

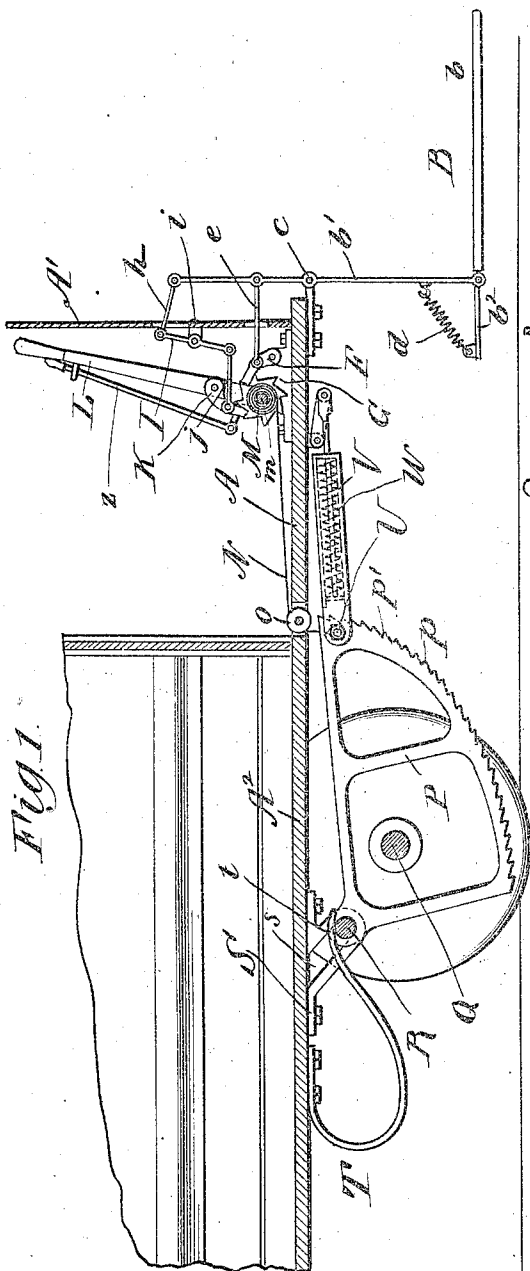
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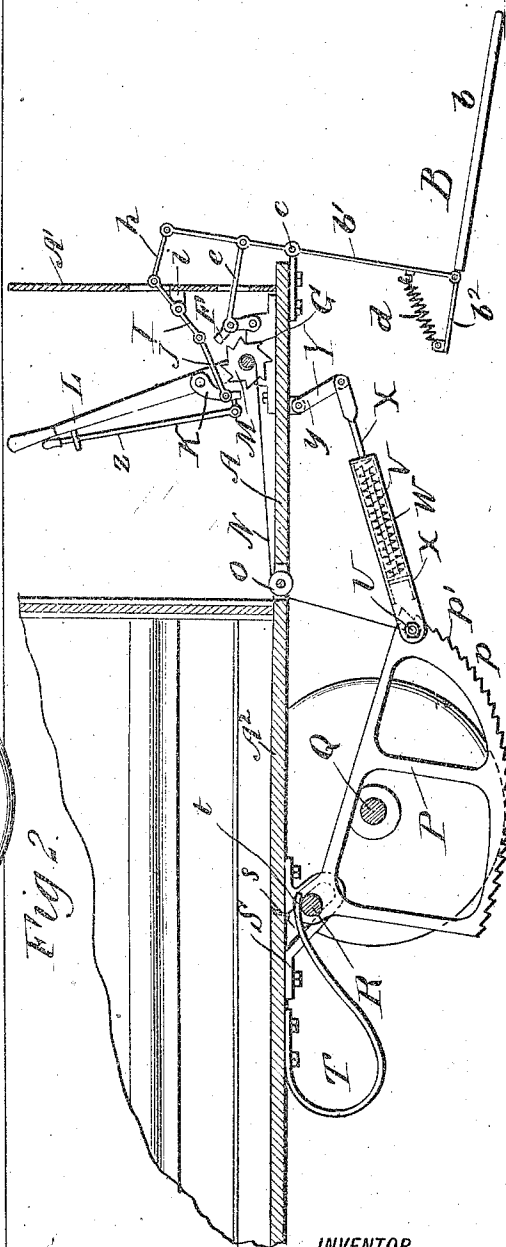
I. BENJAMINS.
CAR FENDER AND STOP.

