

D. F. ROBINSON.
 TRACK OILING DEVICE.
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944,464.

Patented Dec. 28, 1909.

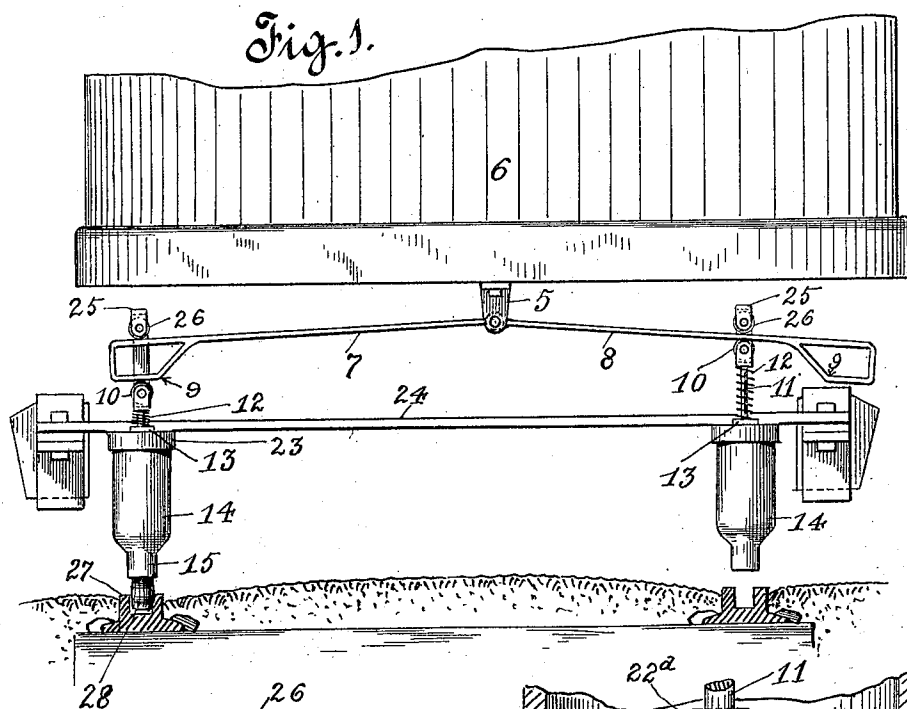


Fig. 2.

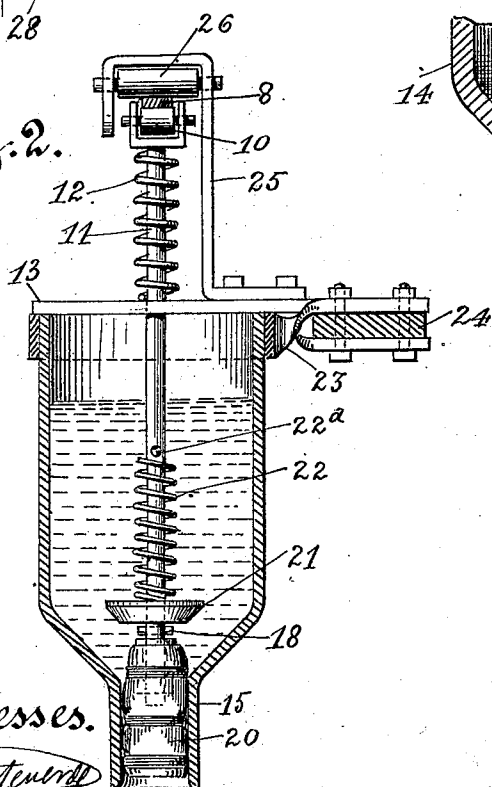
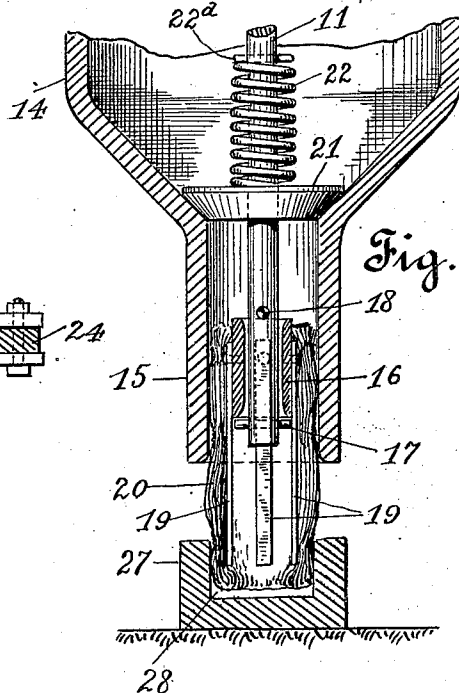


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

DAVID F. ROBINSON, OF LOS ANGELES, CALIFORNIA.

TRACK-OILING DEVICE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, DAVID F. ROBINSON, a citizen of the United States, residing in the city of Los Angeles, county of Los Angeles, and State of California, have invented new and useful Improvements in Track-Oiling Devices, of which the following is a specification.

My invention relates to an automatic oiling device for oiling the curves of railroad tracks and particularly designed for street railways; and the object thereof is to provide an automatic oiling device carried by the car which will automatically oil the curves as the car passes around the same. I accomplish this object by the mechanism described herein and illustrated in the accompanying drawings in which:

Figure 1 is a front elevation of a part of a street car equipped with my improved automatic oiling device. Fig. 2 is an enlarged vertical section of the oil reservoir and connected parts. Fig. 3 is a still greater enlarged central vertical section of the lower part of the reservoir with the swab in central section.

