W. TORRENS.

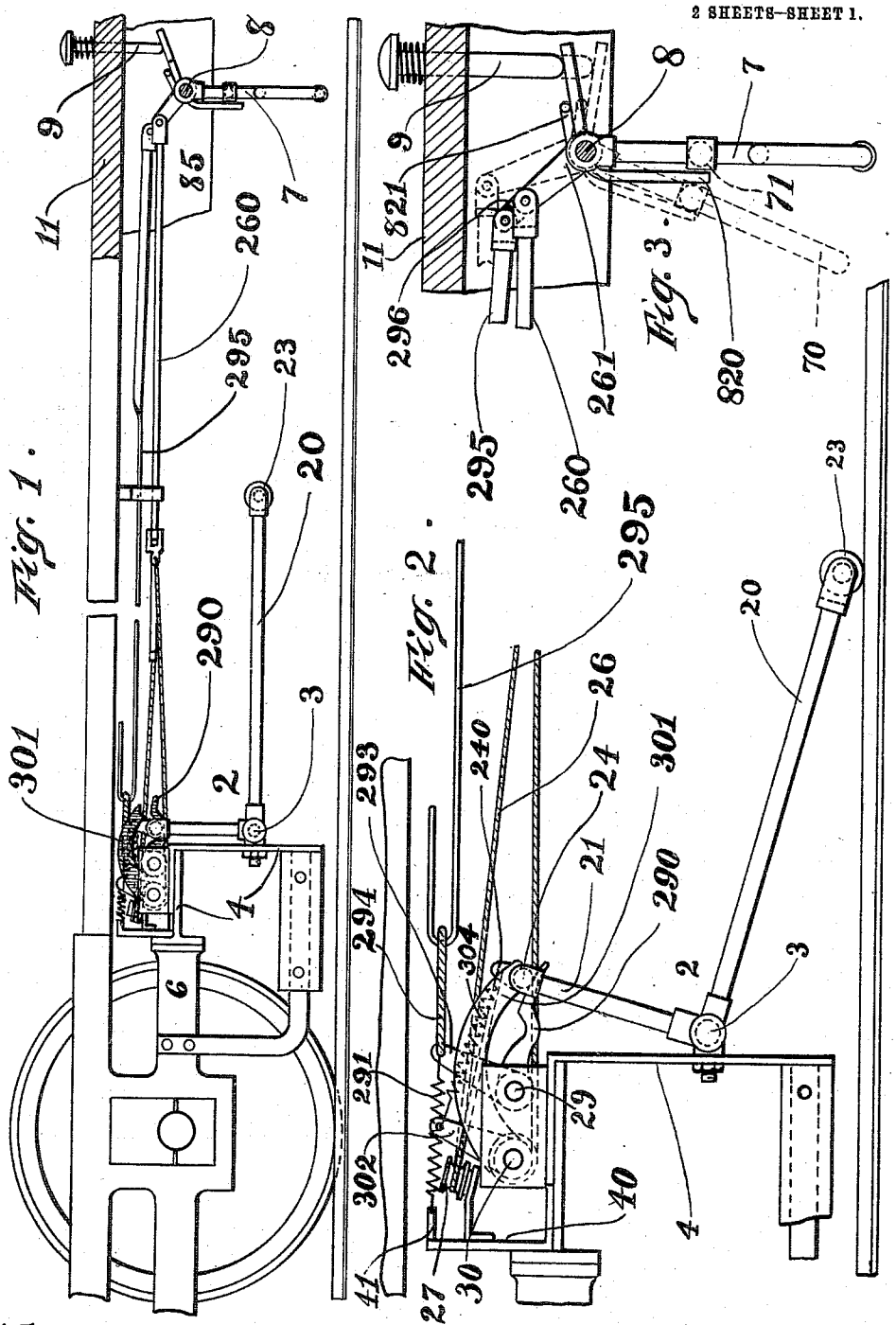
LIFE GUARD FOR RAILWAY CARS.

APPLICATION FILED AUG. 4, 1909.

973,393.

Patented Oct. 18, 1910.

2 SHEETS—SHEET 1.



Witnesses
C. A. Jarvis
Chas. W. La Rue

Inventor:
William Torrens
by Wilbur M. Stone
his attorney.

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Fig. 4.

