Dec. 11, 1923. 1,476,960

T. ELLIOTT

RAILWAY CAR

Filed April 17, 1922 3 Sheets-Sheet 1

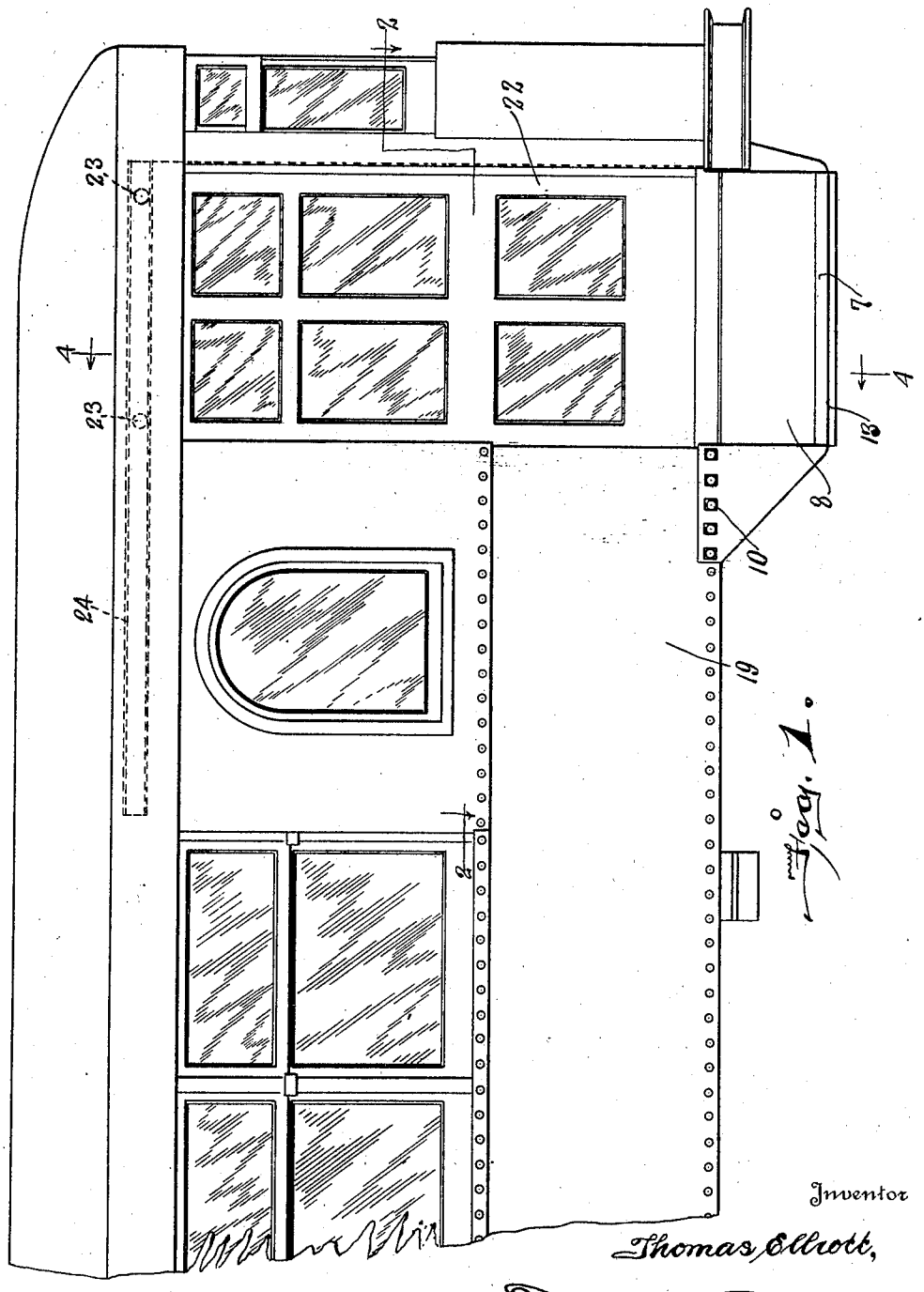


Fig. 1.

