(No Model.)

L. D. B. SHAW.

SLIDING HILL AND CARRIAGE TO BE USED THEREWITH.

No. 456,438. Patented July 21, 1891.

Fig. 1.

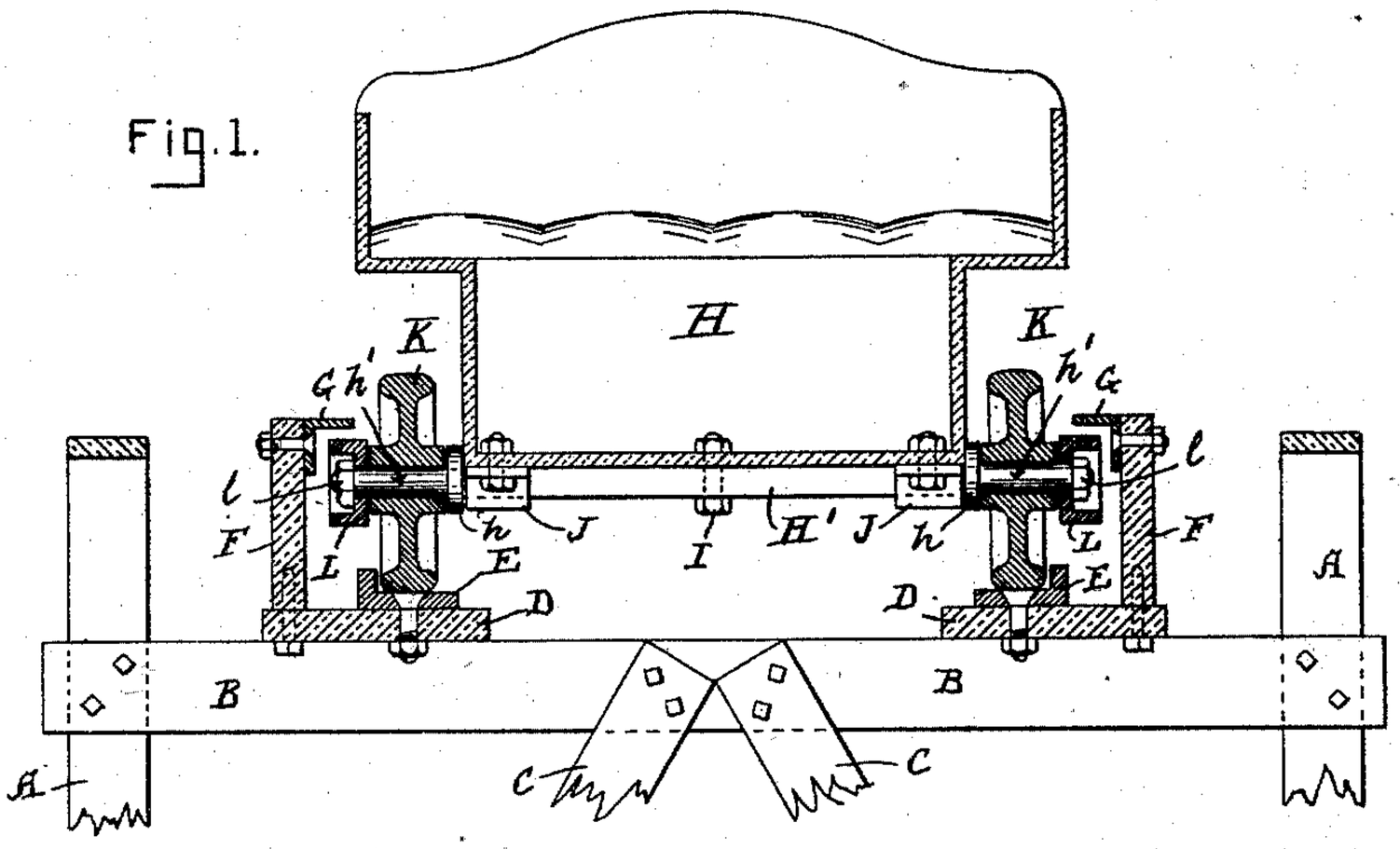


Fig. 2.

