

C. D. B. FISK & D. R. SMITH.

CAR FENDER.

APPLICATION FILED DEC. 5, 1908.

Patented Nov. 16, 1909.

2 SHEETS—SHEET 1.

940,588.

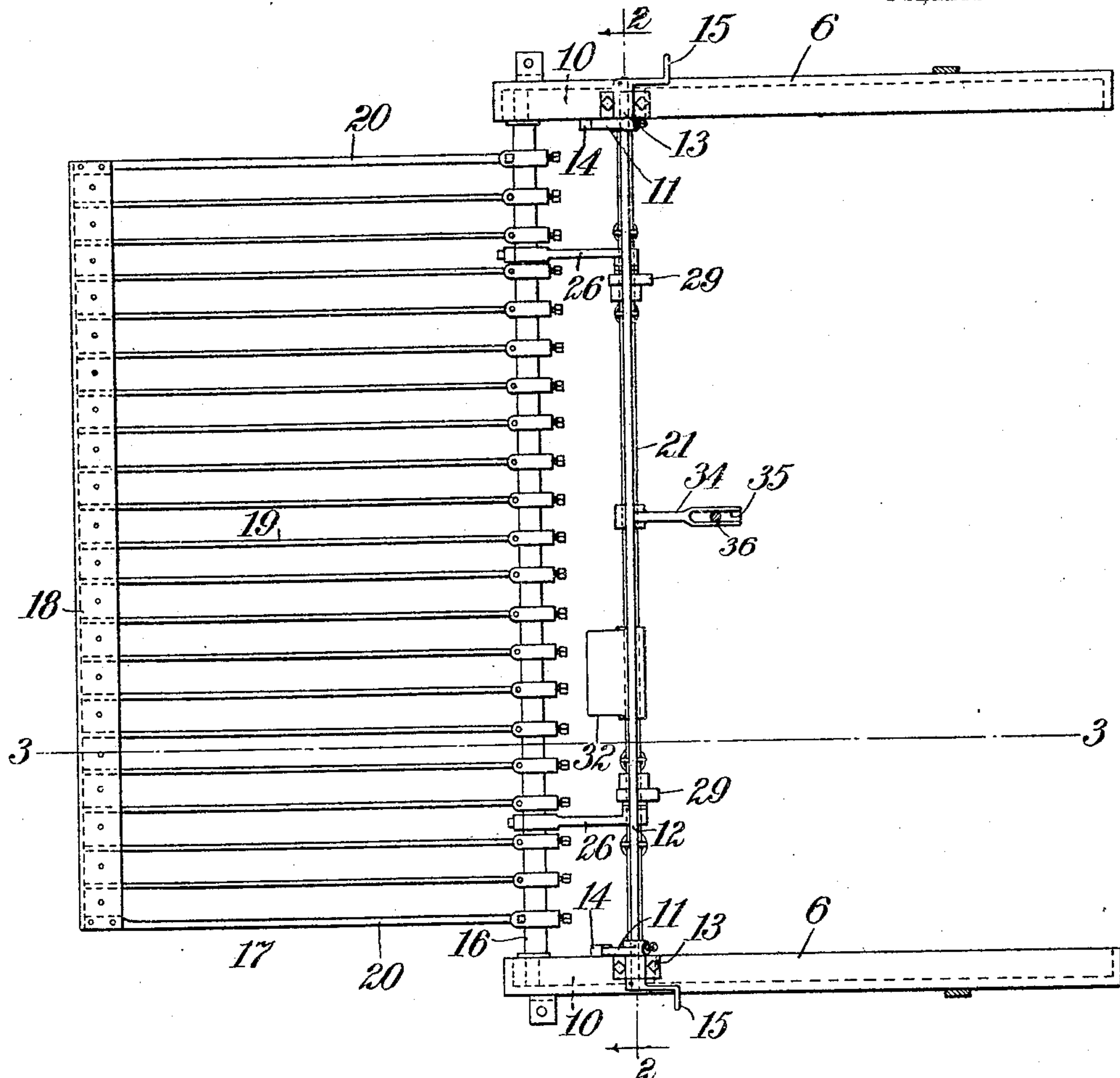


Fig. 1.

