

(No Model.)

B. BARTELMES.
SWITCH OPERATING DEVICE.

No. 485,446.

Patented Nov. 1, 1892.

Fig. 1.

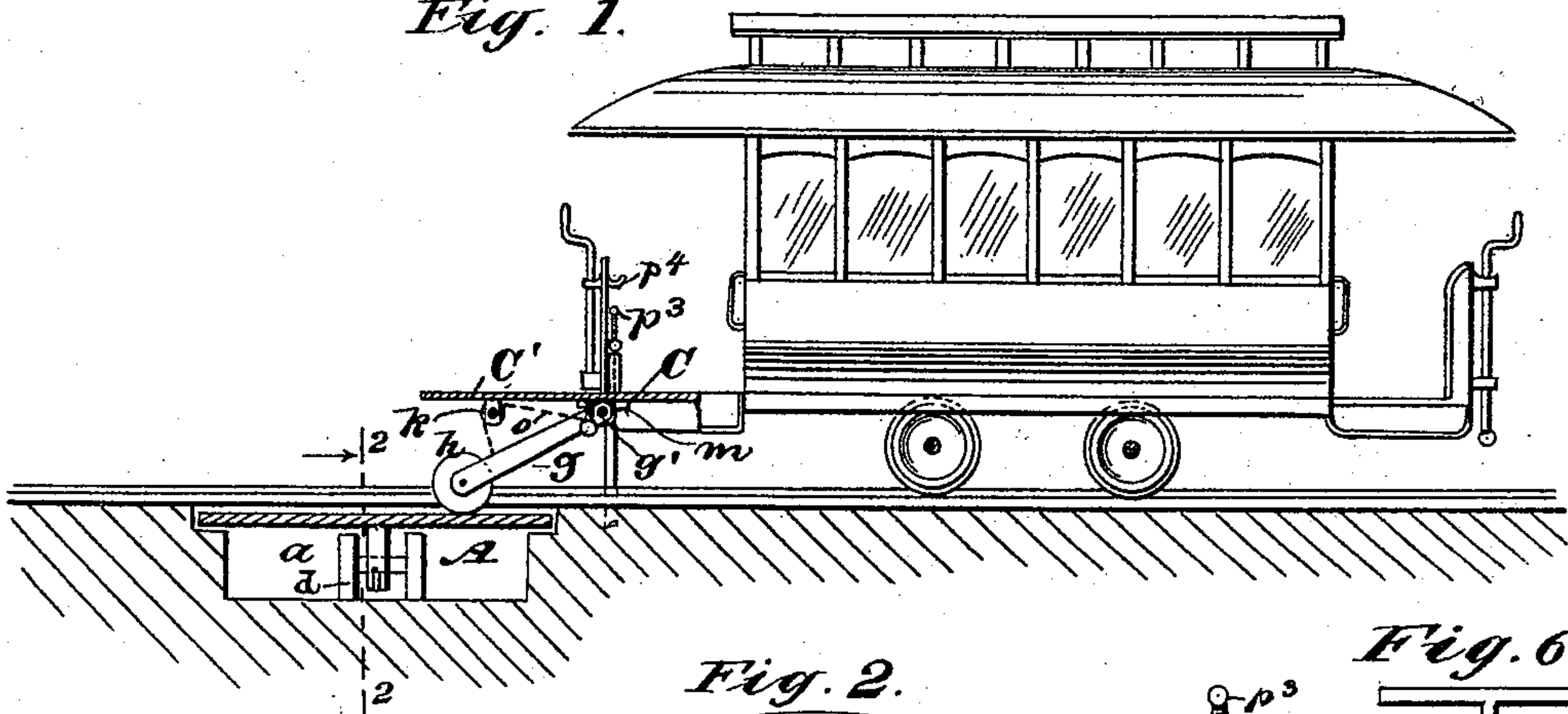


Fig. 2.