In the drawings 5 is a bracket which is secured to the bottom of the car 6. In this bracket are pivotally mounted the swab actuating arms 7 and 8. These arms preferably consist of a bar of metal which extends from the pivotal point outwardly about twelve inches beyond the car wheels, not shown, when the car is on a straight track. The bar is then bent downwardly and inwardly so that a portion lies parallel with the main part of the bar and is then bent upwardly at a sharp angle and the end is secured in any appropriate manner to the straight portion of the bar preferably by welding the same. This lower portion which I have marked 9 in the drawings I will call the operating hand. When the car is on a straight track the straight portion of the arm rests upon a roller 10 revolvably mounted in the top of the swab shaft 11 which is held in its elevated position by a spiral spring 12 which is coiled around the swab shaft and bears upon bar 13 and the top of the shaft. This swab shaft passes through a bearing bar 13 mounted on the top of the oil reservoir 14 and passes thence downwardly to approximately the neck 15 of the oil reservoir. On the bottom thereof is secured a swab which is composed of a metal sleeve 16 which is received upon the end of

the swab shaft and is held from slipping off the bottom by cotter pin 17 which is of a length equal to the diameter of the sleeve. A like cotter pin 18 passing through the swab shaft holds the sleeve from passing upwardly on the shaft. On the outer side of the sleeve are secured springs 19 of which there may be any desired number. I prefer to use four oppositely disposed, and equally spaced. Around the sleeve and the springs is wrapped a swab cloth 20 which just fills the neck of the reservoir snugly. The lower end of the swab extends to the bottom of the neck and the neck is long enough so that the swab prevents the oil from escaping from the reservoir. Slidably mounted on the swab shaft above the swab is the valve stopper 21, which is held by spring 22 just above the swab. This spring is coiled around the swab shaft and is held from sliding up thereon by pin 22^a. The oil reservoir is preferably secured to the truck frame by a strap 23 which is passed around the top of the reservoir and is bolted to a cross bar 24 of the truck frame. Bearing bar 13 is also secured to cross bar 24. To the bearing bar is secured a retaining bar 25 the upper end of which is U-shaped as best shown in Fig. 2, which holds or retains the swab arm in engagement with the swab shaft. In the U-shaped end of this bar is mounted an anti-friction roller 26.

In the operation of my device the reservoir would be partially filled with oil when the car stands on a straight track the parts would be in the position shown in Fig. 2. When the car takes a curve the forward end thereof will at first travel on a line which would be a projection of a straight portion of the track, while the wheels of the truck, not shown, would be traveling on the first few feet of the curve, this will cause the swab arm and hand which extends over the inner rail 27 to pass between the roller mounted in the top of the swab shaft and the roller mounted in bar 25 as shown at the left hand side of the drawings in Fig. 1, while the other swab arm and hand will move as shown in said figure. When the hand of the swab arm is between said rollers the swab shaft is depressed thereby carrying the outer end of the swab down into the groove 28 of the curve thereby oiling the same so as to prevent a certain amount of noise and also to reduce the friction on the flange of the wheel on the curve rail. The movement of the

swab arm downwardly carries valve stopper 21 to close the upper end of the neck of the reservoir as shown in Fig. 3, and the same is held spring pressed on its seat by spring 22.

5 As the car rounds the curve the swab turns upon the swab shaft thereby oiling the curve rail. After the car has passed the curve the swab arms are returned to their normal position with the hands just on the outer side

10 of the swab shafts. As the hand passes to its normal position spring 12 returns the swab shaft and swab and other parts to their normal position as shown in Fig. 2. By providing the lower end of the swab with

15 springs on the inner side thereof the lower end of the swab will accommodate itself to the curve, if there should be any irregularities therein. As the reservoir and swab shaft are carried by the car truck and the

20 swab operating arms are carried by the car body the movement of the car body is utilized at the proper time to cause the swab to enter the groove in the curve of the track. It will be observed that the length of the

25 swab is such that a portion of it is always within the neck of the reservoir. The swab fits the neck of the reservoir snugly enough to prevent the oil from passing out around the same, and the upper end of the swab is

30 nearly closed so as to keep any considerable amount of oil from running out through the center of the swab. The reservoir is preferably secured to the truck just in front of the wheel at the front end of the car, as thereby

35 the curve is oiled just as the car is passing around the same, and when no oil is needed the swab does not contact with the track.

Having described my invention what I claim is:

40 1. An automatic curve oiling device comprising a car; an oil reservoir secured to the car truck, said reservoir having an opening

in the bottom thereof; a swab longitudinally movable through the opening in said reservoir; means adapted to hold the swab out of engagement with the rails of the track when the car is on a straight portion thereof; and means carried by the car body to cause the swab to engage the sides of the groove in the inner rail of track at the curve when the

45 car is passing around said curve. 50

2. An automatic oiling device for track curves comprising a car, an oil reservoir having a depending open neck, said reservoir being secured to the car truck; a swab shaft longitudinally movable in said reservoir; a spiral spring surrounding said swab shaft and normally holding the same in an elevated position with the swab within the reservoir; a swab operating arm pivotally connected to the car body, said arm having a hand on the outer end thereof; a retaining bar passing over said arm and normally holding the same in engagement with the swab shaft.

55 60 65

3. An automatic oiling device for the curves of a railway track, comprising a car; an oil reservoir secured to the car truck; a swab carried by said reservoir; and means carried by the car body coacting with the swab and movable across the top of the swab by the transverse movement of the car body across the track whereby the swab is projected downwardly from the reservoir into contact with the rail when the car is rounding

70 75 a curve.

In witness that I claim the foregoing I have hereunto subscribed my name this 28th day of October, 1908.

DAVID F. ROBINSON.

Witnesses:

G. E. HARPAM,
S. B. AUSTIN.