

No. 812,097.

PATENTED FEB. 6, 1906.

E. A. STANLEY & J. E. ANGER.
TRAM CAR AND OTHER LIKE VEHICLE.

APPLICATION FILED FEB. 6, 1905.

2 SHEETS—SHEET 1.

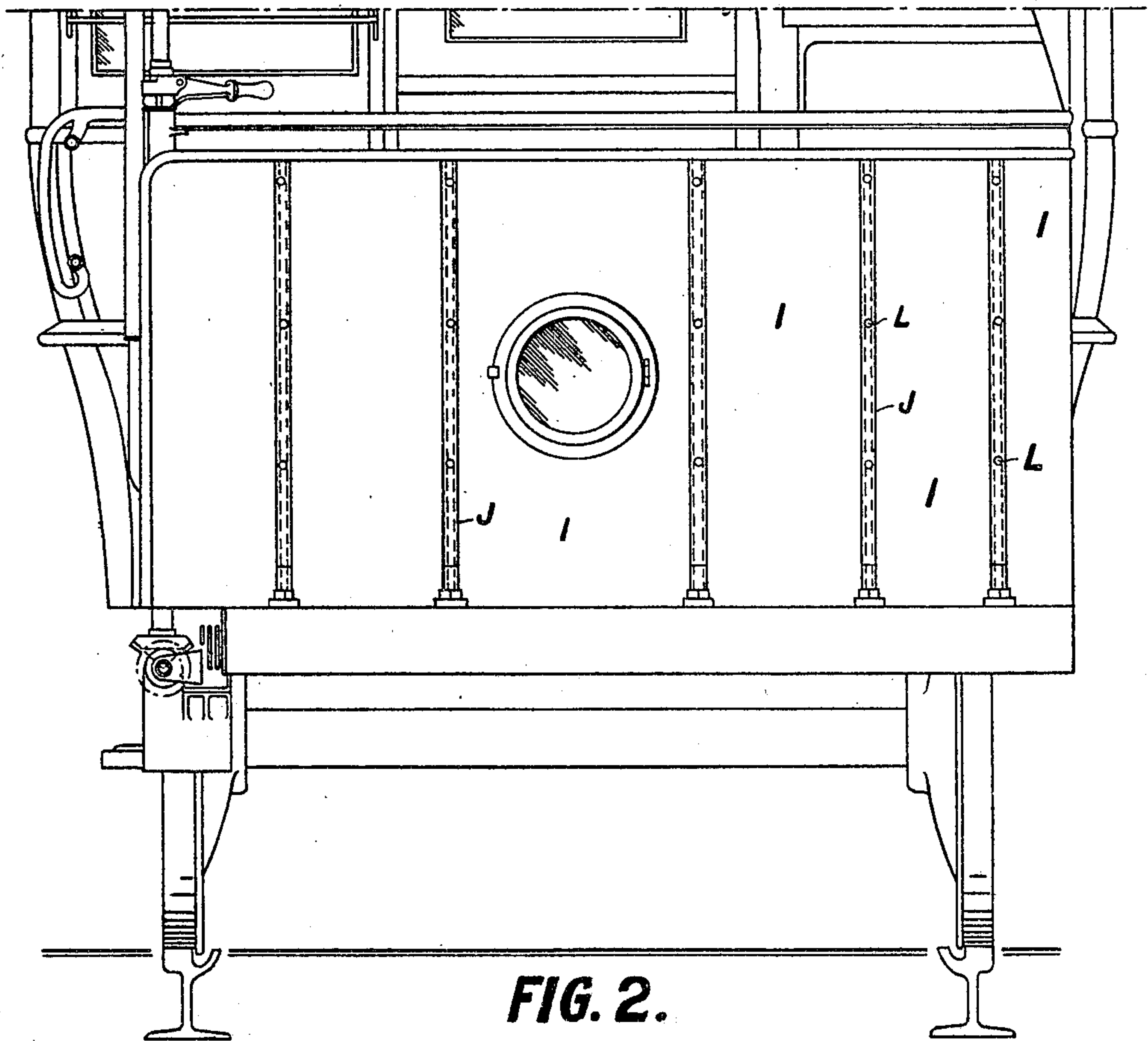