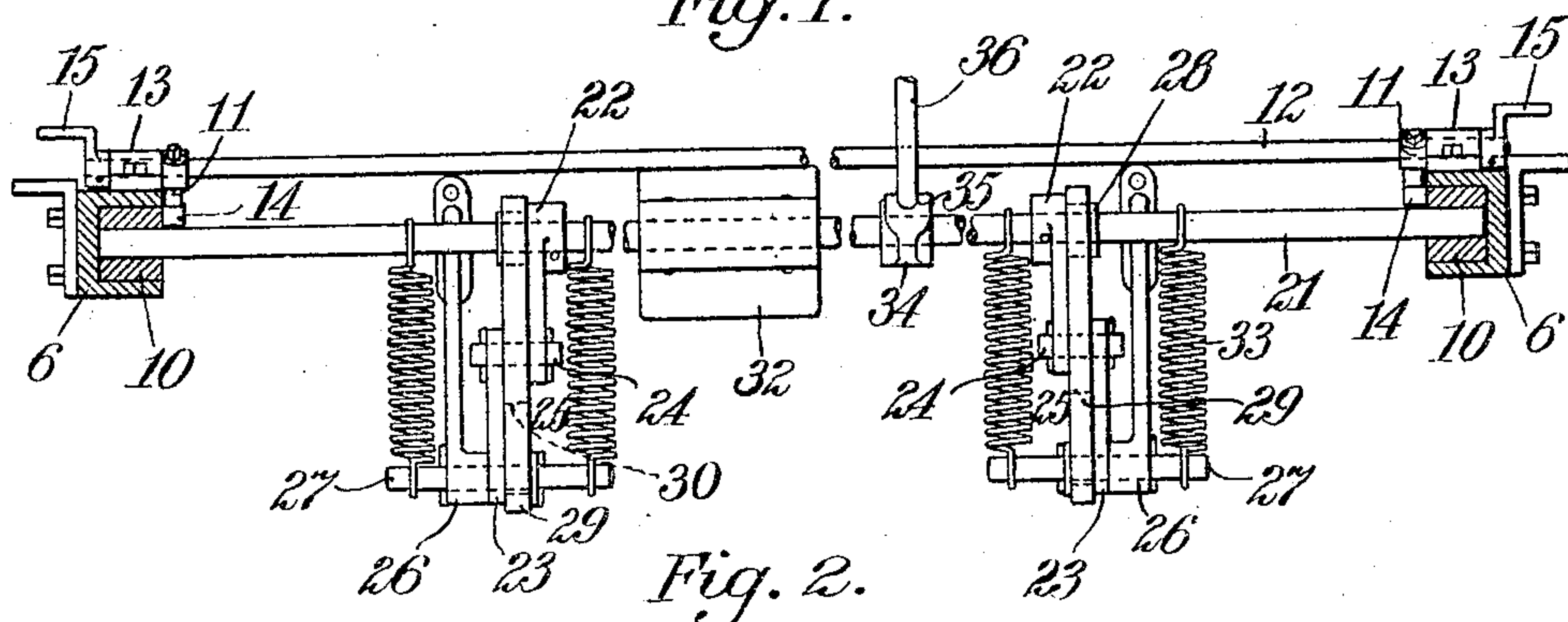


Fig. 2.

