(No Model.)

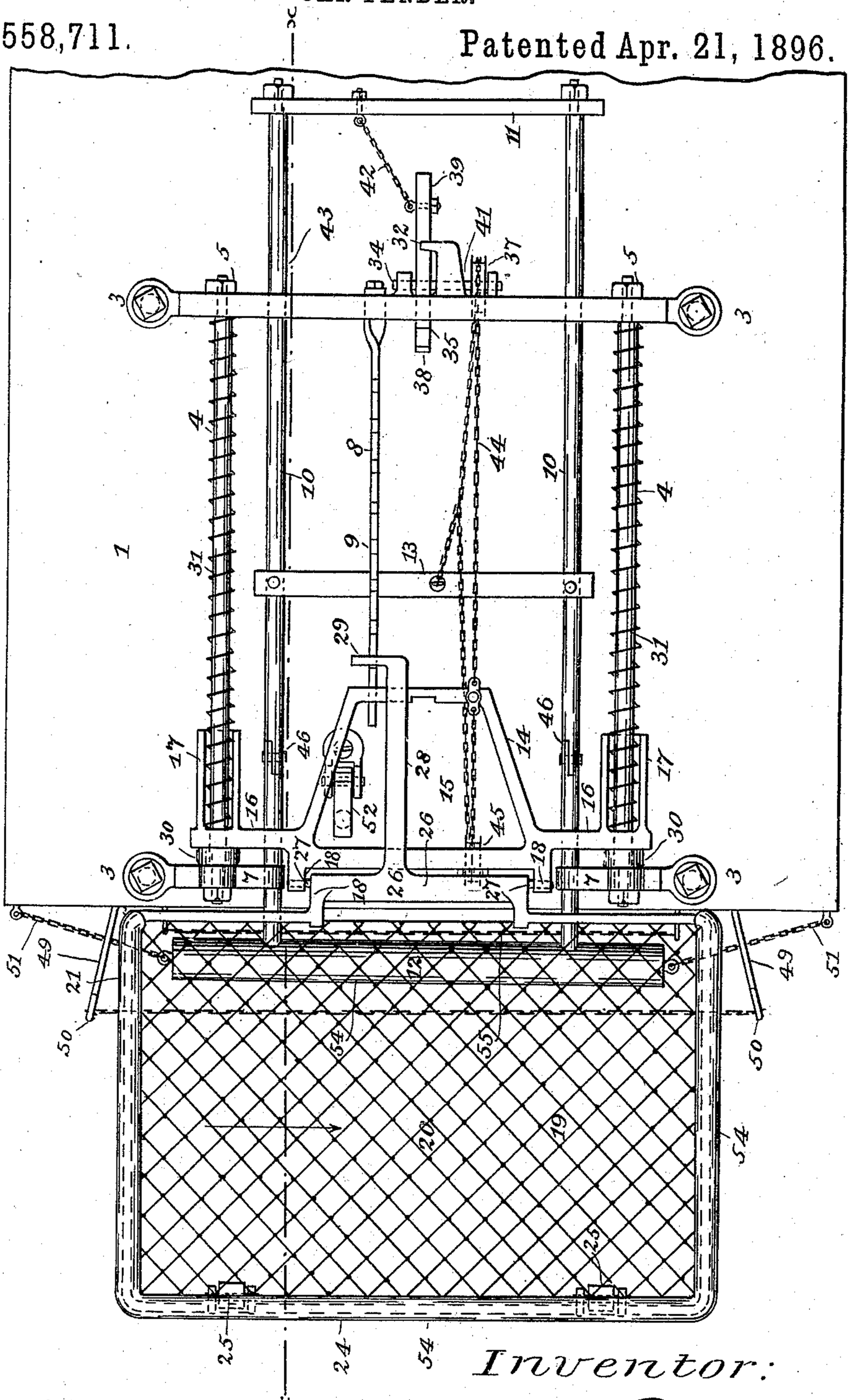
3 Sheets—Sheet 1.

W. BATTEN.

CAR FENDER.

No. 558,711. Patented Apr. 21, 1896.

Fig. 1.



Witnesses:
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E. M. Shuster.

Inventor:
Walter Batten
By H. G. Rogers
his Attorney.