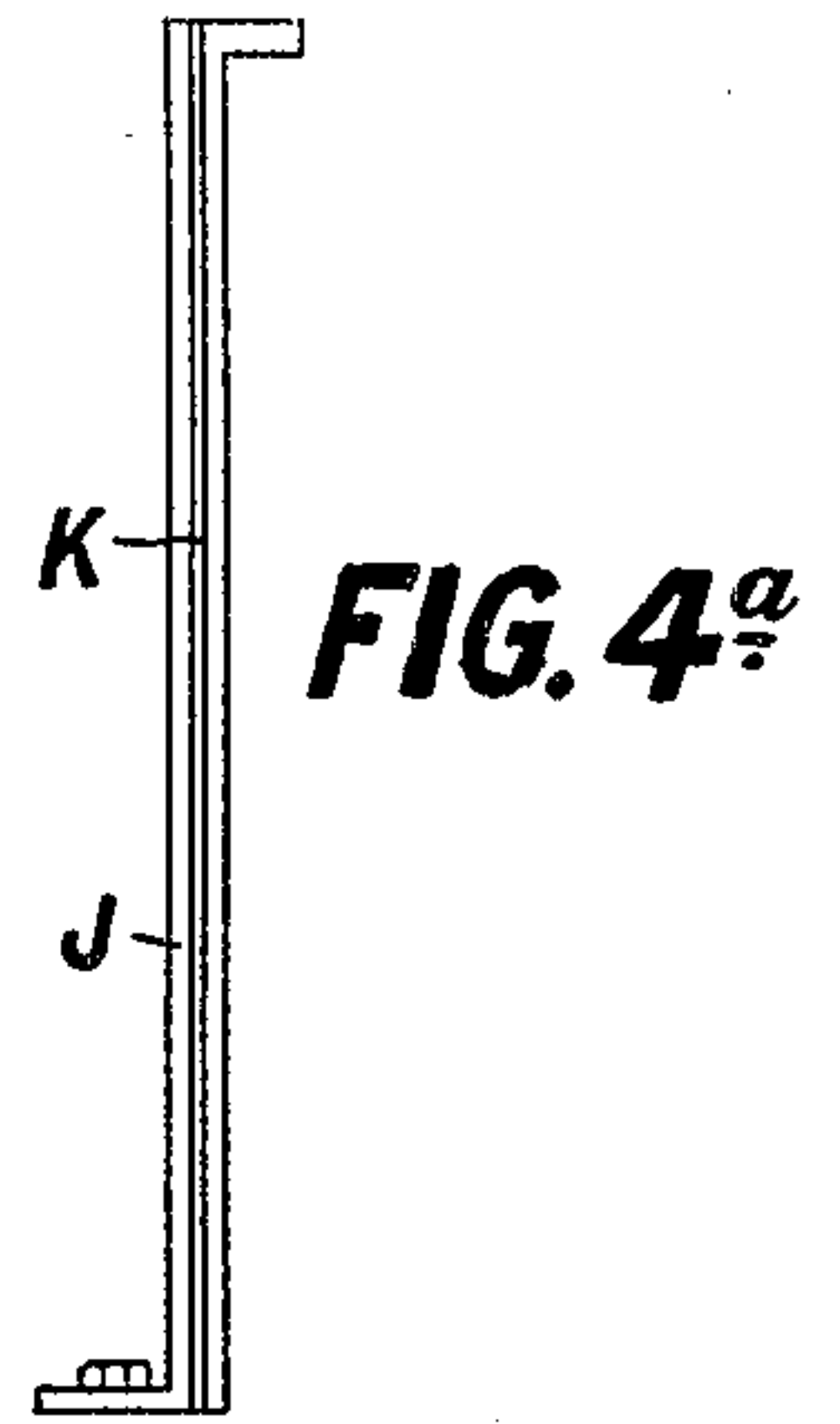
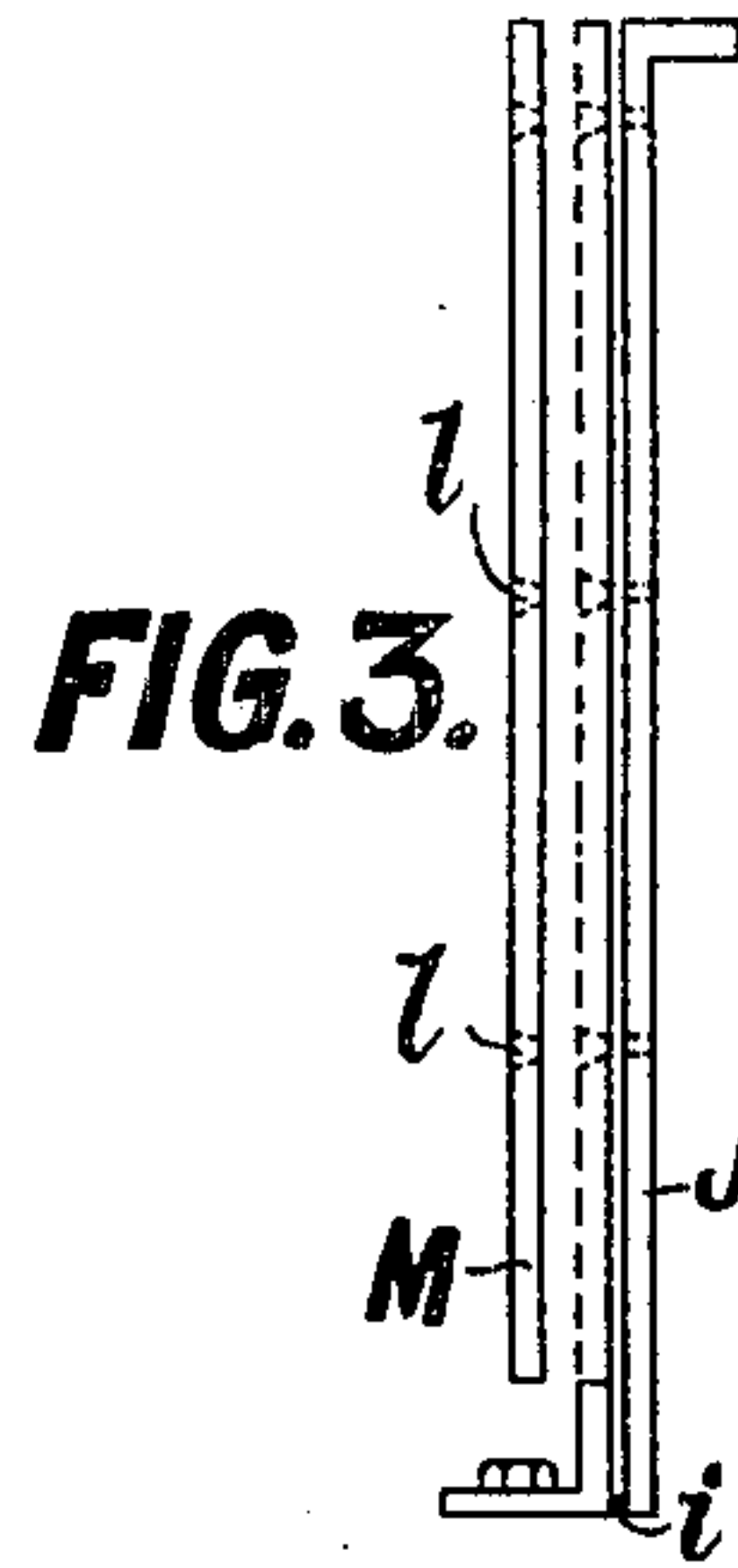
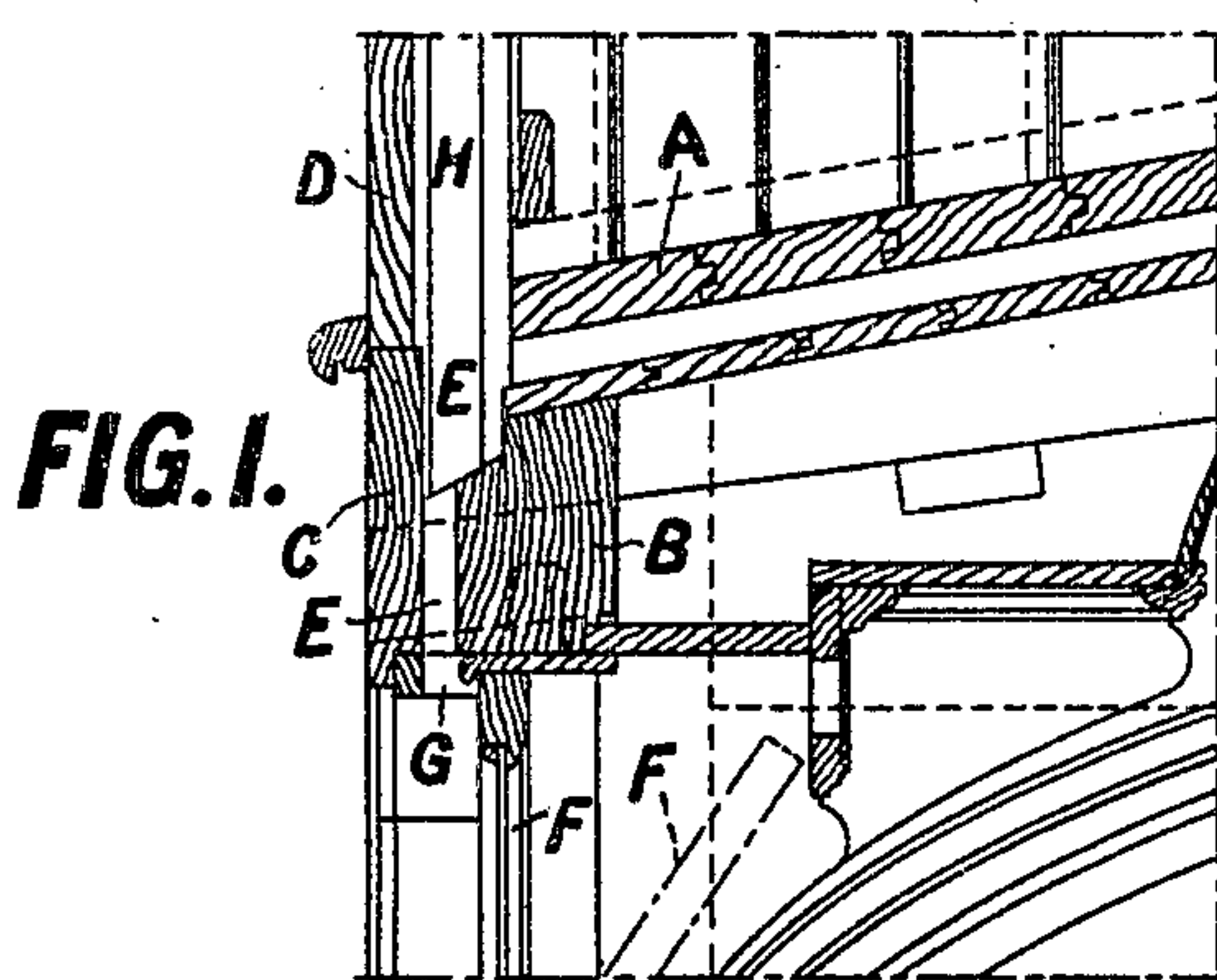


