

(No Model.)

W. T. BROWNE.

SWITCHING ATTACHMENT FOR STREET CARS.

No. 245,273.

Patented Aug. 9, 1881.

Fig. 1.

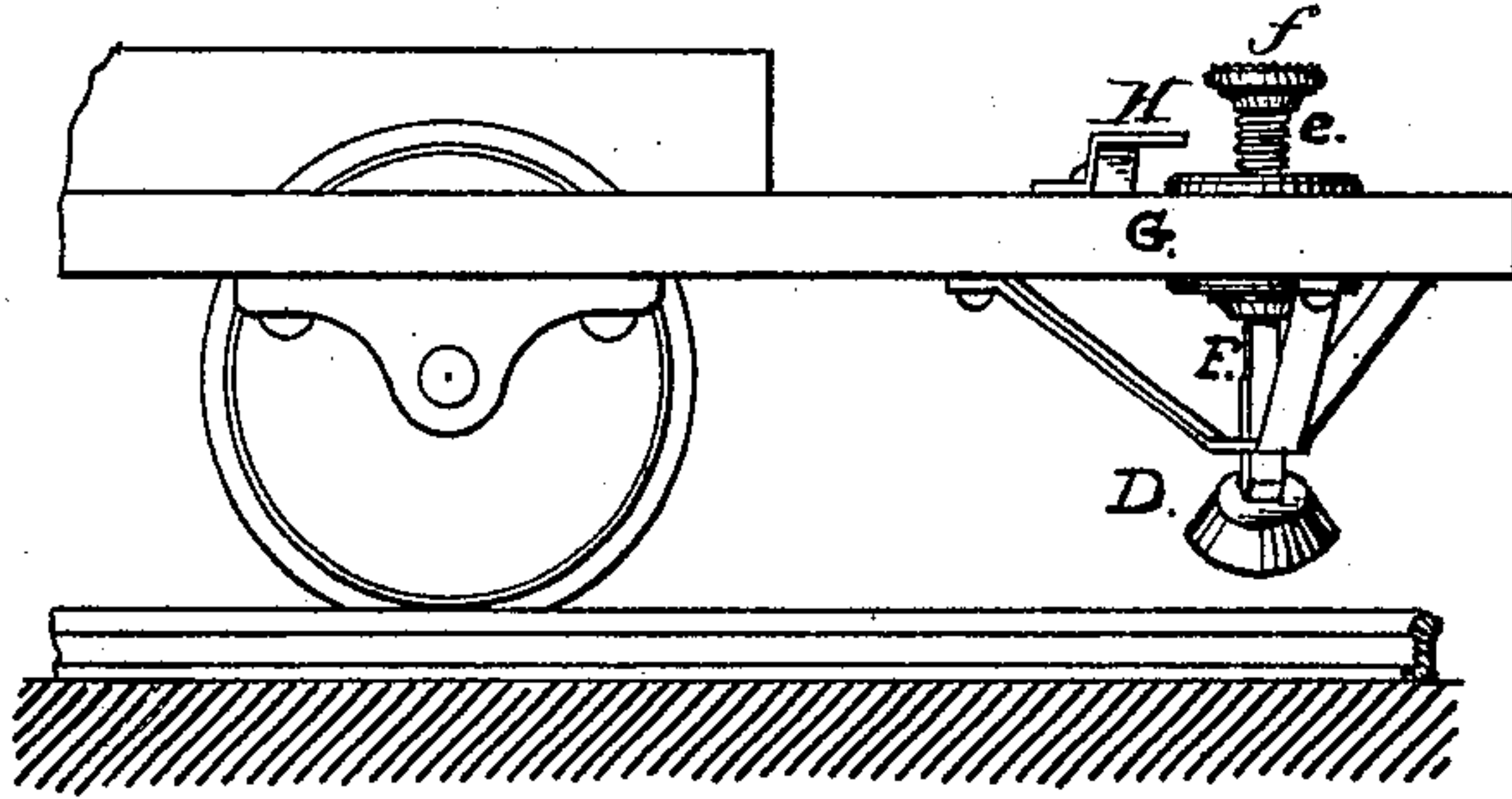


Fig. 2.

