

(No Model.)

2 Sheets—Sheet 1.

L. T. PYOTT.
SIDE ENTRANCE CONVERTIBLE STREET CAR.

No. 597,512.

Patented Jan. 18, 1898.

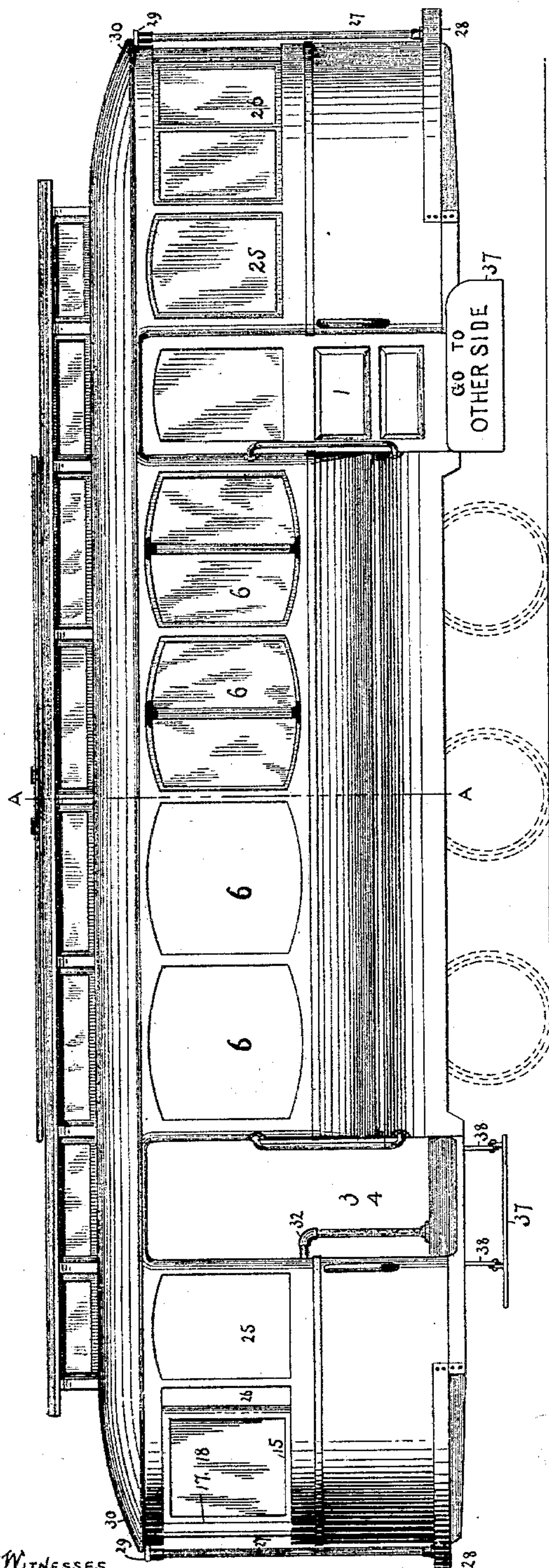


Fig. 1

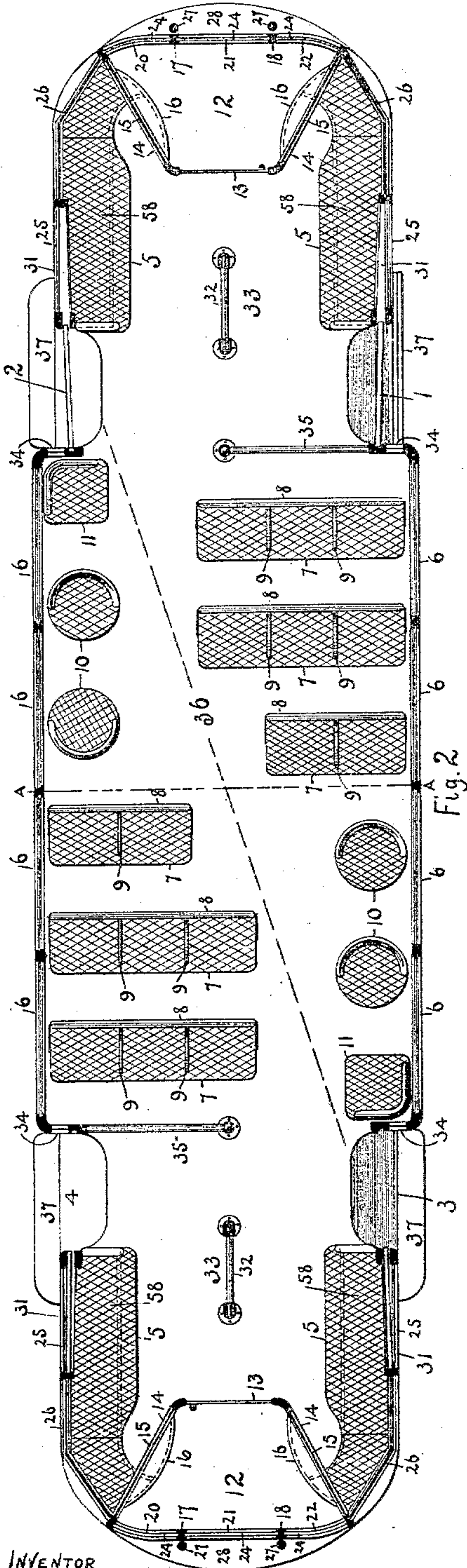


