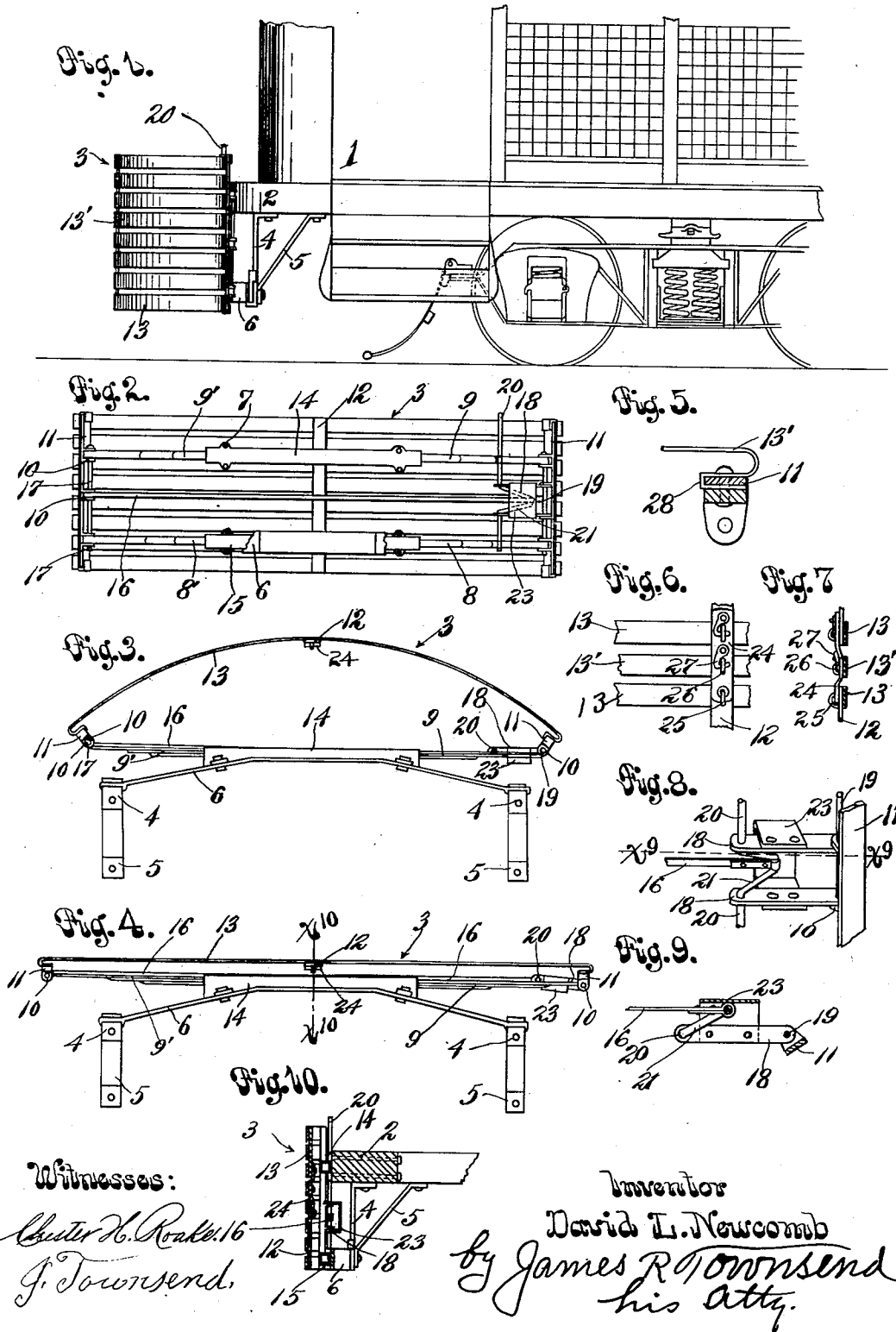


D. L. NEWCOMB.
CAR BUFFER FENDER.
APPLICATION FILED MAR. 13, 1906.

969,143.