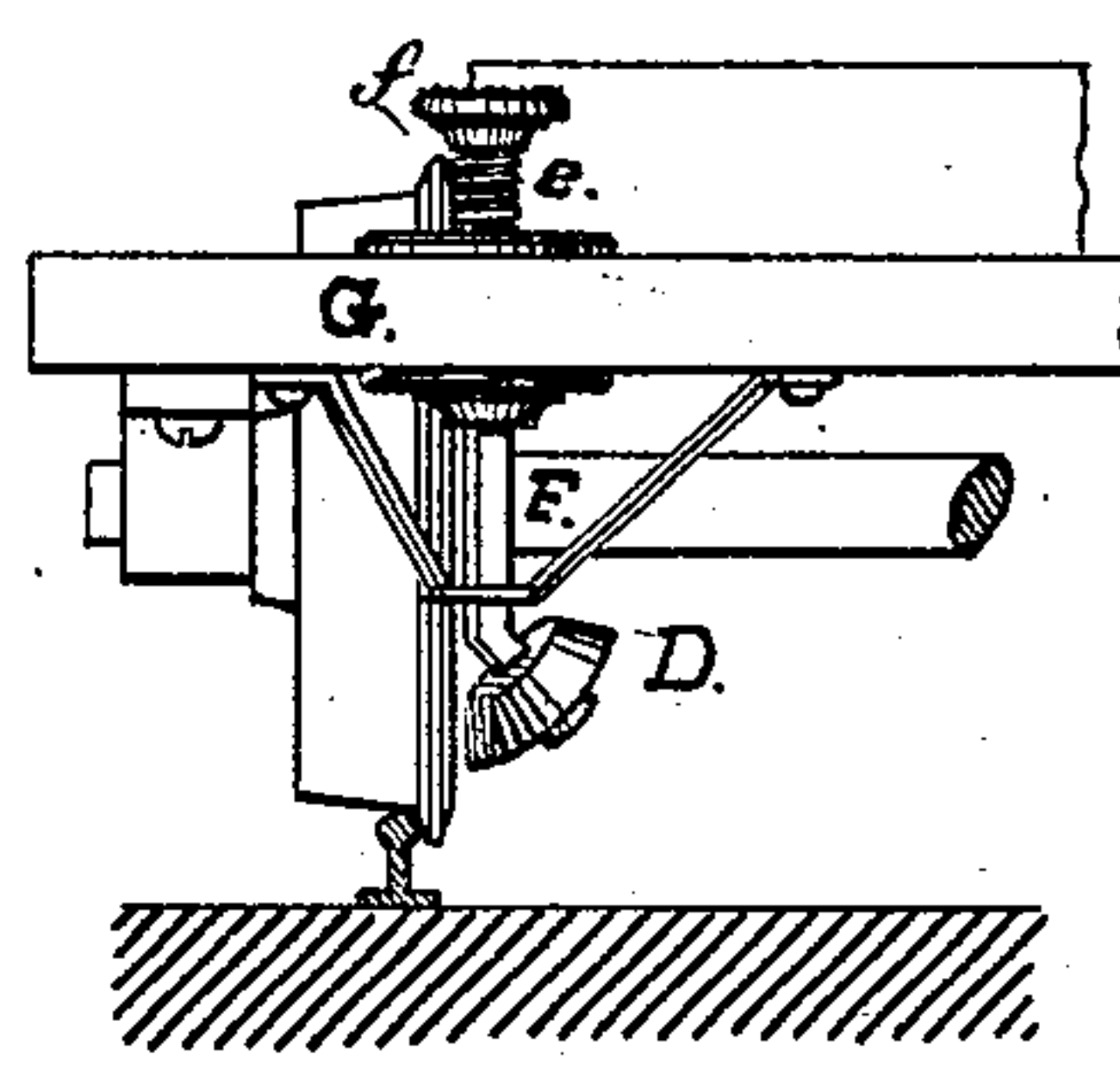


Fig. 3.