(No Model.) 3 Sheets—Sheet 2

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Fig. 2.

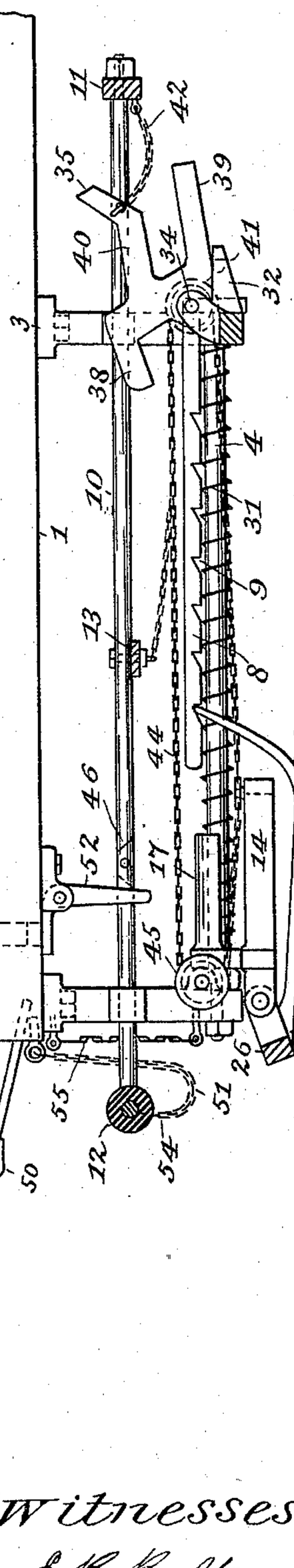
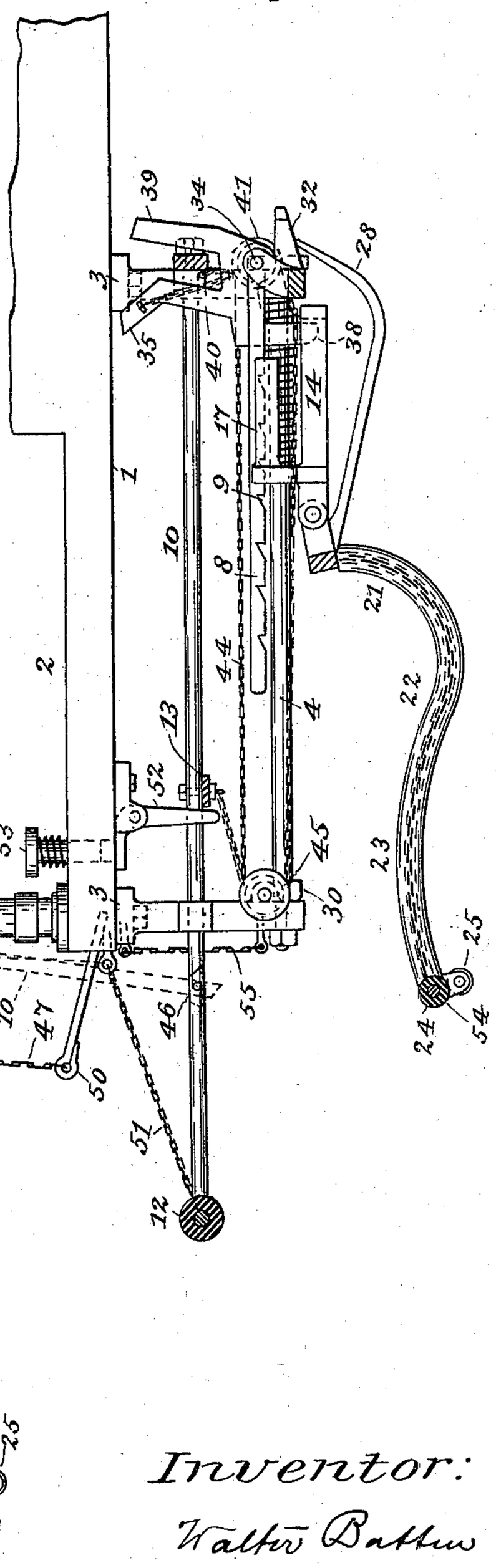


Fig. 3.



