Jan. 2, 1923.

A. J. THORNLEY.

CAR FENDER.

FILED AUG. 10, 1922.

1,440,423

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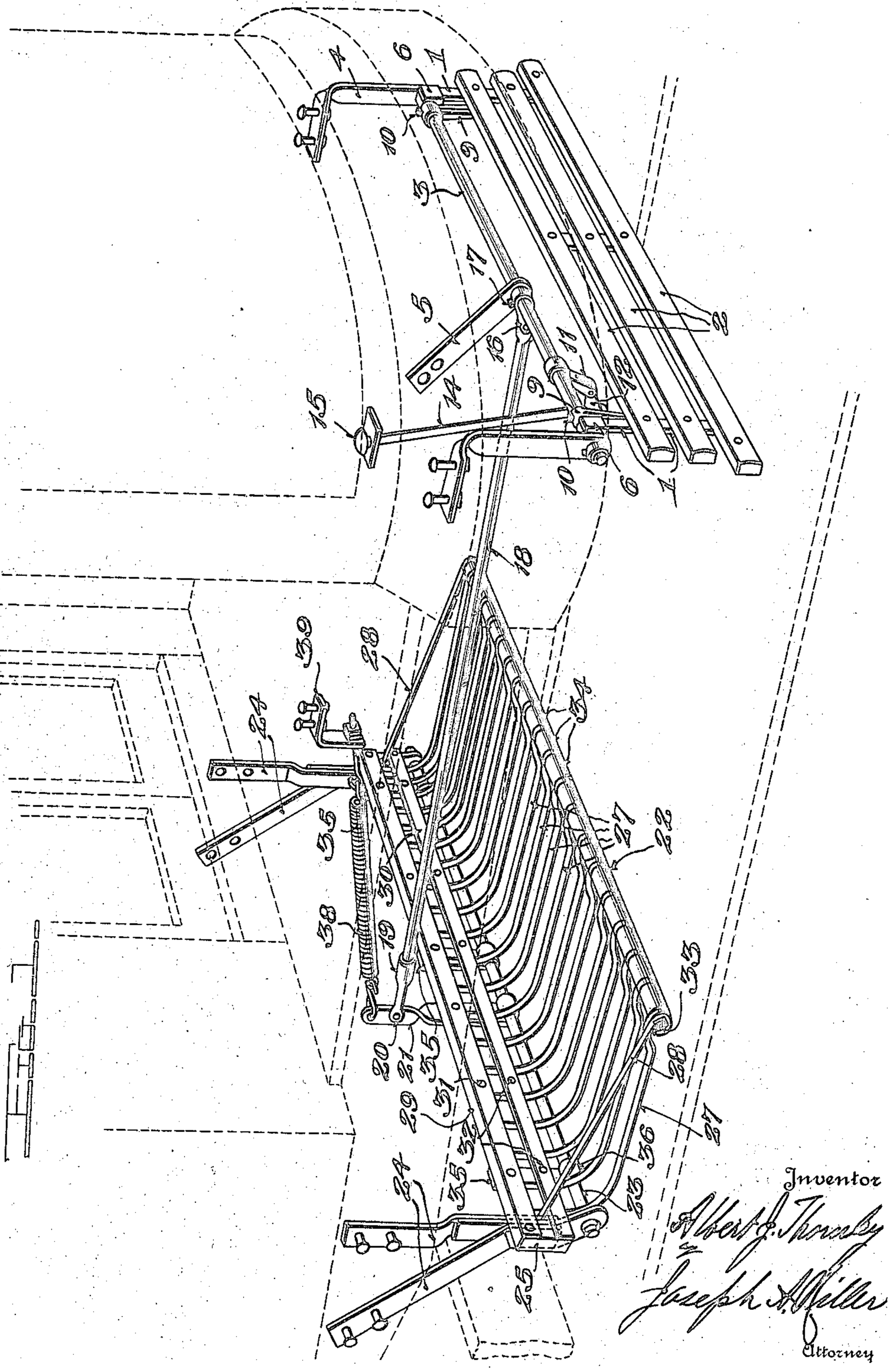

