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PATENTED FEB. 18, 1908.

T. G. & W. H. MAYBERRY.

PLEASURE RAILWAY.

APPLICATION FILED OCT. 10, 1907.

2 SHEETS—SHEET 1.

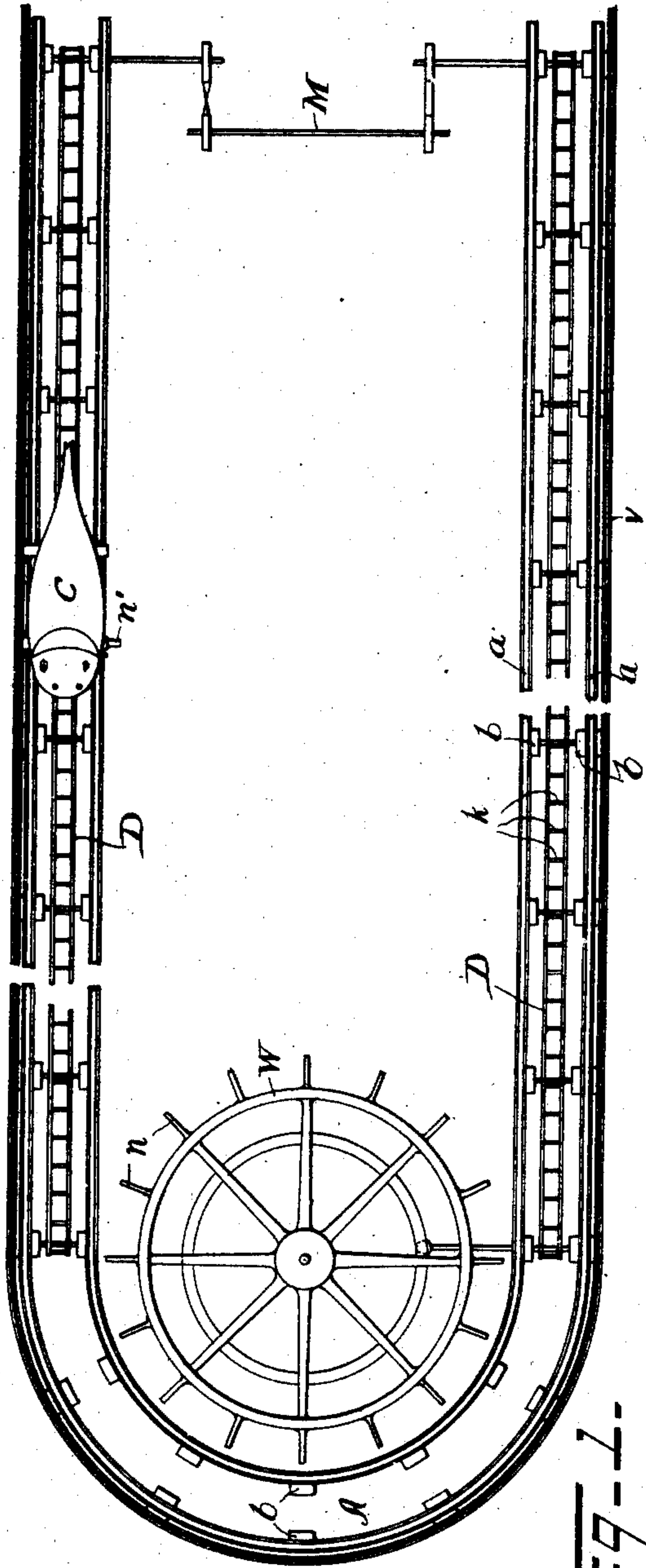


Fig. 1.