Patented Aug. 30, 1910.

2 SHEETS—SHEET 1.



Witnesses:

Chas. H. Roake
J. Townsend.

Inventor

David L. Newcomb

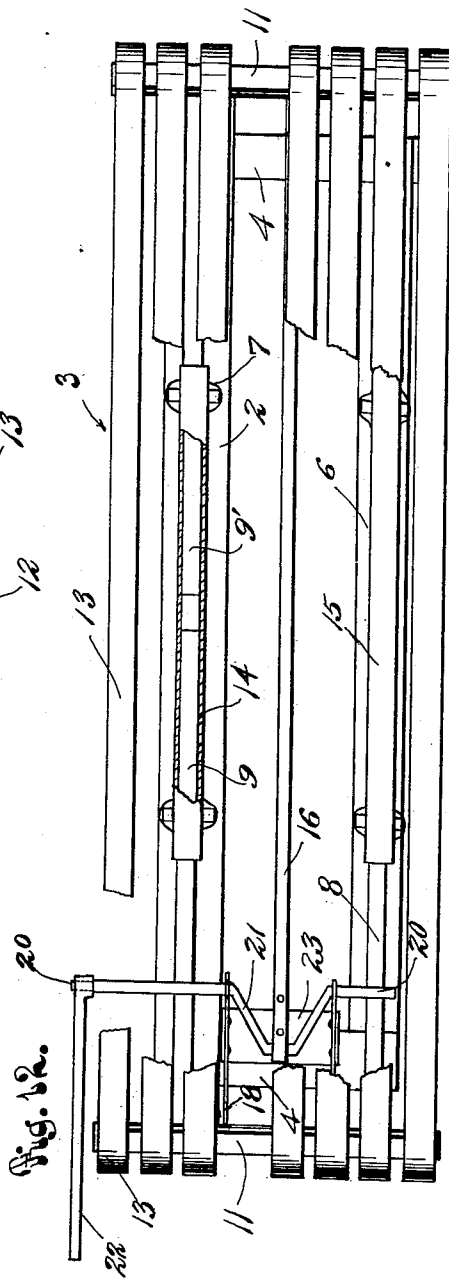
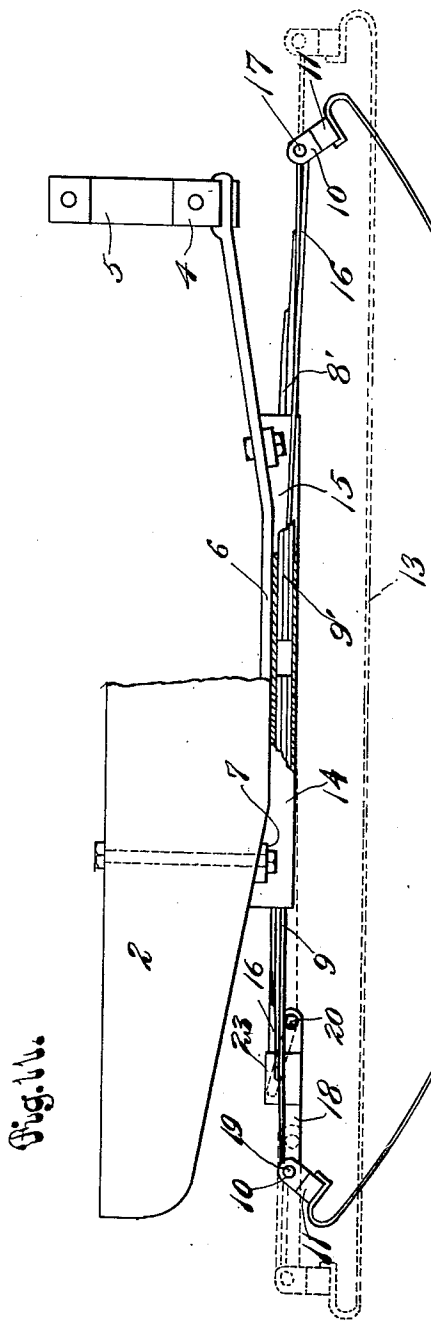
by James R. Townsend
his atty.