No. 584,452.

Patented June 15, 1897.



WITNESSES:
O. C. Hinge.
M. G. M. C. C.



INVENTOR
Israel Benjamin

BY
Charles Deemer & Co.
ATTORNEYS.

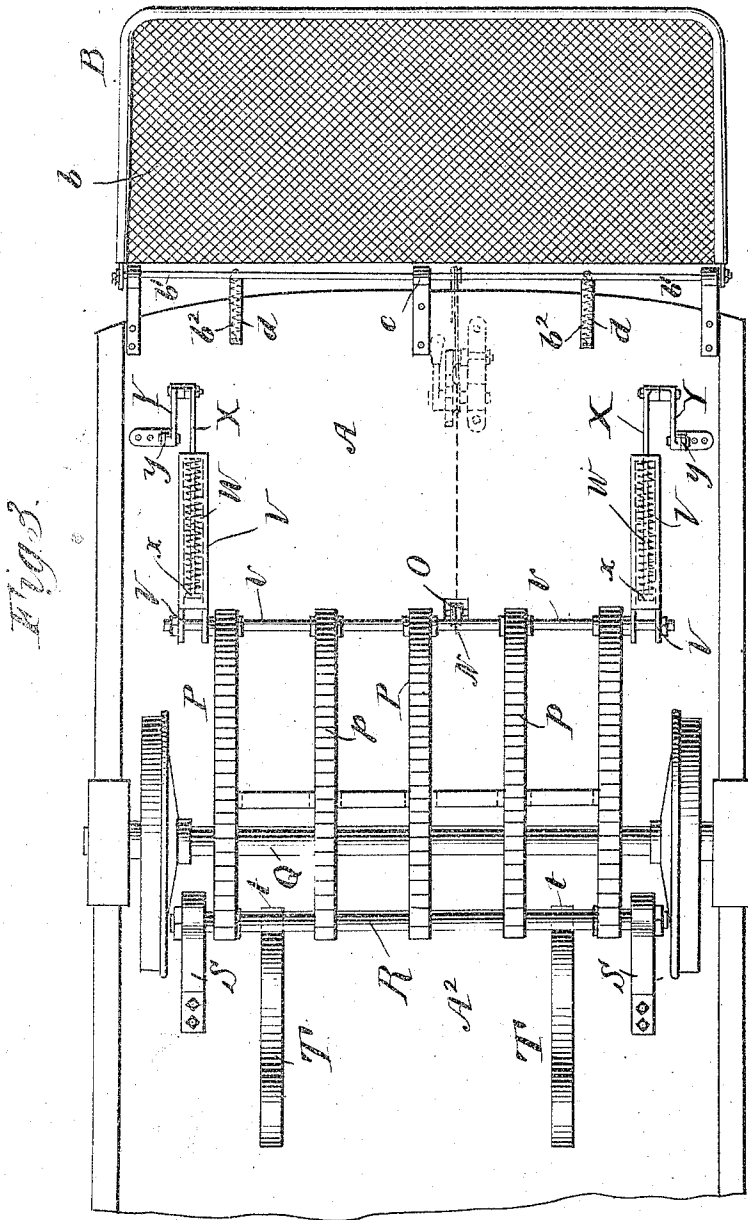
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O. C. Winge.
H. & A. Chan.

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Israel Benjamin
BY
Charles Deane
ATTORNEYS.

UNITED STATES PATENT OFFICE.