FIG. 2.

Witnesses

Henderson F. Hill
Samuel G. Taylor

Inventors

Ethelbert A. Stanley,
and
John E. Anger,
By Mason, Truitt, Lawrence
attys.

No. 812,097.

PATENTED FEB. 6, 1906.

E. A. STANLEY & J. E. ANGER.
TRAM CAR AND OTHER LIKE VEHICLE.

APPLICATION FILED FEB. 6, 1906.

2 SHEETS—SHEET 2.

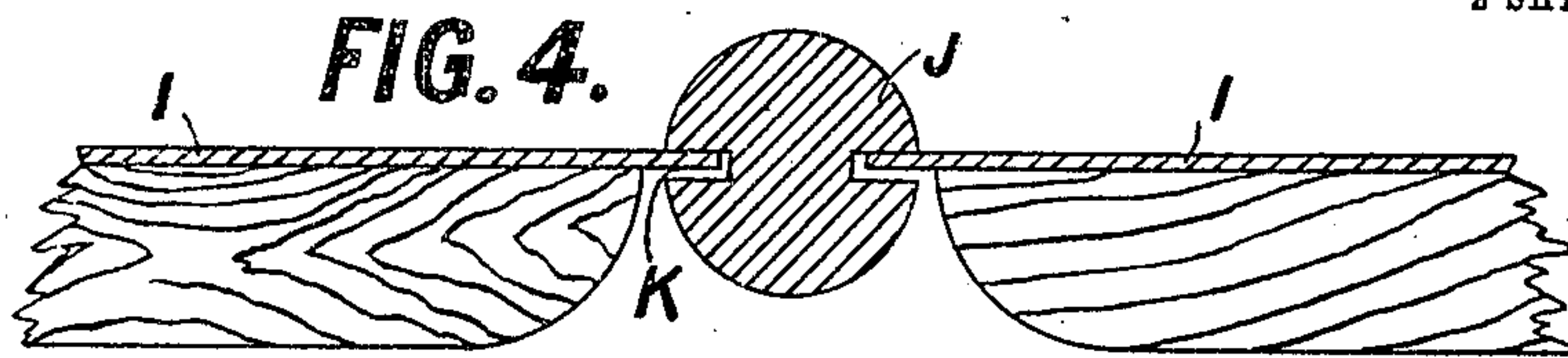


FIG. 7.

FIG. 5.