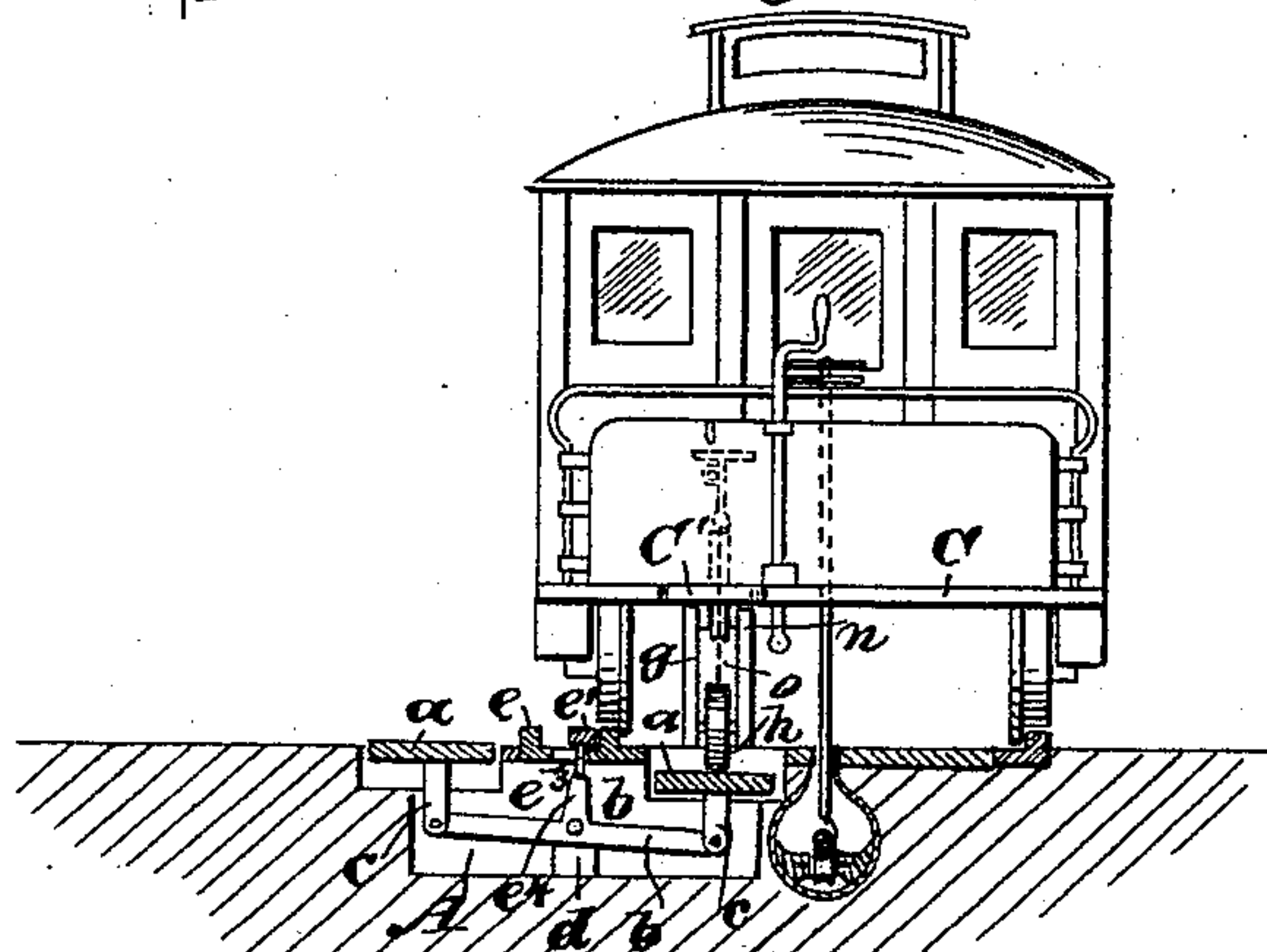


Fig. 6.