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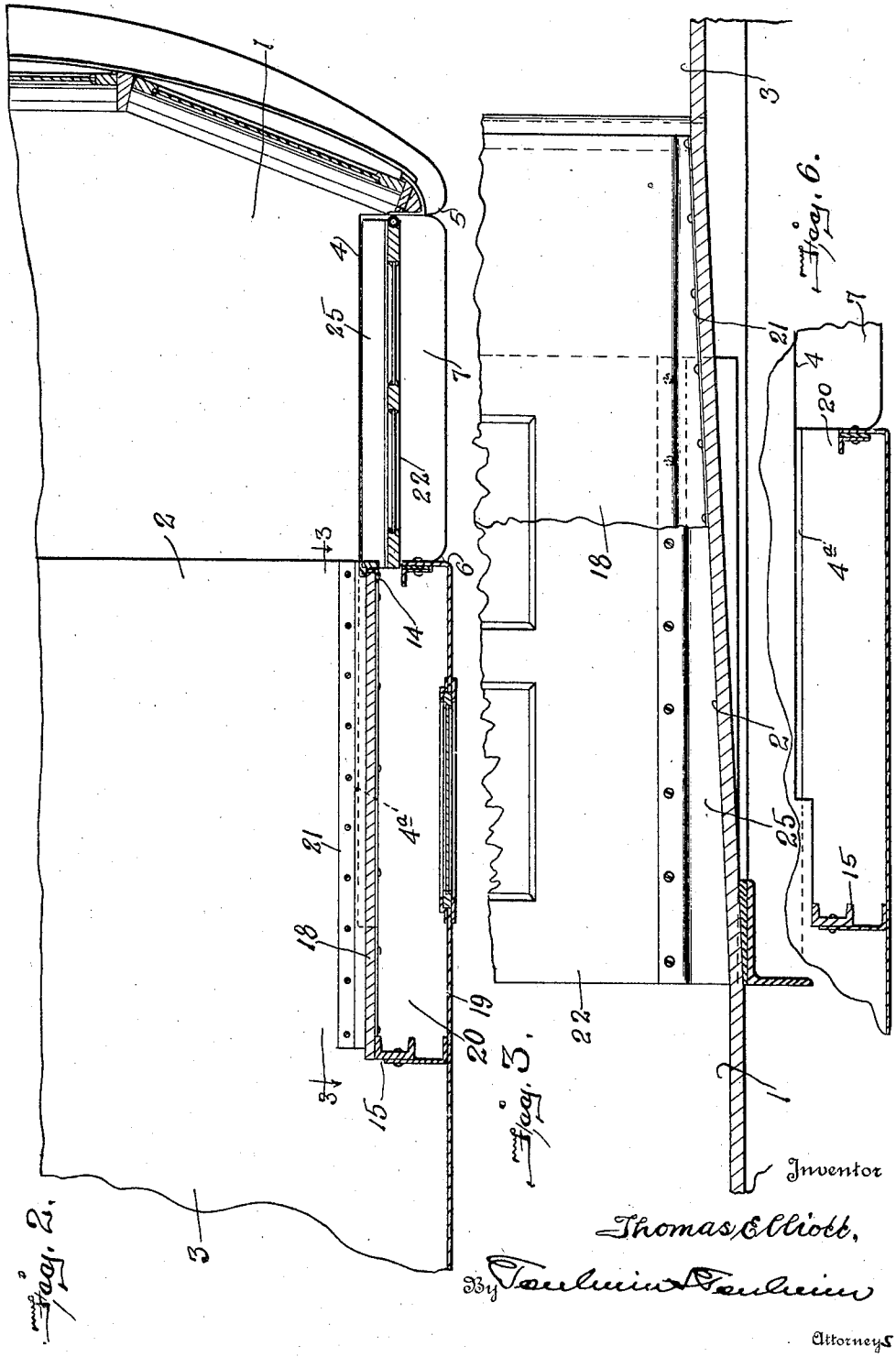
Attorneys

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RAILWAY CAR

Filed April 17, 1922 3 Sheets-Sheet 2



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RAILWAY CAR

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Fig. 4.

