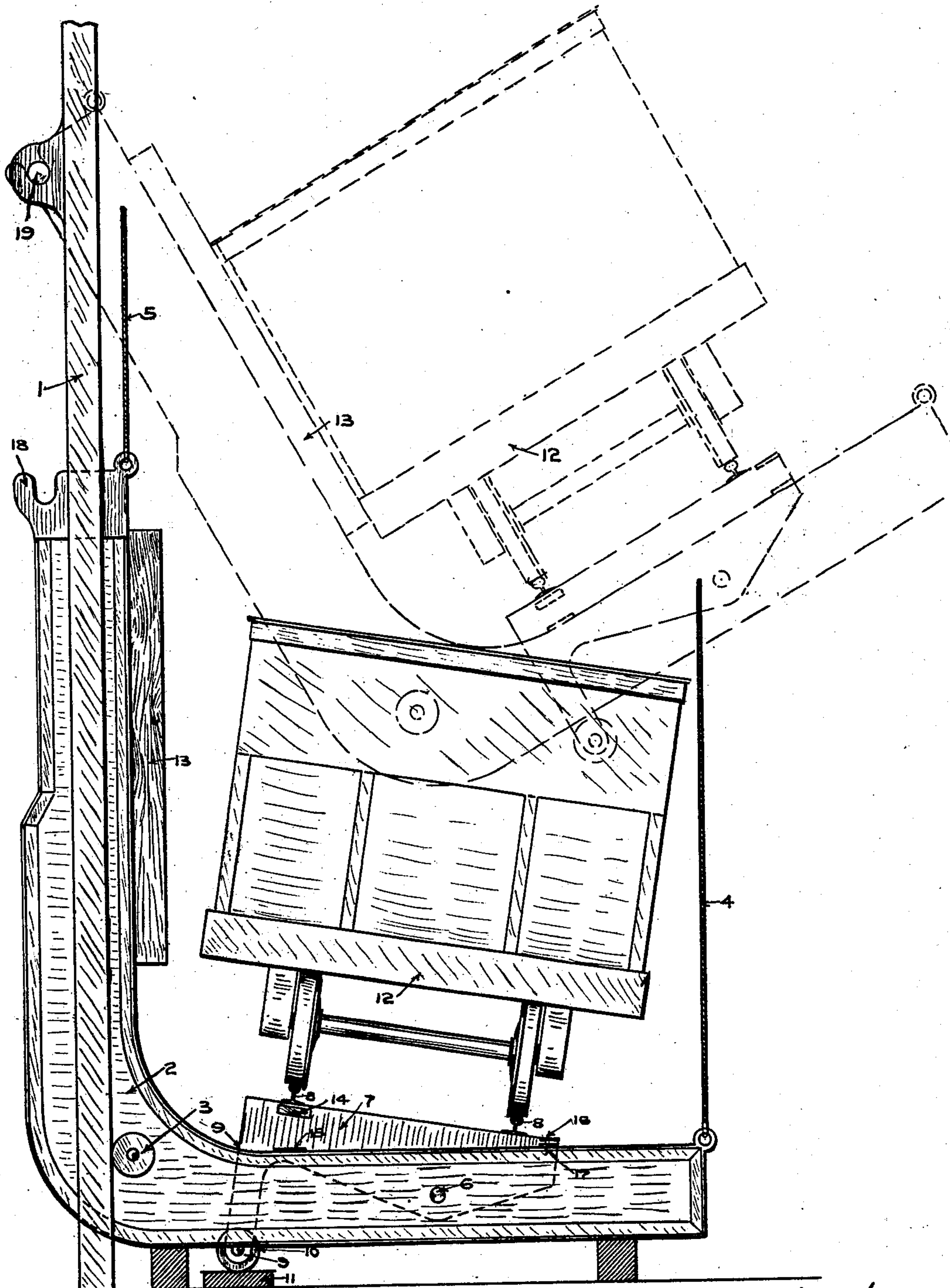


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V. R. BROWNING.
MECHANISM FOR UNLOADING VEHICLES, &c.
APPLICATION FILED JUNE 1, 1900.

NO MODEL.



Witnesses.
Earl H. Browning.
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UNITED STATES PATENT OFFICE.

VICTOR R. BROWNING, OF CLEVELAND, OHIO.

MECHANISM FOR UNLOADING VEHICLES, &c.

SPECIFICATION forming part of Letters Patent No. 720,557, dated February 17, 1903.

Application filed June 1, 1900. Serial No. 18,788. (No model.)

To all whom it may concern:

Be it known that I, VICTOR R. BROWNING, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a new and useful Improvement in Mechanisms for Unloading Vehicles, &c., of which the following is a specification.

This invention relates to mechanism for unloading cars and other vehicles, and has particular reference to the means employed for moving the car against the side of the lifting-cradle. It is evident that as all cars are not of the same width it would be impracticable to fix the track upon which the cars are run unyieldingly in the cradle, for while some cars might fit such an unyielding structure others would be too large to be accommodated by the same, while others would be so small that they would slip off the track when tipped on edge. For this reason it is desirable that the track be mounted yieldingly in the lifting-cradle, so that the car, whatever its size, may be moved to the side of the lifting-cradle. In the devices heretofore used special mechanism was employed for laterally shifting the platform upon which the car stands in order to bring the car into contact with the side of the cradle. My invention simplifies this structure, and instead of having special side clamping mechanism the platform upon which the car stands automatically tilts about a pivot as the cradle is lifted, and in this way the car is permitted to fall against the side of the lifting-cradle.

In order that my invention may be more readily understood, I will describe the same in connection with the accompanying drawing, in which—

1 represents one leg of the tower or frame of the car-unloading mechanism.

