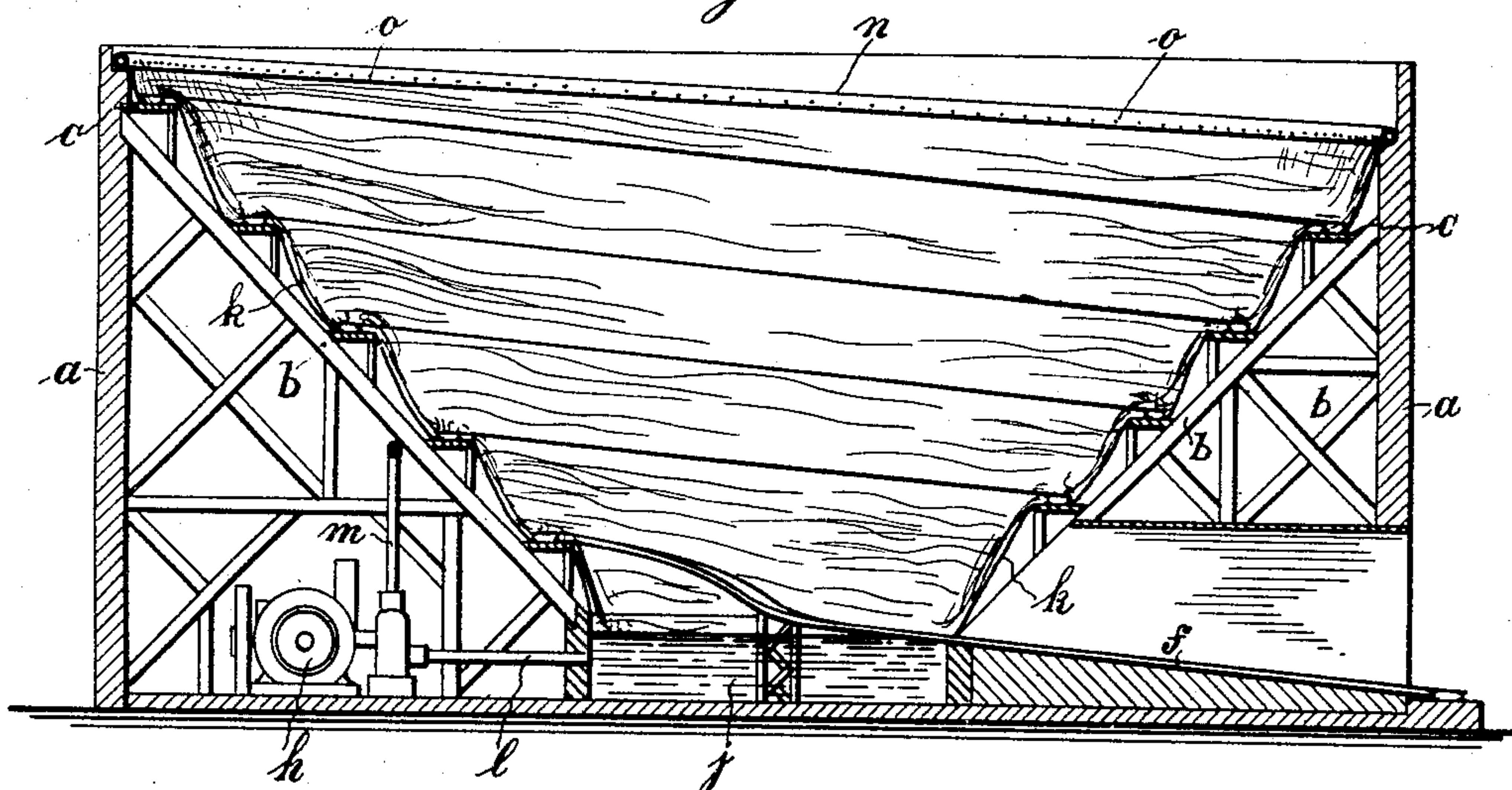
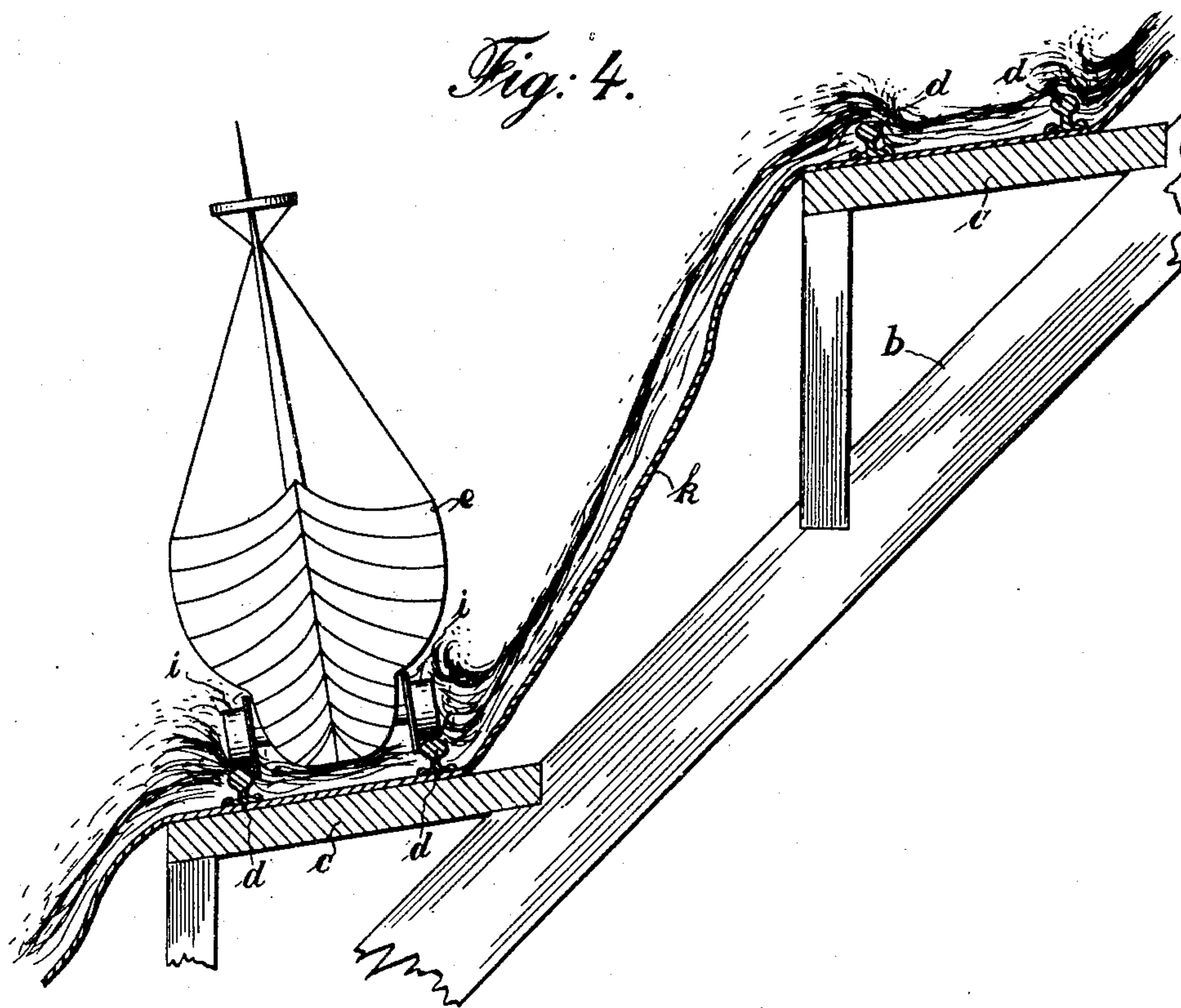


