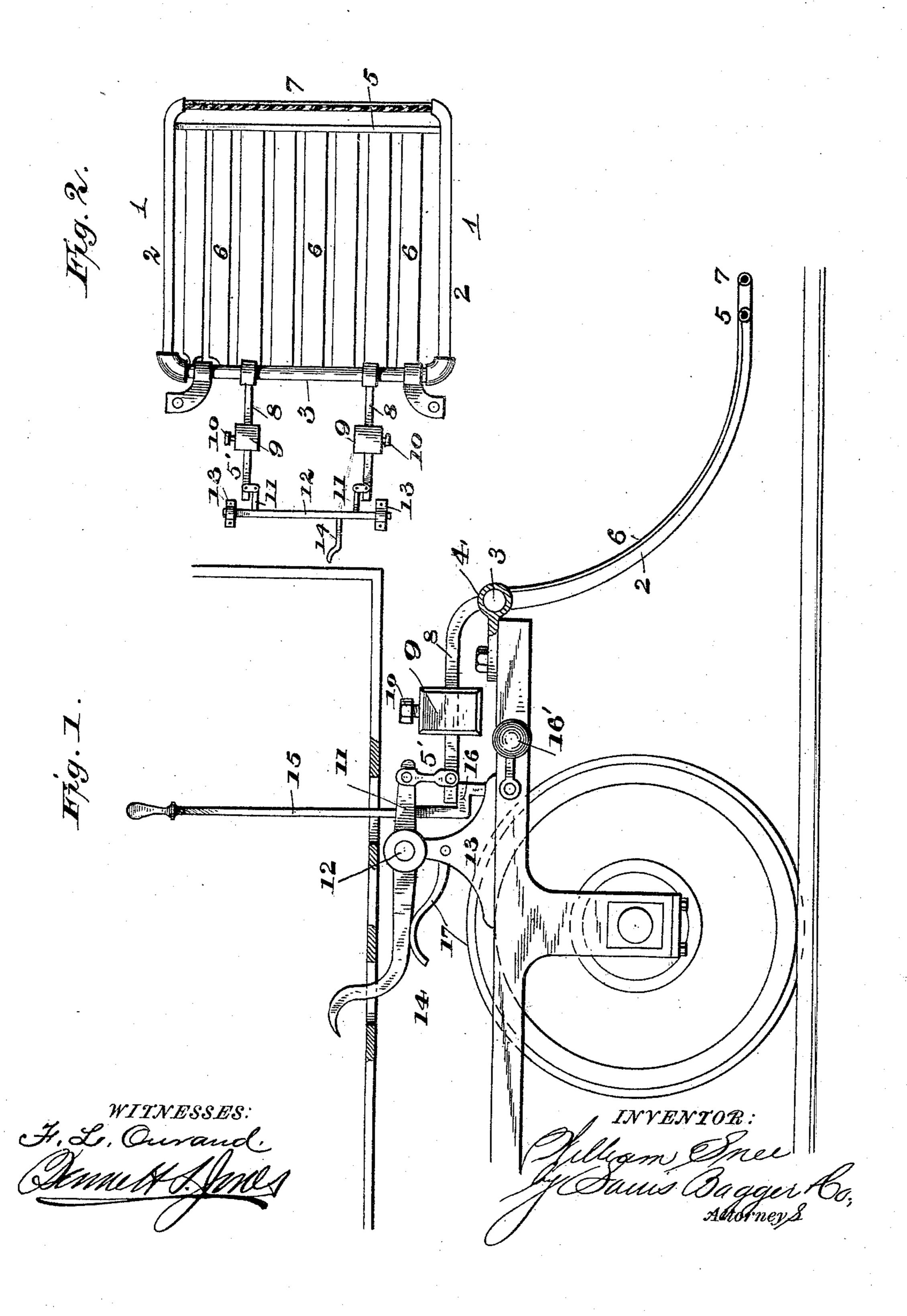
(No Model.)