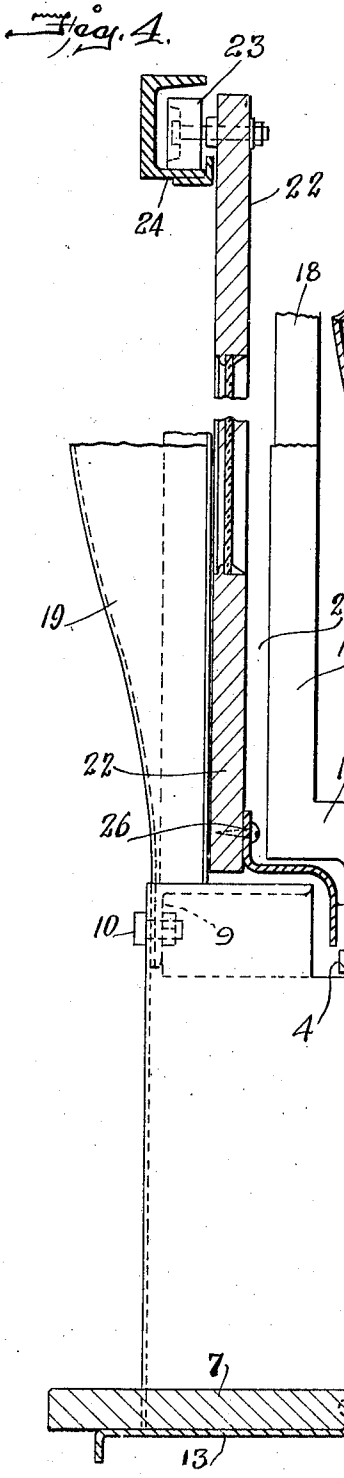
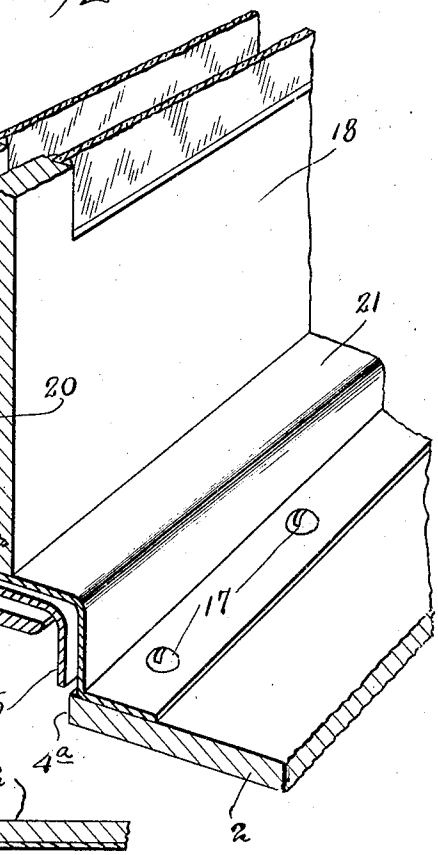


Fig. 5.



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Patented Dec. 11, 1923. 1,476,960

UNITED STATES PATENT OFFICE.

THOMAS ELLIOTT, OF CINCINNATI, OHIO, ASSIGNOR TO THE CINCINNATI CAR COMPANY, OF WINTON PLACE, OHIO, A CORPORATION OF OHIO.

RAILWAY CAR.

Application filed April 17, 1922. Serial No. 553,654.

To all whom it may concern:

Be it known that I, THOMAS ELLIOTT, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Railway Cars, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to railway cars, particularly the kind used on city and interurban railways.

The major features of my invention are:—

(*a*) A step set back or inward so that it shall not project beyond the outer margins of the adjacent parts of the car structure, whereby a stationary and at the same time a protected step is provided and whereby also the usual operating mechanism for actuating the folding steps is eliminated with the advantage of reducing cost and weight, and the labor of the motorman in raising and lowering folding steps;

(*b*) A sliding door located when closed over said step and having a guard which closes any gap between the door and the platform or floor where it is cut away to expose the step.

Certain structural features also enter into my invention.

In the accompanying drawings:

Fig. 1 is a side elevation of a portion of a conventional railway car with my improved step and door arrangement applied thereto;

Fig. 2 is a horizontal sectional view on the line 2—2 of Fig. 1;

Fig. 3 is a vertical sectional view of the floor and an elevation of one side of the car, the view being taken on the line 3—3 of Fig. 2 and looking in the direction of the arrow;

Fig. 4 is an enlarged transverse sectional view on the line 4—4 of Fig. 1;

Fig. 5 is an enlarged perspective view, partly in section, showing the arrangement of the door, the floor and the partition, the door in this view being in the pocket;

Fig. 6 is a plan view showing the relation of the floor to the side sill with a slot intervening.

In Fig. 1 I have illustrated a portion of one side of a railway car of any conventional type. To such a car I apply the features of my invention. I prefer a car having a ramped floor, as best seen in Fig. 3, in which the numeral 1 designates the platform, the numeral 2 the ramped portion of the floor and 3 the horizontal portion.

