(No Model.)

2 Sheets—Sheet 1.

S. H. RODICK.

CAR FENDER.

No. 553,020.

Patented Jan. 14, 1896.

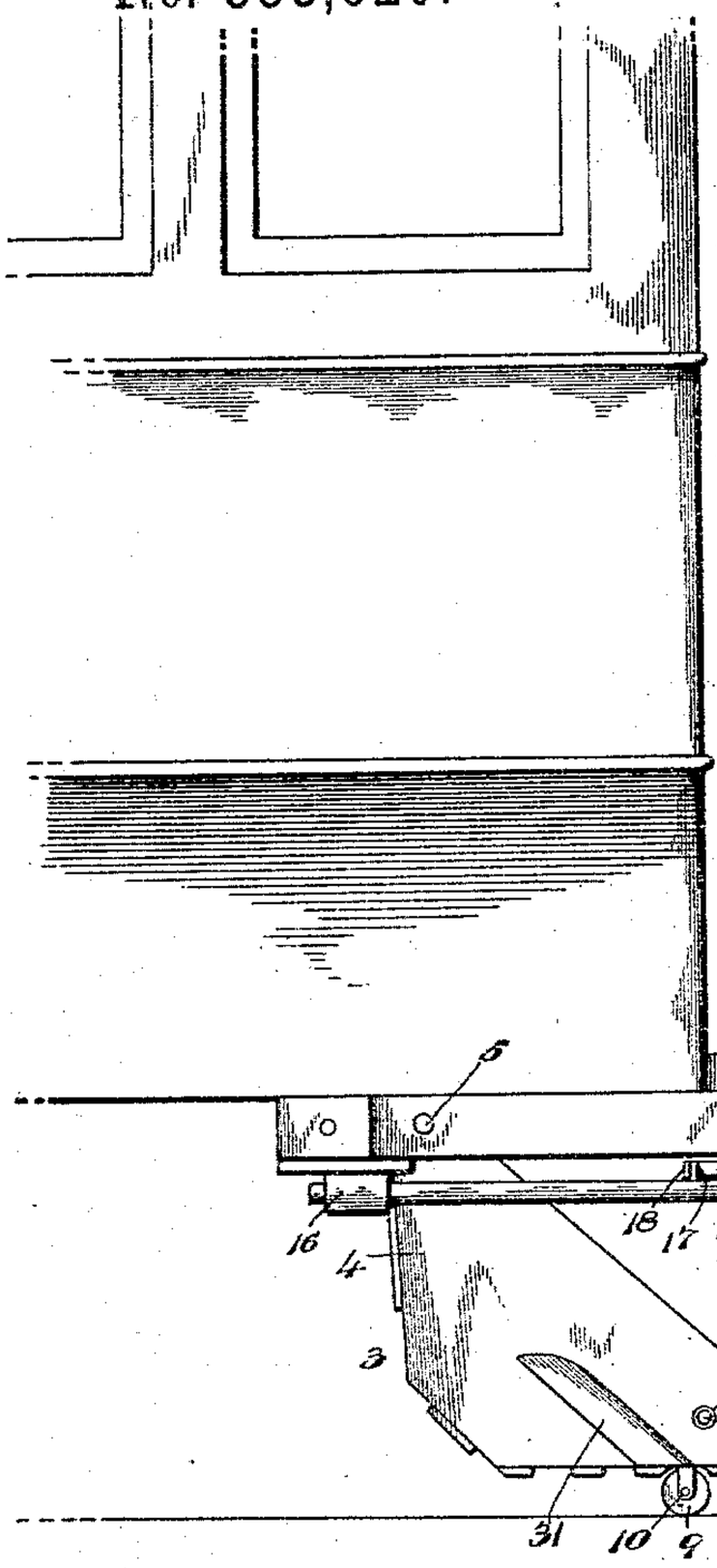

Fig. 1.

