

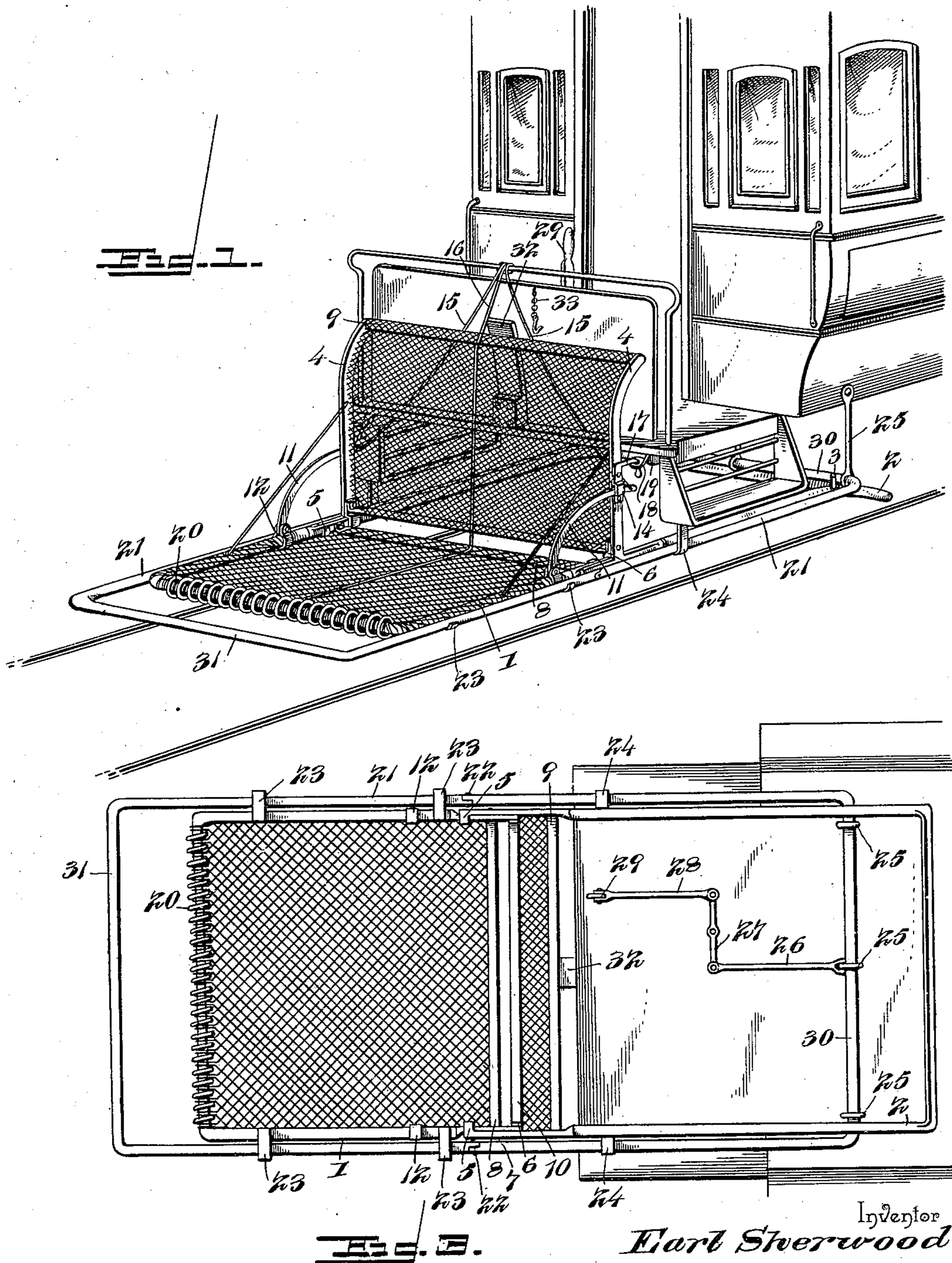
(No Model.)

2 Sheets—Sheet 1.

E. SHERWOOD.
CAR FENDER.

No. 577,326.

Patented Feb. 16, 1897.



Witnesses
E. H. Stewart
R. M. Smith

By *his* Attorneys,

Carl Snow & Co.