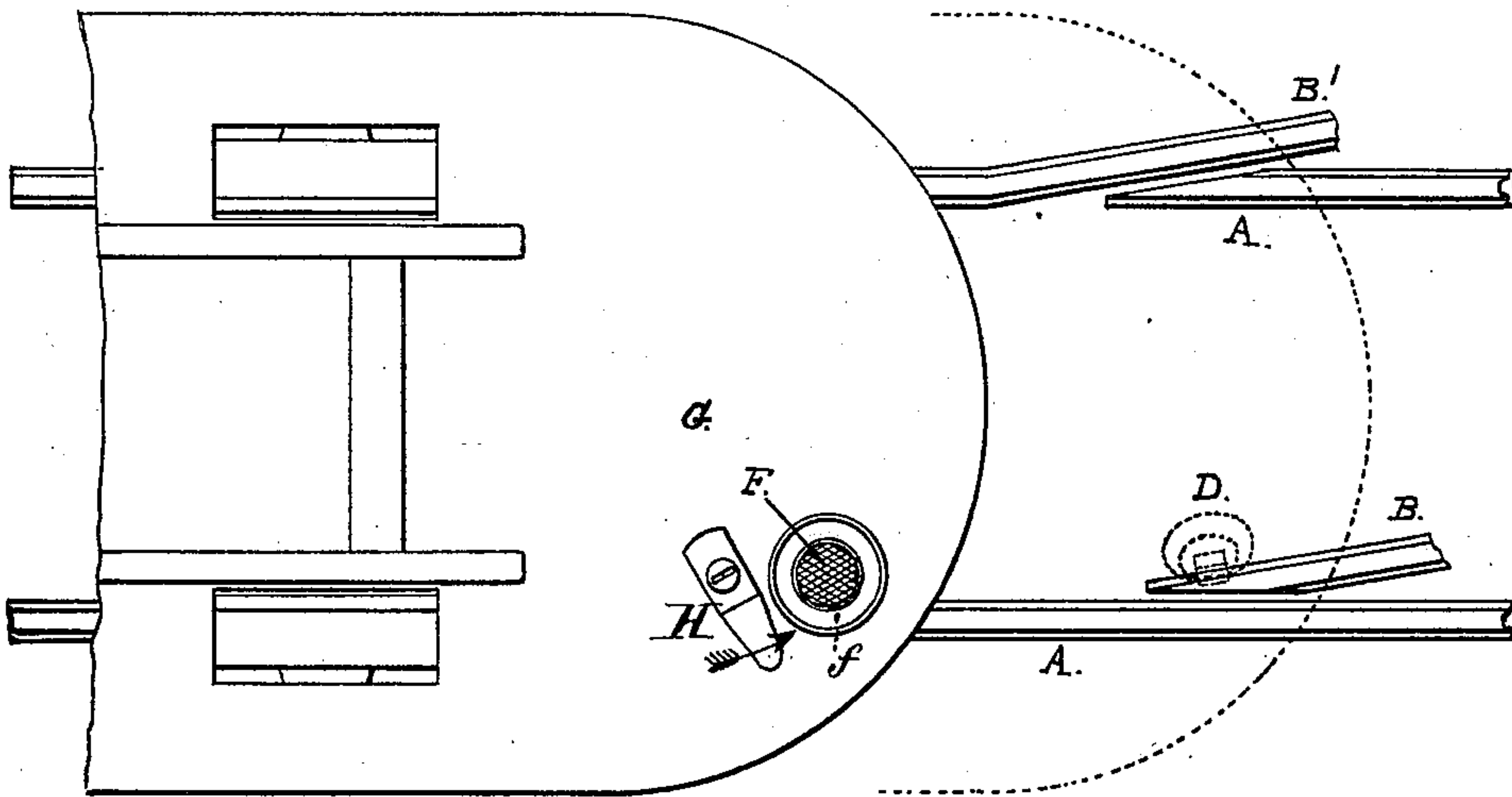


Fig. 4.