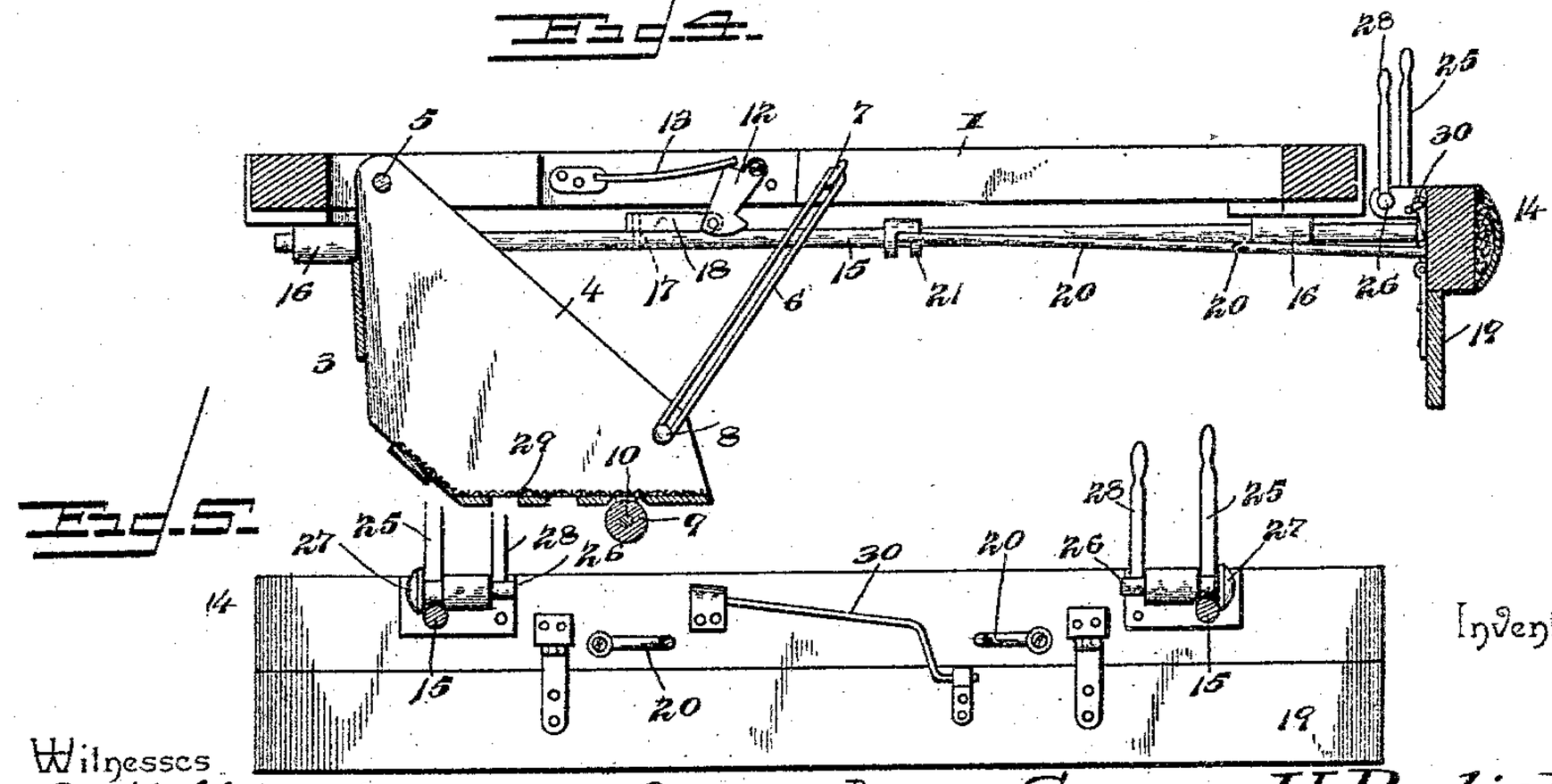

Fig. 4.

Fig. 5.