Fig. 2

WITNESSES

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(No Model.)

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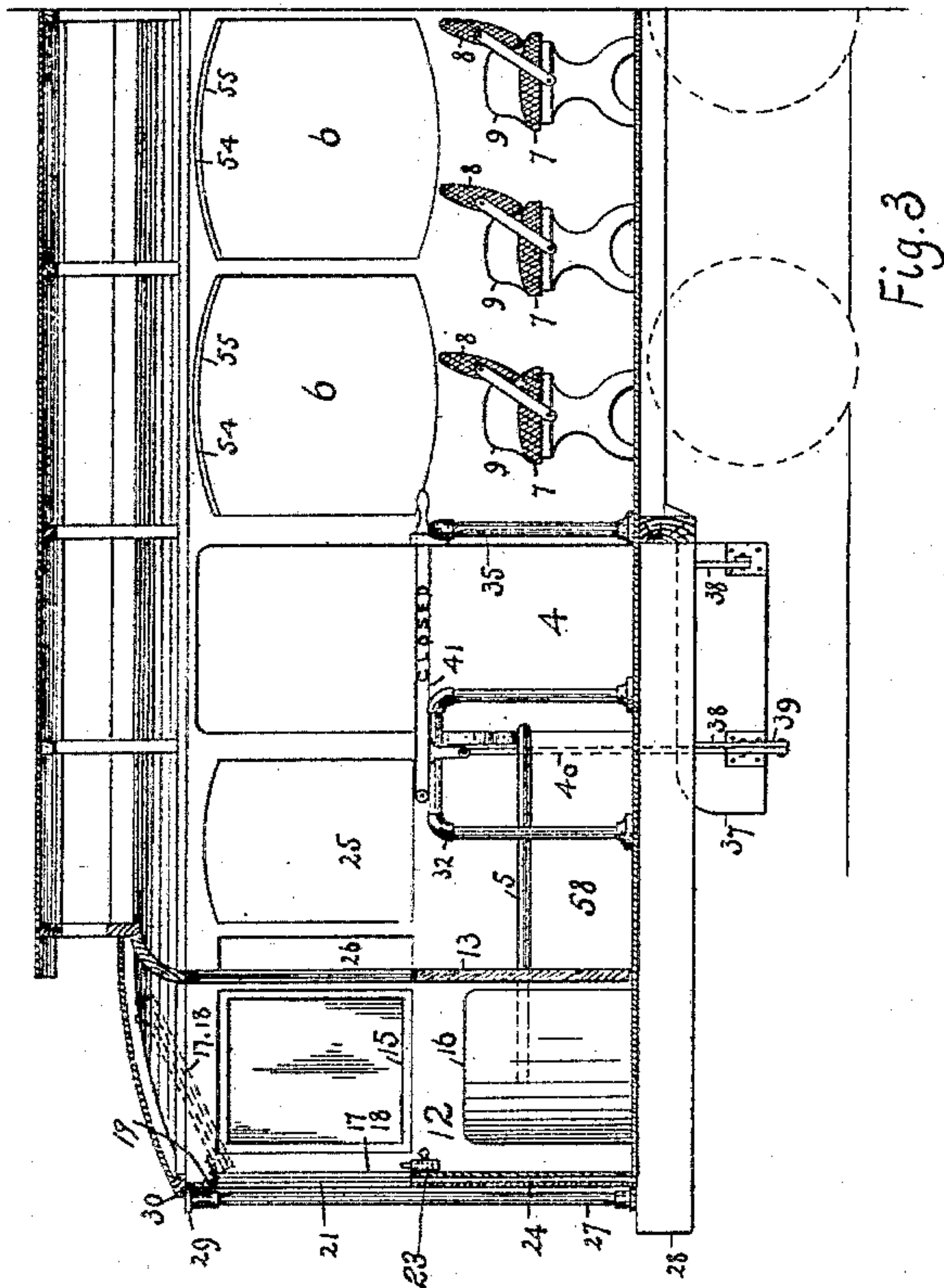


