

No. 849,457.

PATENTED APR. 9, 1907.

W. C. BURDON.
TROLLEY CONTROLLER.
APPLICATION FILED JAN. 27, 1906.

2 SHEETS—SHEET 1.

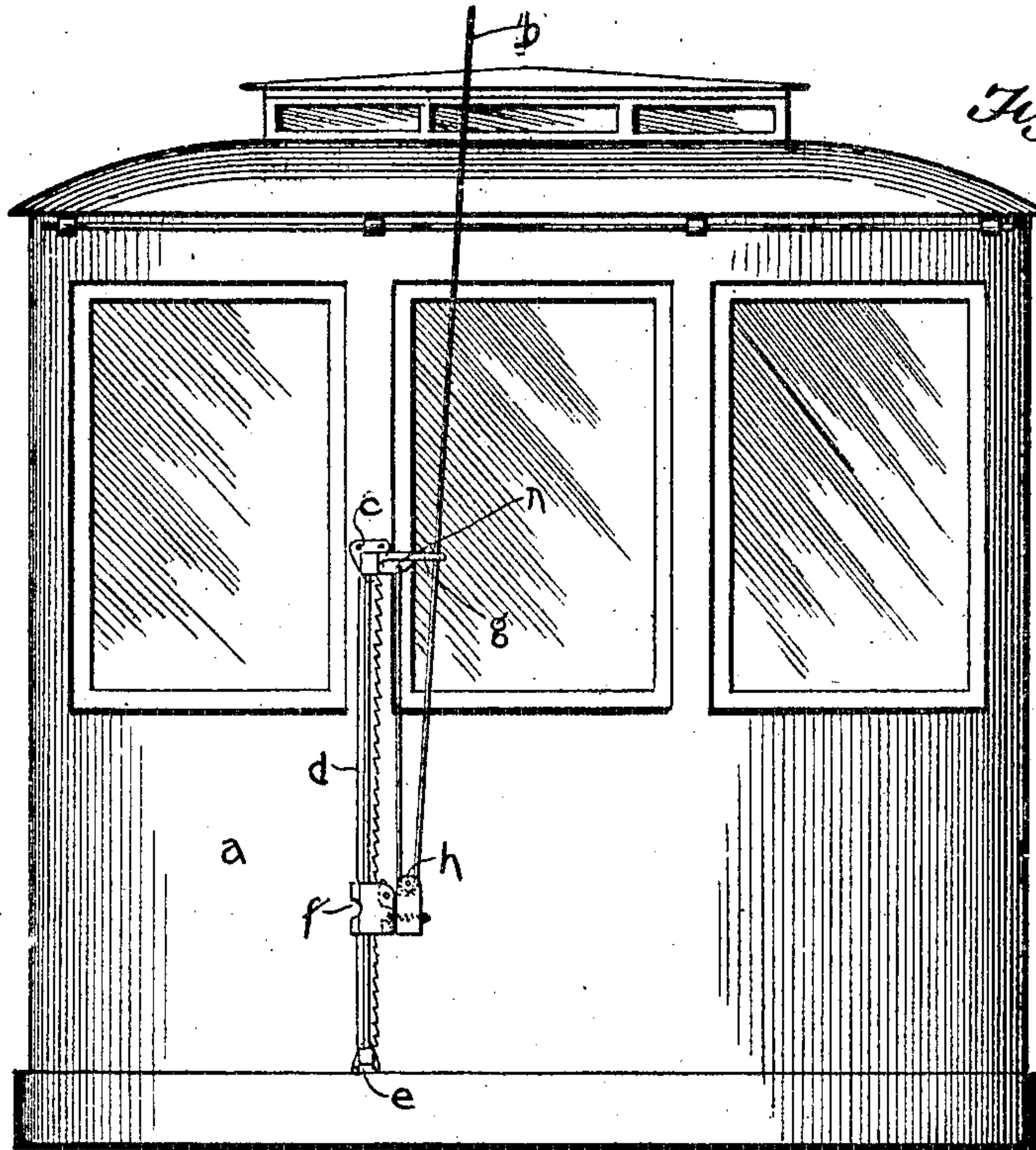


Fig. 1.