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(No Model.) 3 Sheets—Sheet 3.

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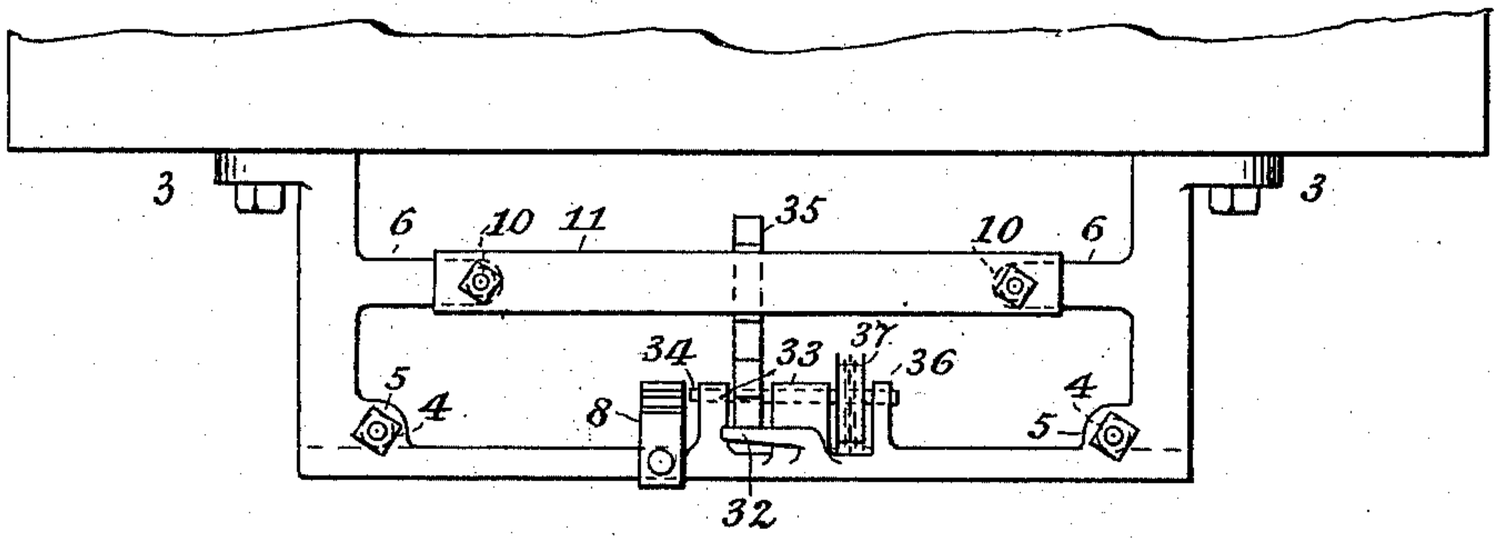
Fig. 4.



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Witnesses:

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UNITED STATES PATENT OFFICE.

WALTER BATTEN, OF BROOKLYN, NEW YORK.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 558,711, dated April 21, 1896.

Application filed July 3, 1895. Serial No. 554,831. (No model.)

To all whom it may concern:

Be it known that I, WALTER BATTEN, a citizen of the United States, and a resident of the city of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Car-Fenders; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the figures of reference marked thereon, making a part of this specification.

My invention relates to life-guards and fenders for street-railroad cars; and its object is the protection of human life and the prevention of injury to a human being who may accidentally be struck by a car while in motion.

The great favor in which electrically-propelled cars are now held and the high speed which they attain, especially on the outskirts of small towns, have necessitated the adoption of the best means for preventing injury to life and limbs of pedestrians. Devices to attain this end are numerous, but have hitherto been found to act slowly, or to be otherwise inefficient, or to be in the way when not in operation. The storage of cars at night where room is restricted and the coupling together of two or more cars while on the road, and, furthermore, the inability to give sufficient attention and care to fenders necessitate that a thoroughly convenient form must be given to such devices, so that they may be readily gotten out of the way and their construction so carried out that careful attendance to them will not be required. In certain cities, moreover, there exist municipal laws prohibiting life-guards from possessing only the object of preventing human beings from getting under the wheels and making it imperative that the life-guards shall be designed with the end in view of keeping persons from even falling under the car-platform. On the other hand, it will readily be imagined that a device which normally projects beyond the front platform of a car will be found excessively inconvenient when the car is sent into the crowded car-shed or when two cars are to be coupled together. Furthermore, its construction, beside being strong and durable, should be simple and inexpensive without detaching from its efficiency as a preventive of accidents.