ISRAEL BENJAMINS, OF NEW YORK, N. Y., ASSIGNOR OF ONE-THIRD TO
BARNET J. SOKOL, HERMAN J. NOVICK, SAMUEL A. LEWIN, HENRY
SALANT, JACOB GLASS, ABRAHAM NADEL, JOSEPH E. ERON, CHARLES
A. SPIVACK, AND SAUL LEVY OF SAME PLACE.

CAR FENDER AND STOP.

SPECIFICATION forming part of Letters Patent No. 584,452, dated June 15, 1897.

Application filed September 17, 1896. Serial No. 606,076. (No model.)

To all whom it may concern:

Be it known that I, ISRAEL BENJAMINS, a citizen of the United States, and a resident of New York city, county of New York, and State of New York, have invented certain new and useful Improvements in Car Fenders and Stops, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters of reference indicate corresponding parts.

This invention relates to car fenders and stops; and it has for its object to provide a simple and improved combined fender and stop mechanism in which the stop mechanism will be simultaneously and automatically operated by the fender when the latter comes in contact with any object.

A further object of my invention is to provide a simple and improved fender and stop mechanism which will possess advantages in point of inexpensiveness, ease of operation, simplicity, positive and automatic operation, and which is adapted to be readily applied to any type of car.

In the drawings, Figure 1 is a side elevation, partly in section, showing the fender and stop mechanism in normal position. Fig. 2 is a corresponding view showing the fender and stop mechanism in operating position, and Fig. 3 is an inverted plan or bottom view showing the end of a car having my improved mechanism applied thereto.

Referring to the drawings, A designates the platform of a car, at the front end of which is pivotally mounted the fender B.

The fender comprises a platform *b*, which extends normally in front of the car and in horizontal position a short distance above the ground and is carried at its rear end upon a vertical framework *b'*, projecting upwardly in front of the platform and pivotally mounted or fulcrumed at about its center to the front edge of the platform, as shown at *c*.

The rear edge of the platform has arms *b*² projected therefrom, which engage with the lower ends of spiral springs *d*, the upper ends of which springs are connected to the rear of the framework *b'*, whereby the forward end

of the platform can be moved upwardly or downwardly without moving the rear upright framework *b'*, thus enabling the platform to ride over small obstacles, while at the same time it is maintained in a position normally at right angles with the framework *b*.

Above the fulcrum *c* is pivotally connected a link *e*, extending rearwardly to a pawl F, mounted upon a block G, which may be secured to the platform A.

Above the link *e* is provided a corresponding pivotally-mounted rearwardly-extending link *h*, pivotally connected with the top end of a vertically-mounted lever-link I, from the lower end of which extends a pivotally-mounted rearwardly-projecting link *j*, which is pivotally connected to a pawl K, carried upon an upwardly-extending operating-lever L, which may be fulcrumed upon the block G. The connecting link-lever I may be fulcrumed, as at *i*, upon the dashboard A' or upon any other suitable part of the framework.

M designates a ratchet-wheel which is mounted, in conjunction with the operating-lever L, preferably upon the block G and is engaged in a corresponding direction by both the pawls F and K. Upon the shaft *m* of the ratchet M is wound a cord or chain N, extending rearwardly and downwardly over a wheel or pulley *o*, through the platform A, into connection with the stop mechanism.

The stop mechanism comprises a series of shoes P, having a segmental bottom edge *p*, which is serrated or toothed, as at *p'*, or otherwise roughened. The shoes P are preferably of skeleton or open construction and are arranged beneath the front axle Q and surrounding the same, as shown.

When in normal position, the shoes are maintained in elevated position, with their serrated bottom edge a short distance above the ground, as shown in Fig. 1.

The shoes are preferably arranged in a series, as shown in Fig. 3, and are pivotally mounted at their rear upper corners upon a transverse bar or rod R, having its ends received in a diagonal slot *s* in brackets *s'*, projecting from the bottom A³ of the car.

Bowed springs T may be provided upon the bottom of the car, with their free ends *t* bearing downwardly upon the transverse bar R to assist in retaining the series of shoes in position and relieve the jar or concussion when the latter drop down into operative position.

