

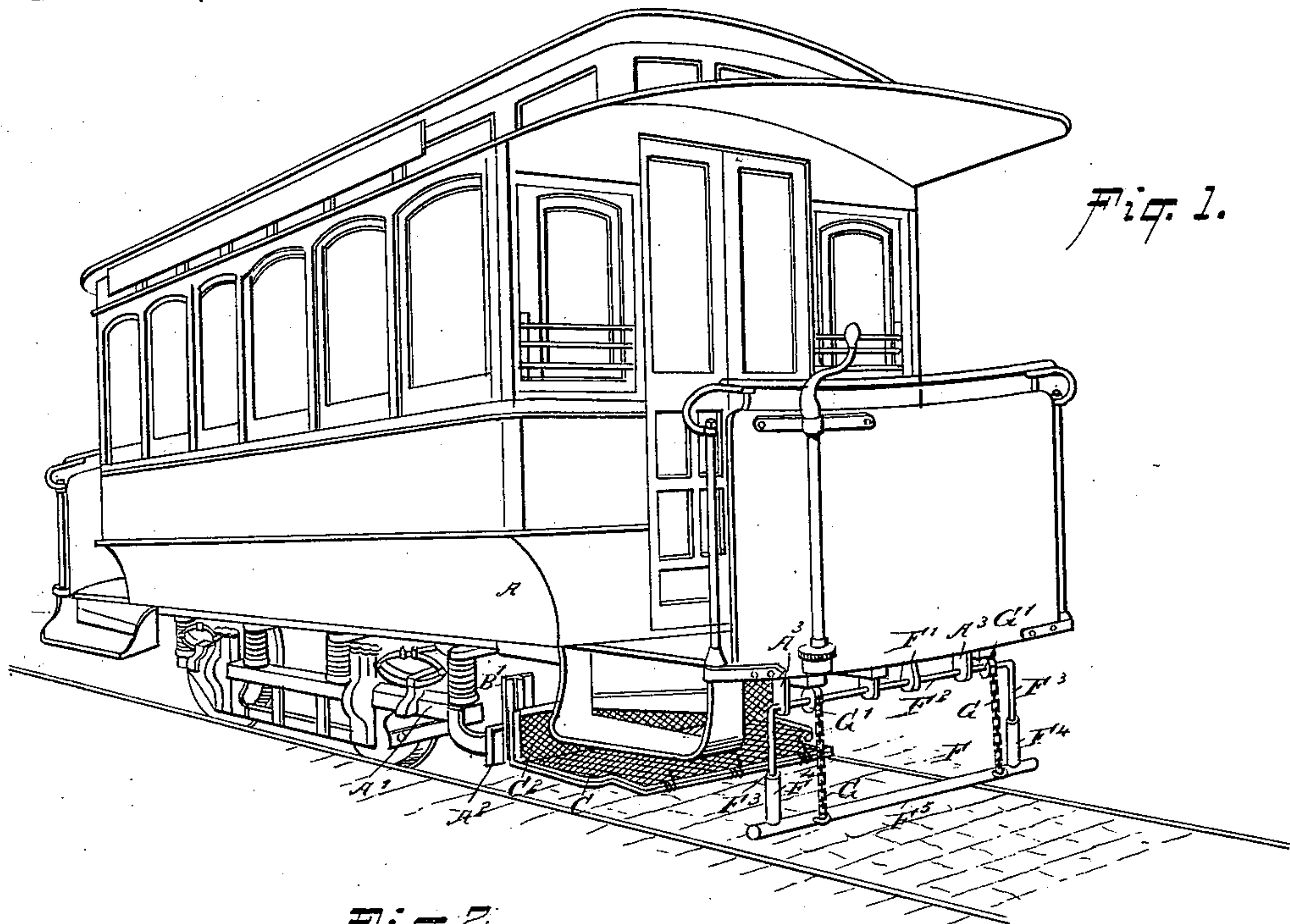
(No Model.)