Witnesses:

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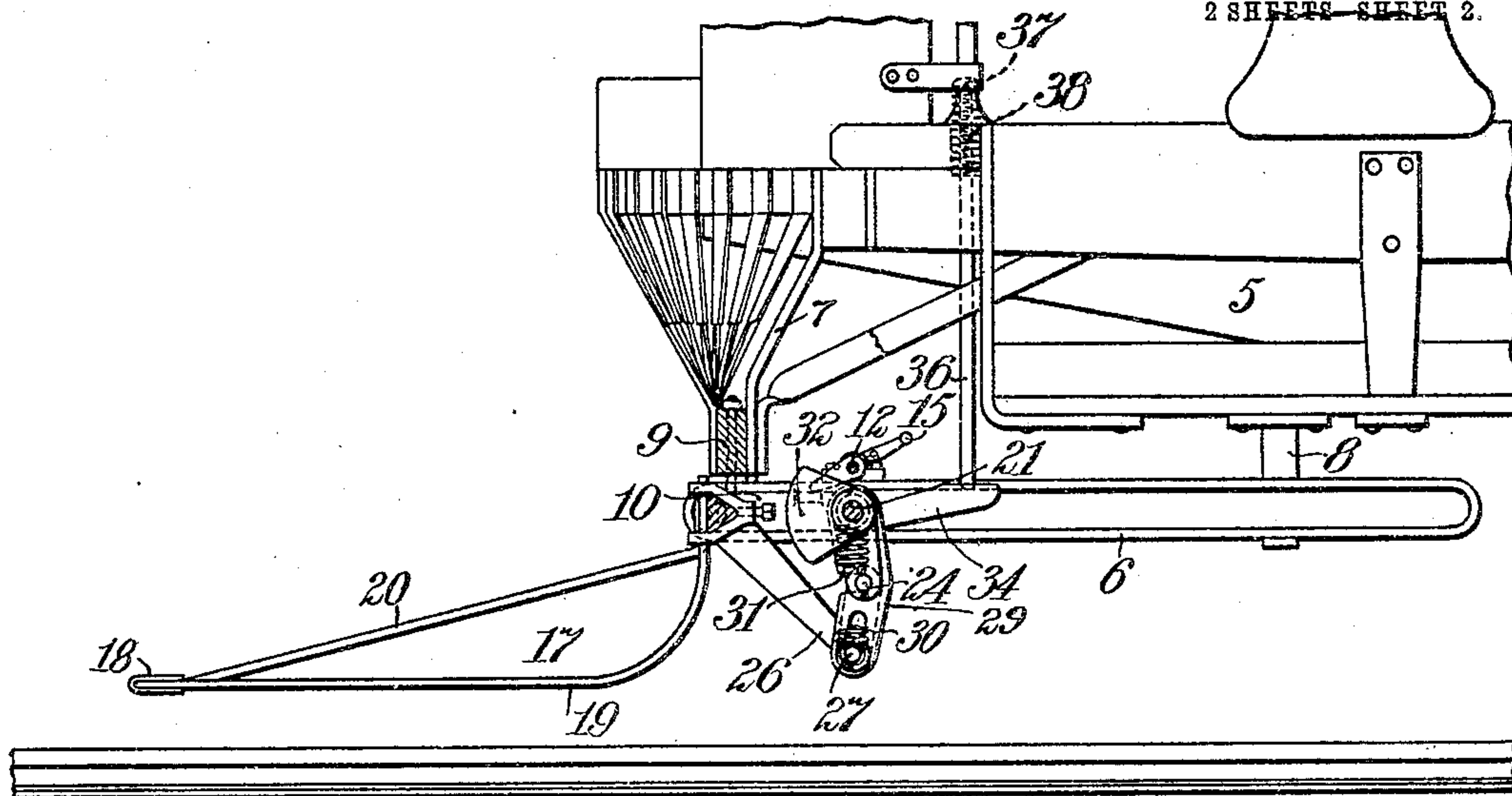


Fig. 3.