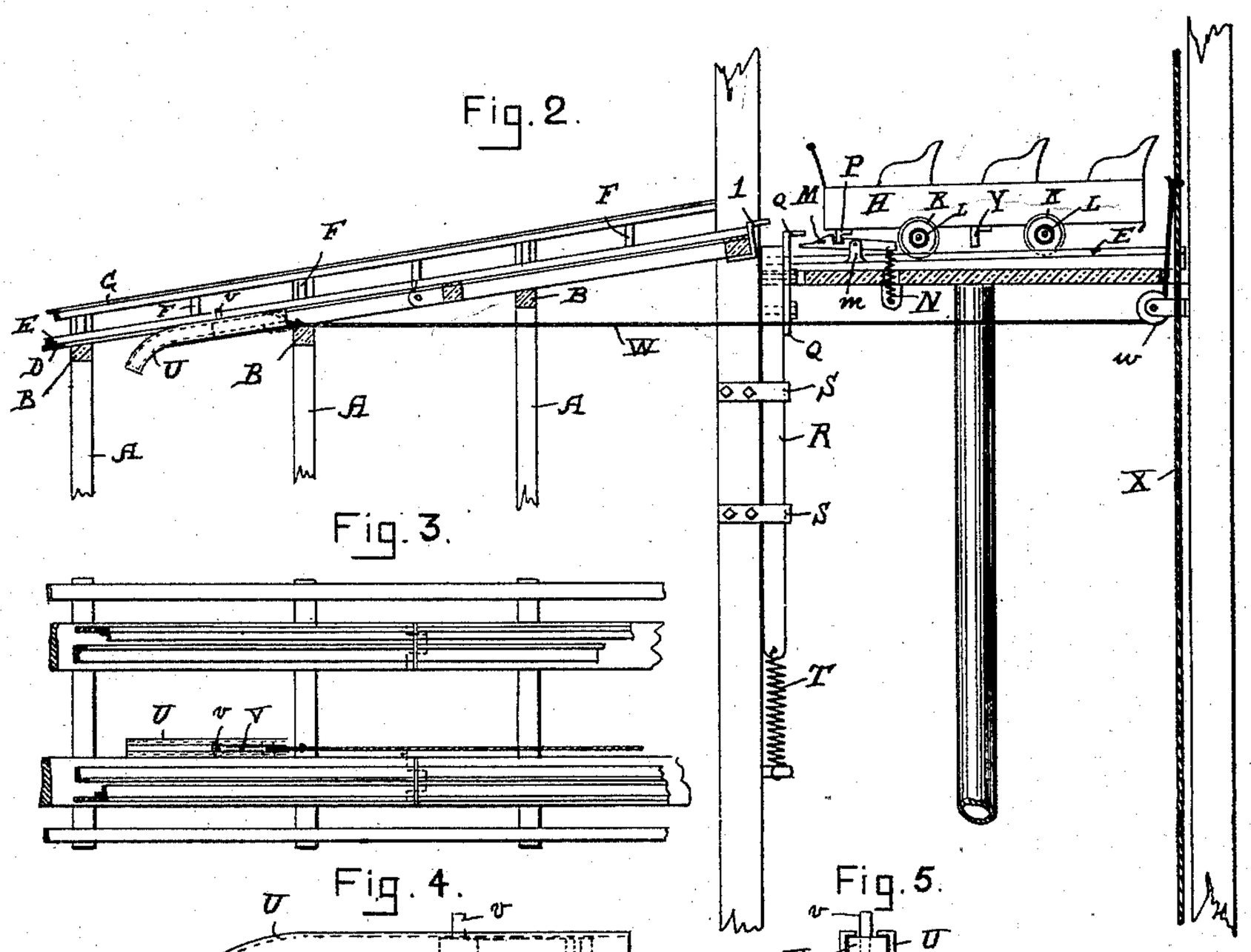


Fig. 3.