2 Sheets—Sheet 1.

S. D. WRIGHT.  
CAR FENDER.

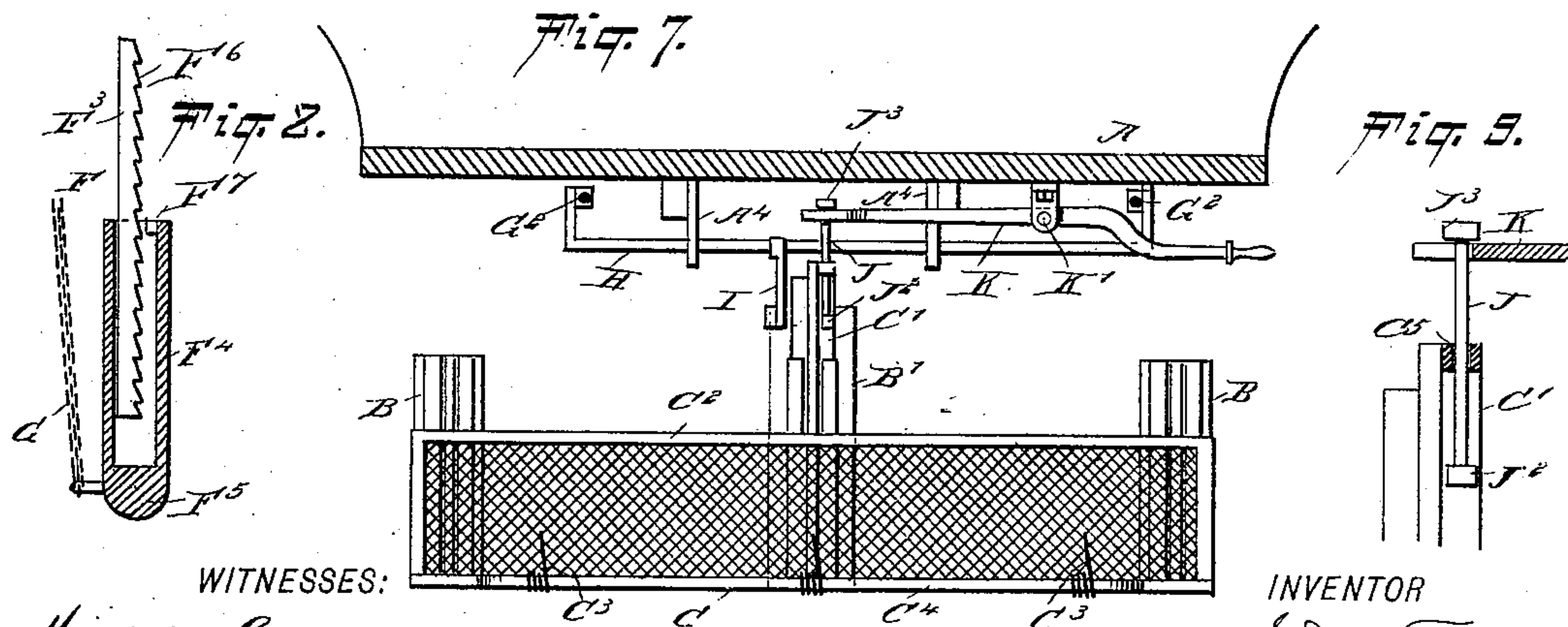