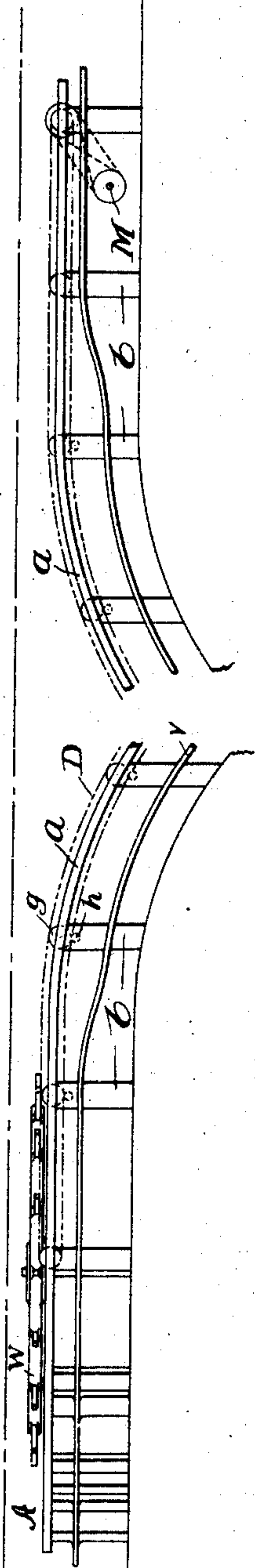


Fig. 2.

