

(No Model.)

2 Sheets—Sheet 1.

J. R. SEATON.
FENDER OR GUARD FOR TRAMWAY CARS.

No. 598,538.

Patented Feb. 8, 1898.

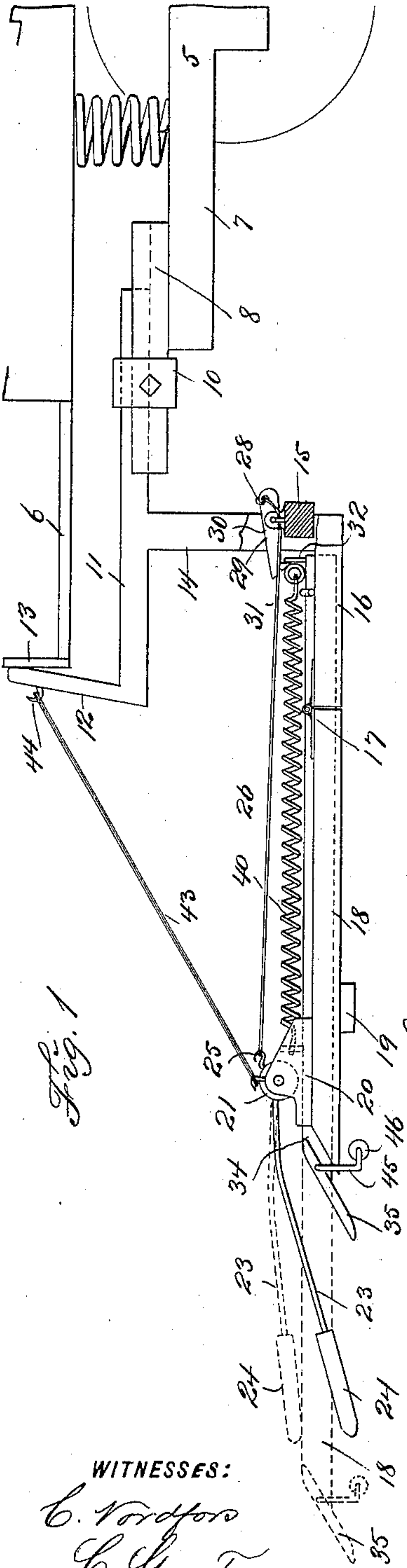
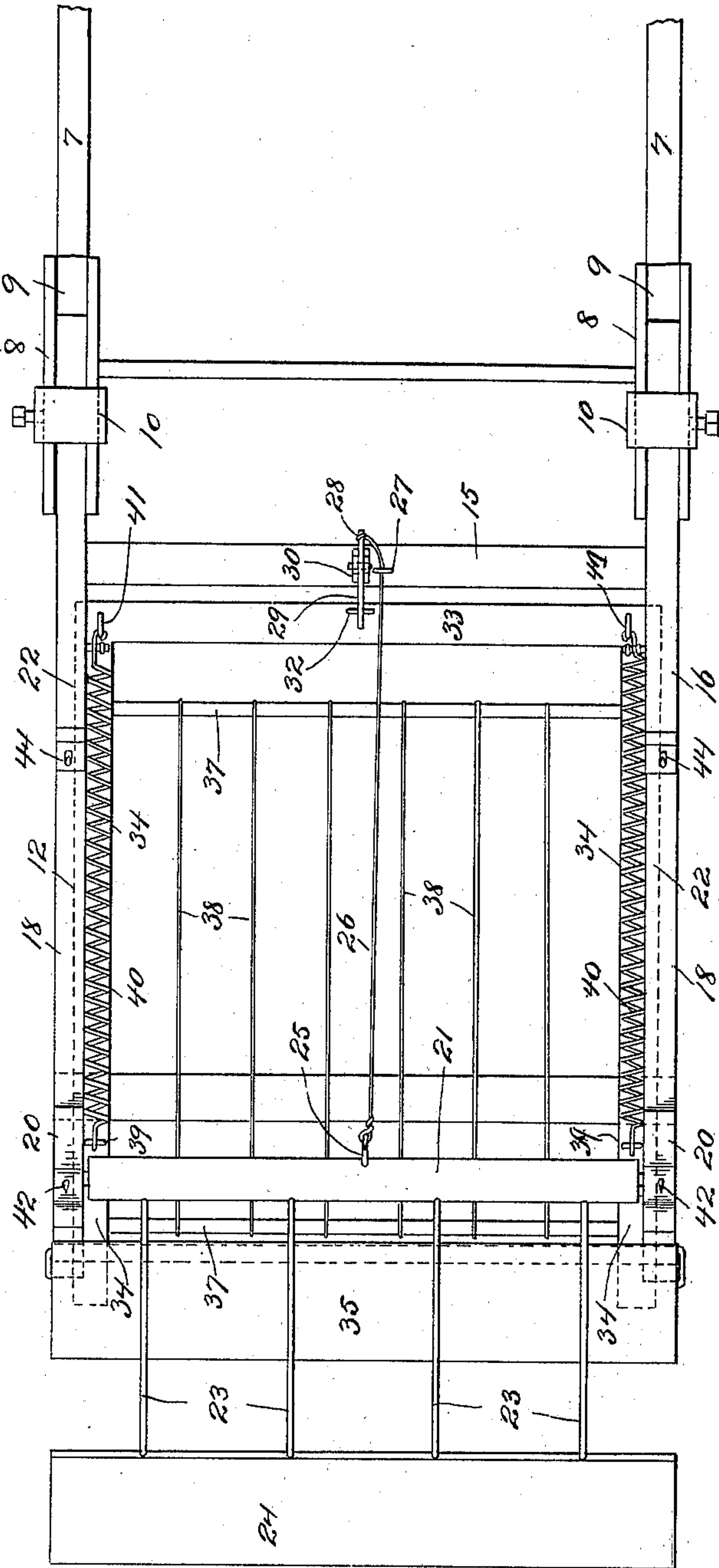