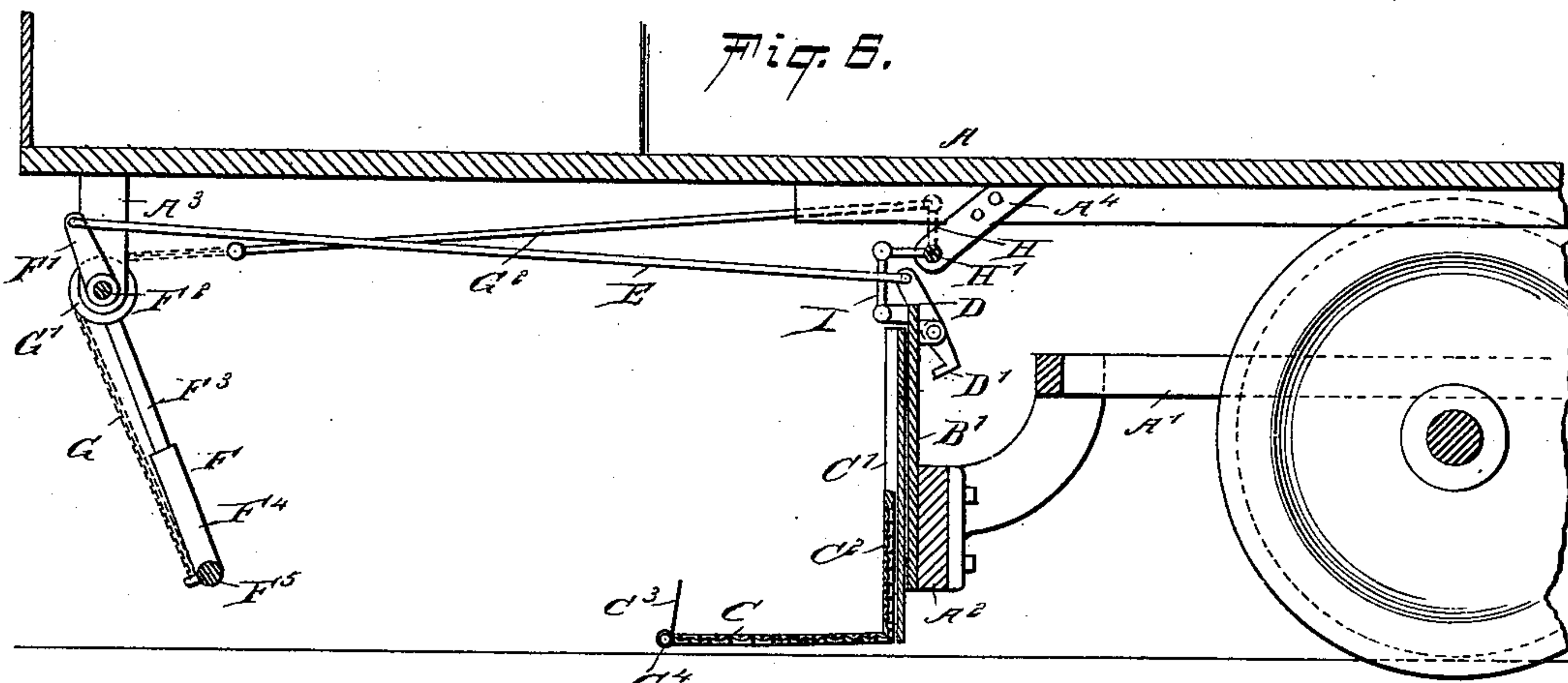
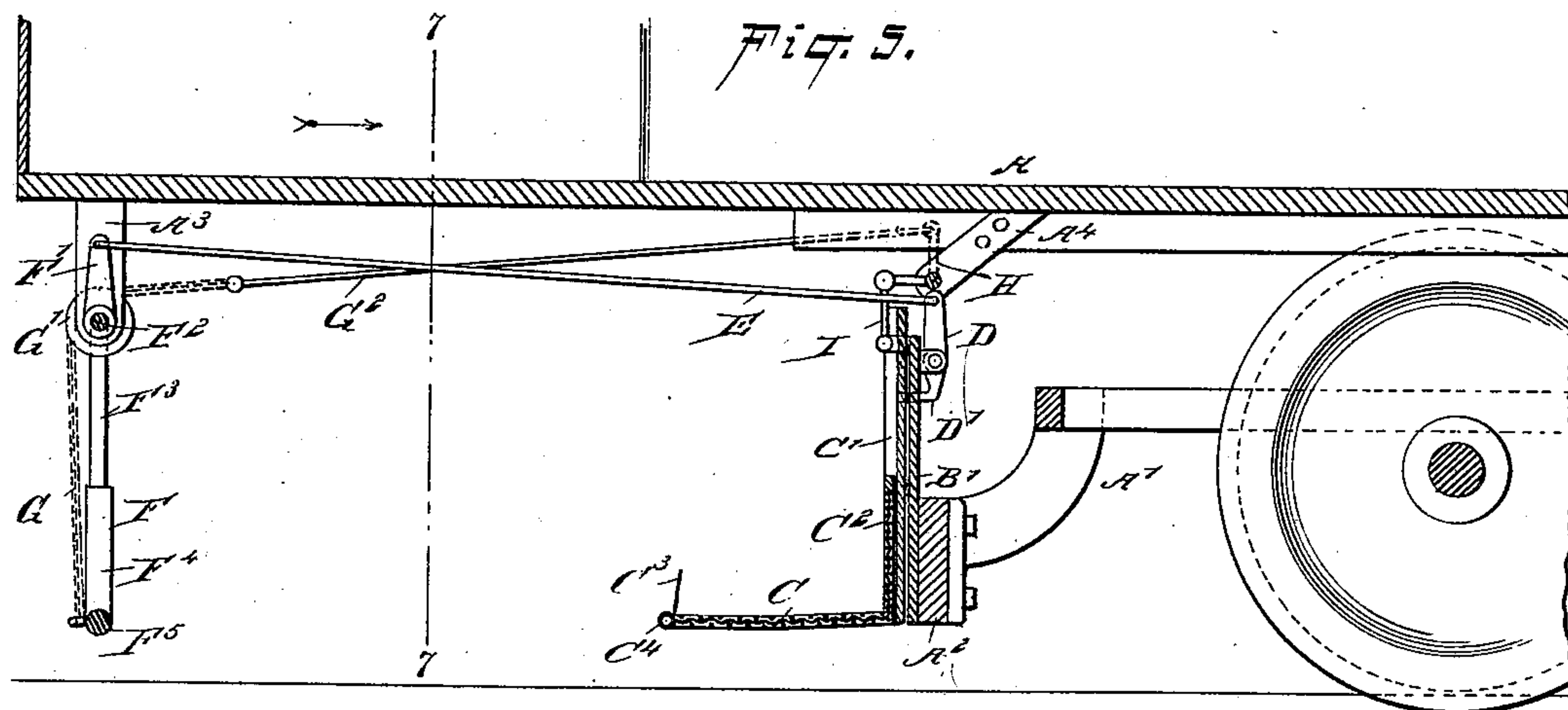
No. 560,959.