It will be seen from Fig. 2 that the platform is cut away at 4 at a point sufficiently remote from the exterior outer margins 5 and 6 of the car structure to accommodate the width of a fixed step 7; and from Fig. 6 that between the floor and the inner edge of the side sill a space 4^a is provided. This space or slot accommodates the door guard when the door is within the pocket, as will be explained later. The step 7 may be sustained in any convenient manner, but preferably by means of a knee or step plate 8 secured to the side sill 9 of the car structure, as by bolts 10, and to a platform sill 11 by rivets 12. The bottom plate 13 is secured to the knee or step plate and the step proper is held upon and within this bottom plate.

It will now be seen, assuming that the door is removed from over the step, that passengers may enter or leave the car by treading on the step and thence to the platform 1 or from the platform down to the step and that while on the step they are essentially within the outer lines of the car.

Extending above the side sill 9 is corner post 14 and a suitable distance toward the center of the car is U-post 15. See Fig. 2. The post 14 is bent inward, as seen at 16, in Fig. 4, so as to rest upon the floor over the sill 11 where the post is secured, as by bolts or rivets 17. Secured to the two posts 14 and 15 is a partition 18 which forms a wall between which and the outer wall or side plate 19 of the car body is formed a pocket 20 for the reception of the door, as will presently appear. To the lower margin of the partition 18 is secured a shield 21 whose function is to close the gap between the floor 2 and the partition, as best seen in Fig. 5. Thus the inside width of the car is made greater by positioning the partition 18 in the manner shown, while at the same time the shield prevents the possibility of passengers stepping into what would otherwise be an open space between the partition and the floor.

Referring now to the door designated 22, it will be seen that for its supporting rollers 23 there is provided a track 24 in the nature of a U-shaped beam standing edgewise, as best illustrated in Fig. 4. This track beam is conveniently supported, in any desired manner, by connection with the upper part of the

car structure. The door, when closed as in Fig. 2, occupies a position over the step at a point which will position it so that it will conveniently travel back into the pocket 20 by rolling the rollers on the track beam 24. This position leaves between the door, when over the step, and the margin of the platform an open space which, if not closed, would endanger the safety of passengers who might step into the space and be inconvenienced or injured. To prevent this condition the door is equipped with a guard 25 in the nature of a strip of sheet metal secured to the lower margin of the door, as indicated at 26, more particularly in Figs. 4 and 5. It will thus be seen that when the door is over the step this gap or space is properly closed and yet that when the door is slid back into the pocket the guard will find ready entrance in the space or slot 4ª and travel under the partition and the supporting post 14, as also clearly shown in Fig. 4.

I have not illustrated any mechanism for operating the door as any of the conventional mechanisms for that purpose may be employed or the door may be slid back and forth by hand.

It will now be seen that I have provided a stationary step located within the outer margins of the car structure and combined therewith a sliding door equipped with means to prevent passengers from getting their feet between the door and the platform, and also a pocket for the door with a partition so located as not to hamper the space within the car and yet so equipped with a shield device as to prevent passengers from likewise getting their feet into the space between the partition and the margin of the car floor.

Thus, I have combined the advantages of a stationary step and a sliding door with practical safety provisions in the nature of shields and guards.

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

1. In a car, the combination with the floor, of a partition located outward beyond the floor and having its bottom edge above said floor and a shield secured to the partition and to the floor and forming a closure of the space between the floor and partition, said shield extending inwardly from the bottom edge of the partition and then downwardly to the outer edge of the floor.

2. In a car, the combination with the floor, a shield extending upward from and laterally beyond the floor and a partition located at the outer termination of the shield.

3. In a car, the combination with a step positioned essentially within the outer margins of the car structure and a pocket located in line with the step, of a partition located outward of the floor and having its bottom edge above said floor, a shield extending inwardly and then downwardly from the partition to the floor and a door having a guard extending inwardly and then downwardly beneath and outside of said shield and essentially from the door to the floor, such shield and guard closing spaces respectively between the partition and the door and the floor, said door being adapted to enter said pocket with its guard.

4. In a car, the combination with the floor, a stationary step below the floor and essentially within the outer margins of the car structure, a sliding door having its bottom edge above said floor and a guard secured thereto and extending first inwardly and then downwardly therefrom and adapted to fill the space between the door and the floor when the door is closed, of a partition located somewhat above the step and forming a pocket between it and the outer wall of the car, said partition having its bottom edge located above the inwardly extending portion of said shield, and a shield extending in parallelism to the first mentioned shield and connected to the floor and the partition and closing the gap between them.

In testimony whereof, I affix my signature.

THOMAS ELLIOTT.