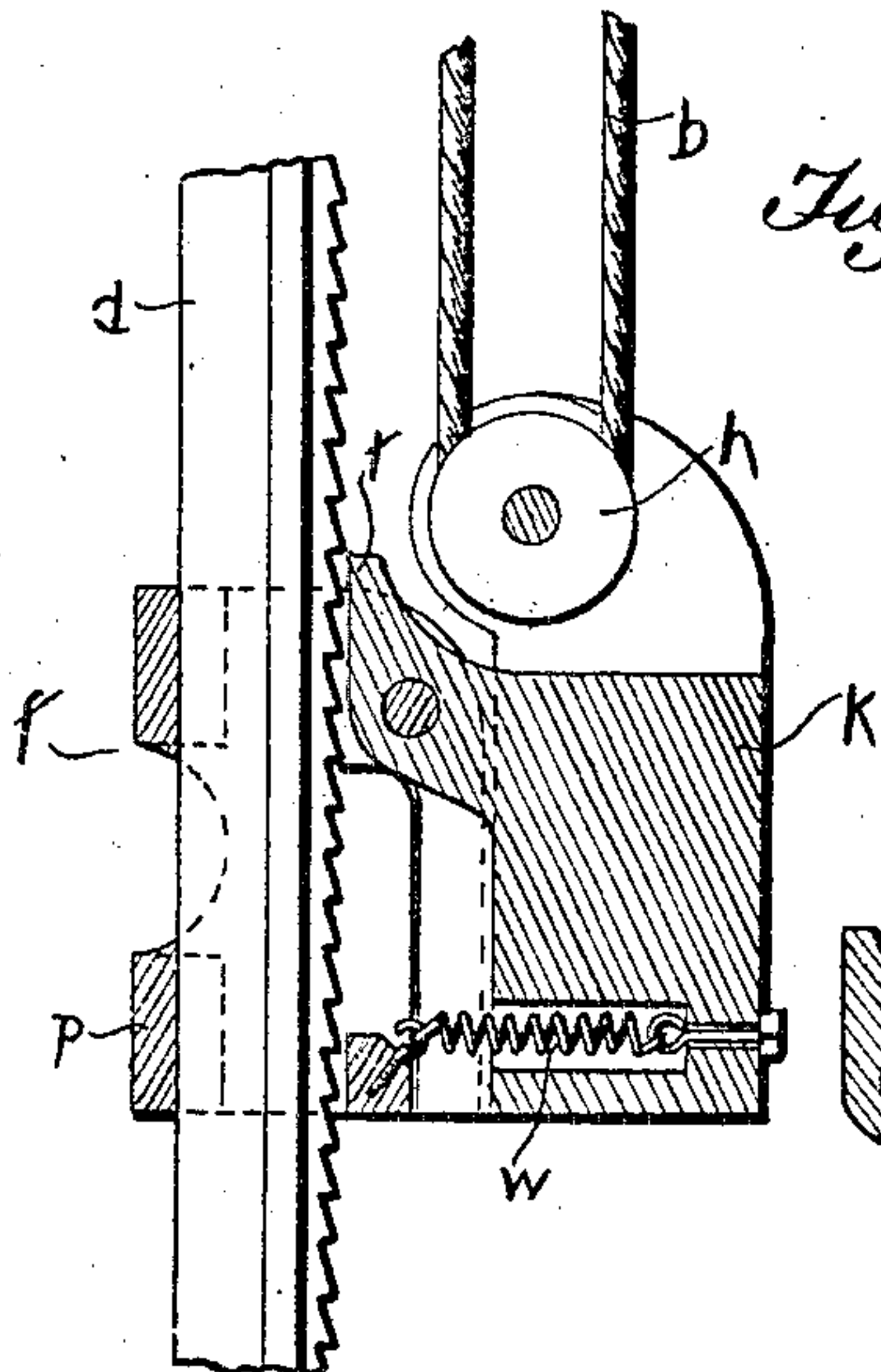


Fig. 2.