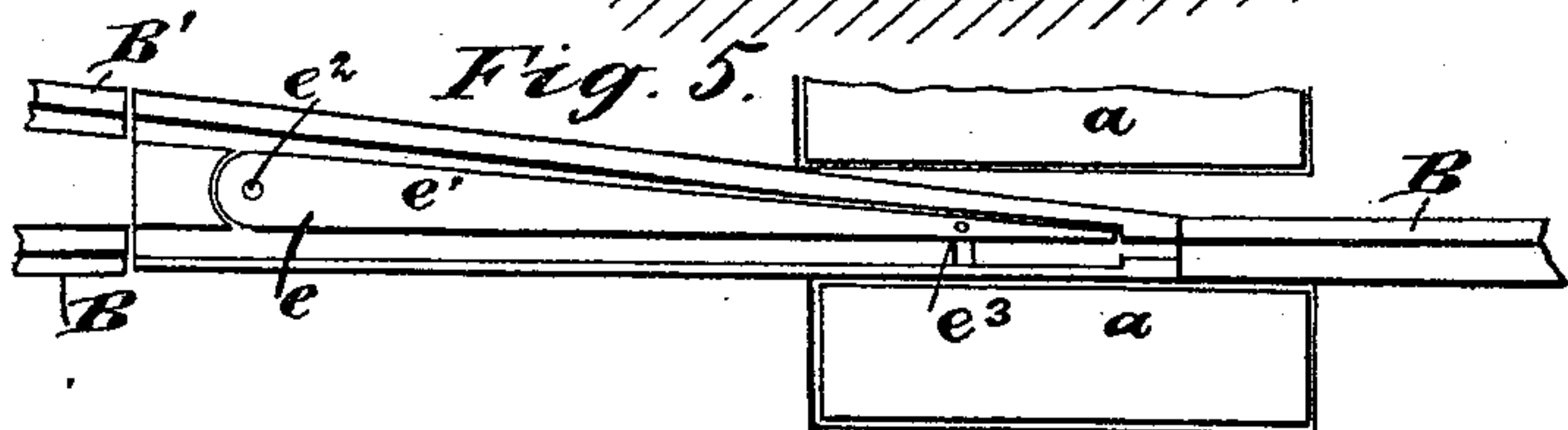
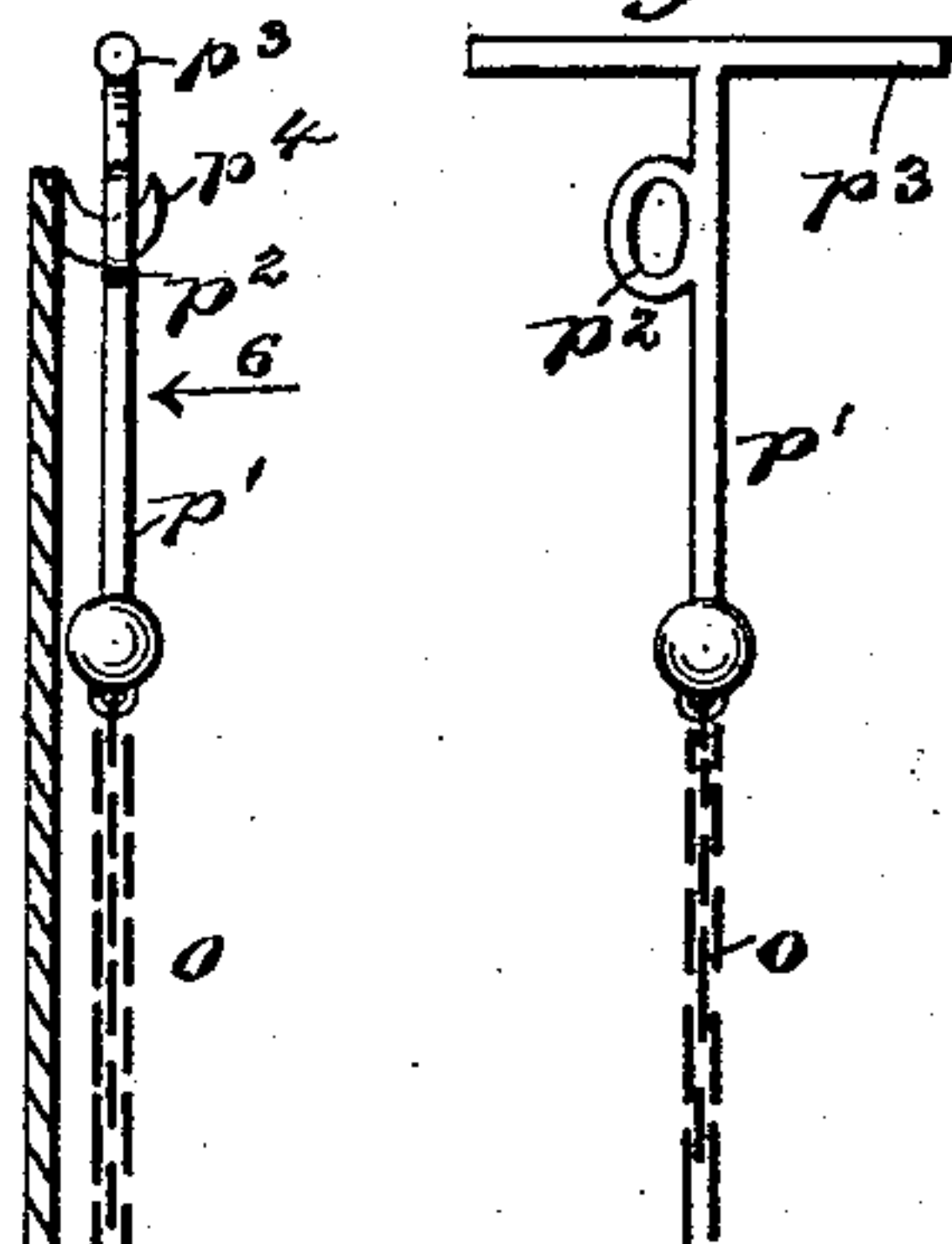