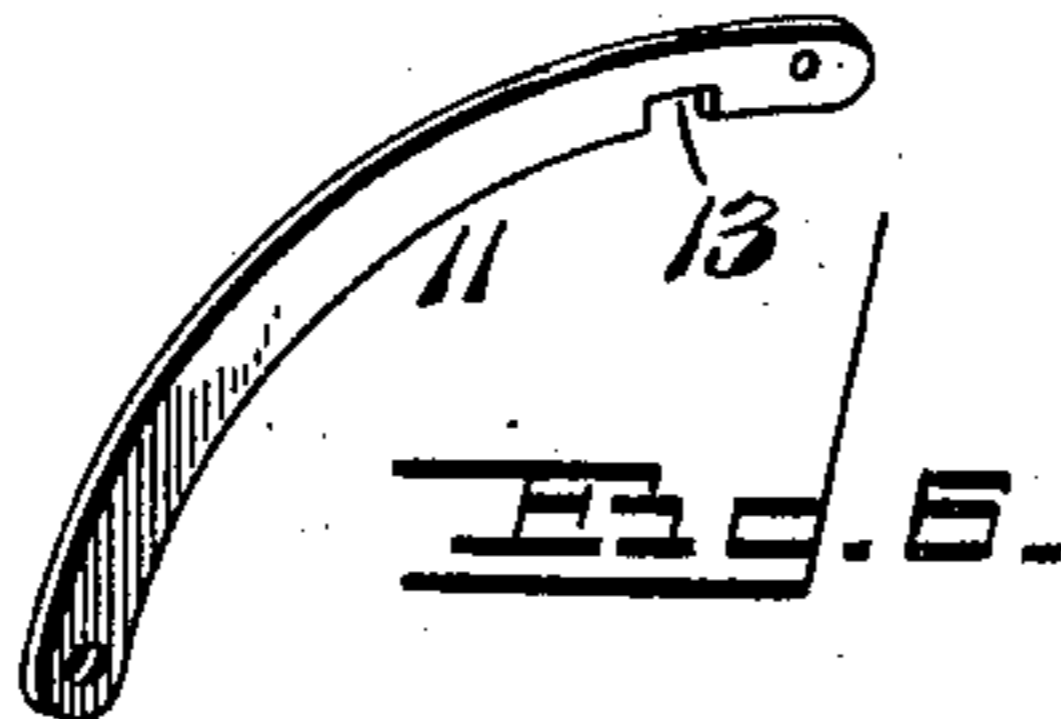
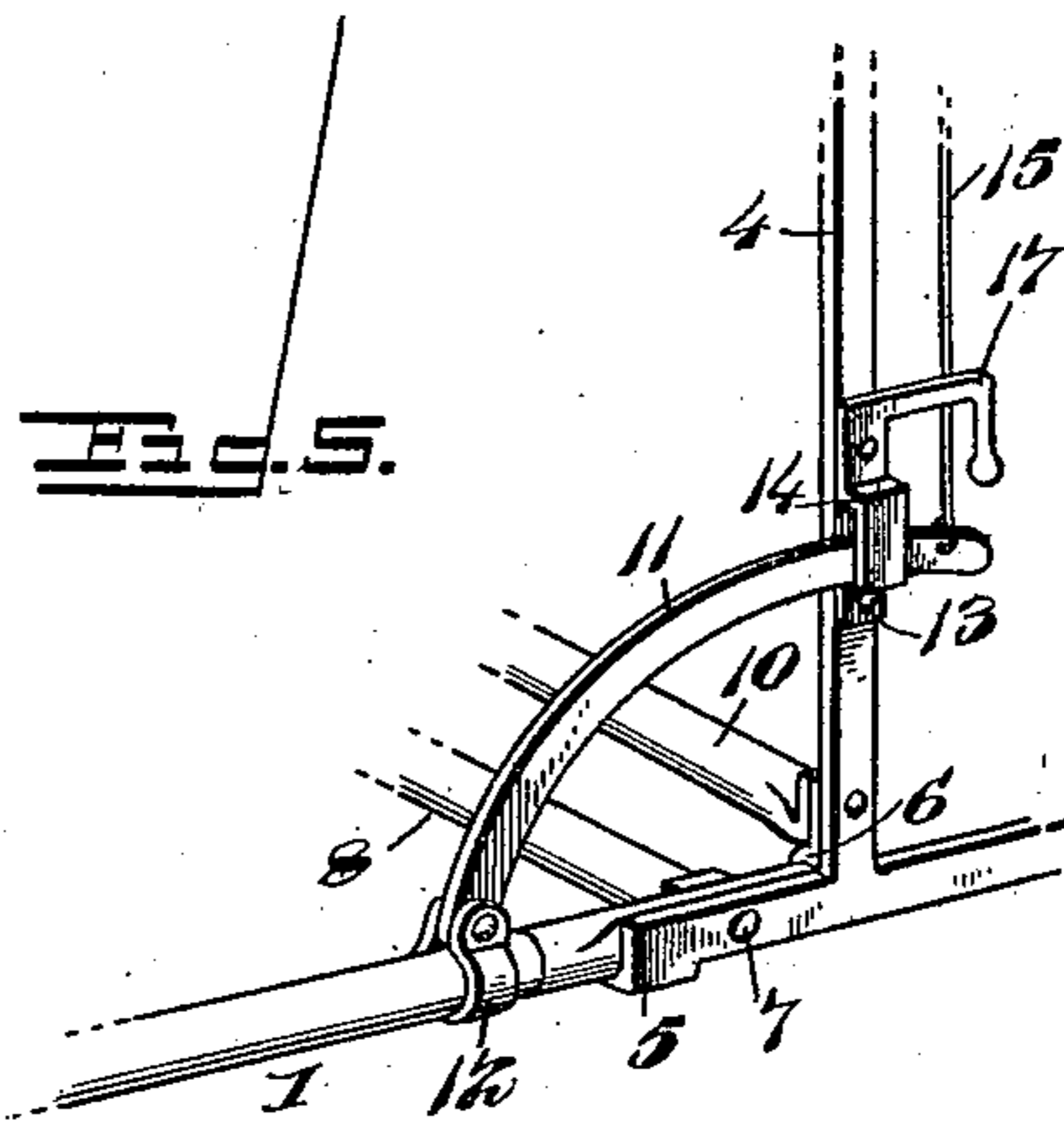