Patented May 26, 1896.



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WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 560,959, dated May 26, 1896.

Application filed April 11, 1895. Serial No. 545,361. (No model.)

*To all whom it may concern:*

Be it known that I, SYLVANUS D. WRIGHT, of New York city, in the county and State of New York, have invented a new and Improved Car-Fender, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved car-fender which is comparatively simple and durable in construction, very effective in operation, and arranged to automatically compensate for the up-and-down motion of the car to hold the gate at all times in proper relation to the track.

The invention consists principally of a fender-platform mounted to slide vertically and lock normally in an uppermost position, and a gate in front of the said platform and adapted to unlock the same to permit the latter to drop by its own weight into a position to receive an object in the path of the car.

The invention further consists of a compensating device of special construction to hold the gate always in proper relation to the track irrespective of the up-and-down motion of the car.

The invention also consists of certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

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.

Figure 1 is a perspective view of the improvement as applied. Fig. 2 is a sectional plan view of the improvement. Fig. 3 is an enlarged sectional side elevation of part of the fender-platform and the means for locking the same. Fig. 4 is a sectional side elevation of the platform-stop. Fig. 5 is a sectional side elevation of the improvement as applied on the line 5 5 of Fig. 2. Fig. 6 is a similar view of the same with the platform in a lowermost active position. Fig. 7 is a sectional end elevation of the same on the line 7 7 of Fig. 5. Fig. 8 is an enlarged sectional side elevation of part of the gate, and Fig. 9 is a sectional side elevation of part of the device for raising the platform.