Inventor

Witnesses
E. K. Stewart,
J. F. Riley

By his Attorneys, Serenus H. Rodick
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(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

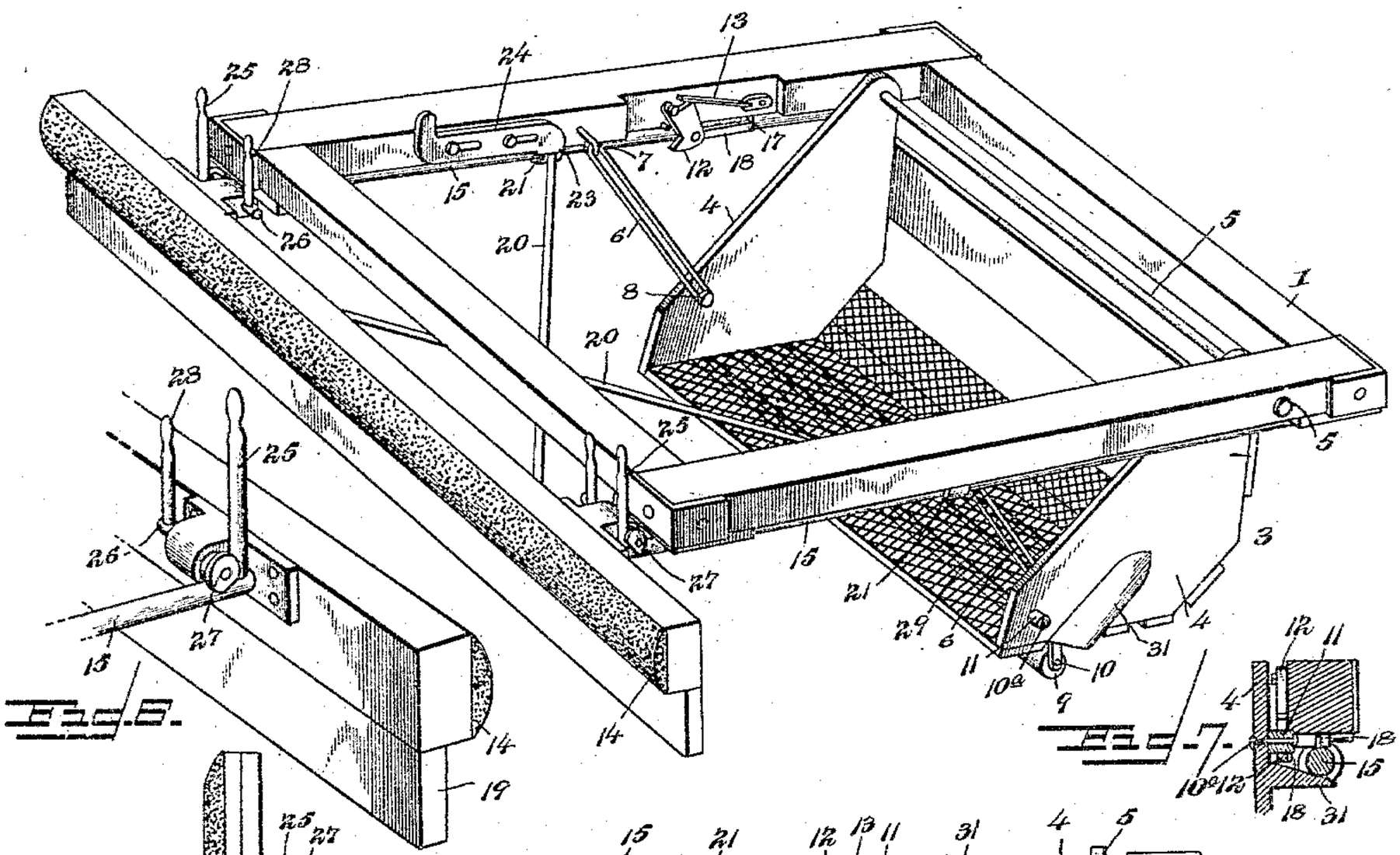

Fig. 6.

Fig. 7.

Fig. 8.

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UNITED STATES PATENT OFFICE.

SERENUS H. RODICK, OF BAR HARBOR, MAINE.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 553,020, dated January 14, 1896.

