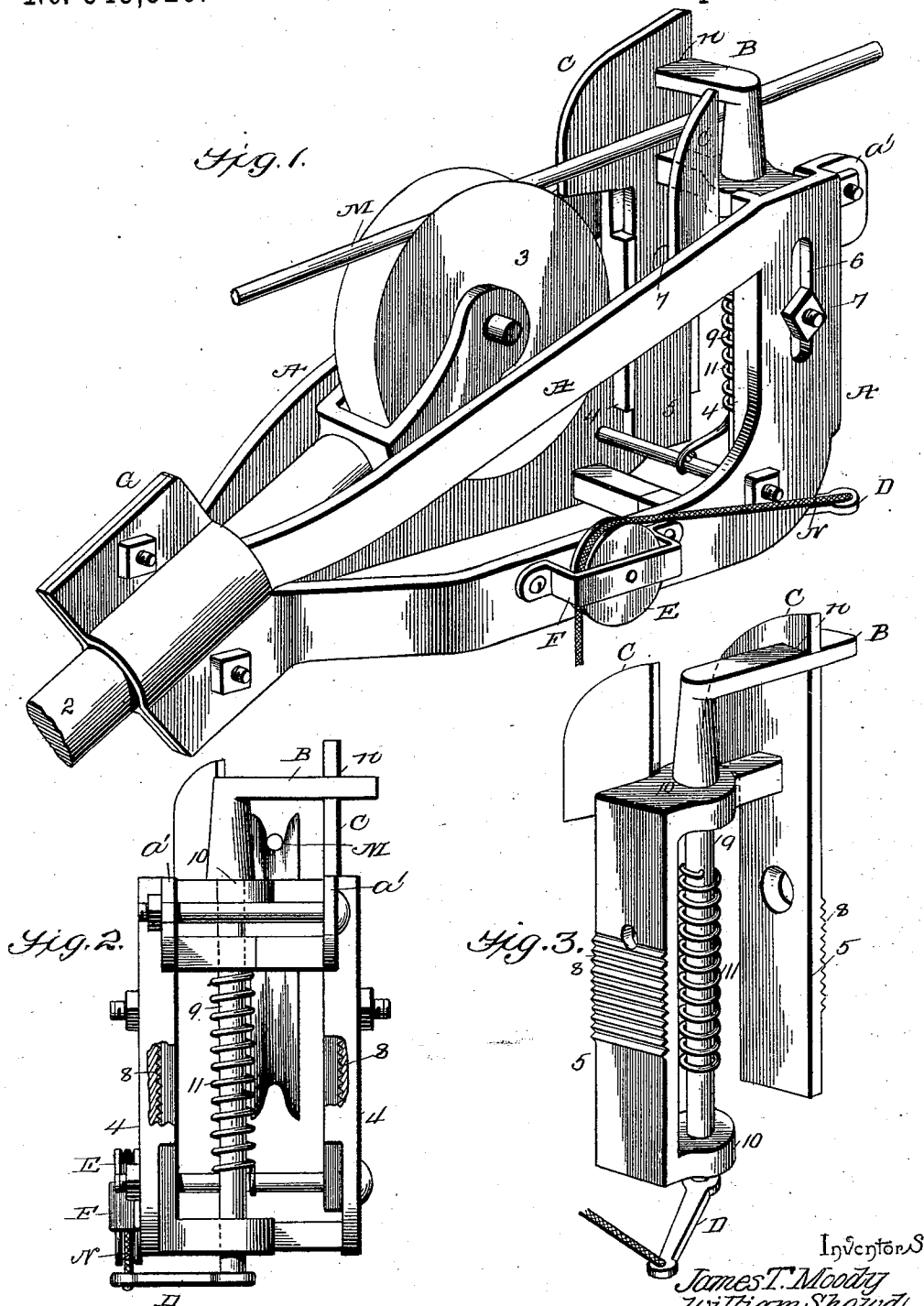


(No Model.)

J. T. MOODY, W. SHAWD & A. J. BAKER.
TROLLEY GUARD.

No. 545,520.

Patented Sept. 3, 1895.



Witnesses

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UNITED STATES PATENT OFFICE.

JAMES T. MOODY, WILLIAM SHAWD, AND ADAM J. BAKER, OF SPRINGFIELD, OHIO.

TROLLEY-GUARD.

SPECIFICATION forming part of Letters Patent No. 545,520, dated September 3, 1895.

Application filed February 23, 1895. Serial No. 539,411. (No model.)

To all whom it may concern:

Be it known that we, JAMES T. MOODY, WILLIAM SHAWD, and ADAM J. BAKER, citizens of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented a new and useful Trolley-Guard, of which the following is a specification.

This invention relates to trolleys for electric railways, and aims to provide an attachment which can be readily and quickly applied to any trolley-arm, which will prevent any accidental displacement of the trolley-wheel from the trolley-wire, and which will be adjustable with respect to the lateral guards to adapt them to the angle of the trolley pole or arm.

