

H. MÜLLER.
SUSPENSION RAILWAY AND THE LIKE.
APPLICATION FILED FEB. 27, 1912.

1,044,902.

Patented Nov. 19, 1912.

2 SHEETS—SHEET 2.

Fig. 2

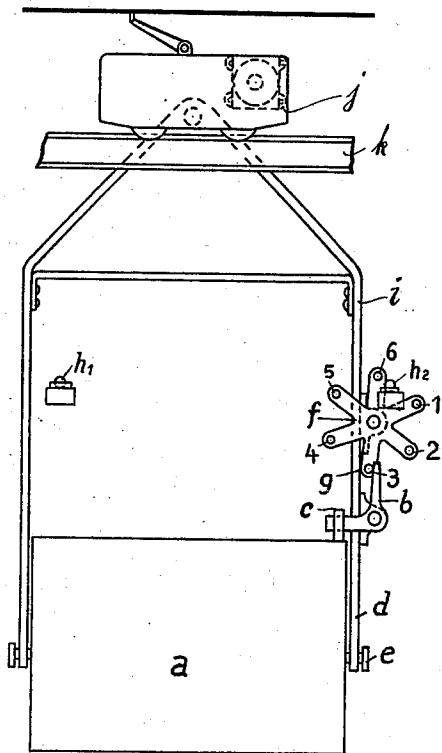
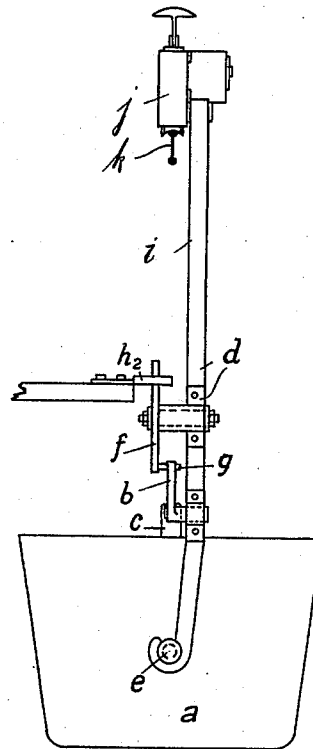


Fig. 3



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UNITED STATES PATENT OFFICE.

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SUSPENSION-RAILWAY AND THE LIKE.

1,044,902.

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To all whom it may concern:

Be it known that I, HERMANN MÜLLER, residing at Leipzig-Gohlis, Germany, subject of the German Emperor, have invented new and useful Improvements in and Relating to Suspension-Railways and the Like, of which the following is a full, clear, and exact description of my invention.

When, in connection with automatically operated suspension railways, certain operations are to take place at predetermined points of the line, as, for example, the release of the car-locking arrangement with a view to discharging the contents of the car-bucket, it is, for constructional reasons, not always convenient or possible to effect the selections of such points by adjusting detents along the track, more especially as, in this case, all the cars would be caused to tip at the same point, which is not always desired. For effecting the selection by means of an adjustment on the car itself it has heretofore been necessary to provide as many levers as there are discharge points, and with the very limited space at disposal, particularly in the case of suspended cars, the arrangement of these levers causes very considerable difficulties. Some attempts have been made to solve the problem by means of electrically actuated appliances, but have not led to any practical results, because, apart from being altogether too complicated, they can, of course, only be employed where electric current is available.

According to the present invention the selection of the operating point is effected by fitting a mechanical racking device on the car, which, during the travel of the car, is moved stepwise by successively striking fixed abutments arranged along the track, and is adapted to initiate or cause the operation of tilting or the like when it has made a predetermined number of movements.

In the accompanying drawings—Figure 1 is a perspective of the bucket with the mechanical racking device attached and shows the general arrangement of the same with respect to the cooperating abutments. Fig. 2 is a front elevation of the bucket with tripping device, of the trolley carrying the bucket, and a small section of track upon which the trolley is adapted to travel. Fig. 3 is a similar side elevation.

Referring to the drawings, *a* designates the bucket which is normally held in vertical

position, but in unstable equilibrium, by means of a locking or bellcrank lever *b* engaging with the fork or catch *c*. The axle carrying this lever is mounted in a bracket *d* connected with a hanger *i* hung from the trolley *j* which is adapted to travel along a suitable track *k*. In the bracket *d* there is also mounted the shaft of the star wheel *f*, which is rotated intermittently by successively striking abutment pins *h*₁, *h*₂, *h*₃, *h*₄, etc., arranged at selected points along the track. In the drawing the star-wheel is shown as having passed the abutment pin *h*₂, by the action of which the release pin *g* fixed to the star-wheel is brought close up to the locking lever *b*. When the car continues its journey in the direction indicated by the arrow the star-wheel striking the abutment pin *h*₃ causes the release pin *g* to disengage the locking lever *b*, so that the bucket is allowed to tilt. The kinetic energy of the traveling car is, therefore, without the use of a relay, directly employed to effect the disengagement, which operation requires a comparatively considerable amount of power in the case of cars not kept in good condition and unevenly loaded.

If the unloading is to take place at a different part of the track, it is only necessary to insert the pin *g* into another arm of the star-wheel, the arms having holes 1, 2, 3, 4, 5, 6, for this purpose. For instance, if the pin is inserted into the arm 4, the disengagement is effected at the abutment pin *h*₄.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:

1. In an appliance for initiating or effecting operations in connection with a suspension railway car at predetermined points of the track, the combination with abutments arranged at selected points along the track, of a mechanical racking device fitted on the car, adapted to be engaged by said abutments as the car moves past the same, and means for initiating the desired operation after a predetermined number of engagements.

2. In an appliance for initiating or effecting operations in connection with a suspension railway car at predetermined points of the track, the combination with abutments arranged at selected points along the

track, of a mechanical racking device fitted on the car, adapted to be engaged by said abutments as the car moves past the same, and means for initiating the desired operation through the kinetic energy of the moving car after a predetermined number of engagements.

3. In an appliance for initiating or effecting operations in connection with a suspension railway car at predetermined points of the track, the combination with pins extending outwardly at selected points along the track, of a bracket pivotally supporting the bucket in unstable equilibrium, a wheel having a plurality of arms adapted to engage said pins, and rotatably supported by said bracket, a catch secured to the bucket, a bell-crank lever supported by the said bracket, one arm of which normally engages said catch to maintain the bucket in position, and a pin extending from a predetermined arm of said wheel and adapted to engage with the other arm of said bell-crank lever.

4. In an appliance for initiating or ef-

fecting operations in connection with a suspension railway car at predetermined points of the track, the combination with pins extending outwardly at selected points along the track, of a bracket pivotally supporting the bucket in unstable equilibrium, a wheel having a plurality of suitably perforated arms adapted to engage said pins, and rotatably supported by said bracket, a catch secured to the bucket, a bell-crank lever supported by the said bracket, one arm of which normally engages said catch to maintain the bucket in position, and an extending pin fitting a perforation of an arm of said wheel and adapted to engage with the other arm of said bell-crank lever.

In testimony whereof I have hereunto subscribed my name as inventor in the presence of two subscribing witnesses this 14th day of February 1912.

HERMANN MÜLLER.

Witnesses:

RUDOLPH FRICKE,
EMIL HOFMAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."