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Inventor

David L. Newcomb

By James R. Townsend
his Atty

UNITED STATES PATENT OFFICE.

DAVID L. NEWCOMB, OF LOS ANGELES, CALIFORNIA, ASSIGNOR OF ONE-FOURTH TO WALTER F. PARKER, ONE-SIXTH TO F. J. ZEEHANDELAAR, ONE-SIXTH TO GEORGE A. SMITH, AND ONE-SIXTH TO JAMES R. TOWNSEND, ALL OF LOS ANGELES, CALIFORNIA.

CAR BUFFER-FENDER.

969,143.

Specification of Letters Patent. Patented Aug. 30, 1910.

Application filed March 13, 1906. Serial No. 305,773.

To all whom it may concern:

Be it known that I, DAVID L. NEWCOMB, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Car Buffer-Fender, of which the following is a specification.

An object of this invention is to provide means for preventing destruction of life by trolley cars; to provide simple, contractible, and extensible means which will serve as a buffer fender in front of a trolley car to throw standing persons off the track, the same being collapsible to a minimum space for storage of the car in the car-barn; to provide a fender of the character stated which will not interfere with the use of the draw-bar in coupling on a trailer or other car.

The accompanying drawings illustrate the invention.

Figure 1 is a side elevation of my invention applied on a trolley car, a fragment of which is shown. Fig. 2 is a rear view of the buffer fender detached from a car, portions being broken away to expose parts that would otherwise be concealed. Fig. 3 is a plan view of the fender extended. Fig. 4 is a plan view of the fender collapsed. Fig. 5 is a plan, sectional view of the connection between a fender rib and the end bar that supports the rib. Fig. 6 is a fragmental detail of the means for releasably securing in place the rib that closes the draw-bar gap of the fender. Fig. 7 is a sectional elevation from the right of Fig. 6. Fig. 8 is a fragmental perspective detail of the toggle joint for extending and retracting the buffer. Fig. 9 is a fragmental, sectional plan of the same on line x^9-x^9 . Fig. 10 is a vertical section on line $x^{10}-x^{10}$, Fig. 4. Fig. 11 is a fragmental plan of the fender attached to the front of a car; portions of the fender being broken away for clearness of illustration. Fig. 12 is a front elevation of the car-fender with the draw-bar gap open. Portions are broken away to expose parts that would otherwise be hidden.

1 designates a car; 2, the usual buffer on the car; 3, a yielding convex buffer in front of the car.

4, 5, designate hangers; 6, 7, brackets; 8, 8', 9, 9', springs; 10, lugs, and 11, 12, uprights supporting bendable ribs 13, which

ribs form the convex face of the resilient buffer. The ribs 13 may be resilient, bendable strips of sheet metal, as steel, and the same are mounted on the spring means 8, 8', 9, 9', which consists in adjustable leaf springs which are arranged to slide endwise in sockets 14, 15. Means are provided for bending said ribs to hold them out in front of the car, the same being constructed to allow the ribs to collapse from their bowed position. Said means consist in tie means connecting the opposite ends of the ribs, and comprising a toggle joint and bars or rods connected by said joint. One of said bars or rods 16 is hinged to one of the uprights 11 by a bolt 17 passing through lugs 10, and the other, 18, of said tie bars or rods is pivoted by a bolt 19 to the upright 11 at the other end of the ribs.

20 is a crank shaft, the crank 21 of which forms the toggle joint member connecting the tie bars 16 and 18.

22 is a crank handle or wrench for turning the shaft 20 for the purpose of extending or collapsing the buffer 3.

The toggle joint is provided with a stop 23 to stop the crank 21 in locking position, as shown in Fig. 9, after the tie bar 16 has passed beyond the dead center.