Fig. 2.



WITNESSES:

C. Vordor
C. Gersh

INVENTOR

John Rhodes Seaton.

BY

Edgar Tate & Co.

ATTORNEYS.

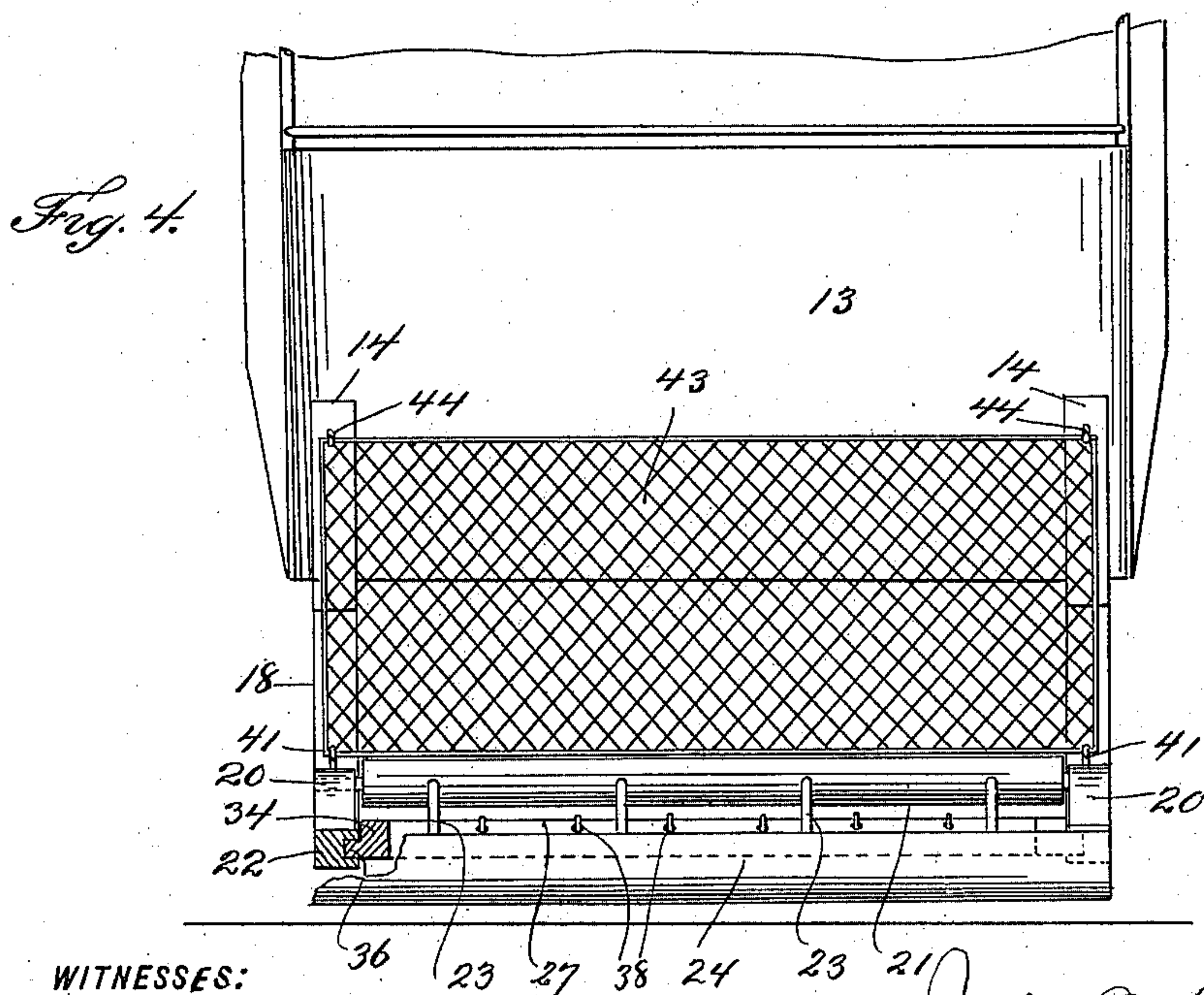
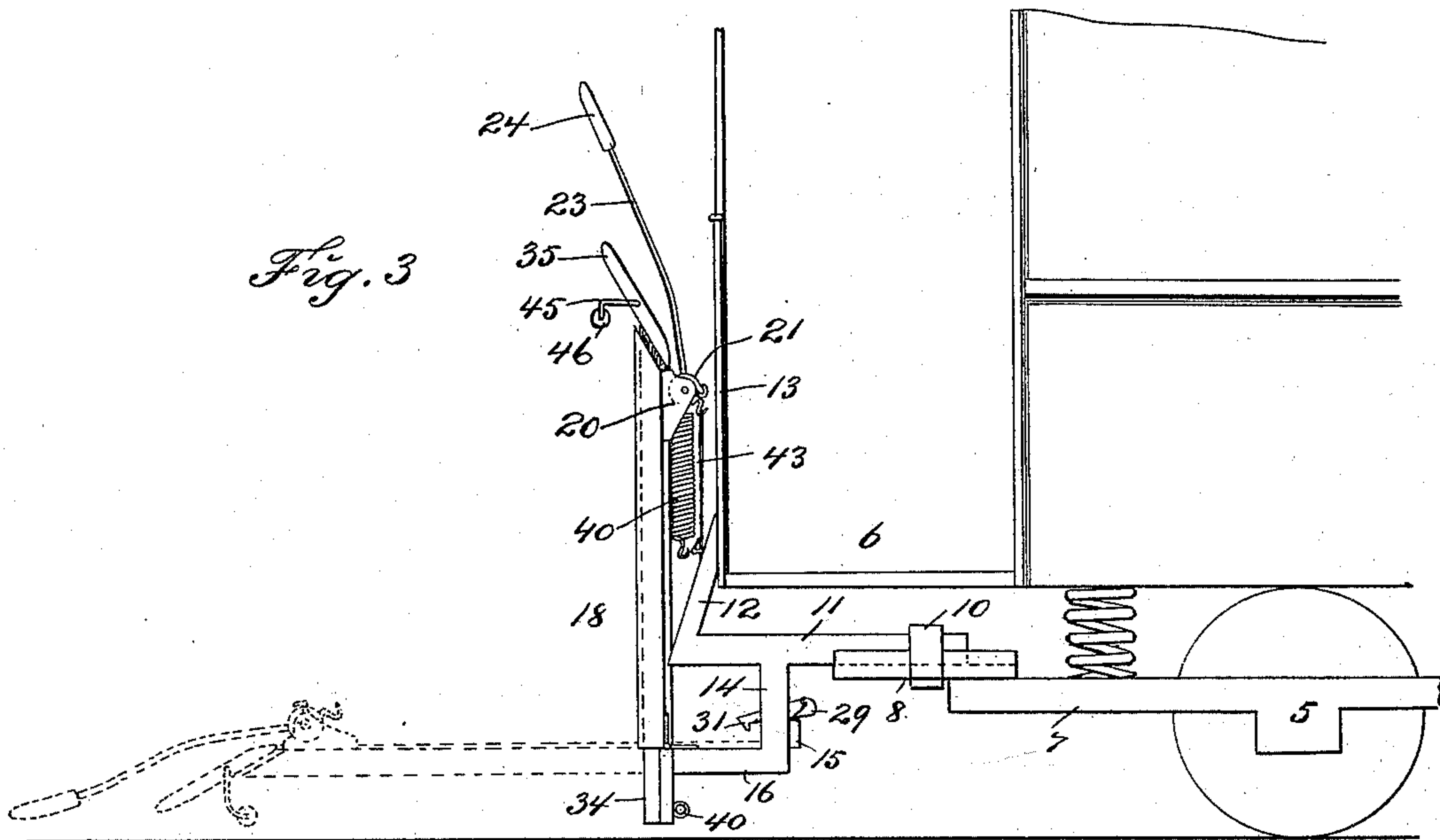
(No Model.)