2 is the lifting-cradle, which is guided in its upward movement in the tower or frame by the antifriction-roller 3 and is lifted by means of the ropes or cables 4 and 5. These ropes or cables pass over a series of sheaves and thence to a hoisting mechanism, which sheaves and hoisting mechanism, however, it is not considered necessary to show.

Pivoted at a point 6 in the lifting-cradle is a tilting platform 7, upon which are laid and secured the rails 8 for the cars. The tilting

platform is pivoted eccentrically and has at its farther end from the pivot a downwardly-extending arm 9, in the lower end of which is journaled a roller 10. Beneath the lifting-cradle and in position to be engaged by the roller 10 when the cradle is in its lowermost position is a pillar 11. The length of the arm 9 and the height of the pillar 11 are such that when the lifting-cradle is in its lowermost position and the pillar and roller are in contact the tilting platform will stand at an incline, as shown in full lines on the drawing. This is the position of these parts when the car 12 is run on the tilting platform, which position causes the car to lean away from the side of the lifting-cradle. As the tilting platform is pivoted eccentrically, as described, it is evident that the same is unbalanced and that when the cradle 2 is lifted the platform will settle by gravity about its pivot until the car-body comes in contact with the buffers 13 on the side of the lifting-cradle. This is the position of the parts shown in dotted lines at the top of the figure. When in this position, the top clamps (not shown) may descend upon the upper edge of the car to hold the same in the cradle during the dumping or unloading operation.

It sometimes happens that it is desirable to lift the cradle when there is no car upon the tilting platform. When this occurs, it is necessary to provide stops 14 and 15 on the platform and cradle, respectively, to prevent the platform from turning too far about its pivot. It will be understood that when there is a car on the platform its sides will engage with the buffers 13 and will itself prevent the tilting platform from turning too far and that it is only when no car is lifted that the stops 14 and 15 will come into use. Under these conditions it may also happen that the platform will for some reason turn to the right, as seen in the drawing, and will, if not prevented, turn completely over. To guard against this, I provide the platform and the cradle with a second set of stops 16 and 17. When a car is on the platform, the clamps which engage with the top of the car will prevent the platform from turning in this direction.

The upper portion of the lifting-cradle is provided with the usual trunnion-hooks 18,

which engage with trunnion-pins 19 when the cradle is lifted in order to turn the latter over to dump the car.

Instead of pivoting the platform eccentrically, as described, it is evident that it may be pivoted at its center and weighted on one side in such a manner as to cause it to tilt when the cradle is lifted.

From the above description it will be seen that I have devised a very simple and at the same time a very effective side clamping mechanism which is certain in action, simple in operation, and cheap in construction. It will be seen also that the mechanism described is adapted not only for unloading cars, but for dumping wagons or any other vehicle that may be run onto the platform, and while it is shown as applied to a lifting-dumper it is evident that it may be applied equally well to dumpers of the rolling type—such, for example, as is shown in the patent to Long, No. 553,122. I do not desire, therefore, that my invention be considered as limited to car-dumpers alone or to the particular form of dumper shown in the drawing.

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

1. In an unloading mechanism for vehicles, a cradle having buffers and a tilting platform for the vehicle mounted in said cradle in such a manner that when the cradle is moved toward the unloading position, the platform will be automatically tilted with reference to the cradle toward the said buffers.

2. In an unloading mechanism for vehicles, a cradle having buffers, and a tilting platform for the vehicle mounted in said cradle in such a manner that when the cradle is moved toward the unloading position, the platform will be tilted by gravity so as to cause the vehicle to rest against the buffers.

3. In an unloading mechanism for vehicles, a cradle having buffers, and a platform for the vehicle pivoted eccentrically therein, so that as the cradle starts toward its unloading position, the platform will automatically turn to cause the vehicle to fall against the buffers.

4. In an unloading mechanism for vehicles, a cradle having buffers, a platform for the vehicle pivoted therein, and means for engaging the platform to tilt the same when the

cradle is in position to receive the vehicle on the platform, the platform being so mounted that when the cradle is moved toward its unloading position the vehicle will fall against the buffers.

5. In an unloading mechanism for vehicles, a cradle having the buffers 13, a platform for the vehicle pivoted in said cradle, and means under the cradle for tilting the platform and the vehicle when the cradle is in its position for receiving the vehicle, the platform being so mounted that when the cradle is moved toward its unloading position, the vehicle will drop by gravity against the said buffers.

6. In an unloading mechanism for vehicles, a cradle having the buffers 13, a platform for the vehicle pivoted in said cradle, a pillar under the cradle for tilting the platform and the vehicle when the cradle is in its position for receiving the vehicle, the platform being so mounted that when the cradle is moved toward its unloading position the vehicle will drop by gravity against the said buffers.

7. In an unloading mechanism for vehicles, a cradle, a platform for the vehicle pivoted in said cradle, means under the cradle for tilting the platform when the cradle is in its position for receiving the vehicle, and stops for limiting the movement of the platform in both directions as the cradle is moved toward the unloading position.

8. In a car-dumping apparatus, the combination of a cradle having a bottom and front side, means for lifting said cradle, mechanism for stopping the front side thereof whereby the continued lifting of the rear side tilts said cradle toward the front, a tilting platform pivoted to the bottom of said cradle on a pivot which is behind the center of gravity of the platform whereby a car on said platform tends to swing toward said side, the side receiving the lateral thrust of the car, and means with which the platform engages when the cradle is lowered whereby the platform is restored to a position with the car freed from the side, substantially as described.

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

VICTOR R. BROWNING.

Witnesses:

EARL H. BROWNING,
CLARK S. SOMERS.