No. 888,418. PATENTED MAY 19, 1908.

W. C. BURDON.

TROLLEY CATCHER.

APPLICATION FILED SEPT. 21, 1906.

3 SHEETS—SHEET 1.

Fig. 1.

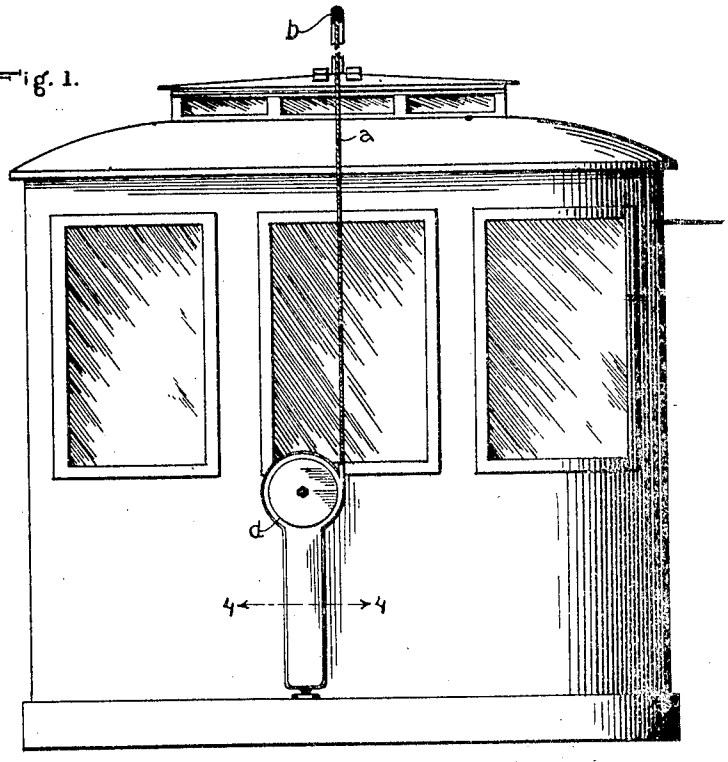
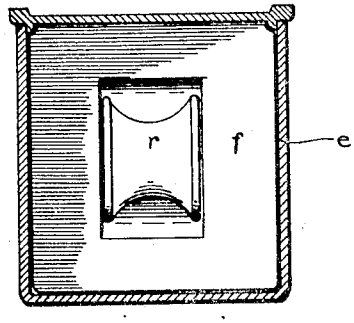


Fig. 4.



Witnesses

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3 SHEETS—SHEET 2.

Fig. 2.