## W. SNEE. PILOT FOR STREET RAILWAY CARS

No. 443,014

Patented Dec. 16, 1890.



## United States Patent Office.

WILLIAM SNEE, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR OF THREE-FOURTHS TO GEORGE WILBUR SPENCER, OF SAME PLACE, AND JAMES H. CANFIELD, OF MCKEESPORT, PENNSYLVANIA.

## PILOT FOR STREET-RAILWAY CARS.

SPECIFICATION forming part of Letters Patent No. 413,014, dated December 16, 1890.

Application filed August 13, 1890. Serial No. 361,883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM SNEE, a citizen of the United States, and a resident of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Pilots for Street-Railway Cars; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enpertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to improvements in pilots for street-railway cars whereby there is but little liability of persons being run

over and injured.

My invention is intended for use in connection with cable or electric cars, or other similar vehicles with which no draft-animals are employed, the object being to provide a pilot which will catch and hold a person who may be upon the track and prevent him from being injured.

The invention consists in the novel construction and combination of parts hereinafter fully described, and definitely pointed

out in the claims.

In the accompanying drawings, Figure 1 is a portion of a street-railway car with my improvements applied thereto. Fig. 2 is a plan view of the pilot and its operating mechanism.

In the said drawings, the reference numeral 1 designates the frame of the pilot, consisting of horizontal curved side bars 2 and a rear cross-bar 3, the latter being pivoted to the front of the car at 4. Near the other end of the frame is a cross-bar 5, with which is connected a series of horizontal bars 6, which are also connected with the rear bar 3. The ends of the side bars 2 extend beyond the bar 5 and are connected by means of a flexible wire rope 7.

Secured to the cross-bar 3 are two rearwardly - projecting arms 8, provided with weights 9, which are adjustable thereon, being secured in position by means of the set-

screws 10. These arms 8 are connected to arms 11 by means of links 5'. These arms 11 50 are secured to a rock-bar 12, pivoted in uprights 13, attached to the car frame or truck.

The numeral 14 designates a curved footlever secured to the rock-bar 12 and projecting up through the car-floor, so as to be actu- 55 ated by the foot of the gripman or driver.

At the rear of one of the arms 8 is a lever 15, pivoted to the car-frame and having a shoulder 16, upon which the rear end of said arm rests. The shaft of lever 15 is provided 60 with a counterbalance-weight 16', by which it is held in position.

17 designates a spring bearing against the foot-lever for keeping the parts from rat-

tling.

The operation is as follows: The pilot is depressed by the driver pressing down lever 14 with his foot, which will actuate rock-bar 12, with which it is connected, causing the arms 11 to be elevated, which, being connected with bars or arms 8, will elevate the latter and depress the pilot. Should a person on the track be struck by the pilot, he will be caught thereby without being injured, owing to the flexible rope 7.

The pilot may be elevated for clearing obstructions on the track by throwing lever 15 out of engagement with the arms 8, when the latter will be depressed by the weights 9. The pilot will return to its former position 80

upon depressing the foot-lever.

Having thus described my invention, what I claim is—

1. A safety-pilot for railway-cars, consisting of a frame and horizontal and transverse 85 cross-bars and a flexible rope extending transversely across the front of the frame, substantially as described.

2. The combination, with the pivoted pilot and the rearwardly-extending arms secured 90 thereto, having adjustable weights, of the pivoted foot-lever, the arms connected therewith, the links connecting said arms, and the arms secured to the pilot, substantially as described.

3. The combination, with the pilot pivoted

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to the car body or trucks, of the rearwardlyextending arms secured thereto, having adjustable weights, the pivoted foot-lever, the arms connected therewith, the links connecting said arms, and the counterbalanced lever having a shoulder with which the arms of the pilot engage, substantially as described.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

WILLIAM SNEE.

## Witnesses:

J. J. McCormick,

J. H. GITTINGS.