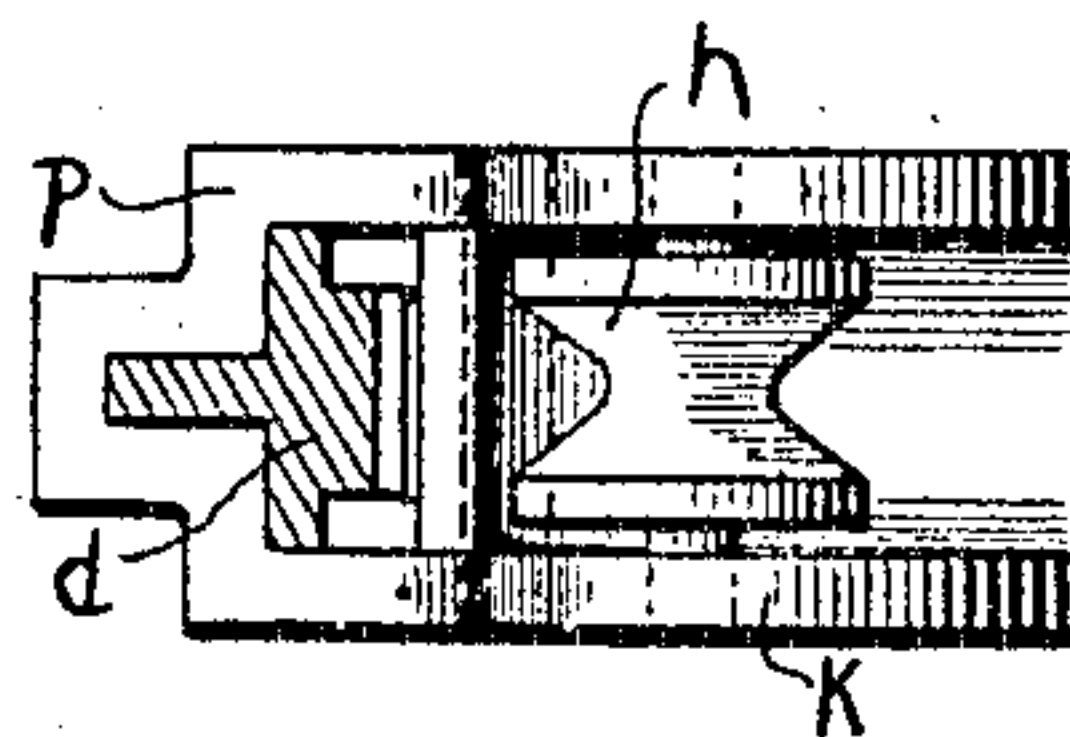


Fig. 3.