One embodiment of my invention, which will be more particularly described hereinafter, comprises a carriage adapted to slide on guides longitudinal to the length of the car and held back against the pressure of helical springs by a latch which may be operated by means of a rod ending in a buffer which projects beyond the front platform should the buffer meet with an obstruction on the track. To the carriage is swung a fender, which normally remains in a horizontal position under the car-platform, but which will be propelled forward and whose front end will fall to the ground when the carriage is released, whereby any obstruction on the track will be taken up on the fender and prevented from getting under the car.

Furthermore, my invention comprises means for preventing the accidental release of and for locking the carriage, so that the car may be coupled to another car or safely and conveniently run into the car-shed, which means may be the hinging of the buffer-rod to allow of its front or buffer end being raised and therefore put out of the way when not in use; and, furthermore, it comprises means for the release of the carriage by the driver or motorman when an accident is feared and when there is time for direct action.

In the accompanying drawings, Figure 1 is a plan view of the device secured in position on the under side of a car. Fig. 2 is a sectional side view of the same, showing the pivoted fender thrown forward. Fig. 3 is a similar view showing the fender when in a retracted position. Fig. 4 is a back view of the same.

To the under side or bottom 1 of the car or car-platform 2 are bolted or otherwise secured two downwardly-projecting standards 3, located one in front of the other and longitudinally to the car itself. The standards carry two longitudinal guide-rods 4, whose ends may be attached to them by nuts, as at 5, or in any other convenient way. The front and back standards have also lugs 6, provided with apertures for the reception of the buffer-rods, the front standard having the lugs 7, in which is journaled the shaft of a front pulley, and the rear standard having the forwardly-extending stop-piece 8 with step 9. The buffer-rods 10, which are adapted to slide in the front

and back standard-lugs, may be conveniently connected together to form a buffer-frame by the rear cross-piece 11 and by the buffer 12, which is located on the front of the car, and also by the middle cross-piece 13. The carriage 14 is constructed with the view of economizing weight, as shown in Fig. 1, in the form of an open frame, having a rearwardly-extending part 15 and a lug 16 on each side. The lugs project rearwardly by means of cap-pieces 17, which avoid to a certain extent the rocking of the carriage and prevent the same from being jammed when the fender is set.

The front of the carriage is provided with lugs 18, in which is journaled the fender or life-guard 19, and which is constructed of a frame 20, covered with a netting and curved downwardly, as at 21, upwardly, as at 22, and again downwardly, as at 23, and ending at the front bar 24, which carries the track-rollers 25, adapted to run on the track when the fender is down.

The fender is provided with a rear cross-bar 26, whose ends are bent at right angles in the form of pintles 27 and enter the eyes of the lugs 18, whereby the fender may swing downward by its own weight. This rear cross-bar has also a rearwardly-projecting piece or detent 28, ending in a plate 29, by means of which the carriage will be prevented from moving backward when an obstacle has been struck.

It will be understood that the rear bar of the fender or cradle is pivoted to the carriage and has rigidly attached to it a detent-bar, which extends back of the pivotal point and which will therefore swing upward when the front of the fender swings downward. In front of the carriage-lugs are the buffer-washers 30 to prevent too great a shock when the carriage is propelled forward, and to propel the carriage forward are the helical or coiled springs 31 on the guide-rods 4, impinging on the carriage-lugs.

The rear standard may be cast in such a form that the stop 32 is provided and the bosses 33 for the reception of a pin 34, on which rocks the latch 35, and also the boss 36 for the other end of the pin, the said pin also carrying the rear pulley 37. The latch is formed, as shown, with a hook 38 and jaws 39 and 40, and it is pivoted at 41 so that it will remain in position either thrown forward or backward. For the purpose, however, of causing it to maintain a backward position there is attached to it a short length of chain 42, which connects it to the rear cross-piece 11 of the buffer-frame 43.