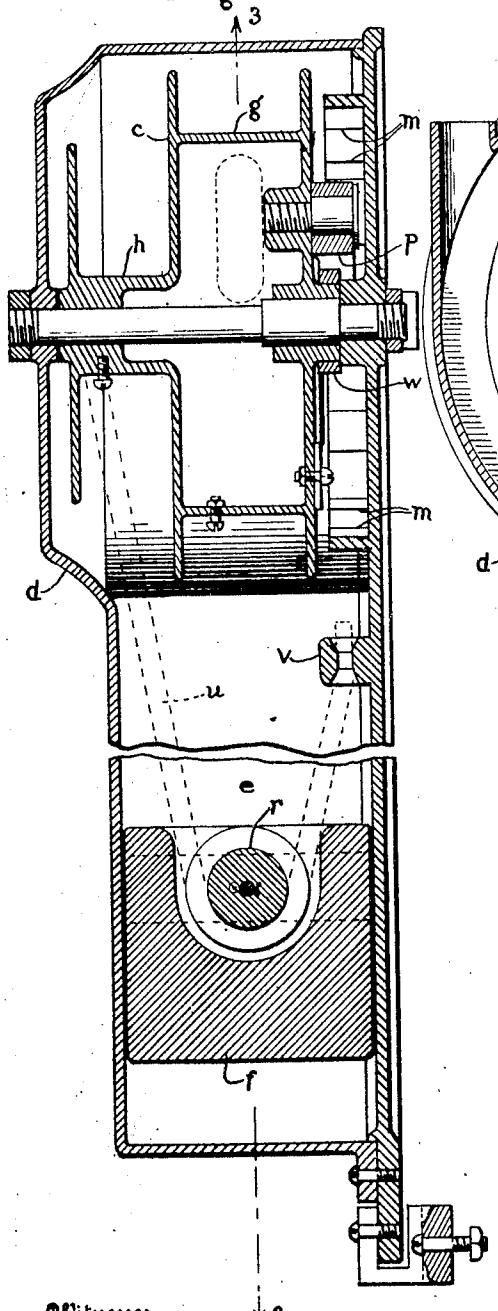
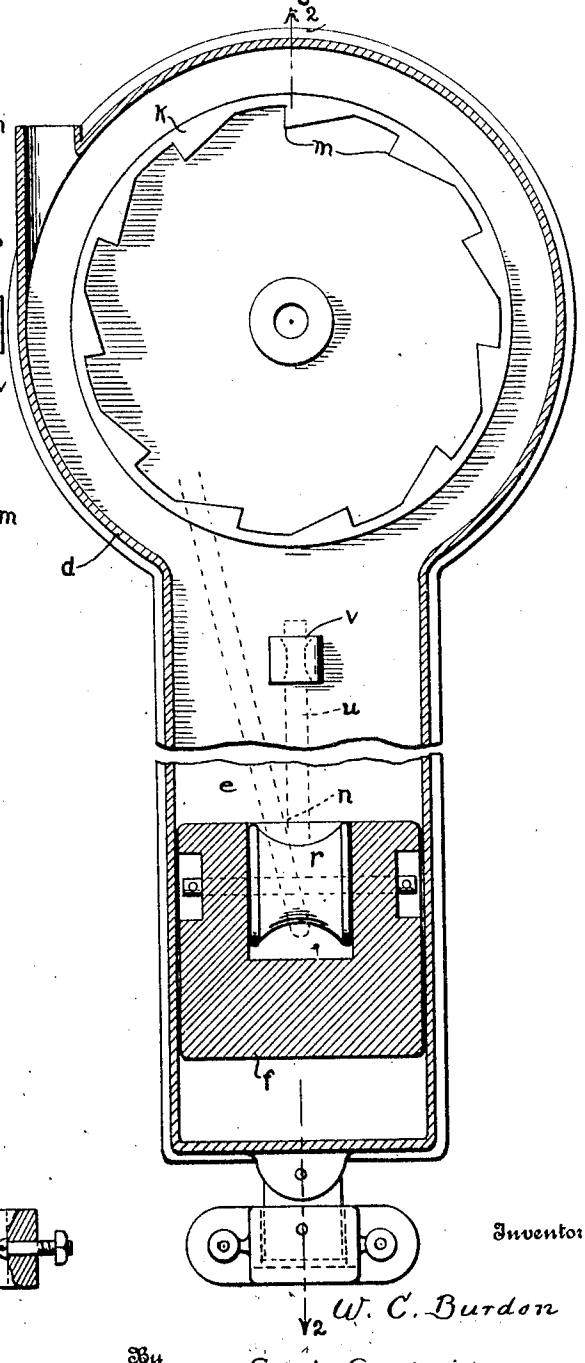


Fig. 3.



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3 SHEETS—SHEET 3.

Fig. 5.

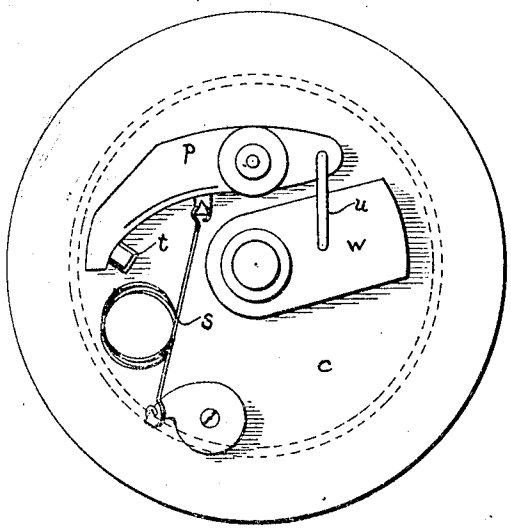


Fig. 6.

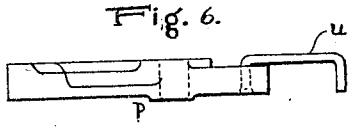
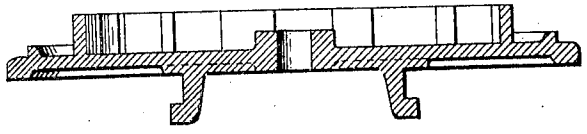


Fig. 7.



Fig. 8.



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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 THOMAS W. MORAN, OF LOUISVILLE, KENTUCKY.

TROLLEY-CATCHER.

No. 888,418 Specification of Letters Patent. Patented May 19, 1908.

Application filed September 21, 1906. Serial No. 335,537.

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-Catchers; 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.