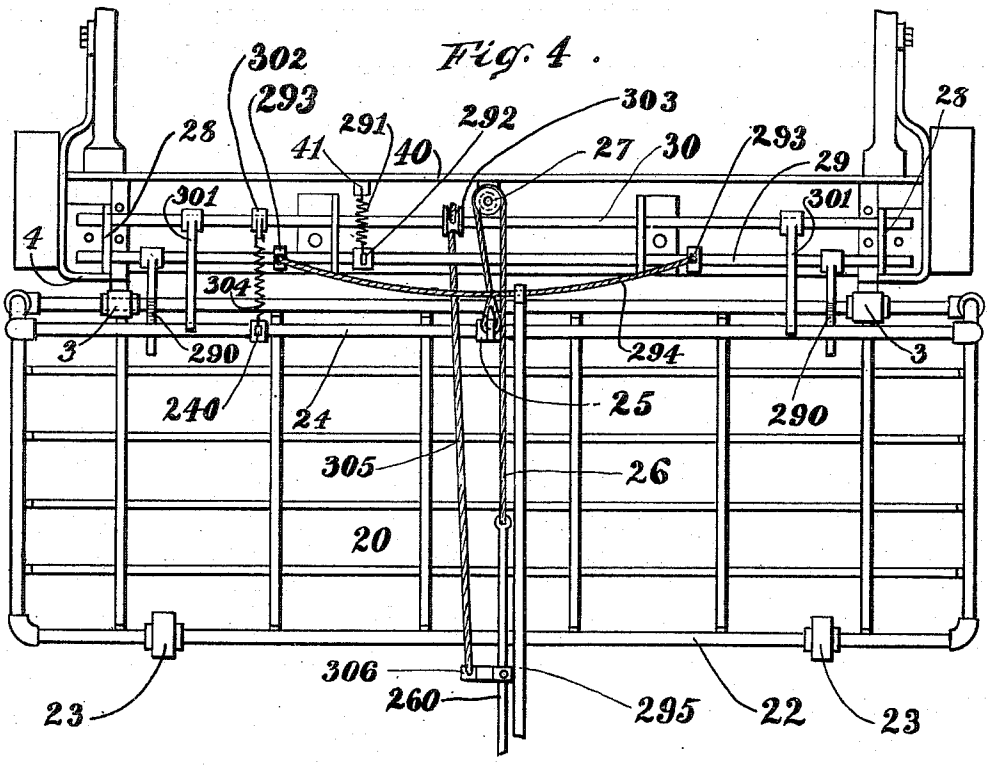

Fig. 5.

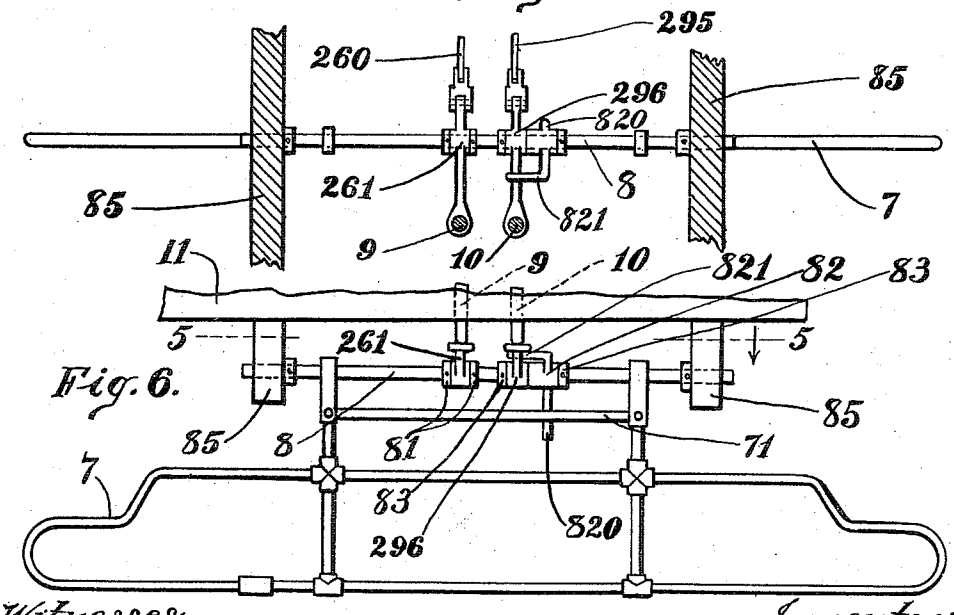

Fig. 6.

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UNITED STATES PATENT OFFICE.

WILLIAM TORRENS, OF NEW YORK, N. Y.

LIFE-GUARD FOR RAILWAY-CARS.

973,393. Specification of Letters Patent. **Patented Oct. 18, 1910.**

Application filed August 4, 1909. Serial No. 511,212.

To all whom it may concern:

Be it known that I, WILLIAM TORRENS, a citizen of the United States, and a resident of New York, in the county and State of New York, have invented certain new and useful Improvements in Life-Guards for Railway-Cars, of which the following is a specification.

This invention relates to life-guards for railway cars, of the type known as trip and drop scoop, in which the scoop or cradle is mounted on the swivelable wheel truck and the trip gate depends from the forwardly overhanging portion of the car platform or body.

The object of the present invention is to furnish a guarding mechanism of the class specified that is simple in construction, reliable and efficient in action and having small liability to derangement or deleterious wear.

To these ends my improvements comprise features illustrated in their preferred embodiment in the accompanying drawings, wherein—

Figure 1 is a side elevation of the forward portion of a car equipped with my improved life-guard. Figs. 2 and 3 are side elevations on an enlarged scale of details of what is shown in Fig. 1 but with the parts in different positions. Fig. 4 is a plan view corresponding with the left hand portion of Fig. 1 and Fig. 5 is a plan view on line 5, 5 of Fig. 6 and corresponding with the right hand portion of Fig. 1. Fig. 6 is a front elevation of the trip gate.