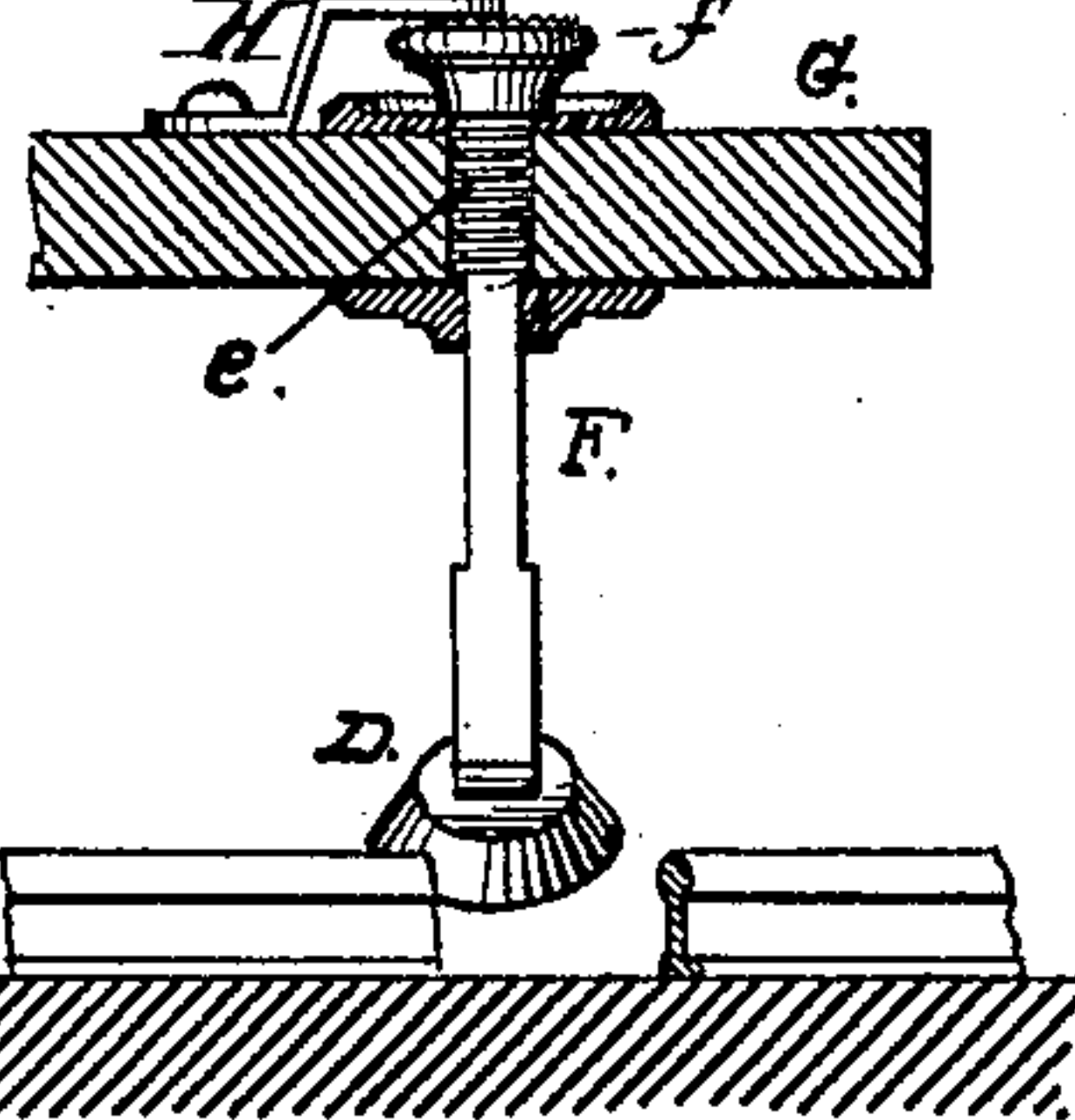