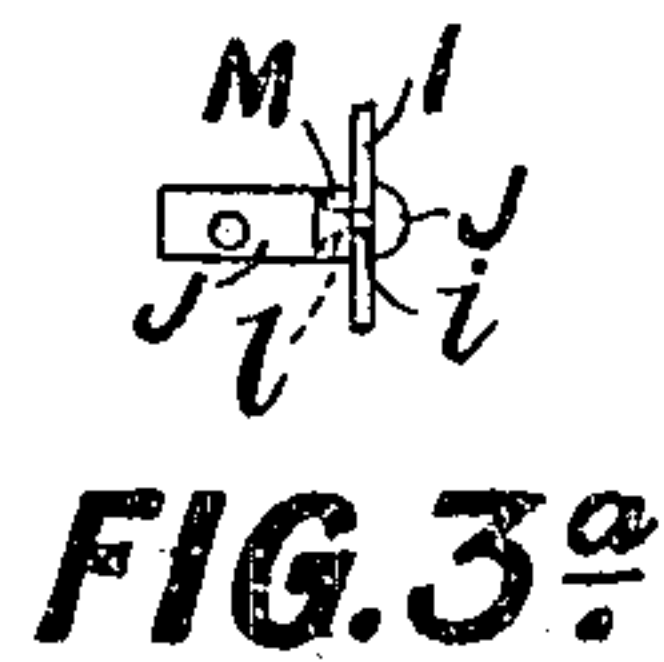
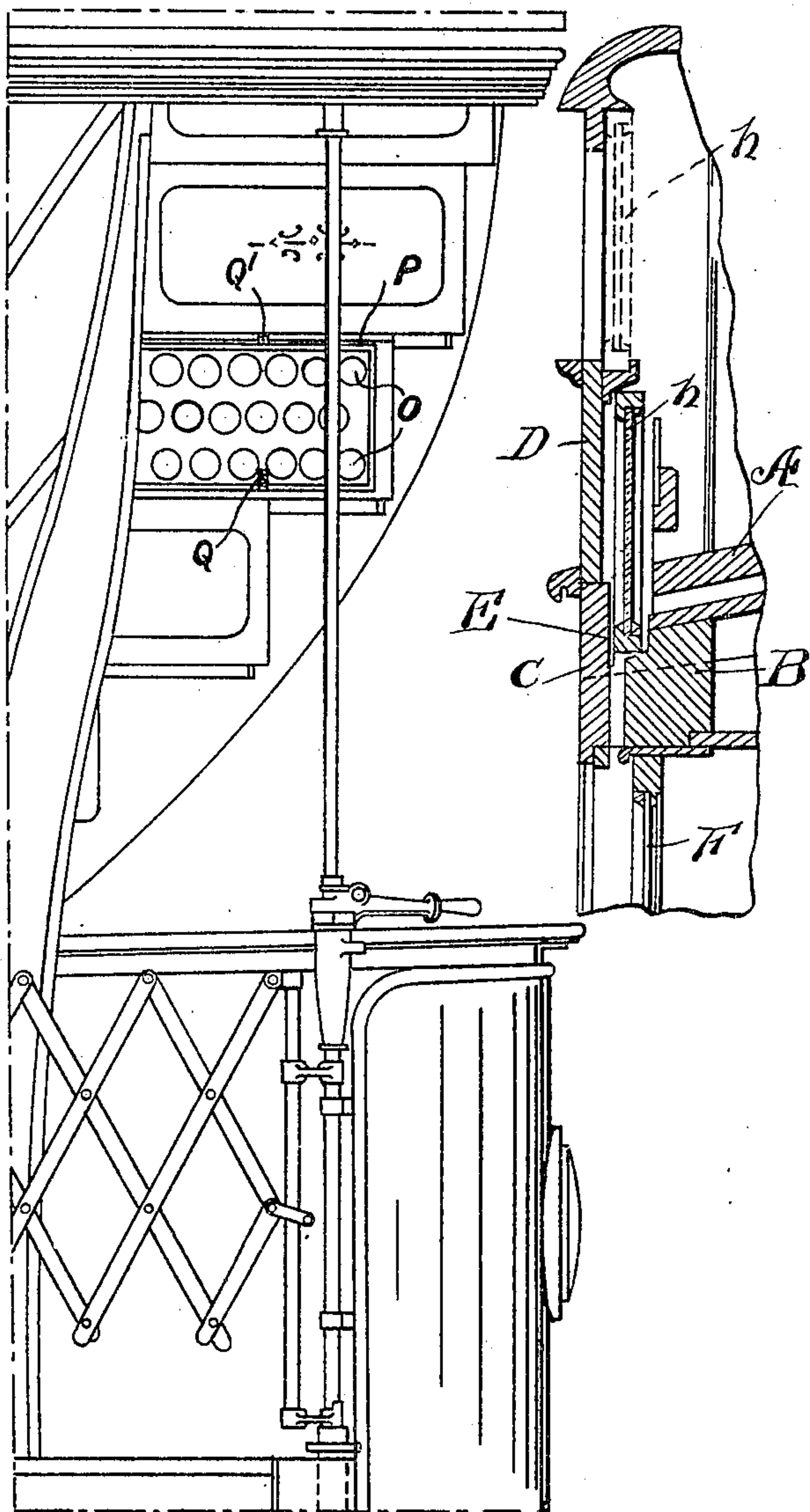