Figure 1 is a front view of my invention as applied. Fig. 2 is a section on the line 2—2 Fig. 3, the rope being shown in dotted lines. Fig. 3 is a section on the line 3—3 Fig. 2, the upper reel pulley being removed. Fig. 4 is a section on the line 4—4, Fig. 1. Fig. 5 is a side view of the reel pulley and its attached parts. Fig. 6 is a detail view of the pawl. Fig. 7 is a detail central longitudinal section of the weight arm. Fig. 8 is a detail cross-section taken horizontally through the back plate of the incasement.

The invention has relation to trolley catchers or devices for holding a trolley when it has escaped from the conductor wire; and the invention consists in the novel construction and combinations of parts, as hereinafter set forth.

In the accompanying drawings, illustrating the invention, the letter *a*, designates a trolley rope, the upper end of which is designed to be attached to a trolley pole *b*. This rope forms the connection between the trolley pole and an automatic tension pulley *c*, which is pivoted in the upper cylindrical portion of a casing *d*, the lower part of which consists of a well extension *e*, in which a weight *f*, is designed to work up and down, said weight being also connected to the pulley *c*, by means of its rope *u*. The pulley *c*, is a double reel pulley, having a bearing *g*, for the trolley rope, and a bearing *h*, for the weight rope; and these ropes are wound thereon in opposite directions, so that when the trolley rope is being wound up, the weight rope is unwinding, and the reverse. In this way a weight of three or four pounds will serve to keep the trolley rope taut, and the pull of the weight will be the same at high points along the trolley wire, as it is at low points.

The upper cylindrical portion of the casing is provided with a ratchet face *k*, having internal teeth *m*, and the double reel pulley is provided with a dog *p*, pivoted to its back, and adapted to engage said ratchet when thrown out of normal position. In its normal position it does not engage the ratchet, and it is held to such disengaged position by means of a spring *s*, whose tension draws the dog inward against an abutment lug *t*. Also pivoted centrally to the back of the pulley upon the shaft thereof is a radial weight arm *w*, extending upon one side only of such shaft and which is connected to the tail of the dog *p*, by a link. The weight well *e*, is usually square in cross section, and is provided with an eye lug *v*, in its back wall for the attachment of the end of the weight rope *u*. The weight is designed to be of square form, and of proper size to move easily in the well. It is provided with a pulley *r*, which engages the suspension loop *n*, of the weight rope.

The reel bearing *g*, of the double reel pulley for the trolley rope is of larger diameter than the reel bearing *h*, for the weight rope, in order to provide for sufficient leverage to enable the parts to operate in an efficient manner. So long as the trolley runs evenly along the conductor wire, the play of the weight will be slight. But when the trolley leaves the conductor wire, it will be thrown violently upward by the spring of the trolley pole, causing the reel pulley to turn rapidly and throw out the dog *p*, because of the inertia of the weight arm *w*. In this way the dog is caused to immediately engage one of the teeth of the ratchet *k*, stopping the reel pulley and holding the trolley pole down.

When the trolley rope is manipulated to replace the trolley in engagement with the conductor wire, its tension on the reel pulley ceases, and the dog is replaced in normal position, out of engagement with the ratchet, by means of its spring.

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

1. In a trolley catcher, the combination of the casing having an upper cylindrical portion provided with ratchet teeth and a lower well extension, a pulley device having bearings in the upper portion of said casing and a ratchet device for engagement with said ratchet teeth, and a weight adapted to have movement in said well extension and pro-

vided with an anti-friction roller, said pulley device having a trolley rope, and a weight rope passing around the weight roller and secured at its end to the casing.

2. In a trolley catcher, the combination of the casing having an upper cylindrical portion provided with ratchet teeth, and a lower well extension, a pulley device having bearings in the upper portion of said casing, and a ratchet device for engagement with said ratchet teeth and comprising a pawl lever, a radial weight journaled upon a shaft of the pulley device and extending upon one side only of such shaft, and a retracting spring extending past the radial weight and attached directly to said pawl lever, and a weight in said well extension having an anti-friction roller, said pulley device having a trolley rope, and a weight rope passing around the weight roller and secured to said casing at its end.

3. In a trolley catcher, the combination of the casing having an upper cylindrical portion provided with ratchet teeth, and a lower reduced well extension, a double rotary pulley having a single shaft provided with journal bearings in said cylindrical portion of the casing, and a ratchet device for engagement with the ratchet teeth of the casing, and a weight adapted to have movement in said well extension and having an attachment roller, said double pulley having a trolley rope connected to one part thereof, and a weight rope connected to the other part thereof, passing around the weight roller and secured to the side wall of said casing.

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

WILLIS C. BURDON.

Witnesses:
T. W. MORAN,
J. W. ZIMMERMAN.