

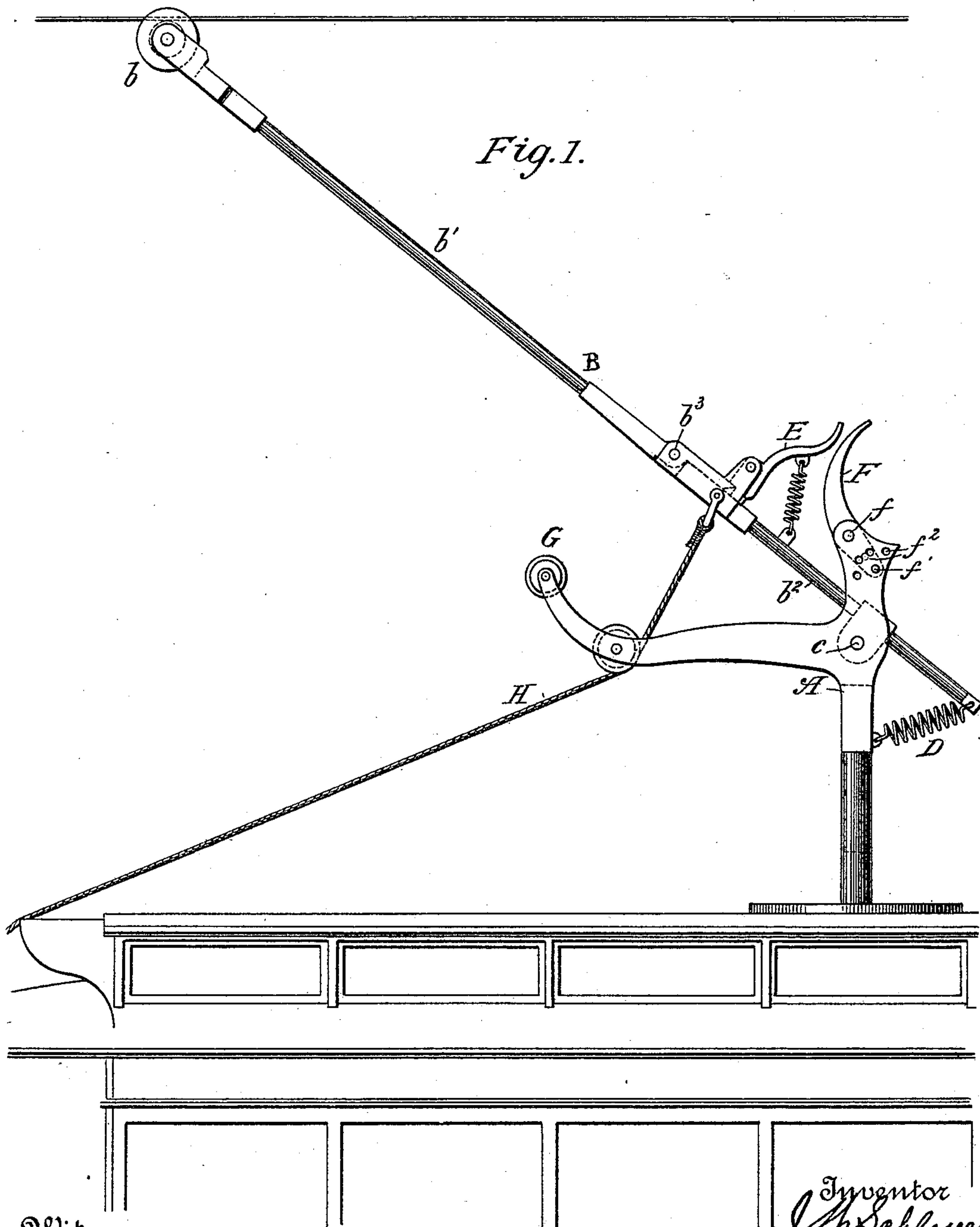
(No Model.)

2 Sheets—Sheet 1.

J. W. SCHLOSSER.
TROLLEY FOR ELECTRIC RAILWAYS.

No. 464,780.

Patented Dec. 8, 1891.



Witnesses

Raymond L. Barnes.