Fig. 3.

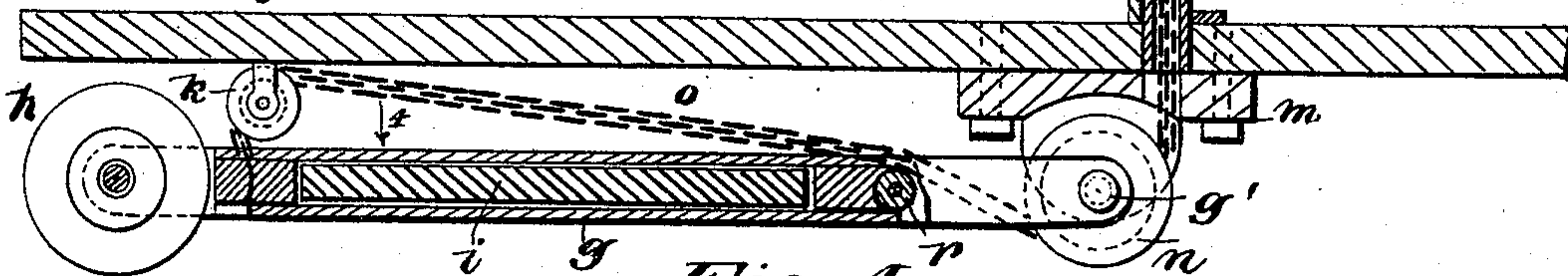
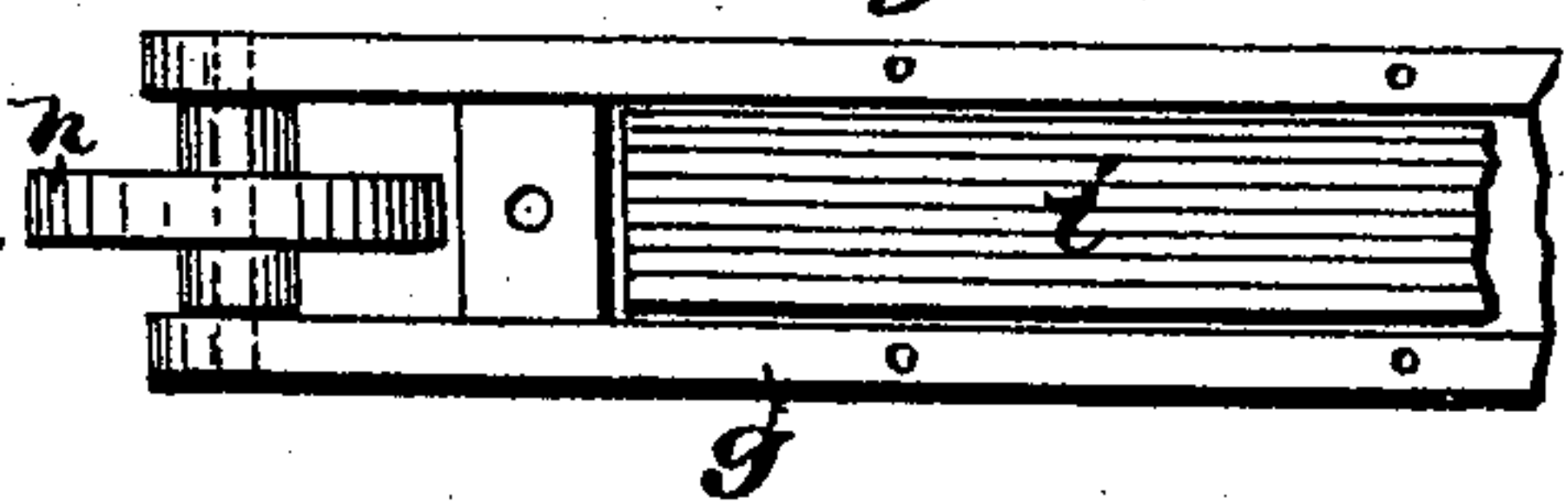