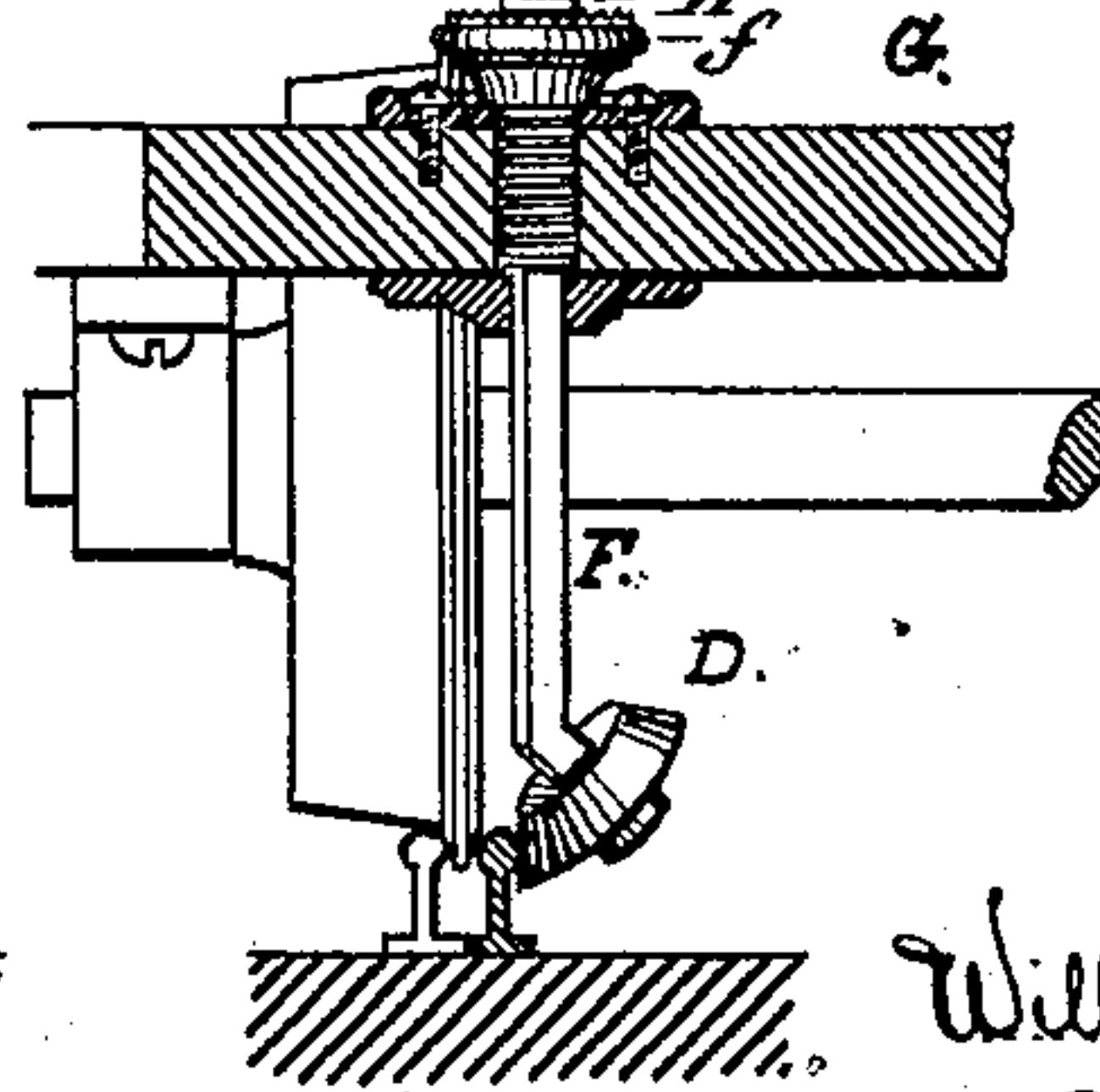