For the purpose of retaining the buffer-frame in such a position that its rear cross-piece will be behind the latch 35, or more particularly between the arms of the jaws 39 and 40, and so that when the fender is pushed back or set that act will move the buffer-frame forward and place the said rear cross-piece in front of the latch-arm, there is provided an endless chain 44, which travels over the front pulley 45 (the latter being carried by the front standard) and the rear pulley 37, and is actuated by forward or backward motion of the carriage.

The buffer-rods 10 may be jointed at 46, permitting the buffer 12 to be bent upward and under the front netting 47 of the dashboard 48, which may be provided with hooks 49 at its lower corners for attachment to eyes 50 of the dashboard. A chain 51 is provided on each side of the buffer attached to the front of the car, whereby if a person should be missed by the buffer itself the latter will be drawn back by the weight on the chains and the fender be released.

On the front platform and in a convenient position to be reached by the foot of the motorman I provide a device for releasing the fender at will. This may comprise a bell-crank lever 52, located beneath the platform and adapted to be engaged by a removable pin 53, having a head on which the foot may be pressed. When this is done, the lever will force back the buffer-frame by engagement with the middle cross-piece 13, and the release of the carriage will then be accomplished without the interposition of an obstacle on the track.

The front of the buffer may be provided with a soft cushion 54, as also the frame of the fender, and a netting 55 be placed vertically under the platform.

In operation the fender is set by forcing back the fender against the pressure of the helical springs, care being taken to raise the forward end of the same, whereby the detent is swung downward and out of engagement with the steps of the stop-piece 8. The hook of the tumbler-latch having been carried over by the rear cross-piece 11 will fall over the rear end of the carriage 15, and as this is being accomplished the chain will draw out the buffer. Should an obstacle be met by the buffer, a very slight pressure will cause it to move back, when the rear cross-piece of the buffer-frame will operate the latch and the carriage will be thrown forward.

It will be evident that if an obstacle should be met by the fender at any point before it has reached its full forward movement the detent-plate 29 will fall into one of the steps 9, when any rearward tendency of the fender will be stopped and the obstacle or person will be carried along by the fender.

The arrangement of the chains, the form and location of the detent and steps, the form of the latch, and of the buffer-frame, and of the carriage and fender may readily be changed, and I desire, therefore, not to be restricted to the precise construction or arrangement herein shown, this embodiment of my invention being but a preferred form which may be modified without departing from the spirit of my invention.

What I claim is—

1. In a device for saving life, the combination with a car, the carriage adapted to slide

under the car upon a frame rigidly secured to said car, springs for propelling the carriage forward, a tumbler-latch pivoted to said frame and adapted to engage the rear end of the carriage, and a stop-piece, of the fender pivoted to said carriage and provided with a detent-bar extending back of the pivotal point of the carriage and adapted to engage the said stop-piece, a jointed buffer rod or rods adapted to slide in said frame and means for connecting the carriage and the buffer, substantially as described.

2. In a device for saving life, the combination with a car, a fender, and a carriage to which said fender is pivoted, and formed with a rearwardly-extending part, of longitudinal guide-rods, and a coiled spring or springs, a latch, a buffer, and a buffer rod or frame jointed near the forward end, and a chain secured to the latch and to the buffer rod or frame, substantially as described.

3. In a device for saving life, the combination with a car, a carriage adapted to slide under the car upon a frame rigidly secured to said car, springs for propelling the carriage forward, a tumbler-latch pivoted to said frame and adapted to engage the rear end of the carriage, and a stop-piece, of a fender pivoted to said carriage, and provided with a detent-bar extending back of the pivotal point of the carriage, and adapted to engage the said stop-piece, a jointed buffer rod or rods adapted to slide in said frame, and an endless chain secured to the carriage and to the buffer-rod whereby when the said carriage is propelled backward the said buffer-rod will be propelled forward, substantially as described.

4. In a device for saving life, the combination with a car and a fender, of a carriage to which said fender is pivoted and adapted to be propelled forward, a spring or springs for so propelling said carriage, a tumbler-latch, a bell-crank lever located near the front of the car, a removable pin to engage said lever, and intermediate means between said lever and the latch whereby the said latch may be operated, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WALTER BATTEN.

Witnesses:
A. N. JESBERA,
E. M. SHUSTER.