Fig. 4.



WITNESSES:

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BENJAMIN BARTELMES, OF BROOKLYN, NEW YORK.

SWITCH-OPERATING DEVICE.

SPECIFICATION forming part of Letters Patent No. 485,446, dated November 1, 1892.

Application filed April 30, 1892. Serial No. 431,312. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN BARTELMES, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful
5 Device to Operate Street-Railroad Switches, of which the following is a full, clear, and exact description.

It is customary in some cities where street-railroads are in use to use the track of a cable-motor railway as part of the system wherein
10 horse-cars are also used, the latter being run part of their route upon the cable-road track and at one or more points along the line diverted therefrom by switches to traverse a
15 side track, which may be parallel with the cable-track or diverge therefrom at an angle.

In modern approved systems of street-railway transit switches are employed that are automatically operated by the travel of one
20 or more horses over a table along the railroad-bed, whereby the animal is adapted by its gravity to move the tongue of the frog that is part of a switch and set it in alignment with the railway-track to be traversed by the drawn
25 car before it reaches the switch. Where the railway-tracks are exclusively used by horse-cars, there is proper provision made to allow the weight of the draft-animal to set the frog of a switch correctly in either direction of
30 travel on the line of the road. In case there is a double use of a cable-railway track for horse-cars and cable-cars, the horse-cars, if switched from the cable-track, will leave the switch open, and it must be closed manually
35 or by a spring, the latter being unreliable in cold weather.

The object of my invention is to provide an attachment for a cable-railway car which will be adapted to set a platform-switch in ad-
40 vance of said car, if it has been left open by a car leaving the cable-track in advance of the cable-car.

To this end my invention consists in the construction and combination of parts, as is
45 hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

50 Figure 1 is a side elevation of a street-railway car with the improvement in place on its platform, shown broken and in contact with

a platform-switch shown partly in section. Fig. 2 is a transverse section of the platform-switch shown in Fig. 1, taken on the line 2 2
55 in said figure, a cable street-car track in cross-section, and a cable street-car with the improvement in place engaging the switch-platform. Fig. 3 is an enlarged side elevation, in section, of the improvement in position on a
60 cable-car platform broken and in section. Fig. 4 is a plan view detached and broken of an important detail of construction viewed opposite arrow 4 in Fig. 3. Fig. 5 is a plan
65 view of the switch-tongue and its support, adjacent track-rails, and a switch-platform shown broken; and Fig. 6 is a side view of a part of the improvement opposite the arrow
6 in Fig. 3.