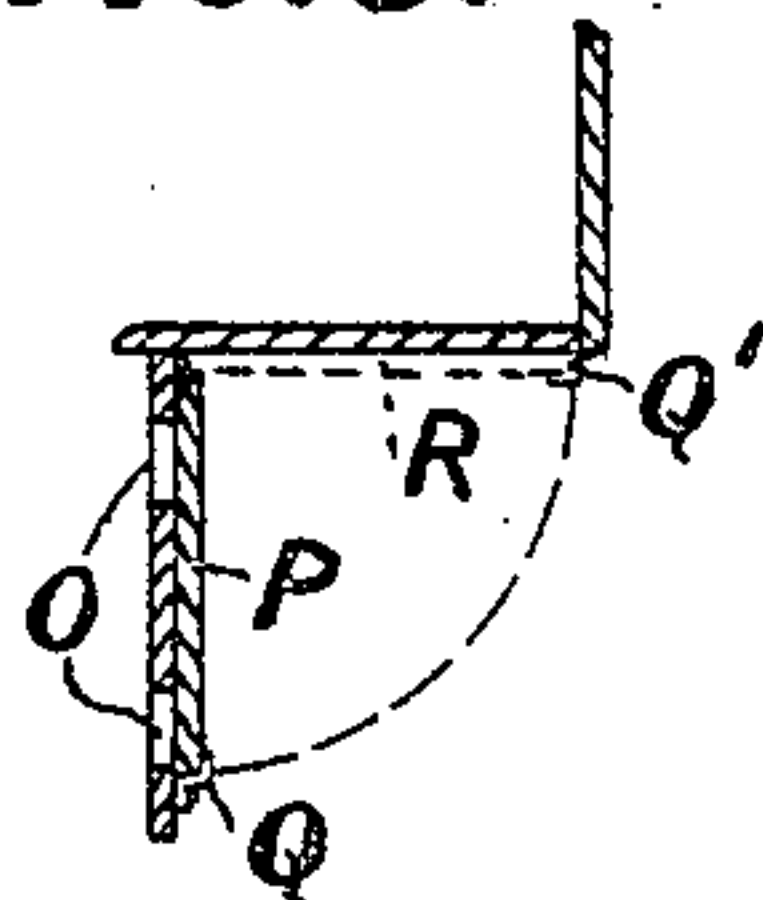


FIG. 3a.