The bolts 17 and 19 hinge the tie bars and the springs to the uprights 11 so that when the toggle crank is turned in one direction to shorten the tie means, consisting of tie rods and toggle, the ends of the ribs are drawn toward each other; the springs 8, 8', 9, 9', will slide into their sockets 14, 15; and on the reverse movement of the toggle crank, lengthening the tie means, the springs will slip outward in their sockets, thereby allowing the fender to collapse, the ribs coming into straight position, as shown in Fig. 4.

In practical use, the buffer-fender 3 will be mounted on the car, and when the car is in use the toggle will be adjusted to hold the ribs bowed, as shown in Figs. 1, 3, and 11. In case the car strikes any person standing on the track, the tendency of the buffer will be to relieve the stress of the blow and to shunt the person to one or the other side of the track. It will be apparent by inspection of Figs. 3 and 11 that when the buffer strikes a person it will yield toward that side of the car on which the

impact occurs, and that the resilient, bendable ribs as well as the springs will relieve the stress upon the person receiving the blow, and that the tendency of the buffer will be to throw the person from the track. When the car is to be stored in the barn, the attendant will turn the crank-shaft 20 to allow the ribs to come into straight position as indicated by solid lines in Fig. 4 and dotted lines in Fig. 11, thereby allowing the car to be stored in minimum space. In this position the cars may be crowded close together, the springs and resilient ribs being capable of yielding to pressure which may come against them when the cars are being stored closely in the barn. One of the resilient ribs may be shiftable in order to allow the draw-bar of the car, not shown, to project through the collapsed buffer when it is desired to attach two or more cars together.

In Fig. 6, a hasp 24 is hinged by a link 25 to the upright 12 and is provided with staples 26 and hooks 27 by which the middle of the shiftable rib 13' is held in place. By releasing the fastenings of the rib 13' the same can be shifted to allow the draw-bar, not shown, to pass through the space between the adjoining ribs. The shiftable rib may be held by hooks 28 which catch on the uprights 11, as will be understood by inspection of the detail in Fig. 5.

It will be understood that when the toggle is operated to bow the ribs, the inner ends of the springs 8, 8' and 9, 9' will be brought against the bottoms of their sockets, not shown, thus positioning the bowed ribs centrally relative to the car, as shown in Fig. 3.

What I claim is:

1. The combination with a car, of ribs mounted in front of the car, and means for bending said ribs to bow them out in front of the car, the same being constructed to allow the ribs to collapse from their bowed position.

2. The combination with a car, of springs extending and movable transversely of the car, bendable ribs secured by their opposite ends to the springs respectively; tie means connecting the opposite ends of the ribs and

comprising a toggle joint for holding said ends at different distances apart for the purpose of bowing and collapsing said ribs.

3. A car fender comprising horizontal bendable ribs, tie means comprising a joint for holding said ribs bowed in front of the car and operable to allow said ribs to straighten, and spring means for mounting the ribs on the car.

4. The combination with a car, of horizontal ways in front of the car, springs mounted to slide in said ways, ribs mounted on said springs, and tie means for drawing the opposite ends of the ribs toward each other.

5. The combination with a car of bendable fender means in front of the car, spring means mounted on the car and carrying said bendable means, and means for holding the ends of the fender means at different distances apart for extending and collapsing said means.

6. Bendable fender means and tie means connecting the ends of said fender means and provided with a toggle joint for holding said ends at different distances apart.

7. Bendable fender means, tie means connecting the ends of said bendable fender means and comprising a toggle joint for lengthening and shortening said tie means, and a crank for operating said toggle joint.

8. Uprights, bendable ribs fastened at their ends to said uprights, tie means connected with the ribs through said uprights and comprising a toggle joint, and means for operating said toggle joint to lengthen and shorten said tie means.

9. A car, a fender comprising horizontal ribs, means for mounting said ribs in front of the car, and means detachably holding one of said ribs in place in front of the draw-bar of the car.

In testimony whereof, I have hereunto set my hand at Los Angeles California this 7th day of March 1906.

DAVID L. NEWCOMB.

In presence of—

JAMES R. TOWNSEND,
JULIA TOWNSEND.