With these ends in view the invention consists of a trolley-head composed of similar side pieces bolted together, lateral guards adjustably connected with the trolley-head, a latch-guard carried by a rotatable shaft and adapted to extend over the trolley-wire and prevent any possible displacement of the trolley-wheel under normal conditions, and connections whereby the trolley-disengaging rope when pulled upon will operate the latch-guard, so as to permit the disengagement of the trolley from the trolley-wire when required. The latch-guard will be automatically returned to a normal position by means of a suitably-disposed spring.

The invention further consists of the novel features and the peculiar construction and combination of the parts which hereinafter will be more fully described and claimed, and which are shown in the annexed drawings, in which—

Figure 1 is a perspective view of the improved trolley. Fig. 2 is a front end view of the trolley-head, part of the frame being broken away to show the interlocking corrugations between the frame and the lateral guards. Fig. 3 is a detailed view of the guards detached from the frame.

The trolley-pole 2, having a trolley-wheel 3, is of any desired form usually provided in the equipment of electric-railway cars operating by the overhead system. The frame or trolley-head is composed of similar side pieces

A, having ears or flanges a' , through which pass bolts or similar fastenings by means of which the said side pieces are secured together. A socket G is formed at one end of the frame, to be clamped upon the trolley-pole 2 when equipping the latter with the attachment. The opposite end of the frame has guideways 4, in which move the shanks or stems 5 of the lateral guards C when adjusting the latter to adapt the device to the angle of the trolley-pole. Bolts or fastenings 7, passing laterally through openings in the shanks 5, operate in slots 6 in the frame, and when tightened clamp the lateral guards in the required relative position. The opposing sides of the stems or shanks 5 and the guideways in which the said stems move are corrugated, as shown at 8, to prevent accidental slipping of the lateral guards after being adjusted. A shaft 9 is mounted in bearing-lugs 10, provided on one of the shanks 5, and one end has the latch-guard B and the opposite end the crank D. This latch-guard normally extends across the space occurring between the lateral guards C, and when the trolley is in working position the trolley-wire M passes beneath the latch-guard B and is held thereby from escaping from between the lateral guards C. A coil-spring 11 is mounted upon the shaft 9, one end being attached to the said shaft and the other to a convenient part of the trolley-head; and serves to normally hold the latch-guard projected across the space between the lateral guards. The trolley disengaging or releasing rope N is connected at one end to the crank D and passes over a sheave E, held by a keeper F to a side of the frame, and extends within convenient reach of the conductor. The free end of the latch-guard enters a notch n in the edge of the lateral guard opposite and remote from the shaft 9, thereby strengthening and bracing the said latch-guard.

When passing switches or changing from one line to another, or when it is required to disengage or adjust the trolley to a trolley-wire, the rope N is pulled upon in the usual way. The first pull turns the shaft 9 in its bearings and moves the latch-guard B, so that the trolley-wire can pass freely between the

lateral guards C. A continued pull on the rope lowers the trolley-pole in the usual manner. After the trolley is in proper position on the trolley-wire, and the rope N is released, the spring 11, regaining itself, will project the latch-guard over the trolley-wire and secure the trolley from accidental displacement.

Changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having described the invention, what we claim is—

1. A trolley provided with lateral guards, and a latch guard journaled to one side of the space between the said lateral guards and normally projected across the said space, substantially as described and for the purpose specified.

2. A trolley having lateral guards, and a latch guard journaled to one lateral guard and normally projected across the space between the said lateral guards, substantially as set forth.

3. A trolley having lateral guards, and a latch guard journaled to one lateral guard and adapted to make positive engagement at its opposite end with the other lateral guard, substantially as specified.

4. A trolley having lateral guards, a shaft journaled in bearings on one lateral guard and having a crank arm to which the releasing or pull rope is attached, and a latch guard attached to the upper end of the shaft and normally extending across the space between

the said lateral guards, substantially as specified.

5. In a trolley, the combination with the trolley head having guide ways in its sides and having slots extending into said guide ways, of guards mounted in the said guide ways, and fastenings for adjustably securing the said guards in the guide ways, substantially as set forth for the purpose described.

6. The combination with the frame of a trolley head, having guideways, of lateral guards adjustably held in the said guideways, and a latch guard carried by and movable with the lateral guards, substantially as described.

7. A trolley head comprising similar side pieces having a socket at one end to receive the trolley pole, and having guideways at the opposite end, means for securing the side pieces together and clamping the trolley pole between them, lateral guards adjustably held in the said guideways, a shaft journaled to one of the lateral guards and having a crank arm to which the releasing rope is attached, a latch guard attached to the shaft and having its free end entering a notch in the remote lateral guard, and a spring for normally projecting the latch guard across the space between the lateral guards, substantially as specified.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

JAS. T. MOODY.
WM. SHAWD.
A. J. BAKER.

Witnesses:

W. W. WITMEYER,
R. F. HAYWARD.