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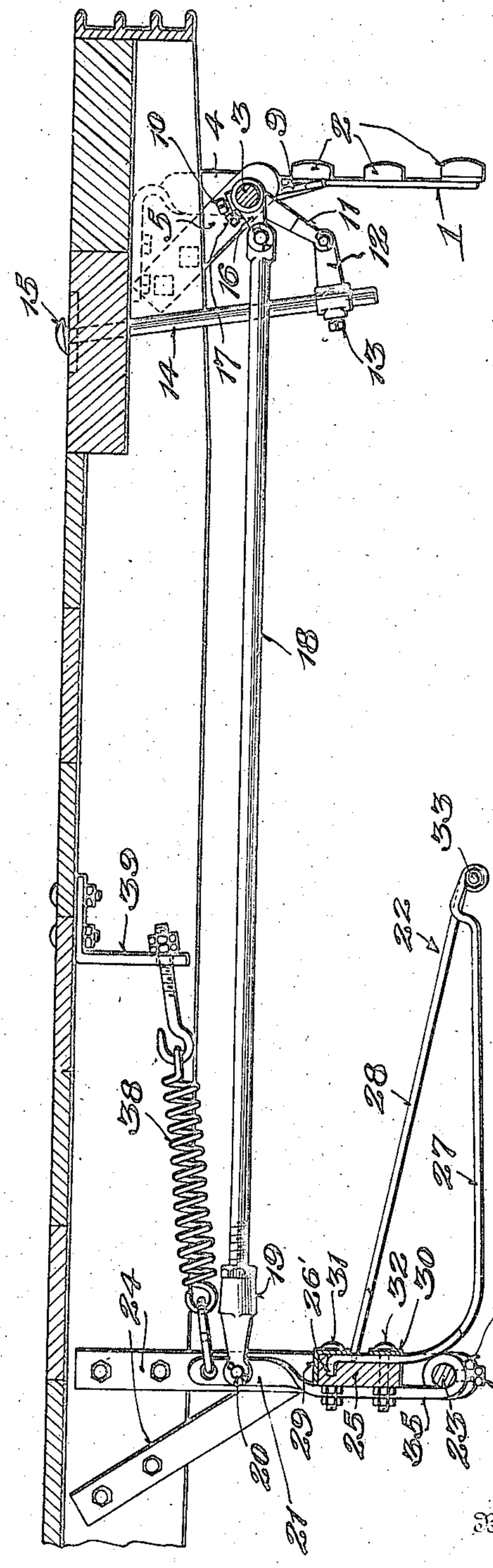

FIG. 2.