FIG. 6.



Witnesses

Henderson A. Hill
Samuel D. Payne.

Inventors

Ethelbert A. Stanley,
and
John E. Anger
By Mason, Furwick Lawrence
Attys.

UNITED STATES PATENT OFFICE.

ETHELBERT A. STANLEY AND JOHN E. ANGER, OF PRESTON, ENGLAND.

TRAM-CAR AND OTHER LIKE VEHICLE.

No. 812,097.

Specification of Letters Patent.

Patented Feb. 6, 1906.

Application filed February 6, 1905. Serial No. 244,430.

To all whom it may concern:

Be it known that we, ETHELBERT ADOLPHUS STANLEY, general manager, and JOHN EDWARD ANGER, general superintendent, subjects of the King of Great Britain, residing at Preston, in the county of Lancaster, England, have invented certain new and useful Improvements in or in Connection with Tram-Cars and other Like Vehicles, (for which application has been made in Great Britain, No. 4,603, dated the 24th day of February, 1904,) of which the following is a specification.

This invention has for its object certain improvements in tram-cars and other like vehicles.

In the accompanying drawings, Figure 1 is a cross-section through the upper part of the car-body, showing our device for draining the roof or top deck of the car; Fig. 2, an end view of the car, showing the segmental dash-plate; Fig. 3, a side view of upright for the dash-plates; Fig. 3^a, a sectional plan view thereof; Fig. 4, a longitudinal section through the segmental dash-plate and support; Fig. 4^a, a side view of the upright J of Fig. 4; Fig. 5, a side view of part of a car, showing a perforated riser; Fig. 6, a cross-section through part of the stairs leading to the top deck. Fig. 7 is a fragmentary vertical sectional view of the superstructure.

The invention embodies the following improvements:

First, referring to Fig. 1, we improve the drainage of the roof or top deck A of the car, as well as enable the sashes of the roof-cover being slid lower, by forming along each side of the car between the outer face of the upper longitudinal rail B of the car-body and an outside board C, that is preferably flush with the advertisement-board D, an interspace or interspaces E, which form vertical passages to lead off any water that may fall on the roof or top deck A of the car. The longitudinal rails B lie immediately above the ordinary inlet-ventilators F or side openings, and the passages E therefore have their outlets G immediately above and on the outside of said ventilators F or side openings of the car. The flooring-boards of the top deck A are stopped short of the outside boards C and advertisement-boards D, and thus clear passages are left through which water falling onto the top deck A will drain away. This arrangement is specially suitable for cars with top-deck covers, because the vertical

passages E are made so as to be practically a continuation of the cavities or ways H, down which the window-sashes *h* of the roof-cover slide, and thus we are able to slide down the sashes *h* much lower than is customary—in fact, their bottom edges can be slid below the top deck A without interfering in any way with the drainage thereof. That part of the interspaces E where the sashes *h* slide is preferably made wider than the sashes, so as to leave a free passage for water-drainage to run down, and thus whether the sashes *h* are down or whether they are raised water will flow down these interspaces E and drain away to the outside of the car at G. The passages E also form air-ducts by which fresh cool air is admitted. These drainage-passages are placed at intervals along the entire length of the car.

Second. In case of accident to the dash-plates at the ends the entire plate has hitherto had to be removed and replaced, thus resulting in unnecessary expense and trouble. To avoid having to remove the entire dash, we build up the dash-plate in segments I, so that if one of the plates I be broken or bent the damaged plate can be removed and repaired or a new one inserted. (See Figs. 2 and 3.) There are of course numerous ways in which each individual plate can be fixed in position so as to be removable. In one arrangement a number of uprights J, Figs. 4 and 4^a, are provided at intervals apart with grooves K therein, and the opposite edges of the plates I are inserted in these grooves and held therein. If, however, one of these segments I gets damaged, it can be slid out of the grooves K and replaced by a new one. Instead, however, of this arrangement the several segments I could be fastened together by bolts or rivets or by clamping the plates I to the uprights J by means of strips M, which are secured to the uprights by the screws L, passed through the holes *l*, Figs. 2 and 3. These strips M hold the plates I firmly in the recesses *i*, or the edges of the plates could be folded at the edges and made to engage one with the other. In fact, any other suitable construction could be employed.