The car A, on which the improvement is applied, supports on its truck A' a transversely-extending bar A<sup>2</sup>, on which are secured a se-

ries of vertically-extending guideways B, in which are fitted to slide vertically the T-irons C', forming part of the platform C, provided with the vertically-extending net portion C<sup>2</sup>, attached to and connecting the several T-irons C' with each other. The front end of the horizontal portion of the platform C carries a number of stops, each made of an upwardly-extending spring-arm C<sup>3</sup>, coiled on a front rod C<sup>4</sup>, and adapted to yield rearwardly when an object passes upon the fender-platform and to spring back into their normal position after the object has completely passed upon the platform, so as to prevent the object from again rolling off the platform. The stop shown in Fig. 4 is, however, the preferred form, and this stop is provided with an arm C<sup>5</sup>, pivoted on the rod C<sup>4</sup> and extending upwardly. A light spring holds the arm normally in this position and an outward swinging of the arm is prevented by the front of the pivot end butting on the top of the platform, so that the arm can swing inwardly when an object passes onto the platform, and it springs back to its normal position after the object has rolled or passed onto the platform.

The platform C is normally held in an uppermost position—that is, with its horizontal portion a suitable distance above the track—so as to be completely out of the way of switches, frogs, and other fixtures on the track.

In order to hold the platform C in an uppermost position and lock it therein, I provide a catch D, fulcrumed on the middle guideway B' and formed at its lower end with a forwardly-extending pin D', adapted to pass through an opening in the said guideway B' to engage a like opening in the T-iron C', mounted to slide in this guideway. As long as the catch D is in the position shown in Fig. 5 the gate C is held in an uppermost position; but when a swinging motion is given to the catch, as shown in Fig. 6, the platform C is unlocked and by its own weight slides downward in the vertical guideways B B' to the position shown in Fig. 6. The horizontal part of the platform C extends close to the track, and consequently an object in the path of the car is readily picked up by the platform. At this time the catch D, by moving



back to its normal position, engages a second opening in the upper end of the middle T-iron C' to lock the platform in a lowermost position, as indicated in Fig. 3.

5 The catch D is pivotally connected by a link E with an arm F', projecting upwardly from a shaft F<sup>2</sup>, forming part of a gate F, arranged in front of the platform C and preferably at the front end of the platform for the car A.  
 10 The shaft F<sup>2</sup> is journaled in suitable bearings A<sup>3</sup>, attached to the under side of the car-platform, and the outer ends of this shaft F<sup>2</sup> are bent downward to form guide-rods F<sup>3</sup>, on which are fitted to slide vertically the sleeves  
 15 F<sup>4</sup>, projecting upwardly from a transverse bar F<sup>5</sup>, forming the lower part or portion of the gate F. Now in order to hold the rod F<sup>5</sup> and its sleeves F<sup>4</sup> in position I provide one or two chains G, which are attached to the bar  
 20 F<sup>5</sup> and extend upwardly to pass over pulleys G', journaled on the shaft F<sup>2</sup>, as is plainly shown in the drawings. The inner ends of the chains G are connected by rearwardly-extending links G<sup>2</sup> with a bell-crank lever H,  
 25 fulcrumed in suitable bearings A<sup>4</sup>, attached to the under side of the car-platform, directly above the guideways B, as plainly shown in the drawings.

The bell-crank lever H is connected at its  
 30 horizontal arm by a link I with the middle guideway B' for the platform C, so that when the car-platform A swings upward at the front end a pull is exerted by the link I on the bell-crank lever H as the fulcrum of the  
 35 latter moves upward with the car-platform and because the lower end of the link I is stationary on the guideway B', supported from the truck A', which latter retains its relation to the track at all times. This swinging motion of the bell-crank lever H causes a forward  
 40 movement of the links G<sup>2</sup> and a downward movement of the chains G, so that the rod F<sup>5</sup> and the sleeves F<sup>4</sup> move downward at the time the car-platform A moves upward with  
 45 the shaft F<sup>2</sup> and the guide-rods F<sup>3</sup>.