2 Sheets—Sheet 2.

J. R. SEATON.
FENDER OR GUARD FOR TRAMWAY CARS.

No. 598,538.

Patented Feb. 8, 1898.



WITNESSES:

C. Vondra
C. Gerst

INVENTOR

John Rhodes Seaton
BY
Edgar Tate & Co.
ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOHN RHODES SEATON, OF COHOES, NEW YORK.

FENDER OR GUARD FOR TRAMWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 598,538, dated February 8, 1898.

Application filed August 10, 1897. Serial No. 647,749. (No model.)

To all whom it may concern:

Be it known that I, JOHN RHODES SEATON, a citizen of the United States, residing at Cohoes, in the county of Albany and State of New York, have invented certain new and useful Improvements in Fenders or Guards for Tramway-Cars, of which the following is a full and complete specification, such as will enable those skilled in the art to which it ap-
10 pertains to make and use the same.

This invention relates to fenders or guards for tramway-cars; and the object thereof is to provide an improved device of this class by means of which the serious and sometimes
15 fatal accidents which frequently result from a person or object being struck by a car when in motion will be avoided; and with this and other objects in view the invention consists in the device hereinafter described and claimed.

20 The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of my improvement are designated by the same numerals of reference
25 in each of the views, and in which—

Figure 1 is a side view of my improved fender or guard and showing the method of connecting the same with a car, part of the construction being shown in section; Fig. 2, a
30 plan view of the fender or guard detached from the car; Fig. 3, a view similar to Fig. 1, showing the parts of the fender or guard in a different position; and Fig. 4, a front view thereof as shown in Fig. 1.

35 In the drawings forming part of this specification I have shown at 5 a part of the truck of a car and at 6 one of the end platforms thereof, and the truck 5 is provided at each side with a projection or arm 7, and mounted
40 thereon and secured thereto in any desired manner is a supplemental arm 8, in the top of which is formed a longitudinal groove 9, and mounted on each of the supplemental arms 8 is a sleeve or keeper 10.

45 My improved fender or guard consists of a supporting-frame composed of horizontal bars 11, the inner ends of which are placed in the grooves 9 of the supplemental arms 8 and are adapted to slide therein and are held in
50 place by the sleeves or keepers 10, and the front ends of said bars 11 are curved up-

wardly, as shown at 12, in front of the dashboard 13, and said bars 11 are provided centrally with hangers 14, which are connected
55 at or near the bottom thereof by a cross-bar 15, and the lower ends of which are provided with forwardly-directed extensions 16.