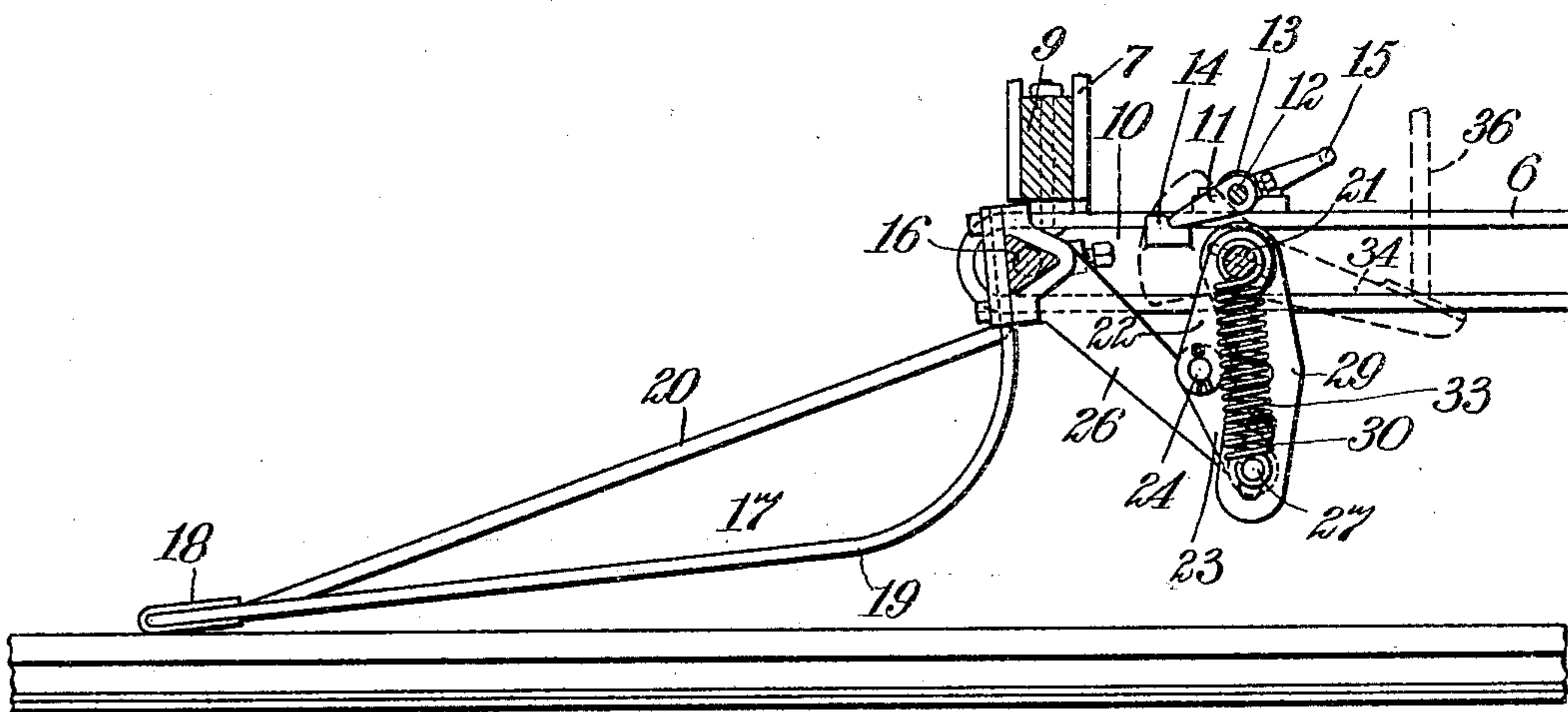


Fig. 4.

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UNITED STATES PATENT OFFICE.

CHARLES D. B. FISK AND DUTEE R. SMITH, OF BOSTON, MASSACHUSETTS.

CAR-FENDER.

940,588.

Specification of Letters Patent.

Patented Nov. 16, 1909.

Application filed December 5, 1908. Serial No. 466,127.

To all whom it may concern:

Be it known that we, CHARLES D. B. FISK and DUTEE R. SMITH, citizens of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Car-Fenders, of which the following is a specification.