Fig. 5.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM T. BROWNE, OF STOCKTON, CALIFORNIA.

SWITCHING ATTACHMENT FOR STREET-CARS.

SPECIFICATION forming part of Letters Patent No. 245,273, dated August 9, 1881.

Application filed December 13, 1880. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM T. BROWNE, of Stockton, county of San Joaquin, in the State of California, have invented certain new and useful Improvements in Switching Attachments for Street-Cars; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings.

My invention relates to an attachment to street-cars, by means of which a car can be switched from a main track to a branch or side track without using a movable switch-rail and without stopping or arresting the motion of the car. Instead of employing a movable switch-rail, I make it permanent and stationary, leaving sufficient space between its end and the tread of the main rail for the flanges of the car-wheels to pass through, where it is desired to run the car directly forward on the main track and avoid the switch. For switching the car I employ a fender or crowding-wheel, which is attached to the car in advance and a little inside of the car-wheel on the outer side of the curve. Ordinarily this fender or crowding-wheel is drawn up far enough toward the bottom of the car to clear the track or rails; but in approaching the switch it is depressed so as to come in contact with the inner side of the switch-rail before the front wheel of the car reaches the end of the switch-rail. The pressure of this fender or crowding-wheel against the inner side of the permanent switch-rail will then, as the car moves forward, crowd the front end of the car in the direction of the curve, so that when the flanges of the car-wheels arrive at the switch they will be far enough away from the main rail to take inside of the switch-rail, all as hereinafter more fully described.

I am aware that fenders or crowding-wheels upon a vertically-moving spindle or shaft connected to the end of the car are old, and do not therefore claim, broadly, such construction.

The invention consists in the special arrangement and construction of the device, as illustrated in the drawings and hereinafter described.

Referring to the accompanying drawings, Figure 1 is a side elevation of the front of a

car-platform with my improvement applied to it. Fig. 2 is a front view. Fig. 3 is a plan or top view. In these views the attachment is raised or out of action. Figs. 4 and 5 are side and front views, respectively, of the attachment in working position to switch the car to the switch-track.

Let A A represent the rails of a main track, and B B' the rails of a side track leading therefrom.

The switch-rail B, which extends across the main track and forms the outside rail of the curve, I make permanent and stationary, leaving sufficient space between its end and the rail of the main track for the flanges of the wheels to pass through when the car moves past the siding on the main track.

Upon each car I mount a fender or crowding-wheel, D, which can be drawn up by the driver under the car, so as to keep it up clear of the track and ground, or be forced down into contact with the track. The wheel D is secured on the lower end of a vertical bar or shaft, F, which passes up through a hole in the car-floor G on the platform of the car and within easy reach of the driver's foot. A spring, e, keeps the bar raised when the crowding-wheel is not in use, so that the wheel D on its lower end will not touch the ground or track. The lower end of the bar F is bent at an angle inward toward the middle line of the car, and a journal is formed on this angular end.

The wheel D is made conical in form, and it is secured upon this angular journal so that the lower portion of its conical face is vertical. This wheel also stands in an oblique position with reference to the middle line of the car, the amount of obliquity being governed by the radius of the curve. This bar, with its fender or crowding-wheel, is placed in advance of the car-wheel that travels on the outer rail of the curve, so that when it is depressed its vertical lower face will strike the inside face of the switch-rail B before the car-wheel reaches the junction of the switch and main rail. The pressure of this wheel against the inside of the switch-rail will force the front end of the car to follow the line of the switch as the car moves forward, so that when the car-wheel reaches the end of the switch-rail B it will take that rail and follow the curve, thus switch-

ing the car from the main track to the branch or side track. The fender or crowding-wheel is lowered into contact with the switch-rail by the pressure of the foot of the driver, and as soon as the car has been shifted to the branch track it is released and the spring draws it up clear of the track and ground.

The head *f* of the bar *F* is serrated upon its upper side in order to prevent the slipping of a plate, *H*, when brought in contact with said head. This plate is pivoted to the floor *G* of the car, so that it can be swung sidewise or laterally, so that when the bar *F* is depressed to bring the wheel *D* in contact with the side of the rail the end of the plate can be swung around over the serrated head, and thus prevent the spring *e* from forcing the bar up, the plate holding the wheel *D* against the rail.

When it is desired to raise the wheel *D*, which is done automatically by the action of the spring *e*, the plate *H* is swung around so as to disengage it from the head *f*.

Where a car is compelled to switch in both

directions in traveling the length of the track it must be provided with one of these fenders or crowding-wheels on each side; and if the car does not turn around, but maintains its position in traveling both ways, a fender or crowding-wheel must be provided at each end.

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

A switching attachment for street-cars, consisting of the vertical spindle or bar *F*, having head *f* and spring *e*, and the conical crowding-wheel *D*, secured to the lower end of the bar, so that the lower portion of its conical face will be vertical, in combination with the pivoted plate *H*, substantially as and for the purpose set forth.

In witness whereof I have hereunto set my hand.

WILLIAM TRAVIS BROWNE.

Witnesses:

EUGENE LEHE,
WM. F. CLARK.