Fig. 3

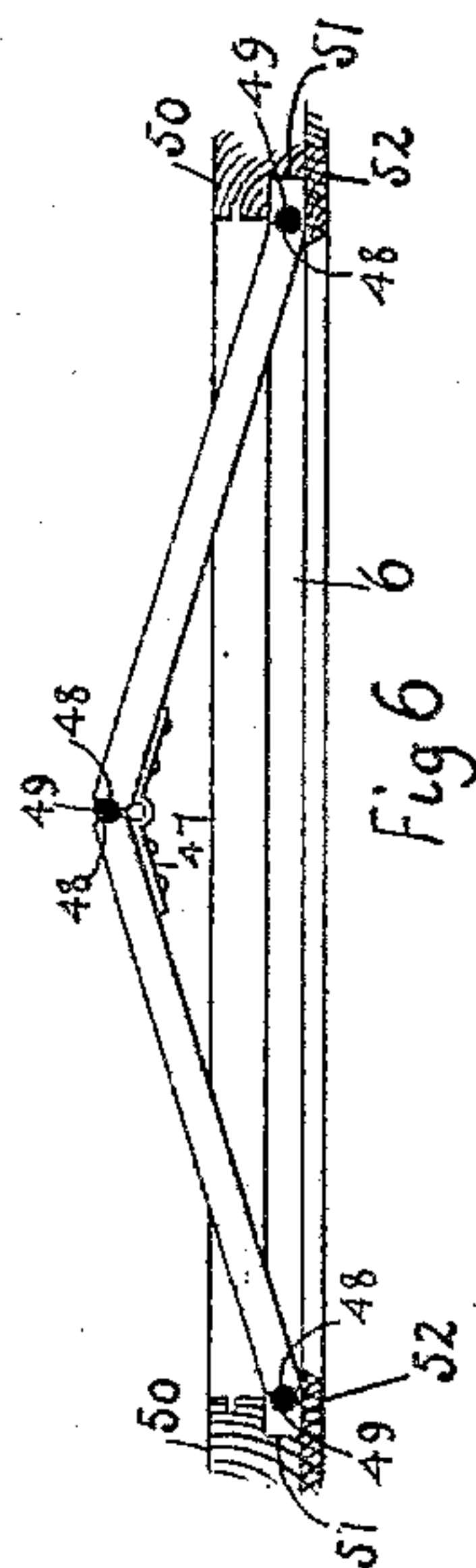


Fig. 6

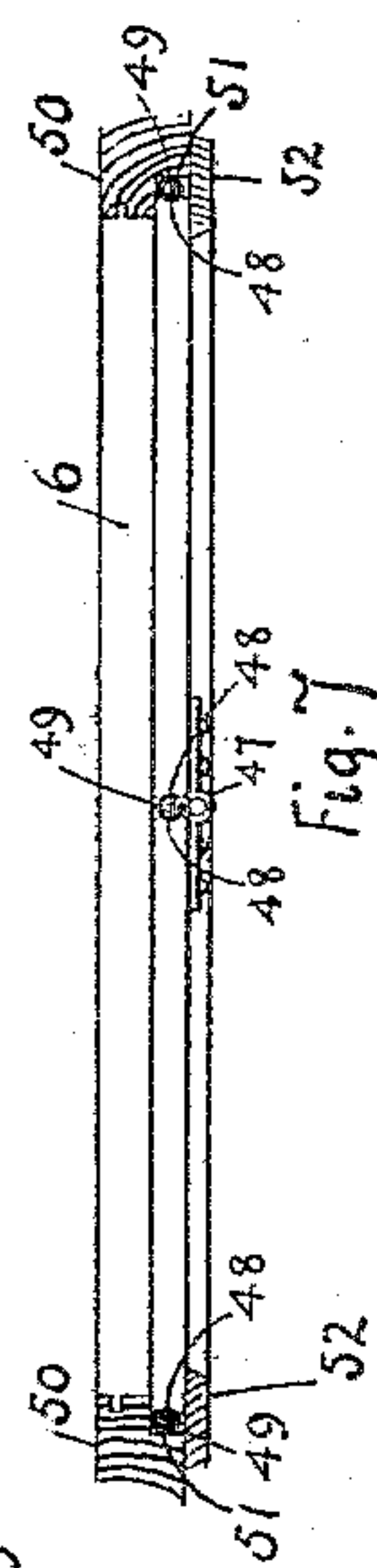


Fig. 7

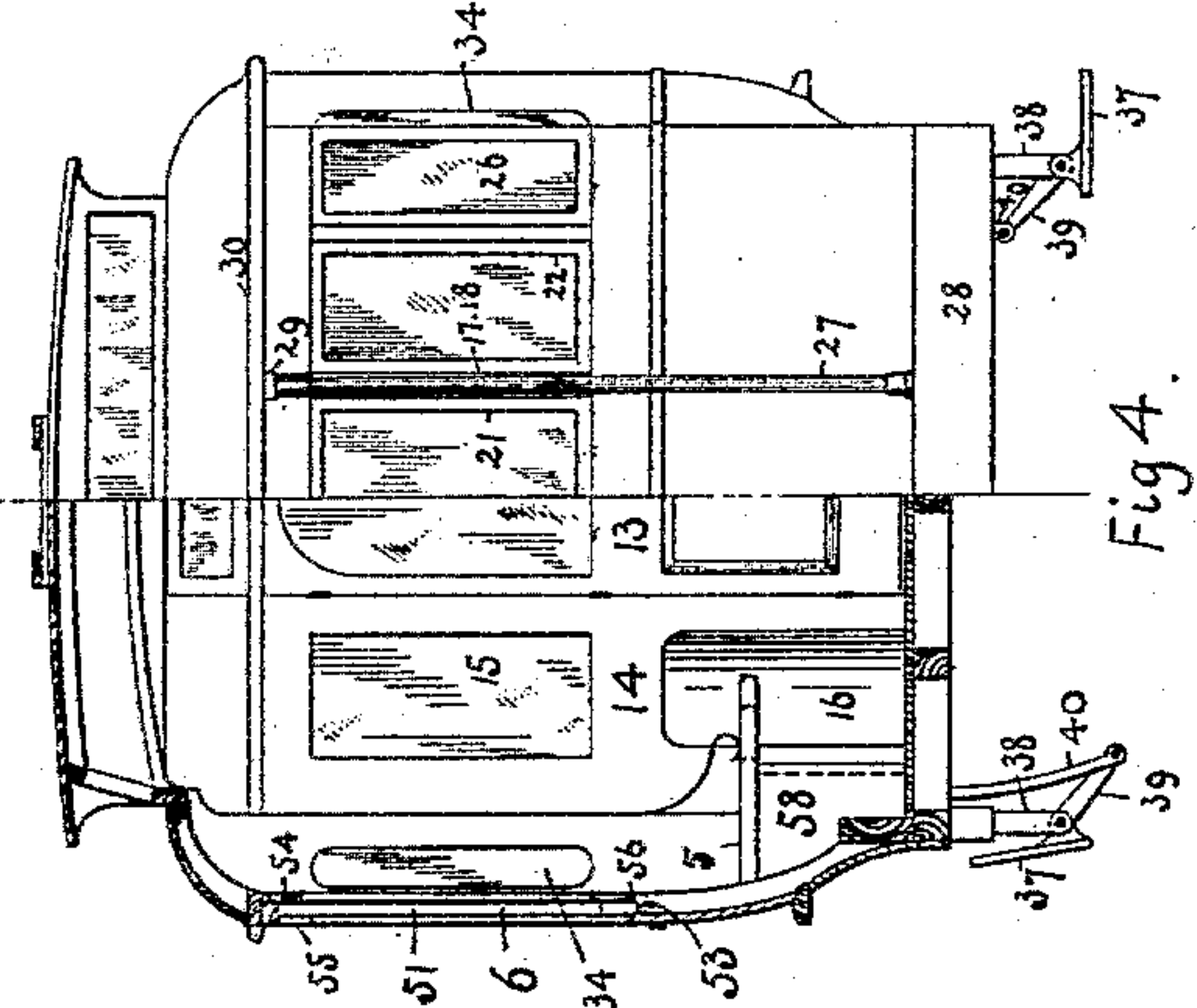


Fig. 4

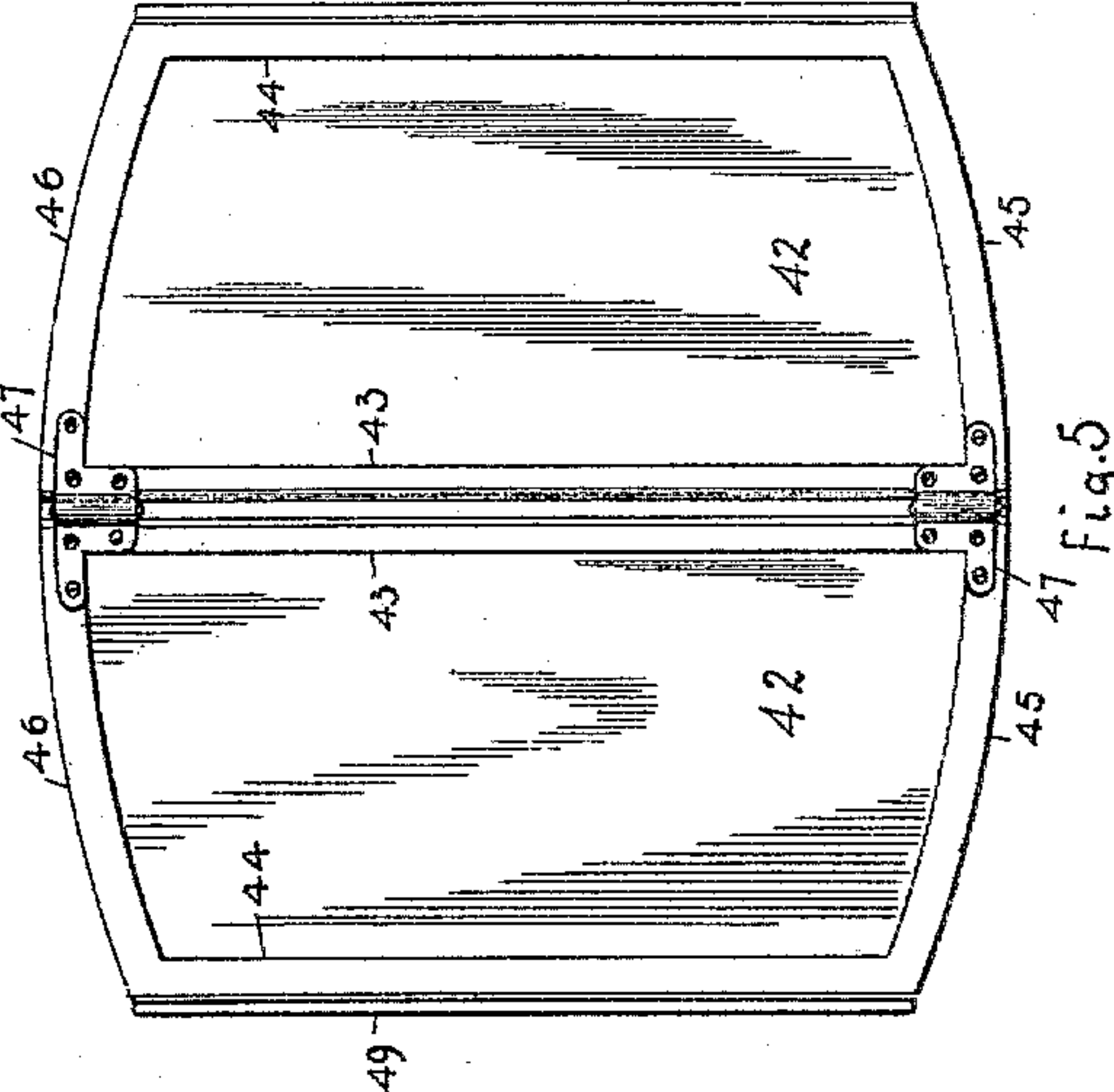


Fig. 5

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UNITED STATES PATENT OFFICE.

LOUIS T. PYOTT, OF PHILADELPHIA, PENNSYLVANIA.

SIDE-ENTRANCE CONVERTIBLE STREET-CAR.

SPECIFICATION forming part of Letters Patent No. 597,512, dated January 18, 1898.

Application filed March 3, 1897. Serial No. 625,810. (No model.)

To all whom it may concern:

Be it known that I, LOUIS T. PYOTT, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Side-Entrance Convertible Street-Cars; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to street-railway cars in which more means of ingress and egress are provided than in cars heretofore used for such purpose and in which I also introduce other novel features to enable the car to be convertible from a closed to an open car, or vice versa, to suit varied conditions of weather, the means I employ for such purpose being always present with the car to enable such change to be readily accomplished while the car is in