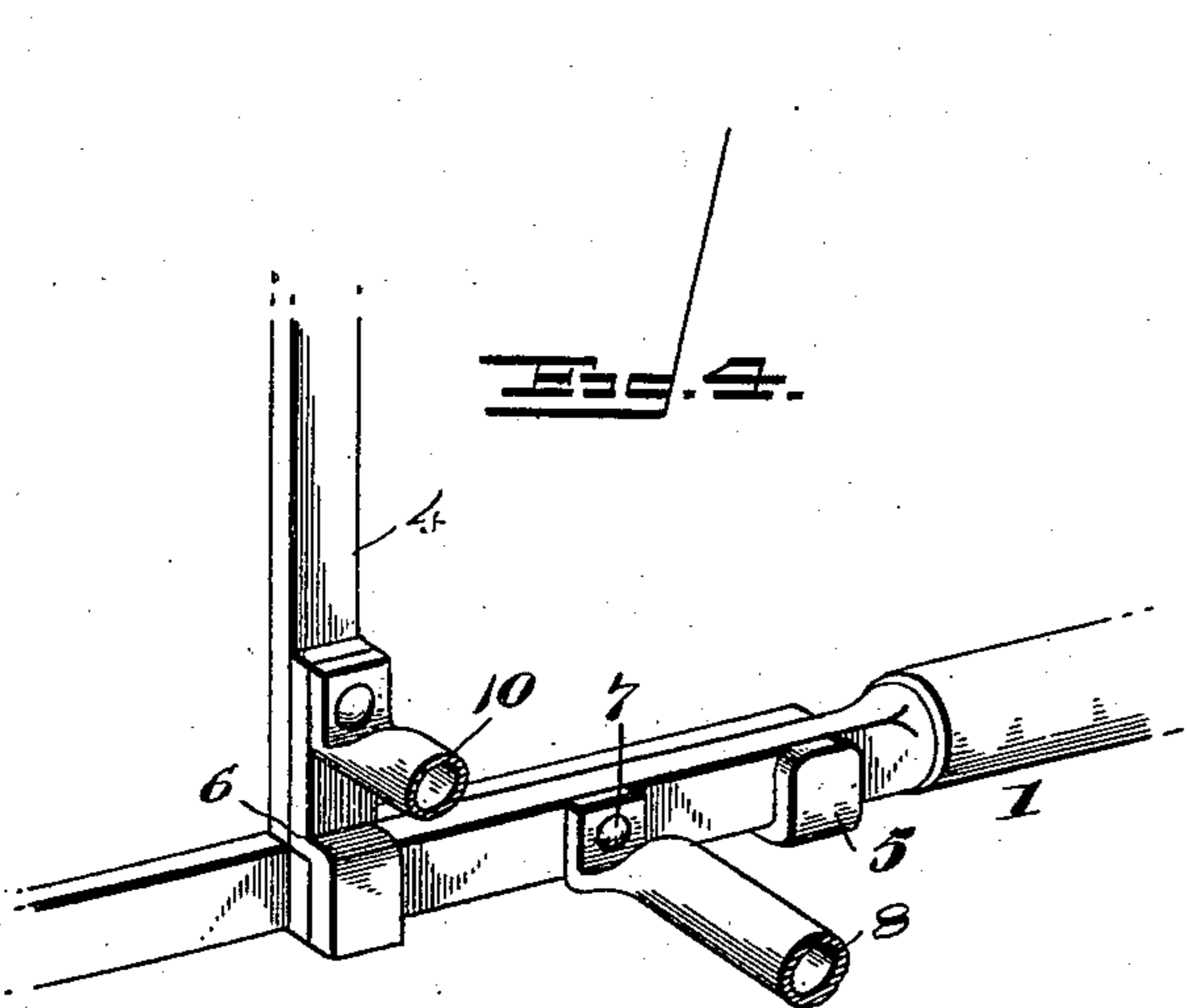
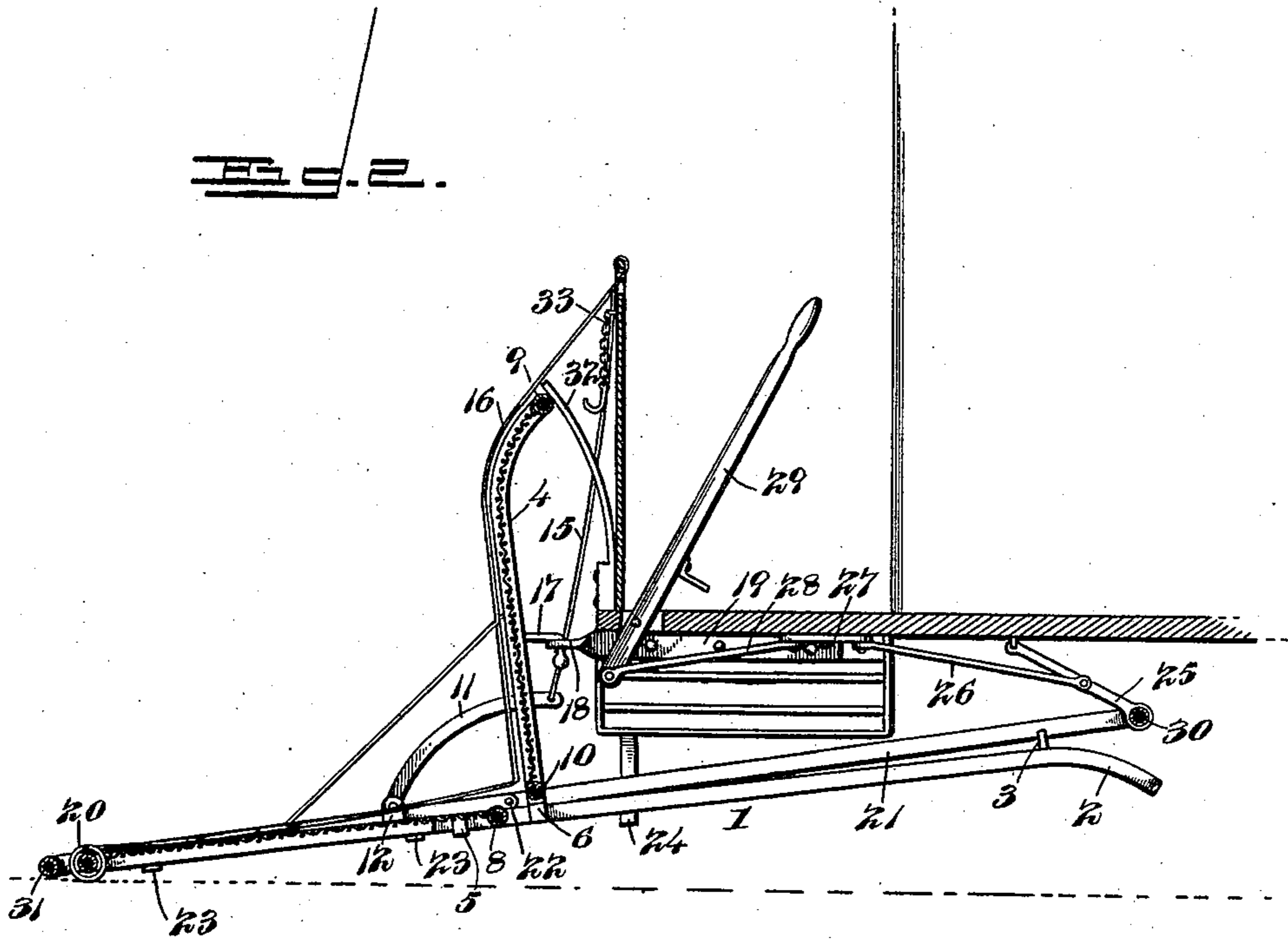
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Inventor
Earl Sherwood