This invention relates to improvements in car fenders and the object is to provide a simple, durable fender which may be easily and quickly operated by the motorman to drop the same to the ground to pick up a person in danger of being struck by the car. The invention consists in certain novel features of construction set forth in the following specification and particularly pointed out in the appended claims.

Referring to the drawings: Figure 1 is a plan of our improved car fender. Fig. 2 is a sectional view taken on line 2—2 of Fig. 1, looking toward the left. Fig. 3 is a longitudinal sectional view taken on line 3—3 of Fig. 1, showing the fender in its normal position ready for use, a portion of the car being shown in elevation. Fig. 4 is an enlarged sectional view showing the fender in its dropped position.

Like numerals refer to like parts throughout the several views of the drawings.

In the drawings, 5 is a car of any usual or desired construction beneath which two guides 6, 6 which are channel-shaped in cross section are rigidly supported in any desired manner as by means of brackets 7 and 8, there being a rigid bar or beam 9 extending transversely of said guides and secured thereto in any suitable manner. In the guides 6, 6, respectively, are located slidable blocks 10, 10 which are normally held in the position shown in the drawings by two locking arms 11, 11 secured to a rock shaft 12 journaled in suitable bearings 13, 13 on the guides 6, 6, respectively, said arms normally engaging lugs 14, 14, thereby locking the blocks 10, 10 against rearward movement, that is, against movement toward the right, as shown in Figs. 1, 3 and 4.

Secured to opposite ends, respectively, of the rock shaft 12 are cranks 15, 15 by means of which said shaft may be rocked to move the arms 11, 11 out of engagement with the lugs 14, 14, respectively, thereby permitting the sliding blocks 10, 10 to be moved rearwardly. Journaled in the blocks 10, 10 is a rock shaft 16 to which is secured a frame 17

which may be of any desired construction and which in this instance comprises a transverse front rod or plate 18 to which are secured a plurality of rods 19 which extend rearwardly and thence upwardly, being secured to the rock shaft 16 in any suitable manner. At each side of the frame 17 there is a rod 20 which is secured to the transverse front rod 18 and extends diagonally upward, being secured in any suitable manner to the rock shaft 16.

Journaled in the blocks 10, 10 is a second rock shaft 21 to which two arms 22, 22 are fast, said arms being pivotally connected to links 23, 23, respectively, by means of pivotal pins 24, said arms and said links constituting two toggles 25, 25. The lower ends of the links 23, 23, respectively, are pivotally connected to two arms 26, 26 by means of pivotal pins 27, 27 extending therethrough, said arms being fast to the rock shaft 16. The arms 22, 22 are provided, respectively, with hubs 28, 28 on which are journaled locking devices 29, 29, each of which consists of a plate interposed between the arm 22 and the link 23 and being provided with a substantially vertical slot 30 and a horizontal slot 31, the former of which receives the pivotal pin 27 while the latter is adapted to receive the pivotal pin 24.

When the fender is in its raised or normal position, the pins 24 abut against the right hand ends of the slots 31, respectively, and the pins 27 are adjacent to the lower ends of the slots 30, respectively, as shown in Fig. 3, it being observed that the toggle when in this position is not straight, but on the contrary is bent backwardly, that is, the axes of the pins 24 are at the right of a plane containing the axes of the pins 27 and the rock shaft 21 and thus the frame 17 is securely locked in its raised position. To hold the toggles 25 in this position there is provided a weight 32 fast to the rock shaft 21 and tending to rotate said rock shaft in the proper direction to maintain the pins 24 at the right hand ends of the slots 31.