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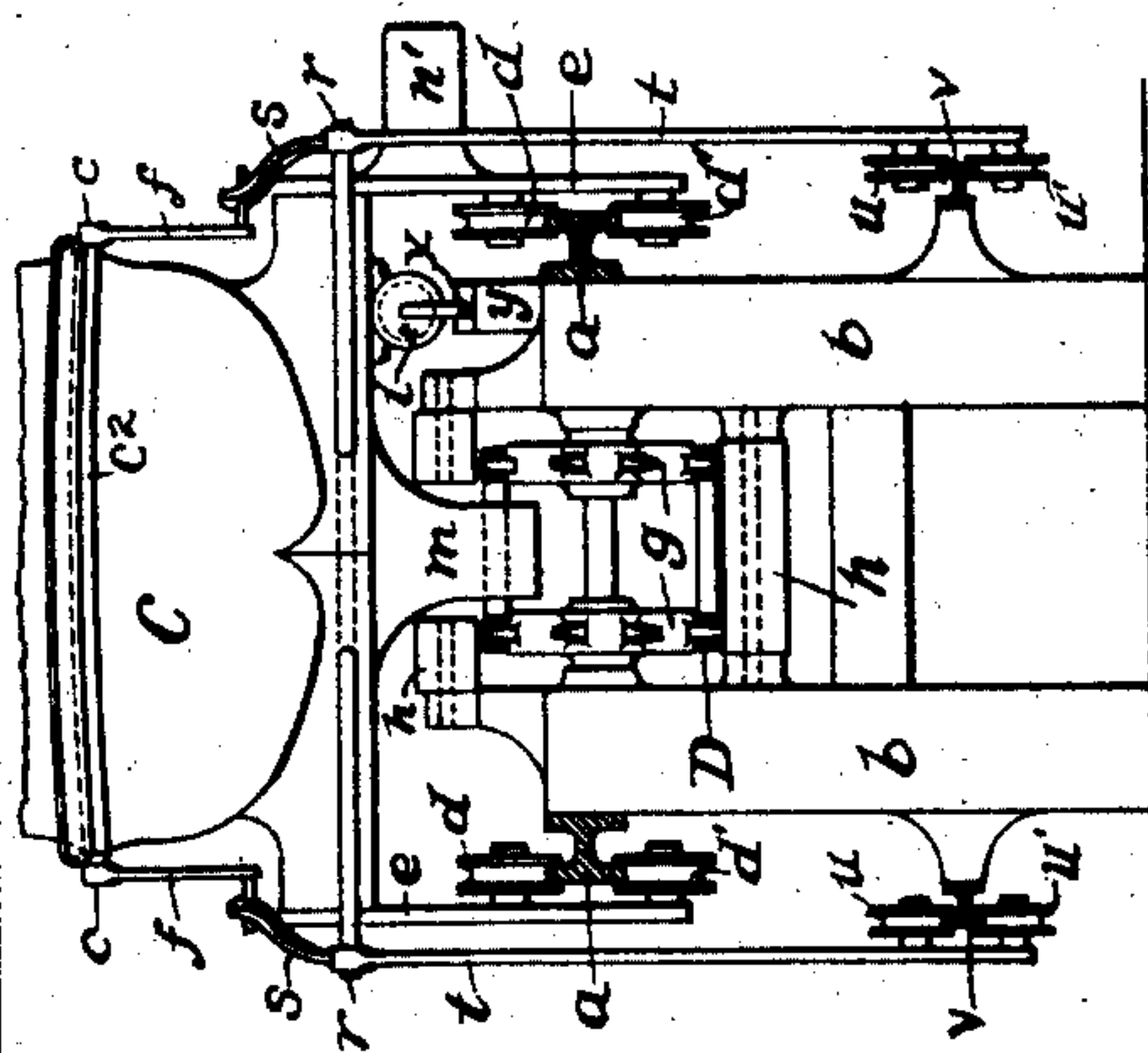
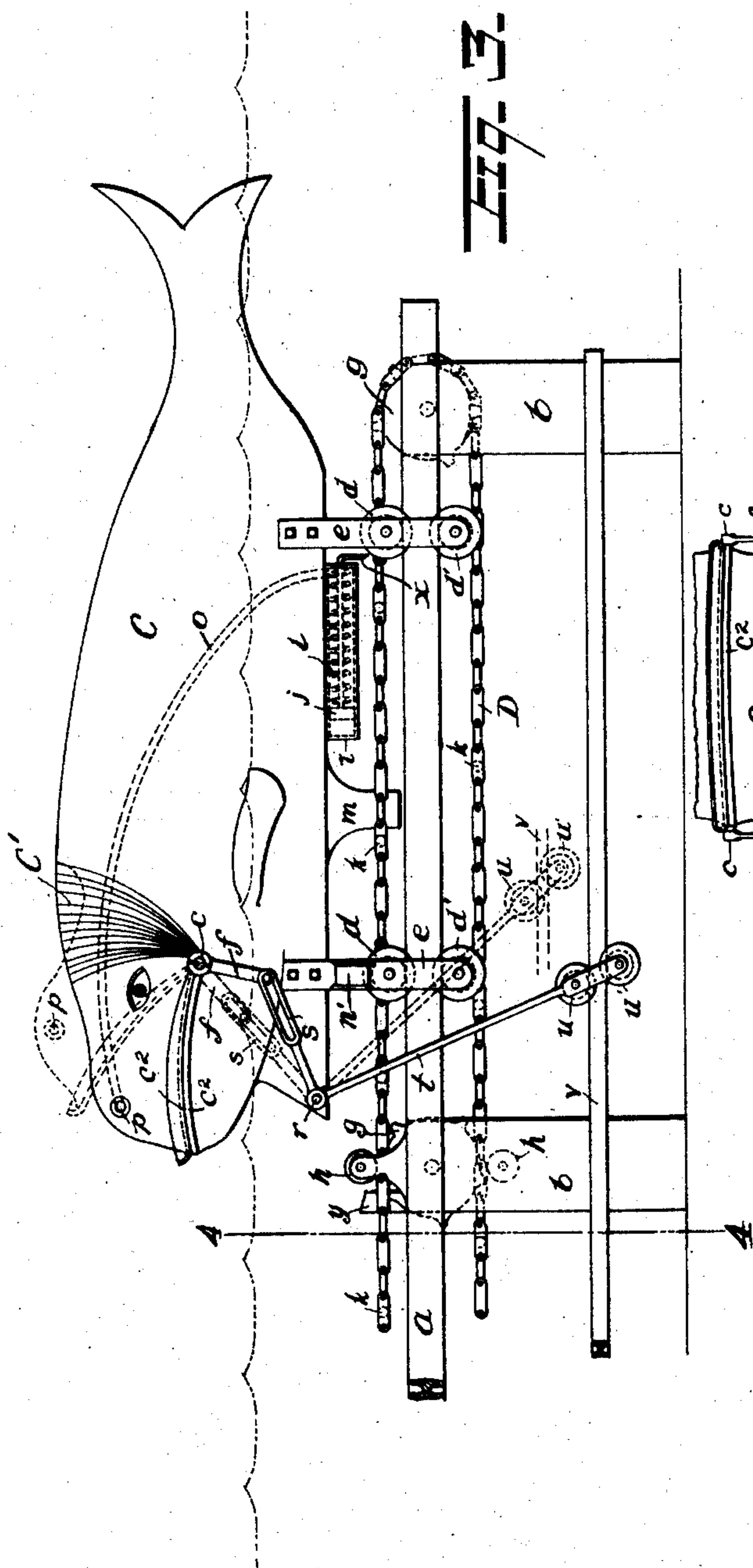
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2 SHEETS—SHEET 2.