L-shaped cradle 2 pivoted at 3, 3 on frame 4 fixed to truck 6, has skeleton floor 20 thereof forwardly reaching from its points of support 3 and front rail 22 thereof may be provided with rolls 23 for engagement with the track or ground when said cradle is in its lower or operative position. Back frame 21 of cradle 2 has its upper rail 24 provided with dog 25 to which is attached lifting rope or chain 26 passing over pulley 27 on upright 40 of frame 4 and then forwardly to pull rod 260 of bell crank 261 loosely pivoted on axial shaft 8 of gate 7.

Pivoted in suitable side plates 28, 28 on opposite sides of frame 4 are rock shafts 29, 30. Said rock shaft 29 has fixed thereto retaining hooks 290, 290 for engagement with upper rail 24 of cradle 2 to retain said cradle in its upper or inoperative position. Spring 291 between arm 292 of rock shaft 29 and ear 41 of frame member 40 is provided to urge hooks 290, 290 to their duty. Rock shaft 29 is also provided with arms 293, 293 between the upper ends of which is strung rope or chain 294 for engagement by pull rod 295 of bell crank 296 loosely pivoted on axial shaft 8 of gate 7. Rock shaft 30 carries fixed thereon lock arms 301, 301, spring arm 302 and spool 303. Spring 304 connects arm 302 with dog 240 on rail 24 of cradle 2 to urge lock arms 301, 301 to their duty. Wound about and fastened to spool 303 is rope or chain 305 leading to dog 306 on pull rod 260.

Referring now more particularly to gate 7 and its appurtenances, axial shaft 8 thereof is supported in hangers 85, 85 of the car frame. Collars 81, 81 are fixed to said shaft 8 on opposite sides of bell crank 261 to keep said crank from shifting axially on said shaft. Also shaft 8 has loosely pivoted thereon trip lever 82 having arm 820 depending therefrom for engagement with some convenient member as 71 of gate 7; said lever 82 is further provided with an arm 821 for engagement with bell crank 296 adjacent thereto. Collars 83, 83 fixed to shaft 8 are provided to retain bell crank 296 and lever 82 in position relative to each other and to said shaft 8. Foot operated plunger 9 projecting upwardly through car floor 11 is positioned for engagement with bell crank 261 and a similar plunger 10 for engagement with bell crank 296.

My improved life-guard may be operated either automatically, upon encountering an obstruction such as a person lying or falling in its path or by foot pressure on plunger 10 by a motorman or other person standing on floor 11 of the car. The automatic operation is as follows: The several parts of my apparatus being in the position shown in Figs. 1 and 3 for instance and an obstacle being encountered by gate 7, said gate is swung backwardly to dotted position 70, Fig. 3. Member 71 of said gate swings lever 82 on its axis, carrying with it bell crank 296 to the doted position of said Fig. 3. This pulls rod 295 and rope 294, thus rocking shaft 29 and throwing down retaining hooks 290, 290 whereby rail 24 is liberated and cradle 2 immediately drops to the position of Fig. 2. This dropping of cradle 2 throws dog 240 forwardly and puts an added tension on spring 304, which thereupon through arm 302, urges shaft 30 to rock

and throw lock arms 301, 301, downwardly into engagement with rail 24 of cradle 2, thereby locking said cradle in its lower position and preventing any tendency of the leading part 22 thereof to be raised or to ride over any obstruction.

If the motorman or other person standing near plunger 10 discovers an obstruction before gate 7 has reached that obstruction, pressure of the foot on said plunger 10 will cause bell crank 296 to swing on its axis and pull rod 295 and thereby operate cradle 2 to its working position, without swinging gate 7.

For resetting cradle 2 in its inoperative position the motorman presses plunger 9 downwardly, thereby swinging bell crank 261 and pulling rod 260, which in turn pulls rope 305, rocking shaft 30 and thereby lifting lock arms 301 out of engagement with rail 24, and rope 26 passing around pulley 27 to dog 25 on rail 24 pulls said rail backward, thus swinging cradle 2 on its pivots 3, 3 until said rail 24 engages retaining hooks 290, 290 urged upwardly thereagainst by spring 291. The mechanism is now in its position of rest and inaction as shown in Fig. 1.

I claim:

In life-guards for cars the combination of a pivotally mounted cradle, a pivotally mounted gate, means for locking the cradle in its upper position, means pivoted coaxially with the gate and operable by the swinging of the gate for releasing the cradle, foot operable means, pivoted coaxially with the gate for releasing the cradle independent of the gate, means for locking the cradle in its lower position, foot operable means pivoted coaxially with the gate and successively efficient for unlocking the cradle from its lower position and for raising it to its upper position.

Signed this second day of August 1909 in the presence of two subscribing witnesses.

WILLIAM TORRENS.

Witnesses:
DAVID A. MUNRO,
N. M. HUDSON.