Two pairs of helical extension springs 33 are connected at their lower end to the pins 27 and at their upper end to the rock shaft 21, said springs also normally tending to hold the pins 24 at the right hand ends of the slots 31, respectively. Fast to the rock shaft 21 is a rearwardly extending arm 34 provided with a groove or depression 35 in which is normally located the lower rounded

end of an actuating rod 36 which rod terminates at its upper end in a foot button 37, said rod extending through the floor of the car platform at any convenient point so that the same may be depressed by the foot of the motorman. A helical compression spring 38 surrounding the rod 36 below the foot button 37 is arranged to hold the actuating rod 36 lightly in contact with the arm 34.

Having thus specifically described the fender, we will proceed to describe its general operation. Assuming the parts to be in the position shown in Figs. 1 and 3, and with the car traveling toward the left, should a person be on the track and in danger of being struck by the car the motorman drops the fender by depressing the foot button 37 and the rod 36, in descending, acts through the arm 34 to rock the shaft 21 on its pivot, thereby carrying the toggles 25 forwardly from the position shown in Fig. 3 toward the position shown in Fig. 4. As soon as the axes of the pins 24 have passed to the left of a plane containing the axes of the rock shaft 21 and pins 27, the weight of the frame 17 combined with the action of the springs 33 instantly rocks the frame 17 about the axis of the rock shaft 16 into the position shown in Fig. 4, so that the front transverse rod 18 rests upon the ground, it being observed that during this movement the arms 26 swing upwardly and the pins 27 travel upwardly in the slots 30 and that the toggle locking devices 29 are swung rearwardly thereby. Only a very slight pressure upon the foot button 37 is required to actuate the toggles and as soon as the axes of the pins 24 have passed to the left of a plane containing the axes of the rock shaft 21 and pins 27 the dropping of the frame 17 is instantaneous, so that said frame picks up the person and prevents him from passing beneath the wheels of the car. When it is desired to move the fender beneath the car when out of use, the arms 11 are actuated, as hereinbefore described, to release the blocks 10 so that the entire mechanism may then be pushed backward, said blocks sliding in the guides 6 to the rear ends thereof.

Having thus described our invention, what we claim and desire by Letters Patent to secure is:

1. A car fender having in combination, a frame pivoted to swing about a horizontal axis, a toggle adapted to positively lock said frame normally raised above the ground, and means adapted to be operated by the motorman to actuate said toggle to release said frame and allow the same to drop.

2. A car fender having in combination, a frame pivoted to swing about a horizontal axis, a toggle comprising two pivotally connected members, one of which is pivotally connected to said frame, said members being normally so disposed as to positively lock said frame raised above the ground, and means adapted to be operated by the motorman to actuate said toggle to release said frame and allow the same to drop.

3. A car fender having in combination, a frame pivoted to swing about a horizontal axis, a toggle comprising two pivotally connected members normally so disposed as to positively lock said frame raised above the ground, an arm connected to one of said members, and a device adapted to be operated by the motorman to rock said arm about its axis to actuate said toggle to release said frame and allow the same to drop.

4. A car fender having in combination, a frame pivoted to swing about a horizontal axis, a toggle comprising two pivotally connected members normally so related as to positively lock said frame raised above the ground, a weight connected to said toggle to hold said members in such normal relation, and means adapted to be operated by the motorman to actuate said toggle to release said frame and allow the same to drop.

5. A car fender having in combination, a frame pivoted to swing about a horizontal axis, a toggle adapted to hold said frame normally raised above the ground, means adapted to be operated by the motorman to actuate said toggle to release said frame and allow the same to drop, and a spring connected to said toggle adapted to assist said frame in dropping.

6. A car fender having in combination, a frame pivoted to swing about a horizontal axis, a toggle comprising two pivotally connected members normally so related as to hold said frame raised above the ground, a spring connected to said members and adapted to hold the same in such normal relation, and means adapted to be operated by the motorman to actuate said toggle to release said frame and allow the same to drop, said spring being arranged to assist said frame in dropping.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

CHARLES D. B. FISK.
DUTEE R. SMITH.

Witnesses:

LOUIS A. JONES,
SADIE V. MCCARTHY.