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# UNITED STATES PATENT OFFICE.

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## PLEASURE-RAILWAY.

No. 879,283.

Specification of Letters Patent.

Patented Feb. 18, 1908.

Application filed October 10, 1907. Serial No. 396,705.

*To all whom it may concern:*

Be it known that we, THOMAS G. MAYBERRY and WILLIAM H. MAYBERRY, both citizens of the United States, and residents of the city of Reading, in the county of Berks and State of Pennsylvania, have invented certain new and useful Improvements in Pleasure-Railways, of which the following is a specification.

Our invention relates particularly to amusement railways for summer resorts, in which provision is made for subjecting the patrons to the novel sensation of a partial trip under water in a submarine boat-like car preferably arranged to simulate a whale or the like.

The invention is fully described in connection with the accompanying drawings and the novel features are specifically pointed out in the claims.

Figure 1 is a plan view indicating the general arrangement of a pleasure railway embodying our invention, the improved track, car and car-propelling mechanism being shown. Fig. 2 is a side elevation of the main track, showing part of the car propelling mechanism and also the supplementary track for automatically controlling the opening and closing of the water-tight car for ingress and egress of the patrons. Fig. 3 is an enlarged side elevation of an end portion of the tracks and of the car thereon with the car-opening and closing mechanism indicated in both the positions which it automatically assumes. Fig. 4 is a cross-sectional view taken on the line 4—4 of Fig. 3.

The main rails *a a* of the car tracks are secured to suitable uprights *b b b* of varying heights as determined by the varying level of the track at the elevated starting and finishing ends of the railway, at the deeply submerged dip portions, and on the inclines connecting them. As shown the starting and finishing ends of the railway are arranged adjacent each other, with approximately parallel track portions extending therefrom to the return-bend A; the track or other means employed for conveniently replacing the cars in starting position after finishing a trip being omitted as well known and forming no part of our invention. The rails *a a* project laterally from the tops of the uprights *b b b*, and are provided with both upper and lower treads adapted respectively for correspondingly spaced-apart upper wheels *d* and lower wheels *d'* mounted

on depending members *e* of the car body C, so as to either bear the weight of the latter or positively retain and guide it during its submerged travel.

The car propelling mechanism comprises similar endless drive-chains D D, each extending the full length of one of the approximately parallel track portions, over suitable sprocket wheels *g g* and supporting pulleys *h h h* placed to correspond with the changing level of the track. These double-chain belts are suitably driven in reverse directions, from a main shaft M as shown, and are provided at intervals with cross-bars *k k* adapted to engage a central depending arm *m* of car C, so as to cause the latter to be positively moved with the drive chains when in position above it. To provide for positively traversing the car around the return bend A of the track, a drive wheel W is provided upon a vertical shaft located at the center of said bend as shown and arranged to be driven by chain belt D; said wheel being provided with peripheral arms *n n* arranged to swing clear of the inner rail one or other of which will engage a fixed member *n'* of the inner side of the car as the latter passes beyond the control of outward-drive chain belt, and will carry it around the return bend and deliver it to the action of the opposite inward-drive chain belt by which it is propelled to the finishing end of the track.