UNITED STATES PATENT OFFICE.

EARL SHERWOOD, OF HONESDALE, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO JUDSON J. CURTIS, OF SAME PLACE.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 577,326, dated February 16, 1897.

Application filed April 25, 1896. Serial No. 589,084. (No model.)

To all whom it may concern:

Be it known that I, EARL SHERWOOD, a citizen of the United States, residing at Honesdale, in the county of Wayne and State of Pennsylvania, have invented a new and useful Car-Fender, of which the following is a specification.

This invention relates to car-fenders and is in the nature of an improvement upon the construction shown and described in Letters Patent No. 547,566, granted October 8, 1895, to myself and George B. Parsons, for a car-fender.

The principal aim of the present invention is to provide a construction of scoop and trip and the operating mechanism therefor which will avoid interference between such parts and the draw-head, brake-chains, and other devices arranged beneath the end of the car body and platform.

The invention also has for its object to simplify and improve the general construction of the scoop and the trip whereby the same may be set or released or folded out of the way, all of which may be accomplished by the motorman while standing upon the platform.

Other objects and advantages of the invention will appear in the course of the ensuing description.

The invention consists in an improved car-fender embodying certain novel features and details of construction and arrangement of parts, as hereinafter fully described, illustrated in the drawings, and incorporated in the claims.

In the accompanying drawings, Figure 1 is a perspective view of the improved fender shown applied to a car. Fig. 2 is a longitudinal section of the same. Fig. 3 is a bottom plan view thereof. Fig. 4 is a detail perspective view of the hinged connection between the front and rear portions of the scoop-frame. Fig. 5 is a similar view showing the arc-shaped brace for supporting the front portion of the scoop and allowing the same to be folded. Fig. 6 is a detail perspective view of one of the arc-shaped braces detached.

Similar numerals of reference designate corresponding parts in the several figures of the drawings.

Referring to the drawings, 1 designates the frame of the scoop, which is substantially rectangular in form, comprising parallel side bars connected by cross-bars at front and rear, which are also parallel or substantially so. The rear ends of the side bars of the scoop-frame are each given a downward curve, as shown at 2, and are provided adjacent to such curved ends with upwardly-projecting pins 3, forming stops for limiting the forward movement of the trip-frame hereinafter described.

At points intermediate their ends the side bars of the scoop-frame are divided and lapped by each other and connected by a hinged joint. This division in the side bars of the scoop-frame occurs just in advance of the front end of the platform of the car and adjacent to the junction of the uprights or standards 4 of the vertical portion of the scoop.

In order to afford a firm-braced connection between the front and rear portions of the scoop-frame, the adjacent ends of the side bars thereof are lapped by each other, as shown in Fig. 4, and the rear portions of the side bars are provided with U-shaped extensions or lips 5, between which and the main bodies of such portions of the bars the front portions of the side bars of the scoop-frame are received. Brackets or keepers 6 are secured to the inner surfaces of the standards 4, and the rear ends of the side bars of the front portion of the scoop-frame are received between said keepers and the rear portions of the side bars when the front portion of the scoop-frame is folded downward into its operative position.