Application filed January 9, 1895. Serial No. 534,330. (No model.)

To all whom it may concern:

Be it known that I, SERENUS H. RODICK, a citizen of the United States, residing at Bar Harbor, in the county of Hancock and State of Maine, have invented a new and useful Car-Fender, of which the following is a specification.

The invention relates to improvements in car-fenders.

The object of the present invention is to improve the construction of car-fenders, and to provide a simple inexpensive one which will be positive and reliable in operation, and which is designed to be located under the ends of a car out of the way.

A further object of the invention is to provide such a fender which will be adapted for all kinds of street-railway cars having motive power, but which will be particularly adapted for electric cars, and which will be capable of automatically dropping a cradle or receptacle in position to catch a person or other object struck by a car to prevent the same from coming in contact with the wheels, and to shut off the electric current simultaneously with the dropping of the cradle or receptacle.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a side elevation of a portion of a car provided with a car-fender constructed in accordance with this invention, the cradle or receptacle being dropped into position for catching a person or other object. Fig. 2 is a detail perspective view of the fender. Fig. 3 is a reverse plan view of the same. Fig. 4 is a longitudinal sectional view of the fender. Fig. 5 is a transverse sectional view. Fig. 6 is a detail perspective view of a portion of the bumper, illustrating the construction of the locking mechanism for retaining the reciprocating rods against accidental turning. Fig. 7 is a detail sectional view illustrating the manner in which the catches support the cradle or receptacle in an elevated position.

Like numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a rectangular supporting-frame secured beneath a car 2 and located at one end thereof, and having hingedly mounted within it a cradle or receptacle 3, designed to be normally held up or supported above the road-bed and adapted to be automatically dropped to catch a person and to prevent him from coming in contact with the wheels of a car.

The cradle or receptacle 3 is substantially L-shaped in cross-section, and is composed of substantially triangular end pieces 4, and connecting slats or bars forming a bottom and back to the receptacle or cradle. The end pieces 4 are hinged at their upper rear corners to the side bars of the rectangular frame 1 by means of a transverse pintle-rod 5, and the front portion of the cradle or receptacle is connected with the supporting-frame by means of links 6 attached to eyes 7 of the frame, and receiving headed studs or projections 8, located on the inner faces of the end pieces 4. The links support the basket or receptacle when in operative position and limit the downward or rearward swing of the same.

The receptacle or basket or cradle 3 is provided at its bottom with transversely-arranged rollers 9, mounted on a transverse rod 10, and adapted to permit the receptacle or cradle to pass readily over the road-bed.

At the ends of a cradle or receptacle are arranged projections 10^a, provided with anti-friction-sleeves 11, and adapted to engage depending substantially L-shaped catches 12, pivotally mounted in recesses at the inner faces of the sides of the rectangular supporting-frame. The pivoted catches 12 are provided in rear of the pivots with shoulders which are engaged by springs 13, adapted to throw the bottom or suppopting portion of the catches forward in position to receive the projections at the front of the cradle or receptacle.

The cradle or receptacle is automatically operated by a person coming in contact with a padded bumper 14, located at the front of the car and mounted on the front terminals of longitudinally-disposed reciprocating rods 15, slidingly mounted in bearings 16 of a supporting-frame, and carrying projections or pins 17 for engaging and swinging rearward the pivoted catches. The bumper is rigidly mounted on or secured to the front ends of

the sliding rods, and it slides with the latter. The catches are provided with substantially L-shaped arms 18, pivoted to the bottoms of the catches and extending in rear of the projections 17, whereby, when the bumper comes in contact with a person, the rods 15 will move inward and release the catches and cause the cradle or receptacle to drop into position to catch the person and prevent him from coming in contact with the car-wheels or the motor mechanism. The bumper 14 is provided with a depending spring-actuated hinged portion 19, and is supported by crossed horizontally-disposed bracing-rods 20, disposed diagonally and having their front terminals secured to the bumper and their rear ends secured by means of sleeves 21 to the reciprocating rods. The sleeves 21 are slotted and receive projections or pins 22, one of which engages detachably a bifurcated arm 23 of a sliding plate 24, which is adapted to be connected with the mechanism of an electric car, so that the current will be switched off as soon as a person is struck, and all that the motorman is required to do is to apply the brakes and assist in stopping the car. The plate 24 is mounted on the inner face of one of the side beams of the supporting-frame by means of suitable fastening devices arranged in slots, and the arm 23 is substantially L-shaped and extends laterally beneath the side of the supporting-frame and depends at the outer side of the adjacent reciprocating rod to receive the projection or pin 21 thereof.