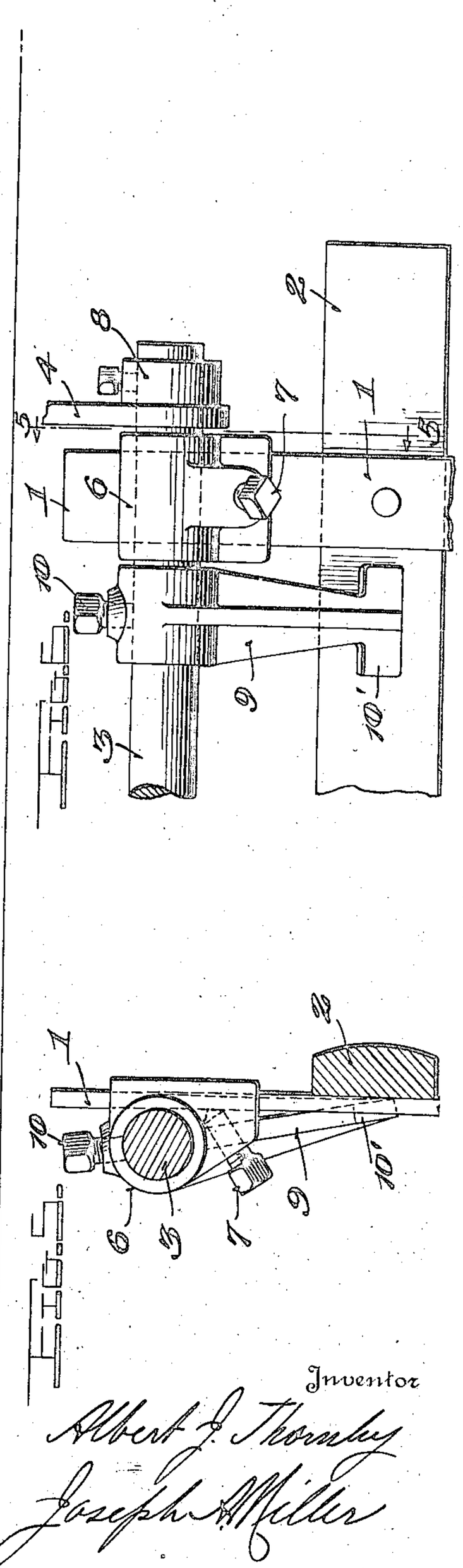

FIG. 3.

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3 SHEETS-SHEET 3

FIG. 3.