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

JOSEPH ALEXANDER BRUCE, OF BROOKLYN, NEW YORK.

WHIRLPOOL FOR PUBLIC AMUSEMENT.

SPECIFICATION forming part of Letters Patent No. 779,464, dated January 10, 1905.

Application filed May 4, 1904. Serial No. 206,294.

To all whom it may concern:

Be it known that I, JOSEPH ALEXANDER BRUCE, a subject of the King of Great Britain, and a resident of Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Whirlpools for Public Amusement, of which the following is a specification.

My invention has reference to a novel amusement apparatus.

It pertains particularly to a whirlpool for the amusement of the public, by means of which the passengers experience the sensation of being in a ship caught by a whirlpool and carried round and round on a spiral track provided on an inverted cone. When the ship and passengers reach the bottom of the inverted cone, then a sensation is experienced as if a ship was sucked down into the depths of the ocean by the irresistible force of the water. The spiral track, on which the vessel descends first slowly and then more rapidly, is so constructed that water flows down on same, and the bottom portion of the inverted cone likewise is covered with water. Furthermore, the surroundings, accessories, and scenery of the interior of said inverted cone are so arranged as to create the real impression of being sucked down into a natural whirlpool. It might appear that this would be anything but pleasure. However, the passengers are conscious of the fact that all danger is eliminated, and therefore greatly enjoy the trip. After passing the bottom of the inverted cone the vessel runs through a channel which leads outside of the building. Here the ship is stopped, the passengers disembark, new passengers are taken on, and the boat is then hauled up to the starting-point, from where it again descends.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 represents the whirlpool in top plan. Fig. 2 shows the building in side elevation with tracks on which the vessel is carried up to the top of same. Fig. 3 is a cross-section on line *xx* of Fig. 1; and Fig. 4 is a section, on an enlarged scale, showing various details.

Similar letters of reference denote like parts in all the figures.