use or at any time. I also provide an inclosure to shelter the motorman from inclement weather, greater seating capacity than heretofore obtained in cars of the same external dimensions, safety appliances to protect passengers from being damaged by cars passing upon parallel tracks, and more roomy seats, a majority of which enable the passengers to face toward the front of the car, similar to the most approved construction for such purpose employed by the finest equipment used upon steam-railways.

The features enumerated will be more fully pointed out in the detailed description which follows and which is illustrated in the drawings, in which—

Figure 1 is an exterior side elevation of my car. Fig. 2 is a plan showing the arrangements of the seats, the side entrances and exits, &c.; Fig. 3, a longitudinal sectional elevation of one-half of the car on its central line. Fig. 4 is one-half in end elevation and one-half in cross-sectional elevation on line A A, Figs. 1 and 2; Fig. 5, an elevation of the removable folding windows; Fig. 6, a plan showing the manner of inserting or removing windows; Fig. 7, a plan showing windows fixed in position and closing the window-opening.

Similar figures of reference indicate similar parts in all the views.

It will be seen that I inclose the body of the car from end to end and have no projecting end platforms and no end doors, as heretofore generally used, but instead have door-openings 1 3 on one side and 2 4 upon the opposite side, they being located about equidistant from the ends to the center of the car or dividing the car into two parts from its center to its ends. There will be doors 1 2 midway of such distance for one part and doors 3 4 midway of such distance for the other part, and when running upon a street or road having a single track there will be four places for passengers to enter and leave the car, and it can readily be arranged to have one pair of doors for entrance and the other pair of doors for exit, thus greatly facilitating the quick handling of passengers without inconveniencing them. When running upon a street or road having a double track, the doors next the opposite track will be rendered impassable, as will be more fully set forth farther on. The car, as illustrated, seats thirty-eight passengers, or sixty per cent. more than summer-cars of the same length with overhanging platforms and center aisles. Seats 5 at the ends are fixed and accommodate four passengers each, and underneath them is an inclosure 58 to receive the folding sashes of windows 6 when taken from the windows in warm weather. Seats 7 have reversible backs 8 and seat-partitions 9. Seats 10 are revoluble. Seats 11 are fixed. A motorman's room 12, wherein are the controllers, brakes, levers, or means for operating or controlling the car, is provided at each end, they being entered by double swinging doors 13 and having angular partitions 14 at their sides, in which are fixed sashes 15, and a swell 16 under each sash makes room for the knees of the passengers on seats 5. At 17 18 are swinging or disappearing posts hinged at 19, they having grooves upon each edge in which to slide the sashes 20 21 22 when the posts 17 18 are swung down and secured by the bolts 23 to the casing 24. The sashes 20 21 22 may be slid up to inclose the outer end of the motorman's room 12. If in warm weather it is desired to ventilate the rooms 12, the sashes 20 21 22 are dropped into pockets 24 and the posts 17 18 swung up and secured, as shown by dotted