The lapped ends of the front and rear portions of the scoop-frame are pivotally connected by means of the transverse pins or bolts 7, which also serve to secure the transverse frame-bar 8 in place, said bar 8 constituting the rear bar of the front portion of the scoop, to which the wire webbing or meshed fabric is connected.

Any desired form of wire-webbing is stretched over the front portion of the scoop and connected to the side bars and to the front bar and the bar 8 by winding or coiling the terminal portions of the strands of the

wire webbing or netting around such bars and making the same fast in any convenient manner. After this is done the frame with the webbing or netting applied is galvanized by submerging the same in a zinc-bath, the zinc acting as a soldering agent for uniting the strands of netting at the points of intersection and also to the frame-bars of the scoop. This produces a light and strong construction of scoop-frame.

By providing the lips or keepers 5 and 6 upon each side of the pivot 7 the divided portions of the front and rear portions of the scoop-frame are effectively braced relatively to each other and the front portion of the scoop is sustained in alinement with the rear portion, while the disposition of said lips or keepers admits of the front portion of the scoop being folded against the upright portion of the scoop when not in use.

The upright portion of the scoop comprises the standards 4, the top connecting cross-bar 9, and the lower cross-bar 10, to which suitable wire webbing or netting is applied in a manner similar to that above described in connection with the front portion of the scoop. The upright portion of the scoop is rigidly connected to the rear portion, and the front portion of the scoop is braced relatively to the upright portion by means of a pair of arc-shaped braces 11, pivotally connected at their lower ends to clips 12, embracing the side bars of the front portion of the scoop and provided at their opposite ends with notches 13, by which they are adapted to engage loops or keepers 14, secured to the outer surfaces of the standards 4. The openings in these keepers allow of a sufficient amount of play of the braces 11 to permit of such braces being lifted to throw the notches thereof out of engagement with the keepers, after which the braces may slide rearwardly through the keepers for permitting the front portion of the scoop to be folded upward against the upright portion of the scoop. When the front portion of the scoop is in its operative position, it is firmly held by reason of the engagement of the braces 11 with the keepers.

The braces may be disengaged from their keepers by means of flexible connections 15, which attach at their lower ends to the braces and extend at their upper ends within convenient reach of the motorman. Another flexible connection 16 attaches at one end to the front bar of the scoop and extends thence upward and rearward within convenient reach of the motorman. The motorman by pulling upward on the connections 15 may disengage the braces 11 from the keepers 14, after which, by pulling on the connection 16, he may elevate the front portion of the scoop and move the same into its folded position.

The scoop-frame is provided as to its upright portion with hooks 17, which may be readily engaged with or disengaged from eyes 18 in the front ends of irons 19, bolted to the car-sills or other convenient point.

20 designates an elastic shoe which is in the form of a coiled spring extending transversely of the scoop-frame and coiled around the front bar of such frame, the terminals of said spring being attached to the frame adjacent to its side bars. This shoe is made of stout spring-wire and the coils thereof are considerably larger in diameter than the diameter of the front bar of the scoop, so that when the scoop is thrown downward the several coils of the shoe may yield independently of each other and accommodate the shoe to the unevenness of the ground. At the same time this form of shoe admits of the car running either forward or backward with equal facility.

The trip-frame (indicated at 21) is preferably of open rectangular form, and the side bars thereof are hinged and jointed at the point 22, adjacent to the front end of the car-platform. The front portion of the trip-frame is supported upon laterally-projecting rests 23 on the scoop-frame, so that while it is supported by the scoop-frame it is free to rise and fall independently thereof. The rear portion of the trip-frame is supported at its front end in rigid hangers 24 and at its rear end by means of two or more swinging hangers or links 25, pivotally connected at one end to the bottom of the car and at the other end to the rear cross-bar of the trip. An intermediate swinging hanger 25 is also employed, and from such hanger a rod 26 extends forward and connects pivotally with one end of a lever 27, pivoted intermediate its ends under the car-body and having pivotally connected to its opposite end a rod 28, which extends forward and connects pivotally to the lower end of a hand-lever 29, pivoted intermediate its ends to the car-platform and arranged within convenient reach of the motorman. By this construction as the lever 29 is vibrated forward the hangers 25 are vibrated in a similar direction, and as such lever is vibrated rearward the hangers 25 are vibrated rearward, which acts to draw the trip-frame 21 back and allow the scoop to drop at its front end upon the ground. As the lever 29 is thrust forward the hangers 25 are vibrated forward, carrying with them the trip-frame 21 and causing the rear cross-bar of the trip-frame (indicated at 30) to ride upon the upper surfaces of the curved rear ends of the side bars of the scoop-frame. The rear ends of the scoop-frame bars are thus depressed, causing a corresponding elevation of the front end of the scoop. The bar 30 finally comes in contact with the stops 3 and the further forward movement of the trip-frame is prevented, the fender now being set.