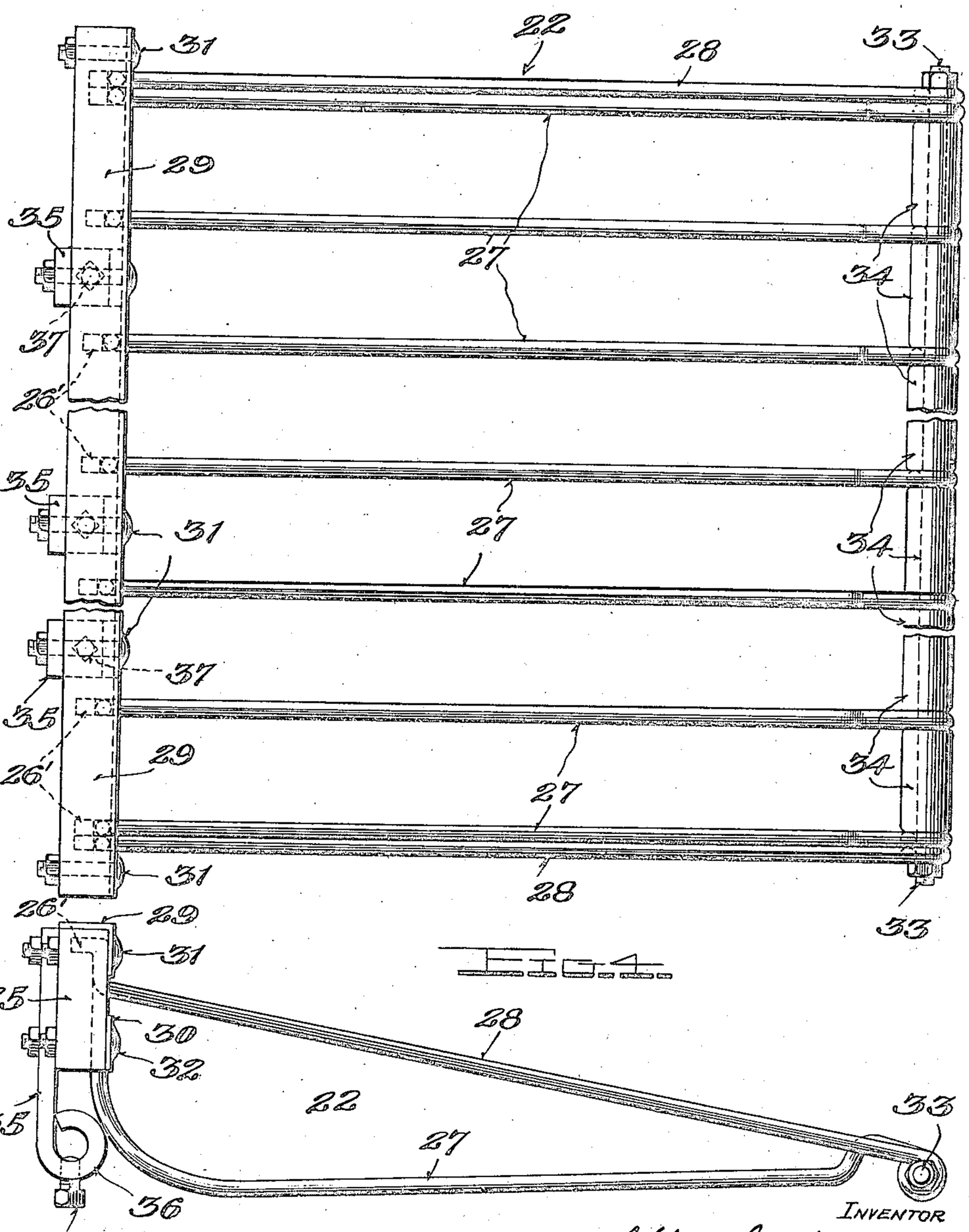

FIG. 4.

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Patented Jan. 2, 1923. 1,440,423

UNITED STATES PATENT OFFICE.

ALBERT J. THORNLEY, OF PAWTUCKET, RHODE ISLAND, ASSIGNOR TO CONSOLIDATED CAR FENDER COMPANY, OF PAWTUCKET, RHODE ISLAND.

CAR FENDER.

Application filed August 10, 1922. Serial No. 580,399.

To all whom it may concern:

Be it known that I, ALBERT J. THORNLEY, a citizen of the United States, residing at Pawtucket, in the county of Providence and State of Rhode Island, have invented new and useful Improvements in Car Fenders, of which the following is a specification.

This invention relates to certain new and useful improvements in car fenders and the primary object of the invention is to provide an improved construction of fender wherein the fender is normally held raised above the car tracks and is combined with a gate or guard, which latter upon being engaged by an obstruction, effects lowering of the fender to pick-up position.

The invention further aims to provide improved means for resetting the gate upon actuation thereof.

A still further object of the invention is to provide an improved form of gate and fender and improved means for mounting and connecting same so that upon actuation of the gate, the fender or catcher will be positively and reliably actuated into pick-up position.

Still further the invention aims to provide a mounting for the gate so as to permit of adjustment thereof to cause its lower side to lie close to the track, since some trucks cause the car to lie higher above the tracks than others.

The invention has still other and further objects which will be later set forth and manifested in the course of the following description.

In the drawings:—

Figure 1, is a perspective view of the invention;

Figure 2, is a longitudinal sectional view;

Figure 3, is a top plan view of the fender or catcher;

Figure 4, is an end elevation thereof;

Figure 5, is a fragmentary detail view on line 5—5 of Figure 6 partly in section of the gate mounting means, and

Figure 6, is a rear side elevation of Figure 5.

In proceeding in accordance with the present invention a guard or trip gate is employed which embodies vertical bars 1 to which spaced horizontal slats 2 are secured. A horizontal shaft 3 is journaled in hangers or brackets 4 that are suitably and rigidly affixed to the front of the car body. A central brace 5 is employed, which is perforated to receive the shaft 3 and rotatably support same. The brackets 6, are slotted to slidably receive the bars 1, and the latter are held rigidly in adjusted position by means of screws 7 which are carried by the brackets 6 and which impinge against the rear faces of the bars 1. A collar 8 is mounted on the shaft 3 and limits movement thereof with respect to the brackets 4. For the purpose of operating the shaft 3 by the gate, a pair of arms 9 are employed which latter have feet 10′ that bear against the rear face of the uppermost slat 2 of the gate, the arms 9 being secured by set screws 10 in rigid position on the shaft 3.