lines, giving the motorman a clear and unobstructed outlook. The room 12, at the rear end of the car, when unoccupied by the motorman may be utilized as a newsroom or for package-express purposes on suburban lines, or utilized for a smoking-room by the introduction of temporary folding seats, which will be kept in receptacles 58 under seats 5 when not required for use. Windows 25 and angle-windows 26 will be dropped into pockets in the car-walls in summer. Columns 27 rest upon bumper 28 and are secured to brackets 29, attached to the roof 30, which they help to support. Doors 1 2 3 4 slide into pockets 31 when opened. At 32 are rails secured to the floor, upon which the conductor can rest, his position being at 33, he being at the rail which is at the back of the car or most removed from the motorman, and windows 34 enable him to have a view of entering or leaving passengers by the doors at the other end of the car from which he may at the time be most removed. At 35 are railings extending toward the center of the car, which protect the passengers located on seat 7 next thereto and which also in cold weather afford opportunity to locate electric heaters near the doors, where cold air will then enter when the doors are opened. The broken line 36 from door 2 to door 3 indicates the diagonal aisle which my arrangement of seats provides for, this being a distinctive feature of my car and its location greatly tending to give easy access to the seats from the doors or to the doors from the seats, as it leads directly from the right-hand rear door, the usual place for entering. Steps 37, longer than the width of the door-opening, are jointedly secured to hangers 38, pendent from the framework, and arms 39, reaching inwardly from the steps to which they are fastened, have thereto connected rods 40, which reach up and couple to safety-levers 41. When the steps 37 are to be thrown into proper horizontal position for passengers to use in entering or leaving the car, the lever 41 is thrown into a perpendicular position clear of the door-opening and the passage-way is unobstructed. When it is designed to close the passage-way, as shown in Fig. 3, the lever 41 is thrown down to a horizontal position across the doorway and prevents passengers passing through, while by the same movement step 37 is raised so it cannot be used, the lever 41 being entirely independent of the door and inside of it blocks the passage-way, so that if a passenger should slide the door open he could not pass out, owing to the obstructions presented by bar 41 across the doorway and the elevation of the step 37, which he could not use.

The folding sashes of my car, which are for use in windows 6, are illustrated in Figs. 5, 6, and 7, and are a radical departure from any means heretofore known for quickly converting a summer to a winter or a winter to a summer car or for the protection of passengers in

an open car from sudden rains or storms. As seen in Fig. 5, the sash is double or has two lights of glass 42, each light being secured in stiles 43 44 and rails 45 46. To the outside of stiles 43 and rails 45 46 are secured hinges 47, which enable the two parts of the sash to fold and lie together or be opened out flat like a book, and at the outer edges of the stiles 44 are grooves 48, into which are secured compressible material 49, which is preferably of rubber, although not necessarily of that material, and upon the inner edge of one of the stiles 43 like material is secured and which when the sash is in use is pressed into the groove 48 within the edge of the other stile 43 when the window is opened flat and secured in the opening 6, as shown in Fig. 7. Fig. 6 shows the manner of inserting the jointed sashes to close the openings 6. In posts 50 are grooves 51, formed in the posts 50 and by the cover-strips 52 upon the outsides of the posts 50, the cover-strips 52 being somewhat closer to each other than the posts 50 or overlapping into the window-opening 6. This enables the stiles 44 and the compressible material 49 to be presented against the inner side of the strips 52 when folded enough to enter between posts 50, and thereafter the sash is pressed flat and enters the grooves 51, thus readily and quickly securing it and by the compression of the yielding material 49 rendering it tight and noiseless.

In Fig. 4 the means within the car for entering and securing the sash is shown, where 53 represents the bottom groove wherein the sash is dropped to rest when inserted and 54 the inside top cover-strip, higher at its lower edge than the outer cover-strip 55, which enables the sash to be passed over the lower inner cover-strip 56 before entering groove 51 and dropping to rest within bottom groove 53. A bolt or other means may be attached at the inside of the sash to still further secure it, if deemed necessary. When a sash is removed from the window, it will be folded together and secured within a box 58 under one of the seats 5, thus being entirely secure and out of the way, occupying no space useful or necessary for other purposes, and always ready to be quickly placed in position when needed.