In the drawings, *a* represents the building, constructed preferably of bricks. This building is usually of circular shape and of such size as to suit requirements. I prefer to make it about one hundred feet in diameter and fifty feet high. It is open at the top.

b illustrates the inside framework, by means of which the inverted cone is formed. The framework *b* carries the supports *c*, (see Figs. 3 and 4,) on which a road-bed is provided for the rails *d d*. The road-bed is arranged in spiral form and runs around the inverted cone down to the bottom, where a central circular space *j* of about twenty feet in diameter is left free. This space is filled with water about one foot deep. The spiral support *c* and the road-bed thereon are so arranged that the vessel moves slowly when at the top of the building. The farther the vessel descends the faster it moves downward, owing to the higher pitch of the spiral road-bed below and partly by the momentum, so that the maximum speed has been attained when the vessel reaches the bottom space *j*, which is filled with water. The vessel then crosses the bottom space in a curved line, passing through its center out into a channel *f*, which leads outside of the building. Here the passengers disembark, and new passengers are taken on. When the vessel is again filled with passengers, then it is hauled up to the top of the building on a road-bed *g*. (Shown in Fig. 2.) This is done by means of suitable machinery *h*, which is diagrammatically illustrated in Fig. 3. Either steam or electric power may be employed, according to circumstances.

As shown in Fig. 4, the supports *c*, forming the road-beds, are mounted on an inclined plane in a similar manner as rails are mounted on railroad-beds where sharp curves occur. This is done in order to make the ship move safely on the spiral track when it attains a high rate of speed. The vessel is provided with small wheels *i*, two of which are represented in Fig. 4. These are of usual construction and secured on the bottom portion of the vessel in any suitable way. The wheels

run on the track in the same manner as car-wheels move on the railroad-tracks.

For the purpose of making the scene still more realistic and creating fully the deceptive illusion of being in a real whirlpool water is made to flow down on the spiral track and over same, as shown in Figs. 3 and 4. This water issues into the bottom space *j*. The interior of the inverted cone is covered with canvas *k* or other suitable material painted in oil-colors and representing water, thus giving the appearance of a whirlpool. This canvas *k* passes under the road-bed and extends down into the water of the central space *j*, being interrupted only at the place where the channel *f* begins, so as to allow the ship to escape to the outside of the building. When the whirlpool is in operation, the engine of the machinery *h* pumps the water continuously from the central bottom space *j* up to the top through the pipes *l m* into the pipe *n*, which latter is provided with a number of openings *o*, through which the water is discharged on the tracks and canvas. Thus a continuous circulation of the same amount of water is effected, and at the same time no water is pumped when the whirlpool is not operated.

The channel in which the ship disappears after passing the central bottom space *j* is also decorated. The designs on the walls represent the bottom of the ocean. Rocks, corals, fish, and sea plants are painted on the interior of this channel.

When it is desired to operate the whirlpool, then passengers are taken on the vessel, which at this time is on the track *g* on the outside of the building. Now the machinery *h* is started, whereupon the vessel is hauled up to the top of the building in any suitable manner. Simultaneously the engine begins to pump up the water through the pipes *l m* into the pipe *n*. After reaching the top the vessel begins to descend first slowly and then more rapidly until it reaches the maximum speed down at the bottom space *j*. Water flows continuously down and over the track *g* while the vessel descends. The vessel then passes the channel *f*, located within the lower part of the building and leading outside of same to the track *g*. Now the passengers disembark, others are taken on, and the same operation is repeated. While passing down in the vessel on the spiral track, the scenery and flowing water create the impression of being in a natural whirlpool, and when the bottom space is reached it actually seems as if said vessel is sucked down into the water filling said bottom space, making thus the illusion complete.

Proper care is taken to prevent the passengers from getting wet while passing down in the vessel.

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

1. A whirlpool for public amusement comprising a circular building, framework therein forming an inverted cone with a free space at the bottom, supports provided on the inside of said inverted cone, a road-bed with track mounted in spiral form on said supports, a channel in the bottom portion of the building, means for circulating water from the bottom space up to the top of the inverted cone and down again, and means for operating the device.

2. A whirlpool for public amusement comprising a circular building, framework therein forming an inverted cone with bottom space, a road-bed and track provided in spiral form on the interior of said cone increasing in pitch below, a channel with the continuation of the track in the bottom portion of the building, a vessel with wheels on said track, means for circulating water from the bottom space up to the top of the building and down again, and means for operating the device.

3. A whirlpool for public amusement comprising a circular building, framework therein forming an inverted cone having a circular bottom space, a road-bed arranged in spiral form on the inside of the inverted cone, painted canvas on the inside walls and said road-bed, rails on the latter, a channel with rails in the bottom portion of the building, a track on the outside of the building leading up to the top of same, means for circulating water down on the painted canvas, and means for operating the device.

4. A whirlpool for public amusement comprising a circular building, framework therein forming an inverted cone having a bottom space, a road-bed arranged in spiral form on an inclined plane, painted canvas on the inside walls, a track on said road-bed, a vessel with wheels thereon, a channel with track in the bottom portion of the building leading outside of same, an inclined track leading up to the top of the building, means for circulating water from the bottom space to the top and down again, and means for operating the device.

Signed at New York, N. Y., this 3d day of May, 1904.

JOSEPH ALEXANDER BRUCE.

Witnesses:

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