The proportion of the several parts described is such that the rod F<sup>5</sup> retains its position relative to the track at the time the platform of the car moves upward. In case  
 50 the car A is loaded at the front end and moves downward nearer to the track, then a reverse motion of the parts described takes place, as the bell-crank lever H is then swung in an inverse direction to the action of the link I,  
 55 and consequently a pull is exerted rearwardly on the links G<sup>2</sup> and chains G to draw the rod F<sup>5</sup> with its sleeves F<sup>4</sup> upward on the guide-rods F<sup>3</sup> in the same proportion as the forward end of the car-platform moves downward.  
 60 Thus by the arrangement described the gate F always retains a proper position relative to the track, irrespective of the up-and-down motion of the car, so that an object in the path of the car is not liable to pass under the gate  
 65 without actuating the latter in a rearward direction, as shown in Fig. 6, to actuate the catch D, so as to trip the gate F, as previously

explained. When the car has come to a standstill and the object struck is removed from the platform C, the latter is again lifted into an  
 70 uppermost position and locked therein by the catch D.

In order to prevent the sleeves F<sup>4</sup> from accidentally moving upward on the rods F<sup>3</sup> when a round object, for instance, strikes the  
 75 rod F<sup>5</sup>, I provide the said rods F<sup>3</sup>, on the rear, with teeth F<sup>6</sup>, adapted to be engaged by a lug F<sup>7</sup> on the sleeves F<sup>4</sup>, (see Fig. 8,) so that a slight rearward movement of the rod F<sup>5</sup> will throw the lug into engagement with one of  
 80 the teeth and prevent the rod F<sup>5</sup> and its sleeves from moving upward instead of rearward to trip the platform. The lug F<sup>7</sup> is normally out of engagement with the teeth F<sup>6</sup>, owing to the forward pull of the chains G. 85

Now in order to conveniently raise the said platform C, I provide the middle T-irons C' with a lug C<sup>5</sup>, (see Figs. 7 and 9,) in which is fitted to slide a bolt J, formed at its lower and upper ends with heads J<sup>2</sup> J<sup>3</sup>. The upper head  
 90 J<sup>3</sup> is engaged by the inner end of a lever K, extending transversely and pivoted at or near its middle at K' in a bracket secured to the under side of the car. The outer end of the lever K is formed with a handle under the  
 95 control of the operator. Now when the gate F is in an uppermost position, as indicated in Figs. 1 and 5, the lower head J<sup>2</sup> of the bolt J is a suitable distance below the lug C<sup>5</sup>, so that when the gate F is tripped by the catch  
 100 D, as previously explained, and shown in Fig. 6, then the platform C slides downward without being hindered by the bolt J, as the lug C<sup>5</sup> does not come in contact with the head J<sup>2</sup> until the platform is in its lowermost position  
 105 and locked in place by the catch D.

The form of the horizontal part of the platform C is preferably that shown in Figs. 1 and 2—that is, its widest part at the rear, so as to project somewhat beyond the track-rails,  
 110 while the front portion of the said platform is narrower and is adapted to rest on the track-rails when the platform is in a lowermost position.

Having thus fully described my invention, 115 I claim as new and desire to secure by Letters Patent—

1. A car-fender, comprising vertically-disposed guideways attached to the car-truck, a platform having vertical T-irons fitted to  
 120 slide in the said guideways, a catch pivoted on one of the guideways, and adapted to engage one of the said T-irons and lock the platform in an uppermost position, and a swinging gate in front of the platform and  
 125 connected with the said catch, to cause the latter to disengage the platform at the time the gate is swung rearward by an object striking it, substantially as shown and described.

2. A car-fender, provided with a gate comprising downwardly-extending guide-rods, a transverse rod having sleeves fitted to slide  
 130 in the said guide-rods, a chain connected with the said transverse rod, a bell-crank lever



connected with the said chain and fulcrumed on the car-platform, and a link connected with the said bell-crank lever and pivotally connected with part of the car-truck, substantially as shown and described.

3. A car-fender, provided with a platform having at its forward part a series of independent spring-actuated stops normally held in a raised position but adapted to swing rearwardly to permit the passage of an obstruction over them, substantially as set forth.

4. In a car-fender, the combination of a vertically-movable platform, a locking de-

vice to engage and hold the same in an elevated position, means for releasing said locking device, whereby the fender is permitted to fall, a bolt having sliding engagement with said fender and having a head adapted when the bolt is moved vertically to engage and move the said platform to its elevated position, and a lever connected to and adapted to operate said bolt, substantially as set forth.

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Witnesses:

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