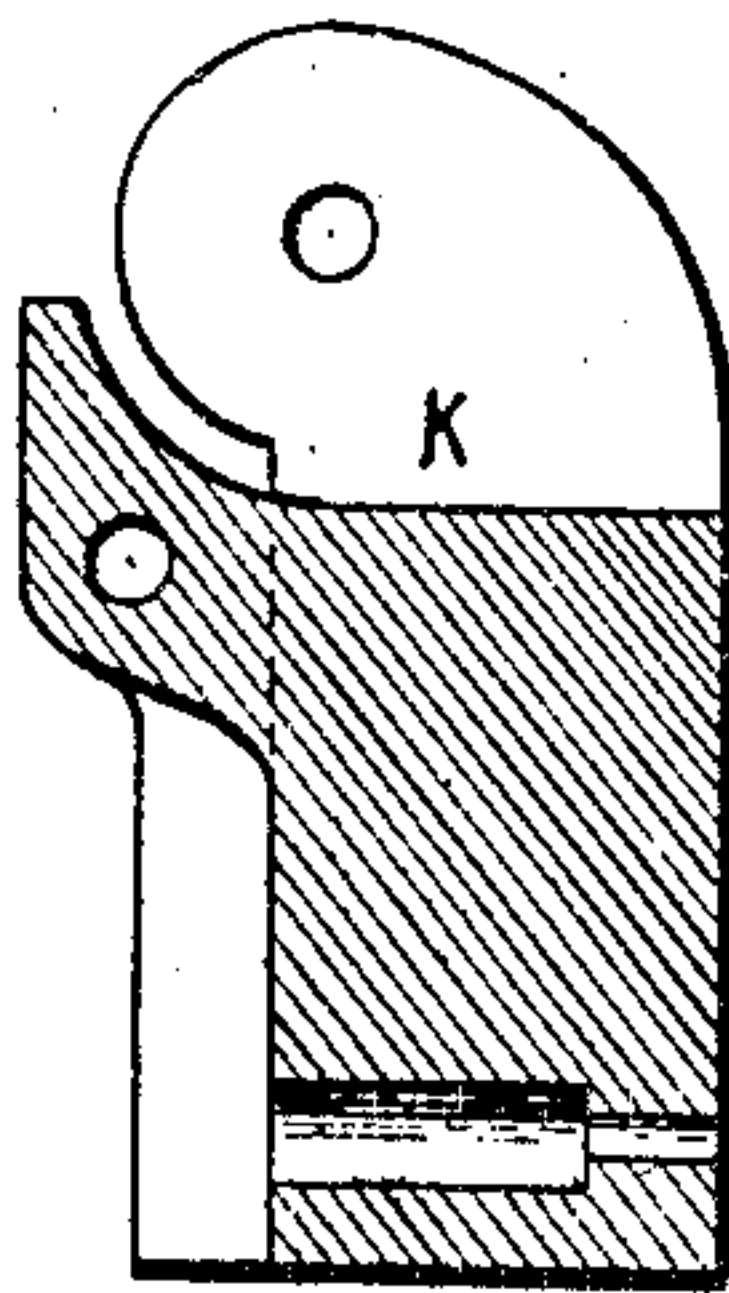


Fig. 4.

Witnesses

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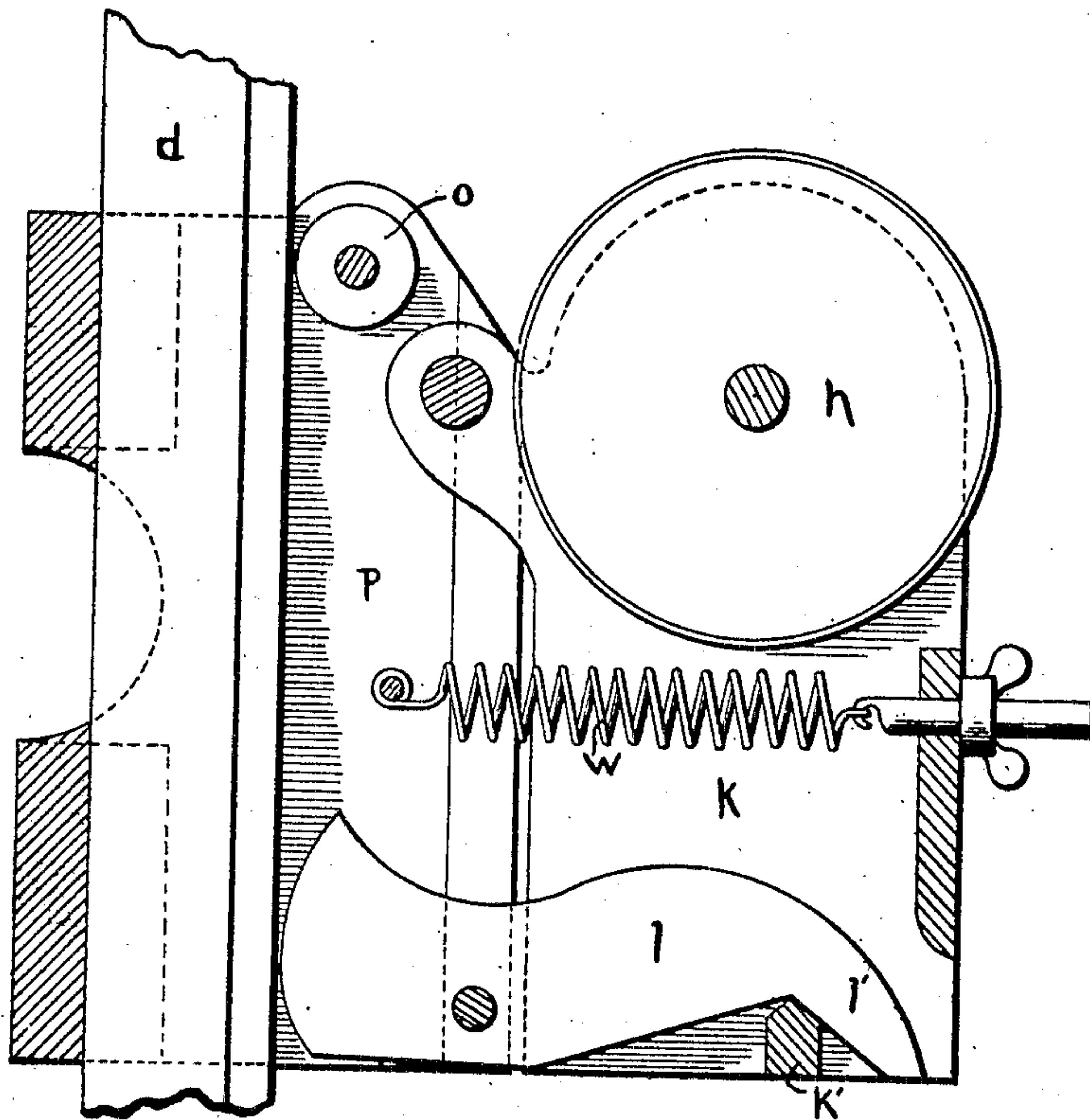
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2 SHEETS--SHEET 2.