G. M. Copenhagen.

Inventor

J. W. Schlosser

By P. T. Dodge

Attorney

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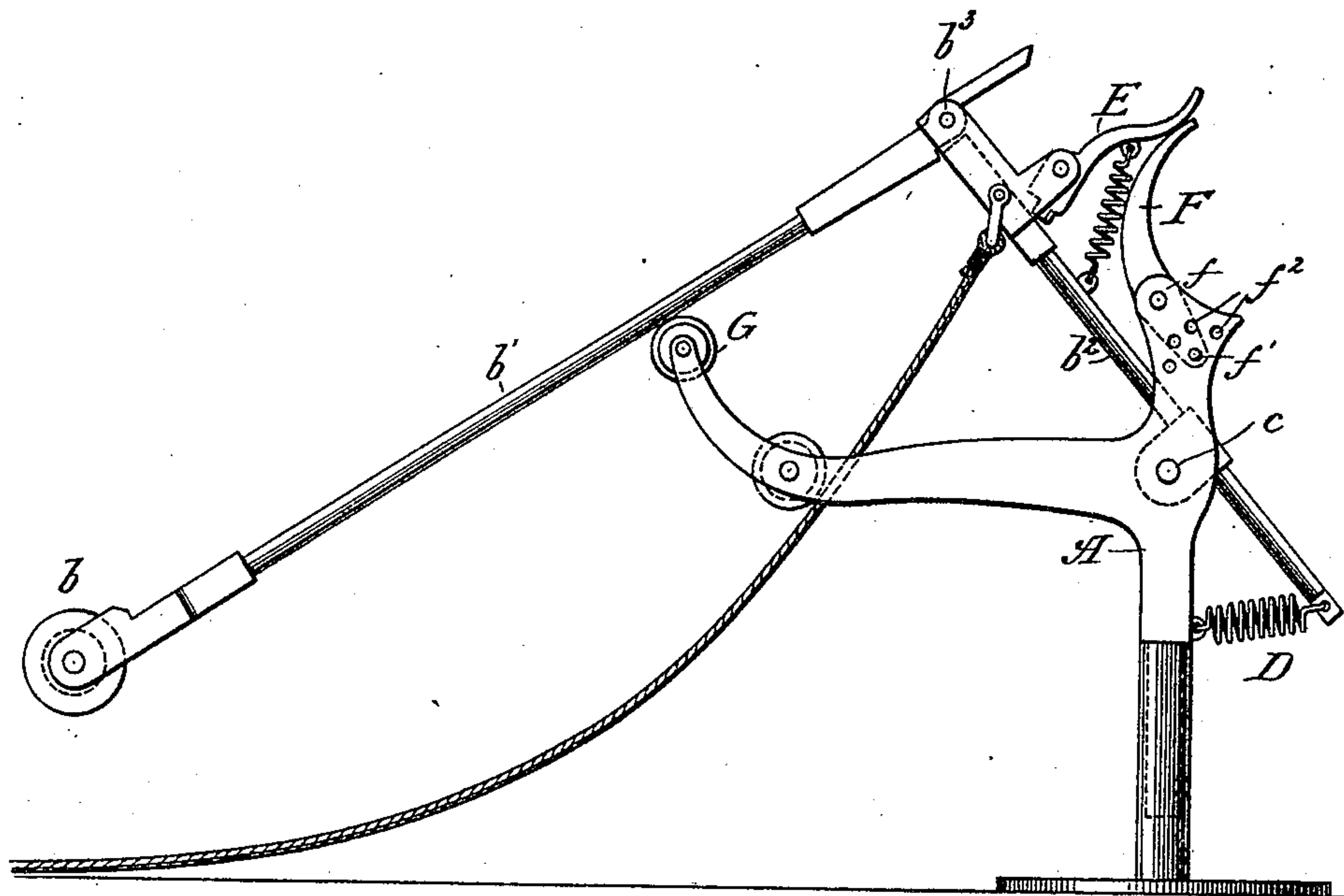
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Fig. 2.



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UNITED STATES PATENT OFFICE.

JOHN W. SCHLOSSER, OF WASHINGTON, DISTRICT OF COLUMBIA.

TROLLEY FOR ELECTRIC RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 464,780, dated December 8, 1891.

Application filed August 10, 1891. Serial No. 402,246. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. SCHLOSSER, of Washington, District of Columbia, have invented a new and useful Improvement in
5 Trolleys for Electric Railways, of which the following is a specification.