A crank 11 is secured to the shaft 3 and is pivoted to an arm 12 secured by a set screw 13 onto the lower end of a reset rod or pin 14, the latter having an operating head 15 which projects through the floor of the car in a position to be engaged by the foot of the motorman. A crank 16 is secured by a set screw 17 to the shaft 3 and is pivoted to the forward end of a rod 18 the latter underlying the floor of the car and the rear end of the rod 18 having an adjustable threaded member 19 which is pivoted at 20 to the upper end portion of an arm 21, the lower portion of which latter is rigidly secured to the fender or catcher 22. The fender or catcher embodies a shaft 23 which is pivoted in hangers 24 carried by the car body and depending therefrom. A horizontal bar 25 is employed having cut-outs on its front face in which are conformably received the angular ends 26′ of a series of rod-like fingers 27. The end bars are provided with integral upwardly inclined parts 28 which also have angular upper ends 26′ for reception in the cut-outs of the bar 25. For the purpose of holding the angular ends of the fingers in their respective cut-outs, angle bars 29 are rigidly secured over the top and front faces of bar 25, and a lower metal clamping strip 30 is employed which is secured to the front face of the bar 25 and engages the fronts of the upwardly extending parts of the fingers. Bolts 31 and 32 are employed to rigidly secure the clamping strip 30 and angle iron 29 respectively in position. The outer ends of the fingers are formed with eyes receiving a

front bar or rod 33, the fingers being held in their predetermined spaced relation by means of spacing rolls 34 mounted on the front rod 33. The bar 25 has a series of arms 35 rigidly secured to its rear face and depending therefrom, the lower ends of the arms being formed with eyes 36 to receive the shaft 23 and being rigidly secured to the latter by set screws 37. For the purpose of normally holding the fender 22 in raised position, a coil spring 38 is employed which at one end is secured to the arm 21 above the pivot 20 of rod 18 and at its opposite end is secured to a bracket 39 secured to the car body.

In operation, upon the gate or trip encountering an obstruction, same will be swung rearwardly about the shaft 3 causing the crank 16 thereof to swing upwardly, thereby moving the rod 18 in a forward direction, with the result that the rod will pull on the arm 21 and move the latter with the shaft 23 so as to cause the fender 22 to move downwardly, or in a position close to the track to thereby pick up the object or obstruction. In the movement of the gate or trip 2, it will be seen that the latter will engage the arms 9 and since these arms are rigidly attached to the shaft 3, the latter will be actuated to effect the aforementioned movement of the rod 18; the arms 9 thereby serving as a means of connecting the gate to the shaft 3 so that movement of the gate will effect movement of the shaft.

When it is desired to raise or lower the gate 2, due to the fact that in some instances the car body sets higher above the track than in others, it will be seen that by manipulation of the screws 7, the bars 1 may be adjusted vertically with respect to the hangers 6 as may be desired or found necessary, this adjustment not affecting the arms 9 which maintain their rigid relation to the shaft 3.

After operation, and removal of the object from the fender 22, the parts may be reset to occupy the normal position of Figure 2 by depressing the reset pin or rod 14.

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

1. In combination with a car fender, a vertical gate having vertical bars, a shaft, slotted fittings on the shaft receiving the bars of the gate therein, screws for adjustably holding the bars in the slots of the fittings, arms rigidly carried by the shaft and abutting the rear of the gate whereby upon actuation of the gate the shaft will be partially rotated, a fender, and means operated by the shaft to render the fender operative.

2. In combination with a car fender, a vertical gate, a shaft, means to adjustably connect the gate to the shaft to allow of vertical adjustments of the gate, means rigid on the shaft and engaged with the gate in all of said vertical adjustments of the latter whereby upon actuation of the gate the shaft will be actuated, and means operated by the shaft to render the fender operative.