Fig. 5.



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UNITED STATES PATENT OFFICE.

WILLIS C. BURDON, OF LOUISVILLE, KENTUCKY, ASSIGNOR OF FORTY-NINE ONE-HUNDREDTHS TO C. H. JENKINS AND THOS. W. MORAN, JOINTLY, BOTH OF LOUISVILLE, KENTUCKY.

TROLLEY-CONTROLLER.

No. 849,457.

Specification of Letters Patent.

Patented April 9, 1907.

Application filed January 27, 1906. Serial No. 298,155.

To all whom it may concern:

Be it known that I, WILLIS C. BURDON, a citizen of the United States, resident of Louisville, in the county of Jefferson and State of Kentucky, have made a certain new and useful Invention in Trolley-Controllers; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the invention, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

The invention has relation to overhead trolleys for railway-cars, referring particularly to means for controlling the trolley; and it consists in the novel construction and combination of devices, as hereinafter set forth.

In the accompanying drawings, illustrating the invention, Figure 1 is an end view of the body of a car, showing the invention applied thereto. Fig. 2 is a sectional detail view of one form of the pawl-slide engaging the catch-bar. Fig. 3 is a top plan view of the same. Fig. 4 is a sectional detail view of the pawl-slide, and Fig. 5 is a sectional detail view of another form of slide in engagement with a smooth-surface catch-bar.

In the drawings, the letter *a* designates the rear wall of a car, and *b* the rope connected to the trolley-pole (not shown) and depending therefrom.

The object of the invention is to take up the slack in the trolley-rope *b* caused in passing conduction-wires of different heights and to hold this rope automatically when the trolley leaves the conduction-wire, so that the trolley-pole will not rise so as to cause damage to the conduction-wires, guy-wires, or trolley-pole or cause more serious injury on account of the falling of the conduction-wires in the street.

To the wall *a* is attached a vertical catch-bar *d* by means of connection-plates *e* at the upper and lower portions of the wall in such wise that the intermediate portion of the catch-bar is left clear for the movement of a balanced pawl-slide *f*, which is engaged by a loop of the trolley-rope.

The upper attachment or connection-plate for the catch-bar is provided with a guide hole or bearing *g*, through which the trolley-

rope passes downward around a pulley *h*, which is pivoted in the pawl member *k* of the pawl-slide, said rope having its end portion extending upward and fastened to the upper attachment-plate, as indicated at *n*, or in other convenient manner. The pawl-slide is designed to move freely up and down on the catch-bar in accordance with the movements of the trolley-pole and is of sufficient weight to take up the slack of the rope at all times.