Fig. 4.

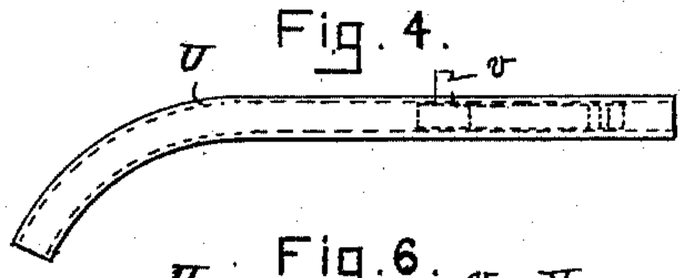


Fig. 5.

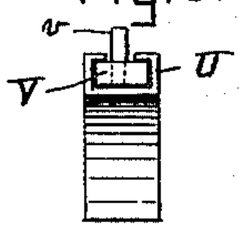
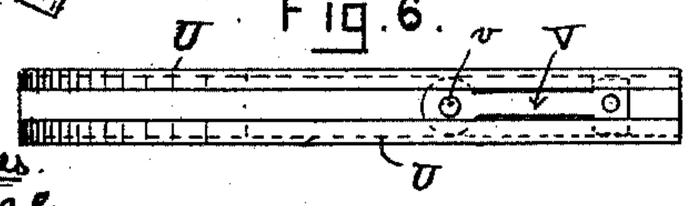


Fig. 6.



Witnesses.
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Inventor.
Lorenzo D. B. Shaw
by Edwin Clarke.
attorney.

UNITED STATES PATENT OFFICE.

LORENZO D. B. SHAW, OF CONEY ISLAND, NEW YORK.

SLIDING-HILL AND CARRIAGE TO BE USED THEREWITH.

SPECIFICATION forming part of Letters Patent No. 456,438, dated July 21, 1891.

Application filed October 14, 1890. Serial No. 368,073. (No model.)

To all whom it may concern:

Be it known that I, LORENZO D. B. SHAW, a citizen of the United States, residing at Coney Island, in the county of Kings and State of New York, have invented certain new and useful Improvements in Sliding-Hills and in Carriages to be Used Therewith, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to certain improvements in what are known as "sliding-hills" or "chutes" and in carriages to be used therewith, the object being to so construct the tracks or ways and carriages that it will be impossible for the carriage to leave the track, thereby preventing all liability of accidents therefrom.

The invention consists of certain details of construction hereinafter fully described, and pointed out in the claims.

Referring to the accompanying drawings, Figure 1 represents a vertical transverse section through a track and carriage embodying my invention. Fig. 2 is an elevation, partly in section, of the upper end of the track and elevator. Fig. 3 is a plan or top view of the upper end of the track. Fig. 4 is a side view of the elevator-lowering attachment. Fig. 5 is an end view, and Fig. 6 a plan or top view, of the same.

A A represent standards, B cross-beams, and C ties that support the track proper.

To the cross-beams B, at a proper distance apart, are secured planks D, to which rails E, of an angle-iron form, are securely bolted. A short distance outside the rails standards F are secured to the planks D, and to the tops of the standards are bolted angle-iron guard-rails G.

H represents a carriage, the axle H′ of which is square in the part that is under the carriage, and is secured thereto by a bolt I, passing through it and through the bottom of the carriage, and also by two clamps J, secured to the bottom of the carriage, as shown. The axle is formed with two collars *h h*, between which the bottom of the carriage fits, and the portions outside of the collars are turned down to form journals *h′ h′* for the running wheels K and safety-wheels L, and the extreme ends are turned down to a smaller diameter and screw-threaded to receive a nut *l*, that secures both the running and safety wheels in place. The wheels K run up the rails E, the flanges of which keep them in place; but should the carriage from any cause jump, then the small or safety wheels L will come into contact with the angle-irons G and prevent the wheels K from rising sufficient to pass over the flange of the rail E.