The reciprocating rods 15 are journaled on the supporting-frame and are swiveled at their front terminals to the bumper and are provided adjacent to the latter with arms 25, forming handles by which the reciprocating rods may be turned to carry their pins or projections out of engagement with the arms of the catches and the arm of the switch-plate. The arms 25 are locked against accidental outward swinging by means of fastening devices, each consisting of a shank 26, journaled in a suitable bearing, a segmental head located at the outer side of the shank, and a handle or arm at the inner end of the shank. The segmental head 27 is adapted to be turned by means of the handle or arm 28, to carry its curved or straight edge adjacent to the arm of the reciprocating rod. The curved edge of the segmental head projects over the outer face of the arm of the reciprocating rod, and forms a stop for the same, and the straight edge terminates short of the arm of the reciprocating rod and permits the same to swing outward unobstructedly.

The basket or receptacle may be constructed in any suitable manner, and is provided with wire-netting or similar material, as shown at 29; and the depending hinged portion of the bumper is engaged by a spring 30, which has one end secured to the upper portion of the bumper and its lower end connected with the hinged member 19, and the latter is adapted to swing rearward to permit small objects, such as stones and the like, to pass beneath the car-fender without operating the same.

The fender receptacle or cradle is provided at its ends with lugs 31, forming stops to limit the upward swing of the basket or receptacle, to hold the lateral projections or pins 10 in position to be engaged by the pivoted catches.

It will be seen that the car-fender is simple and comparatively inexpensive in construction, that it is positive and reliable in its operation, and that it is capable of catching a person, of preventing him from coming in contact with the car-wheels or motor mechanism, and of automatically shutting off the current to facilitate stopping a car. It will also be apparent that it is located beneath the end of a car out of the way, and that when a car is reversed the fender at the rear end may be adjusted and arranged to prevent the bumper from releasing the catches and allowing the cradle or receptacle to fall.

Changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

What I claim is—

1. The combination of a supporting frame, a receptacle hinged at its back to the frame and provided with lateral projections, pivotally mounted spring actuated catches arranged on the frame and adapted to engage the projections and having L-shaped arms, reciprocating rods slidingly mounted on and disposed longitudinally of the frame and having projections for engaging said arms, stops mounted on the receptacle for limiting its upward swing, and a sliding bumper arranged at the outer ends of the rods, and rigidly connected to the same substantially as described.

2. The combination of a supporting frame, a hingedly mounted receptacle, a catch for holding the receptacle elevated, a sliding switch plate provided with an arm, a reciprocating rod journaled on the frame and provided with projections for engaging the catch and the plate, and having an arm for rotating it to carry the projections out of engagement with the catch and the plate, and means for locking said arm, substantially as described.

3. The combination of a supporting frame, a hingedly mounted receptacle, a device for holding the receptacle elevated, a reciprocating rod journaled on the frame and provided with a projection for engaging the said device and having an arm for rotating it, a bumper connected with the rod, and a shank journaled on the bumper and provided at one end with a segmental head for engaging said arm and having a handle at its other end, substantially as described.

4. The combination of a supporting frame, a hingedly mounted receptacle, a device for holding the same elevated, a reciprocating

rod mounted on the frame and adapted to release the said device from engagement with the receptacle, and a bumper connected with the rod and provided with a lower portion arranged to swing rearward, substantially as and for the purpose described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

SERENUS H. RODICK.

Witnesses:
CHAS. H. WOOD,
HARRIET SHAW.