The front cross-bar 31 of the trip-frame normally occupies a position considerably in advance of the corresponding bar of the scoop, and upon the fender coming in contact with an object the trip will be thrust rearward, thus allowing the scoop to drop into the position shown in Fig. 2. It will thus be impossible for the object to pass beneath the scoop,

while by reason of the ability of the front portion of the trip-frame to rise and fall independently of the scoop the object may pass either over or under such trip-frame, according to the tendency. Should the motorman see a person or object upon the track, he may grasp the lever 29 and pull the same back, thus allowing the front end of the scoop to drop without waiting for the trip to act.

32 is a spring interposed between the top bar 9 of the scoop and the front end of the car for throwing the scoop down quickly when the latter is released, the spring forming, also, a cushion for the back thrust of the scoop.

The construction above described obviates all interference between the fender and its operating mechanism and the draw-head and other parts of the car mechanism arranged beneath the platform, &c. It also enables the motorman, while standing upon the platform of the car, to set the fender or to drop the scoop or to fold the same, together with the trip-frame, upward against the front of the car, where it may be held by means of a chain 33, having a hook for engaging the front bar of the scoop.

The fender is susceptible of various changes in the form, proportion, and minor details of construction, which may accordingly be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed as new is—

1. In a car-fender, a scoop-frame made in two sections having a hinged connection with each other, one of said sections being jointed between its front and rear ends so as to fold and extended under the car-body for engagement with the tripping mechanism, in combination with a trip slidingly supported on said scoop-frame, a swinging hanger to which the rear end of the trip is pivotally connected, and an arc-shaped brace pivotally connected to one of said sections and having a sliding and interlocking engagement with the other section, substantially as described.

2. In a car-fender, a scoop made in two sections having a hinged connection, one of said sections being jointed between its front and rear ends so as to fold and extended under the car-body for engagement with the tripping mechanism, in combination with a trip slidingly supported on said scoop, a swinging hanger to which the rear end of the trip is

pivotally connected, an arc-shaped brace connected to one of said sections and having an interlocking engagement with the other section, and a flexible connection attached to said brace whereby the latter may be disengaged for allowing the scoop to be folded, substantially as described.

3. In a car-fender, the combination with the pivoted scoop-frame having its side bars extended straight back under the car and formed with downwardly-curving rear ends, of the trip-frame slidingly supported on the scoop and having its rear end supported upon a swinging hanger, substantially as described.

4. In a car-fender, the combination with the scoop-frame pivotally connected to the car and having its side bars extended straight back under the car, of a trip-frame slidingly supported on the scoop and provided at its rear end with a cross-bar which engages the rear ends of the side bars of the scoop-frame, and a swinging hanger for yieldingly supporting the rear end of the trip-frame, substantially as described.

5. In a car-fender, the combination with the pivoted scoop, of the trip slidingly supported thereon, the swinging hanger for suspending the rear end of the trip, and an operating-lever and connections between said lever and hanger, whereby the trip may be moved for releasing or setting the scoop, substantially as described.

6. In a car-fender, the scoop-frame pivotally connected to the car and having its side bars extended back under the car, and made in hinged and folding sections, means for folding or setting the scoop from the car-platform, and a shoe consisting of a coiled spring surrounding the front bar of the scoop, in combination with a trip-frame independently connected to the car-body and slidingly supported on the scoop, a swinging hanger suspending the rear end of the trip, an operating-lever within reach of the motorman, and connections between said lever and hanger, whereby the trip may be moved for dropping or raising the scoop, substantially as described.

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

EARL SHERWOOD.

Witnesses:

JOHN H. SIGGERS,
THEODORE DALTON.