3. In a car fender, a horizontal bar having cutaway parts in its front face, fingers having angular parts received in the cutaway parts, an angle iron secured to the top and front face of the bar to secure the fingers to the bar and a clamping strip secured to the front face of the bar and over the fingers and located below the angle iron.

4. In a car fender, a bar having cutaway parts therein, fingers having portions thereof received in the cutaway parts, and means to secure the fingers in the cutaway parts.

5. In a car fender, a bar having cutaway parts therein, fingers having portions thereof received in the cutaway parts, and clamping means engaged over the bar and with the said portions of the fingers to hold the latter in position.

6. In a car fender, a bar, a front rod, a series of fingers having eyes at one end and receiving the rod and having rear parts embedded in the bar, and means to clamp the rear parts of the fingers embedded in the bar.

7. In a car fender, a shaft, means to support the shaft, a fender having a rear bar above the shaft and a front bar, fingers connecting the bars, arms depending from the rear bar and rigidly secured to the shaft, and means to raise and lower the fender about the shaft.

8. In a car fender, a shaft, means to support the shaft, a fender having a rear bar above the shaft and a front bar, fingers connecting the bars, arms depending from the rear bar and rigidly secured to the shaft, an arm secured to the rear bar and extending thereabove, a spring connected to the last named arm and to the car body, and means connected to the last named arm to raise and lower the fender.

9. In a car fender, a shaft, a bar above the shaft, a plurality of vertical arms rigidly secured to the rear of the bar and having their lower ends extending therebelow and rigidly secured to the shaft, a series of fingers having rear vertical parts embedded in the front face of the bar, and means common to all of the fingers to clampingly engage and hold said vertical parts of the fingers to the bar.

10. In a car fender, a shaft, a bar above the shaft, a plurality of vertical arms rigidly secured to the rear of the bar and having their lower ends extending therebelow and rigidly secured to the shaft, a series of fingers having rear vertical parts engaged with the front face of the bar, and means to secure said vertical parts of the fingers to the bar.

11. In a car fender, a shaft, a bar above

the shaft, a plurality of vertical arms rigidly secured to the rear of the bar and having their lower ends extending therebelow and rigidly secured to the shaft, a series of fingers having upwardly extending rear parts extending across the front of the shaft and thereabove and engaged with the front face of the bar, and means to secure the said finger parts to the bar.

12. In combination with a car fender, a vertical gate having vertical bars extending thereabove, a shaft, fittings on the shaft slidably supporting the upper ends of said vertical bars, means for adjustably securing the bars to the fittings, means actuated by the shaft to render the fender operative, and means carried by the shaft and engaged with the rear of the gate in all adjustments of the latter for operating the shaft upon movement of the gate.

13. In combination with a car fender, a gate disposed in front of the fender, means connected to the fender to actuate the latter to operative position, means to mount the gate for vertical adjustment, and means carried by the fender actuating means and movably engaged with the gate in all vertical adjustments of the latter for effecting movement of the fender actuating means by and upon movement of the gate.

14. In a car fender, a shaft, a bar thereabove, fingers secured at their rear to the bar and having downwardly extending parts disposed across the front of the shaft, and means to connect the fronts of the fingers.

15. In combination with a car fender and a gate arranged in front thereof, actuating means connected to the fender, means to adjustably connect the gate to the actuating means, and means carried by the actuating means and engaged with the gate in all adjustments of the latter for effecting operation of the actuating means by and upon movement of the gate when engaging an obstruction.

16. In combination with a car fender and a gate arranged in front thereof, a shaft, means connected to the fender and to the shaft for operating the fender by the shaft movement, means to adjustably and pivotally suspend the gate from the shafts to permit the gate to be disposed in varying horizontal planes, and means rigid on the shaft and engaged with the rear of the gate in all vertical adjustments of the latter for effecting movement of the shaft and thereby movement of the fender by and upon movement of the gate in encountering an obstruction.

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

ALBERT J. THORNLEY.

Witnesses:
S. N. BARRY,
J. A. MILLER.