The car C is shown in the form of a whale, but may be made in any design. It is supported, as previously stated, by wheels *d d'* mounted on the depending members *e* and driven by engagement of arm *m* with the drive chains. The top head portion of the whale, as shown, is made separately and is pivoted to the body at *c* so that it may be turned thereon to open the mouth and permit ingress and egress of passengers. A flexible water-proof portion C' is provided to permit the opening and closing movements; and the lips C<sup>2</sup> of the mouth are made of soft rubber or the like to insure a water-tight closure, and the upper lip is formed, as shown, with a curled up rim so as to catch and drain back to the pivot end the water that would otherwise drip into the boat when the mouth is open.

The opening and closing mechanism for the mouth consists of cranks *f* fixedly secured to the pivots *c* and engaged by the slotted arms *s* of the bell-crank levers *s t* which are pivoted at *r* to the whale body. The other



arms *t* of the bell-cranks are extended below the tracks *a a* and carry wheels *u u'* which ride upon and engage double flange tracks *v v* secured to the supporting posts *b* outside the same and some distance below the tracks *a a*. These tracks *v v* are set at the required distance from tracks *a a* and lie substantially parallel therewith, so as to hold the bell-crank arms *t* in such positions as to keep the mouth of the whale open, except when the boat is dipped under the water. At such dips the arms *t* are arranged to tightly close the mouth and hold it closed until the boat has again risen to the surface. This is accomplished by means of the tracks *v v* which at the dip portions are so set in relation to tracks *a a* as to raise the arms *t* and positively close the mouth, the mouth being automatically opened in a similar manner by the return of the boat to normal elevated position. These dips are shown only in the straight portions of the track, but may be placed anywhere and any desired number may be employed.

To simulate the spouting of a whale we have provided a pump mechanism carried submerged beneath the boat and arranged to discharge water from the head of the whale at desired intervals. As shown in the drawings this consists of a pump casing *i*, secured to the whale boat *C*, and carrying a piston *j* normally held at one end of its stroke by the spring *l*; a flexible tube *o* connects the end of this chamber with the nostril *p* in the head of the whale, and the usual admission opening is provided in the pump cylinder head to fill the cylinder with water. The piston rod projects through the head of the cylinder and is bent to form a finger *x* to be engaged by one or more track projections *y* located at desired points, and forcibly draw the piston, against the action of the spring *j*, to the opposite end of its strokes and cause a discharge of water through the tube *o* and nostril *p*.

What we claim is:—

1. A pleasure railway comprising approximately parallel lines of track connected by a return bend, a car on said track provided with a depending belt-contacting arm, separate reversely-driven link-belts arranged to loosely engage said depending arm and thereby drive the car in opposite directions

upon the parallel track portion, and a cooperating drive wheel having a series of peripheral arms swinging clear of the inner rail of the return bend and arranged to loosely engage an inner-side member on the car to drive the latter around the return bend substantially as set forth.

2. In a pleasure railway comprising a suitably supported submerged track with relatively elevated portions and inclines, and car propelling mechanism, a submergible car having a normally water-tight movable roof portion adapted to provide ingress and egress thereto when opened, and means for automatically moving said roof-portion to respectively close the same in descending an incline and open the same in ascending an incline.

3. In a pleasure railway comprising a suitably supported submerged track with relatively elevated portions and inclines, and car propelling mechanism, a submergible car having a normally water-tight movable roof portion adapted to provide ingress and egress thereto when opened, a lever pivoted to the car and adapted to control the opening and closing of said movable roof-portion, and a supplementary track having portions thereof out of parallel with the main track, the free end of said lever being arranged to ride upon said supplementary track and to be swung thereby so as to automatically open and close the movable roof portion as desired.

4. In a pleasure railway comprising a suitably supported submerged track, a car traveling on said track provided with an upwardly extending spouting-tube the lower end of which is arranged in communication with a submerged pump chamber on the car, a spring-pressed piston in said chamber having a projecting piston rod, and suitably located track projections adapted to engage said rod and automatically operate said pump during the passage of the car substantially as set forth.

In testimony whereof, we affix our signatures, in the presence of two witnesses.

THOMAS G. MAYBERRY.  
WILLIAM H. MAYBERRY.

Witnesses:

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