Third. The stairs that lead to the roof of the car have sometimes had one of their risers perforated, so that the driver can by looking through the perforations O, Figs. 5 and 6, obtain a view of the rear, and thus the staircase does not prejudicially obscure the driver's view at that side. We propose to provide

by the present invention a hinged door P at the rear of the riser, which can be kept closed at that end of the car which is for the time being at the rear, and fastened by a catch Q. It is hinged in such a manner that it can either be shut down, so as to close the perforations O, or folded up flat against the under side of the step above in the position shown by the dotted lines R and fastened in that position by a small auxiliary catch Q'. At the driver's end this door P is kept open, so that he may have a view through the riser, while at the rear end the door is kept closed.

We declare that what we claim is—

1. In tram-cars, or like vehicles, the combination with a body, of a dash secured to said body, said dash comprising longitudinally-grooved uprights, and segmental plates secured within the grooves of said uprights.

2. In tram-cars, or like vehicles, the combination with a body, of a dash secured to said body, said dash comprising sections, and clamping means for securing said sections in a fixed position.

3. In tram-cars, or like vehicles, the combination with a body, of a dash carried by said body, said dash comprising segmental sections, and clamping means for securing said sections in a fixed position.

4. In tram-cars, or like vehicles, the combination of a body provided with an outer wall, a top deck or roof formed upon said body and terminating upon one side near said outer wall, said outer wall and top deck forming a passage for permitting of drainage of said deck.

5. In tram-cars, or like vehicles, the combination with a body, said body provided with a ventilator, of a top deck or roof secured to said body above said ventilator, a side wall terminating above said ventilator, said side wall and deck provided with a passage therebetween providing a drainage for the top deck and opening outside of said ventilator.

6. In tram-cars, or like vehicles, the combination with a body structure, of a ventilator secured to said body, a superstructure formed upon said body, said superstructure provided with a passage extending from the floor thereof through said superstructure contiguous to the outside of said ventilator.

7. In a tram-car, or like vehicle, the combination with a body, of a superstructure

formed upon said body, said superstructure provided with a passage opening upon one side of said body and contiguous to the floor of said superstructure, a slidable sash carried by said superstructure, said sash adapted to be positioned within said passage.

8. In a tram-car, or like vehicle, the combination with a body, of a roof or deck positioned upon said body, said roof or deck provided with a longitudinal rail, an outside wall positioned contiguous to said rail, said outside wall and rail spaced apart for forming a drain-passage.

9. In a tram-car, or like vehicle, the combination with a body, of a longitudinal rail secured to said body, an outside board secured contiguous to said rail, said board and rail spaced apart for forming a passage, a superstructure formed upon said body, a slidable sash of the roof-cover carried by said superstructure, said superstructure provided with a passage of greater width than and communicating with the passage formed between the board and rail, and said sash adapted to be positioned within the passage of said superstructure.

10. In a car, the combination with a stairs provided with a tread and a riser, said riser provided with an aperture, a hinged door secured to said stairs, adapted to be normally positioned parallel with said riser for closing said aperture, a catch carried by said stairs and normally engaging said door for securing it in a closed position, and an auxiliary catch secured to said stairs and being capable of engaging and retaining said door in an opened position parallel to said tread.

11. In tram-cars and other like vehicles, the combination with the perforated riser of the stairs that lead to the top deck, of a hinged flap and catch devices, so arranged that the flap can be folded against the riser to close the perforations, or be opened clear thereof, and be held in either position by one or other of the catch devices.

In witness whereof we have hereunto signed our names, this 20th day of January, 1905, in the presence of two subscribing witnesses.

ETHELBERT A. STANLEY.
JOHN E. ANGER.

Witnesses:

G. C. DYMOND,
JOHN McLACHLAN.