The platform of the elevator employed for raising the carriages is provided with rails E′, corresponding to the rails E of the track. Set on an incline toward the front of the elevator and near the front end of the platform is a catch or trigger M, pivoted in bearings *m*, secured to the platform. This catch is formed with a notch near its forward end, and its rear end is drawn down by a spiral spring N, and to the under side of the car is secured a pin or bolt P, which when the car is pushed upon the platform takes into the notch in the catch or trigger M, and is securely held until the platform has been raised to the required height. Then the front end of the catch or trigger M comes into contact with an angle-iron stop Q, secured to a bar R, held to the frame of the elevator in guides S. To the lower end of the bar R is secured one end of a spiral spring T, the other end of which is secured to the elevator-frame. The object of having the stop Q and bar R held by the spring T is to allow the elevator-platform to rise to the required height independently of the exact position of the stop Q. A section of the upper end of the track is hinged to the main track, and the end next to the elevator is fitted with a Z-iron 1, so that as the elevator rises the Z-iron will come into contact with the platform and the end of the section will be raised until the stop Q has drawn down the trigger M and released the carriage, which then passes down the track.

I cause the elevator to be lowered automatically in the following manner: At a suitable distance down the track—say twenty feet—I secure to the inner side of one portion of the track guides U, curved downward at one end. (See Figs. 2 and 4.) In these guides is fitted a sliding plate V, the center of which is of a width less than the space between the two guides U, so that it can pass down the curved

portion. This plate V is provided with a pin or projecting piece *v*, and also a hole by which a rope W is secured to the slide. The other end of the rope passes under a pulley *w*, secured on one side of the elevator, and the end of the rope is secured to the rope X, that controls the valve for operating the elevator. To the under side of the car is secured an angle piece or bolt Y, that when the car runs down the track comes into contact with the pin or projection *v* and carries the slide V forward until it passes down the curved portion and the projection is out of the way of the bolt Y. As the slide V is drawn forward, the rope draws down the rope X and operates the valve of the elevator in the same manner as if the rope had been drawn down by the hands. After the elevator is lowered and the rope X is drawn up to cause the elevator to ascend it draws upon the rope W and pulls the slide V to the upper end of the guides, ready to be operated upon by the next car that descends.

What I claim is—

1. In a sliding-hill, tracks or ways consisting of planks D, angle-iron rails E, secured thereto by bolts, the standard F, and angle-iron guard-rails G, substantially as shown and described.

2. In a carriage for sliding-hills, an axle H′, formed square under the carriage-body and secured thereto and having collars *h h* and journals *h′ h′*, the running wheels K, and safety-wheels L, secured to the axle by nuts *l*, substantially as shown and described.

3. A carriage having axles H′ formed square under the carriage-body and having collars *h h* and journals *h′ h′*, running wheels K, and safety-wheels L, in combination with a track having angle-iron rails E, standards F, and angle-iron safety-rails G, all arranged substantially as set forth.

4. In an elevator for raising carriages for sliding-hills, the catch or trigger M, mounted upon the elevator-platform, and the releasing devices Q R T, secured to the elevator-frame, in combination with a carriage having a pin or bolt P to lock into said catch or trigger, substantially as set forth.

5. In a sliding-hill, a device for automatically lowering the elevator after the carriage has left the same, consisting of curved guides U, slide V, having a pin *v*, a rope W, attached to said slide and the elevator-valve rope X, and an angle piece or bolt Y, secured to the under side of the carriage, substantially as shown and described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 9th day of October, A. D. 1890.

LORENZO D. B. SHAW.

Witnesses:

CHAS. STEERE,

EDWIN PLANTA.