At the present day it is the common practice to provide electric cars with pivoted vertically-swinging arms known as "trolleys,"
10 which extend upward from the top of the car to an overhead conducting-wire for the purpose of receiving and transmitting the current from the conductor to the motor on the car. As ordinarily constructed, these arms are
15 urged upward by strong springs, and it frequently happens that in the event of the roller or trolley proper escaping from the conductor the arm will be thrown upward above its normal position, so that it will contact
20 with the conductor in an objectionable manner, or contact with obstructions in such manner as to cause injury thereto.

My invention is intended to prevent the breakage and other evils which attend the
25 swinging of the trolley above the proper height; and to this end it consists in combining with the arm automatic tripping or releasing devices of such character that whenever the arm swings above a given point it
30 will be automatically released and permitted to fall. It will be apparent to the skilled mechanic that the details of construction to this end may be variously modified, or, in other words, that the invention may be embodied in various equivalent forms.

I prefer to mount and operate the trolley-arm in the ordinary manner, but to joint its upper end so that it may rise and fall independently of the remaining portion, and to
40 sustain the end thus jointed by a latch or locking device, which is automatically released whenever the arm reaches a predetermined elevation.

In the accompanying drawings, Figure 1
45 represents my improved trolley in operative position. Fig. 2 is a similar view illustrating the manner in which the upper end is released and permitted to fall.

Referring to the drawings, A represents a
50 vertically-slotted arm or bracket mounted in any suitable manner on the car, and B the vertically-swinging trolley-arm carrying the

usual roller *b* at its upper end and connected near its lower end by a horizontal pivot *c* to the bracket. Its lower extremity is connected
55 to one end of a strong spiral spring D, which is attached at the opposite end to the bracket, so that it serves to urge the trolley constantly in an upward direction, the action in this regard being essentially the same as in the trol-
60 leys now in general use.

The arm B, instead of being made in one continuous piece, as usual, is constructed in two parts *b'* *b''*, which are connected by a
65 pivot *b'''*, so that the upper section *b'* may when released drop independently on the remaining portion, as shown in Fig. 2.

E is a latch pivoted to the lower member of the trolley and arranged to engage over
70 the lower end of the upper member, thereby locking the two parts together, so that they constitute for the time being a rigid trolley operating like those in general use.

F represents a trip-arm so shaped and located that whenever the trolley, disengaged
75 from the conductor or otherwise released, tends to rise above the desired limit the latch E will encounter the trip-arm and be disengaged from the upper part of the trolley, so
80 that, although the lower part of the trolley-arm remains in its elevated position, the upper end falls to the position shown in Fig. 2. The bracket may be provided with an out-
85 reaching arm carrying a roller G, which serves to arrest the falling end of the trolley.

H is a controlling-cord attached to the lower member of the trolley and extending
90 downward within reach of the attendant as a means of controlling the rising and falling movements of the trolley, as usual.

In order to restore the trolley to an operative condition after its upper end has been tripped and permitted to fall, it is only necessary to pull downward on the cord, the
95 effect of this action being to depress the lower member while the upper member is supported and caused to turn upon the roller G as a fulcrum until the parts are again brought into line, whereupon the latch engages auto-
100 matically to hold them.

In order to permit an adjustment of the device so that the trolley will be released at a higher or lower level, the trip-arm F may be mounted on a horizontal pivot *f* and se-

cured by a pin f' , adapted for insertion in either of a series of holes f^2 in the bracket. This arrangement permits the trip-arm to be changed in position, as may be required.

5 It will be observed that my trolley under normal conditions operates in precisely the same manner as the ordinary rigid trolley; but the supplemental tripping or releasing devices are brought into action only when
10 the conditions are such that safety demands it.

Having thus described my invention, what I claim is—

15 1. A vertically-swinging trolley jointed to permit independent falling motion of its upper end, in combination with automatic trip devices, whereby the parts are held in fixed relations until the arm rises above the upper limit.

2. In combination with the supporting-bracket, the jointed trolley-arm, the lifting- 20 spring, the latch connecting the two parts of the arm, and means for automatically tripping said latch.

3. The bracket having the outreaching arm and the roller G, in combination with the 25 pivoted jointed trolley-arm, the latch, means for operating the latch automatically as the arm rises and falls, and a cord for depressing the arm.

In testimony whereof I hereunto set my 30 hand this 31st day of July, 1891, in the presence of two attesting witnesses.

JOHN W. SCHLOSSER.

Witnesses:

W. R. KENNEDY,
FABIUS S. ELMORE.