My improved fender or guard consists of a main and a supplemental frame, and the main frame is hinged to the forwardly-di-
60 rected extensions 16 of the hangers 14, as shown at 17, and said main frame of the fender or guard consists of side bars 18, which are connected at their forward ends by a
65 cross-bar 19, and said side bars 18 are provided on their upper sides and at or near their forward ends with bearings 20, in which is mounted a shaft 21, and the said side bars
70 of the main frame of the fender or guard and the outwardly-directed extensions 16 of the hangers 14 are provided with grooves 22, in which the supplemental fender or guard
75 frame is mounted and in which said supplemental frame is free to slide, these grooves being shown in dotted lines in Fig. 2 and one of them being shown in full lines in Fig. 4.

The shaft 21 is provided with forwardly-directed rods 23, any desired number of which may be employed, and connected with the
80 forward ends thereof is a cross-head 24, and these rods in the normal position thereof project forwardly and downwardly, as shown in Fig. 1, and said arms and said cross-head
85 constitute a buffer, which will be hereinafter described.

Connected with the shaft 21 is a hook 25, with which is connected a rope, cord, chain, or cable 26, which is carried backwardly and
90 passed through a keeper 27, secured to the cross-bar 15, and which is connected with the hangers 14, and the end of said cable 26 is connected at 28 with a lever 29, which is
95 pivoted to the cross-bar 15 at 30 and the forward end of which is provided with a hook 31, which is adapted to operate in connection with a catch 32, secured to the rear end cross-
bar 33 of the supplemental fender or guard frame.

The frame of the supplemental fender or guard consists of the rear cross-bar 33, side
100 bars 34, which are connected therewith and move in the grooves 22 in the sides of the

main fender or guard frame, and a cross-head consisting of a plate 35, which is secured to the front ends of said side bars 34.

The side bars 34 of the supplemental fender or guard frame are provided with longitudinal ribs or flanges 36, which move in the grooves in the side bars 18 of the main fender or guard frame, and said supplemental fender or guard frame is also provided with cross-rods 37, which are connected by wires 38, any desired number of which may be employed.

Connected with the forward ends of the sides 18 of the main fender or guard frame are hooks, staples, or keepers 39, with which are connected strong contractile spiral springs 40, the rear ends of which are connected with the hooks, staples, or keepers 41, which are secured to or formed on the rear cross-bar 33 of the supplemental fender or guard frame, and the object of these keepers is to project the supplemental fender or guard frame in the operation of the device, as hereinafter described, and I also connect with the forward ends of the main fender or guard frame, and preferably with the bearings 20, in which the shaft 21 is mounted, hooks or similar devices 42, with which is connected a network 43, composed of any desired material, this network being clearly shown in Figs. 1 and 4, but being removed in Fig. 2, and this network is also connected by means of hooks or similar devices 44, secured thereto. The forward end of the supplemental fender or guard frame is also provided at each side with hangers 45, which support a transverse roller 46, which is intended to come in contact with the ground or the rails of the track under certain conditions and especially when the platform of the car is depressed.

The operation will be readily understood from the foregoing description when taken in connection with the accompanying drawings and the following statement thereof.

Supposing the parts of the fender or guard to be in the position shown in full lines in Fig. 1 and the car to be in motion, if a person or object be struck by the buffer 24 said buffer will be borne downwardly slightly by reason of the rods 23 being composed of spring metal. The shaft 21 will be also slightly turned forwardly, the rear end of the lever 29 will be pulled downwardly and detached from the catch 32, and the supplemental fender or guard frame will be released and will be projected forwardly into the position shown in dotted lines in Fig. 1 by the springs 40. As the supplemental fender or guard frame is projected forwardly the cross-head 35 thereof, which is downwardly and forwardly inclined, will strike the cross-head 24 of the buffer, and said buffer will be slightly lifted, and the person or object will be raised and will fall backwardly upon the netting 43 and will be held thereon, and the passing of said person or object beneath the car will be prevented.