The series of stop-shoes P may be connected at their upper forward ends by a transverse rod or bar U, to which the end of the cord or chain N is secured.

To further lessen jar or concussion in the operation of the mechanism, I provide a spring mechanism connected with the front end of the series of stop-shoes. This mechanism preferably consists of a tubular boxing V, pivotally connected with the respective ends of the front transverse rod U, as shown at *v*, and carrying a coiled spring W, through which passes a sliding rod X, having a head *x* bearing upon the end of the spring and connected at its front end by a toggle-joint Y with the under side of the platform A. This toggle-joint may consist of a link *y*, pivotally connected to the front end of the rod X and extending upwardly to a pivotal connection with the platform.

When the fender is in normal position, (see Fig. 1,) the pawls F and K are locked in engagement with the ratchet, and the cord or chain N is wound upon the shaft of the ratchet, so that the stop-shoes P are lifted at their forward ends into elevated position above the ground. Contact of the fender with any object will throw the fender down into forwardly-inclined position, (see Fig. 2,) which will cause an outward movement of the fulcrumed upright back portion of the fender, which carries the links *e* and *h* forwardly in this movement and results in the simultaneous releasing of the pawls F and K from engagement with the ratchet.

Upon the release of the pawls and simultaneously with said release and the operation of the fender the series of stop-shoes will drop downwardly by gravity, so that their serrated or toothed segmental bottom edges come in contact with the ground and cause the stoppage of the car. As the stop-shoes drop downwardly into operative position the cord or chain N is unwound from the shaft or drum of the ratchet, and the jar or concussion occasioned by the operation of the stop-shoes is taken up by the spring mechanism connected therewith.

The apparatus may be readily and conveniently returned to normal position by operation of the lever L to wind the chain or cord N upon the shaft of the ratchet and again retain the latter in locked position by engagement of the pawls.

An auxiliary hand lever *z*, of any usual or adapted construction, may be provided upon the operating-lever L in engagement with the pawl to enable release of the ratchet and consequent operation of the stop mechanism in-

dependent of the operation of the fender when desired.

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

1. A car-fender and stop mechanism, comprising a pivotally-mounted fender embodying an upright fulcrumed back frame or portion, pivotally mounted upon stop-shoes serrated upon their lower surface arranged upon the bottom of the car in rear of the fender, the ratchet mechanism intermediately arranged between the fender and stop mechanism upon the platform of a car and connected with the latter by a cord or chain, and a pawl or locking mechanism engaging the ratchet mechanism and connected with the rear portion of the fender above the fulcrum thereof, whereby when the fender is depressed the ratchet mechanism is automatically released and the stop-shoes simultaneously and automatically dropped into operative position upon the ground, and springs attached to the bottom of the car in the rear of the stops adapted to bear upon them, substantially as and for the purpose set forth.

2. A car-fender and stop mechanism, comprising a fender embodying an upright fulcrumed portion, stop-shoes pivotally mounted in rear of the fender, a ratchet mechanism intermediately arranged and connected with the free end of the stop mechanism by cord or chain, a pawl mechanism engaging said ratchet mechanism and connecting with the upright fulcrumed portion of the fender above said fulcrum, and spring mechanism connected with the stop-shoes against the tension of which the operation of the latter is exerted, and means for operating the stop mechanism independent of the operation of the fender, substantially as and for the purpose set forth.

3. A car-fender and stop mechanism comprising a fender embodying an upright fulcrumed rear portion, stop-shoes pivotally mounted at their rear upper ends, a ratchet mechanism intermediately arranged between the fender and stop mechanism and carrying a cord or chain extending to the front upper end of the stop-shoe mechanism and connected with the upright fulcrumed portion of the fender above said fulcrum, and a pawl engaging said ratchet mechanism and carried upon an operating-lever and connected with one end of a lever-link the other end of which is connected with the fulcrumed upright portion of the fender, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 14th day of September, 1896.

ISRAEL BENJAMINS.

Witnesses:

C. SEDGWICK,

B. McCOMB.