In the drawings, A represents a pit in which
70 two similar platforms *a* are pivotally supported on a cross-beam *b* by vertical arms *c*, that are affixed to the platforms, said beam being centrally fulcrumed on an upright support *d*, as shown in Figs. 1 and 2. There is
75 a frog *e* provided, which is located between the platforms *a* and extended longitudinally of the main track B, its tongue *e'* being pivoted at a point *e²* near the heel of the tongue, so as to vibrate on the frog-body at the front
80 and align its point and sides with either a main track B or side track B', each rail being shown broken at the rear of the frog in Fig. 5. Such a movement of the frog-tongue
85 *e'* is effected by its pivotal connection at *e³* with a post *e⁴*, that is erected on the longitudinal center of the cross-beam *b*, as shown in Fig. 2; and it will be seen that the depression of either platform *a* by an imposed weight
90 will rock the tongue into proper alignment with a main track or side track if a horse-car is drawn in either direction and the draft-animal is caused thereby to tread upon the proper platform. Should a horse-car traverse
95 the cable track B and leave it to travel upon a side track B', the tongue *e'* of the frog will be left in alignment with the side track, and thus cause a derailment of the cable car that may follow the horse-car unless means are
100 provided to set the tongue to align with the main track, to effect which an attachment for the cable car is furnished, which will be described.

Upon the forward edge of the cable-car

platform C an arm g is pivotally secured, as at g' in Figs. 1 and 3, said arm being bifurcated at the front end, whereon a pressure-wheel h is journaled between the parallel limbs of the arm. Said arm may be made of metal and sufficiently weighty to effect its purpose; but preferably a box is formed between its ends for the reception of a weight i , that is of a heft capable of depressing one of the platforms a of the street-railway switch, already described. An extension C' is forwardly projected from the platform C and a loose pulley k is secured to rotate beneath said extension forwardly. The rear end of the vibratable arm g is also bifurcated to loosely embrace the bracket-box m , which supports it in connection with the under side of the platform C, there being a grooved pulley n mounted between depending flanges of the bracket-box upon a pivot-bolt that passes through the limbs of the arm and sustains the latter free to vibrate in a vertical plane therefrom. At a point near the loose grooved pulley k a chain o is affixed by one end to the arm g and thence extended upwardly over the pulley and rearwardly to pass down through the slot between the limbs of the arm, thence over the lower edge portion of the grooved pulley n and upwardly through an aperture in the platform C and vertical tubular guide p , the upper end of the chain being connected to the lower end of a lifter-rod p' , whereon the loop p^2 and cross-bar p^3 are formed, said loop affording means to hold the lifter-rod in elevated adjustment. Preferably there is an antifriction-roller r rotatably secured across the rear slot in the arm g for the support of the chain o , as represented in Fig. 3.

In service the gripman on a cable car having the improvement can by manipulation of the rod p' lower the latter until it rests upon the top of the tubular guide p , which will slacken the chain o and allow the arm g to drop at the front end, so that the wheel h will

roll upon the road-bed near to the platform a and traverse the latter, the weight of the loaded arm e causing the platform to sink and the frog-tongue to vibrate, so as to align it with the main track, if it has been set for a side track by the previous passage of a horse-car from the cable track to a side track. as before explained. When not in service, the arm g is held away from the road-bed by the hooked engagement of the loop p^2 , with the hook p^4 , that is affixed to the dash-board of the car near its top edge, as indicated in Fig. 3.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent--

1. The combination, with a car-platform and a forward extension therefrom, of a vibratable weighted arm, a rotatable wheel at its outer end, and a flexible connection extended from the arm over a pulley on the extension and thence to the car-platform, substantially as described.

2. The combination, with a car-platform, a forward extension thereon, a pivoted weighted arm below, extending from the platform, and a tubular upright case on the platform, of a grooved pulley below on the outer end of the extension, a bracket-box on the car-platform below, a grooved pulley in the box, a weighted arm pivoted by one end to the bracket-box and extending outwardly, a presser-wheel rotatably mounted on the outer end of said arm, a chain on the outer end of the arm, extended over the pulley on the extension and below the pulley on the platform and thence up through the case thereon, and a lifter-rod above on the chain, adapted for detachable connection with the platform dash-board, substantially as described.

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Witnesses:

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