The pawl-slide consists of two members, a slide-piece *p*, which loosely embraces the catch-bar, and a pivoted and weighted member *k*, having a pawl *t*. The slide-piece *p* and pawl member *k* are pivoted together near their upper portions and near the tooth or end of the pawl-arm, which is held in close proximity to the catch-bar without engaging the teeth of the same, by means of its gravity, and a spring device *w*, connecting the lower portions of the slide member and pawl member. This spring device or connection consists of a bolt-rod, a tension-spring in connection therewith, and a nut whereby the tension of the spring may be adjusted.

The weight of the pawl-slide is so balanced that its bearings will be held vertical and free to move easily on the catch-bar. The pulley *h* is pivoted in the upper part of the pawl member. As the rope passes through a bearing of the upper attachment-plate vertically above the pulley, it will at all times have a straight vertical pull on the pawl-slide. Should the trolley leave the conduction-wire, the sudden surge or jerk on the trolley-rope will cause the connection-spring to yield and the pawl member to engage the teeth of the catch-bar, so that the trolley-pole will be locked down and held from rising until the conductor can get to it and adjust it to proper position. As the automatic take-up on the rope keeps the latter under tension, the automatic catch is always ready for action upon a sudden jerk of the trolley-rope, so that it is designed to effect a prompt locking down of the trolley when the latter leaves the conduction-wire.

In Fig. 5 of the drawings is shown a modified form of the invention, wherein the bar *d* has a smooth inner surface and the pawl of the member *k* is dispensed with, being substituted by a cam-lever *l*, pivoted to the slide member *p*, and having a tail portion

l' resting upon a transverse lug k' of the pivoted member k. This cam-lever l has a cam-head which is normally in close proximity to the inner surface of the bar d, and upon a sudden surge or jerk of the trolley-rope the connection-spring will yield and the cam-head of the lever l be caused to engage with the inner surface of the bar d in a frictional manner, so that the trolley-pole will be locked down until adjusted to proper position by the conductor.

An antifriction-roller o is employed at the upper end of the member p, working against the bar d.

Having described the invention, what I claim, and desire to secure by Letters Patent, is—

1. In a trolley-controller, the combination of a vertical catch-bar attached to the wall of the car, a slide working upon said bar and consisting of a main portion and a secondary portion pivoted to said main portion, a pulley carried by said secondary portion and adapted to engage a loop of the trolley-rope, a tension-spring connecting said main and secondary portions, and means for engaging said vertical catch-bar to stop the movement of the trolley-pole and slide upon sudden upward movement of the same.

2. In a trolley-controller, the combination of a vertical bar attached to the wall of the car, a slide working upon said bar and consisting of a main portion and a secondary portion pivoted to said main portion, a pulley carried by said secondary portion and adapted to engage a loop of the trolley-rope, a tension-spring connecting said main and secondary

portions, a cam-lever device pivoted to said main portion, and means in connection therewith for causing said lever device to engage the vertical bar to stop the movement of trolley-pole and slide upon sudden upward movement of the same.

3. In a trolley-controller, a vertical bar attached to the wall of the car, a slide working upon said bar and consisting of a main portion and a pivoted portion carrying a pulley engaging a loop of the trolley-rope, a tension-spring connecting said main and pivoted portions, a lever pivoted to said main portion and having a tail resting upon a lug of the pivoted portion, said lever having a cam-head adapted to frictionally engage the vertical bar to stop the movement of the trolley-pole and slide upon upward movement of the same, substantially as specified.

4. In a trolley-controller, a vertical bar attached to the wall of the car, a slide working upon said bar and consisting of a main portion and a pivoted portion carrying a pulley engaging a loop of the trolley-rope, a lever pivoted to said main portion and having an arm resting upon the pivoted portion, said lever having a cam-head adapted to frictionally engage the vertical bar to stop the movement of the trolley-pole and slide upon upward movement of the same, substantially as specified.

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

WILLIS C. BURDON.

Witnesses:

THOS. W. MORAN,
J. W. ZIMMERMAN.