When desirable, the springs 40 may be disconnected from their attachment at 41 to the supplemental fender or guard. The supplemental fender or guard may then be moved forward beyond the hinges of the main fender or guard at 17, and the entire apparatus may be folded vertically in front of the dashboard, as shown in Fig. 3, and the supplemental fender or guard frame will drop downwardly slightly below the extensions 16 of the hangers 14 and will engage the outer end of the extensions 16 of the hangers 14 and lock the apparatus in the upright position shown in said figure, the downward movement of the supplemental fender or guard frame being limited by the cross-head 35 thereof, as will be readily understood.

It will be apparent that this apparatus may be connected with either end of the car, the entire device including the bars 11, the hangers 14, connected therewith, being detachable and interchangeable from one end of the car to the other whenever desired.

My improvement is simple in construction and operation and perfectly adapted to accomplish the result for which it is intended, and many changes in and modifications of the construction herein described may be made without departing from the spirit of my invention or sacrificing its advantages.

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

1. A fender or guard for tramway-cars, consisting of a hanger or support connected with the car and provided with forwardly-directed extensions at the opposite sides thereof, a main fender or guard frame hinged to said extensions, a spring-operated supplemental fender or guard frame mounted in said main fender or guard frame, and adapted to be projected forwardly, a buffer connected with a shaft mounted over the forward end of the main fender or guard frame and projecting in front thereof, a cable or similar device connected with said shaft and passing backwardly over the main fender or guard frame, and connected with a lever which is supported by said hanger, said lever being adapted to operate to hold the supplemental fender or guard within the main fender or guard frame, substantially as shown and described.

2. A fender or guard for tramway-cars, consisting of a hanger or support connected with the truck and provided with forwardly-directed extensions at the opposite sides thereof, a main fender or guard frame hinged to said extensions, a spring-operated supplemental fender or guard frame mounted in said main fender or guard frame, and adapted to be projected forwardly, a buffer connected with a shaft mounted over the forward end of the main fender or guard frame and projecting in front thereof, a cable or similar device connected with said shaft and passing backwardly over the main fender or guard

frame, and connected with a lever which is supported by said hanger, said lever being adapted to operate to hold the supplemental fender or guard within the main fender or guard frame, said lever being adapted to be operated by said buffer, and said main fender or guard frame being adapted to fold vertically, substantially as shown and described.

3. A fender or guard for tramway-cars, consisting of a support which is adapted to be connected with the truck of the car, and which is provided with hangers having forwardly-directed extensions at each side, a main fender or guard frame hinged to said extensions, a supplemental spring-operated fender or guard frame mounted in said main fender or guard frame, and adapted to be projected therefrom in front thereof, means for holding said supplemental fender or guard within the main fender or guard frame, and adapted to be operated when a person or object is struck, said main fender or guard frame being adapted to be folded vertically in front of the dashboard, and to be locked in such position by the supplemental fender or guard frame, substantially as shown and described.

4. A fender or guard for tramway-cars, consisting of an attachment which is adapted to be secured to the car, and which is provided with hangers, a main fender or guard frame hinged to said hangers, and adapted to be folded backwardly, a supplemental fender or guard frame mounted in said main fender or guard frame and adapted to be projected in front thereof, said supplemental fender or guard frame being provided with springs

which are secured thereto, and to the forward end of the main fender or guard frame, a buffer pivotally supported above the main fender or guard frame, and projecting in front thereof, and devices connected therewith to release the supplemental fender or guard frame, substantially as shown and described.

5. A fender or guard for tramway-cars, consisting of an attachment which is adapted to be secured to the car, and which is provided with hangers, a main fender or guard frame hinged to said hangers, and adapted to be folded backwardly, a supplemental fender or guard frame mounted in said main fender or guard frame and adapted to be projected in front thereof, said supplemental fender or guard frame being provided with springs which are secured thereto, and to the forward end of the main fender or guard frame, a buffer pivotally supported above the main fender or guard frame, and projecting in front thereof, and devices connected therewith to release the supplemental fender or guard frame, said main fender or guard frame being adapted to be folded vertically in front of the dashboard, and to be locked in the raised position by said supplemental or guard frame, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 6th day of August, 1897.

JOHN RHODES SEATON.

Witnesses:

D. A. ROSS,

W. S. CLARK.