By the use of the folding sash I obtain much more width within the car-body than heretofore obtained with the same outside width using the usual drop-sash, as by my invention the side posts have much less breadth across the car, owing to not having to provide pockets within which to drop the sash, thus saving and utilizing a space upon each side of the inside of the car for more commodious seats.

Having described my invention and the most suitable means which I have so far employed to carry it into practice and reserving the use of equivalent means to the same end, I claim—

1. In a street-car, a body wholly inclosed having two entrances upon each side they being so arranged as to location and position as

to divide the space from the center to the ends thereof in nearly equal distances, and seats so arranged as to form a diagonal aisle from the rear door of one side to the forward door of the opposite side, in manner and for the purposes set forth substantially as described.

2. In an inclosed street-car, an inclosed motor-room in each end, communication therewith from the inside of the car, two entrances on each side, cross-seats, revolving seats and fixed seats in the central part of the car and arranged to form a diagonal aisle from right to left in the direction the car is run, and fixed seats having receptacles thereunder at the ends of the car adjacent to the motor-rooms, substantially as described.

3. In a street-car, an inclosed body, without end platforms and with a continuous floor from end to end on one level, motormen's rooms in each end, communicating only with the interior of the car, two doors upon each side at about midway from the center toward each end of the car-body, seats arranged to form a diagonal aisle from a rear door of one side to a forward door of the opposite side and at each door independent hinged steps, means to raise and lower the steps at each entrance, independently by a lever adapted to raise the steps, and in so doing to drop across the door-opening substantially as described.

4. In a street-car, an inclosed body having longitudinal side seats at each end, cross-seats of different lengths and capacities in the car between the doors and arranged so as to form a diagonal aisle from the rear right-hand to the forward left-hand door, revoluble and fixed seats opposite each arrangement of cross-seats, inclosed motormen's rooms at each end of the car and opening thereto, and window-openings in the central part of the car having sashes so applied as to be wholly removable from the windows and stored when the car is to be used as an open car, substantially as and for the purposes set forth.

5. In a street-car, an inclosed body having an arrangement of seats forming a diagonal aisle from right-hand back to left-hand front doors, multiple door-openings on each side, railings extending from the door-openings most removed from the diagonal aisle into the car, guarding the adjacent seat, and available for securing heaters thereto, substantially as described.

6. In a car, window-openings having grooves at each side thereof, the walls of

which are wider at their outer than their inner sides, a groove at the bottom, a groove at the top having its inner side higher than its outer side, and sashes for the openings adapted to be placed therein or removed therefrom in manner and form substantially as set forth.

7. In a car, window-openings, folding sashes for their closure, the parts vertically hinged together and removable from the openings for storing, yielding means at the junction of the hinged parts, and means upon the outer edges of the parts to enter grooves prepared for the reception of the sashes and thereby prevent noise and rattling, and exclude air and dust, in substantially the manner set forth.

8. In a car, window-openings, and windows composed of vertically-hinged parts adapted to be entirely removed from the openings, for storing, and provided with yielding means at their junction and at the junction with the window-openings for the purpose of effectually rendering them both noiseless and tight, substantially as described.

9. In a street-car, an inclosed body providing double means at each side for ingress and egress of passengers, sliding means to open and close the same, an inclosed structure within each end for housing the operator who controls the means for propelling the car and hinged posts at the end of the car adapted to support sliding sashes when in vertical position, or to be swung upward, and secured out of the way when the sashes are dropped, substantially as described.

10. In a street-car, an inclosed structure having side entrances on each side about midway from the ends to the center, steps therefor yieldingly supported and having means for their upwardly swinging and for obstructing the door-opening, seats arranged within the central part of the car to form a diagonal aisle in direction from right-hand back to left-hand forward, inclosed rooms for the reception of the controlling mechanism of the car and opening therefrom and a conductor's support opposite each room-door and between the side-entrance doors, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

LOUIS T. PYOTT.

Witnesses:

RANSOM C. WRIGHT,

WILLIAM C. STOEVEER.