

No. 722,795.

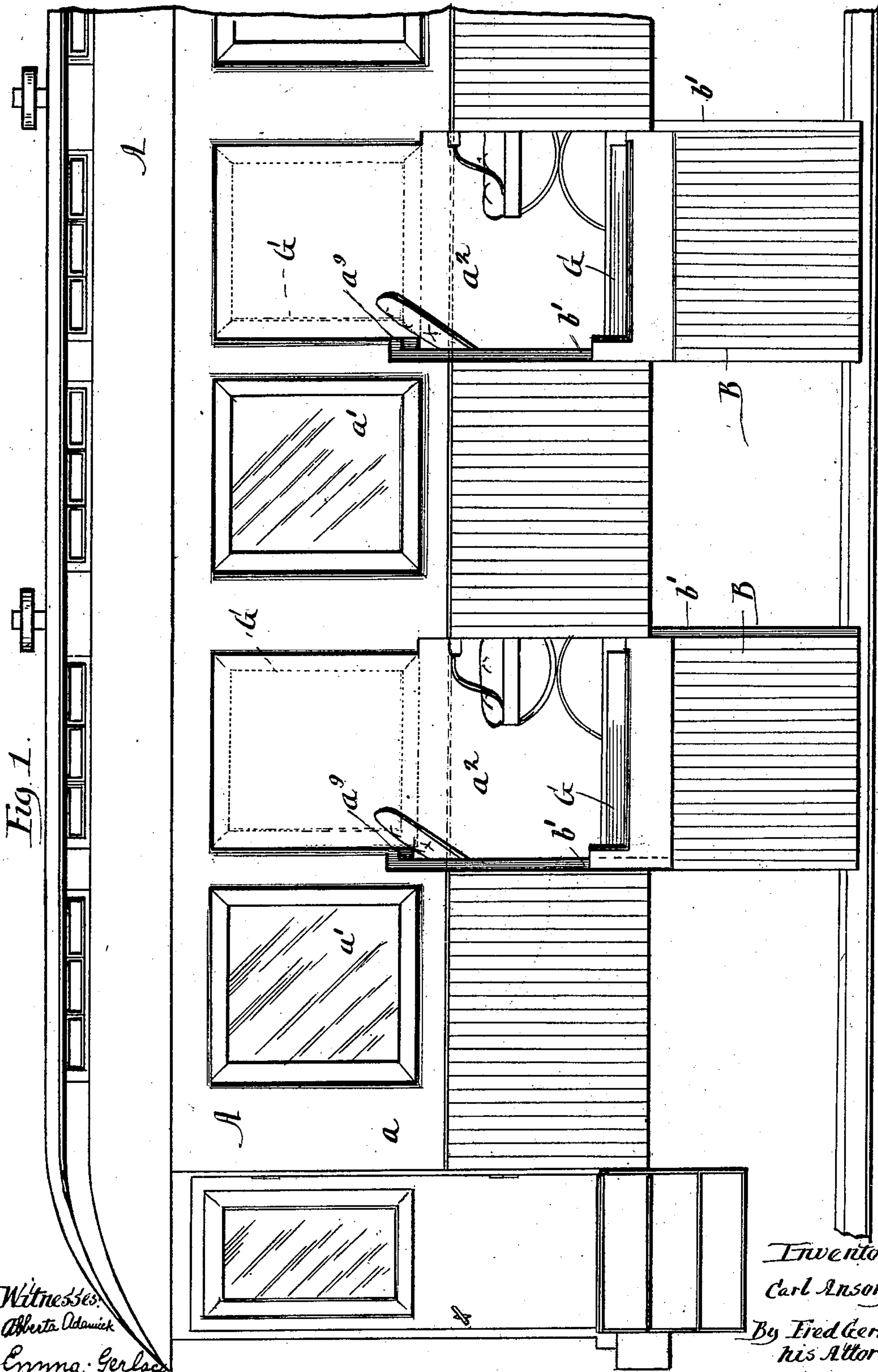
PATENTED MAR. 17, 1903.

C. ANSORGE.
RAILWAY COACH.

APPLICATION FILED JAN. 17, 1902.

NO MODEL.

3 SHEETS—SHEET 1.



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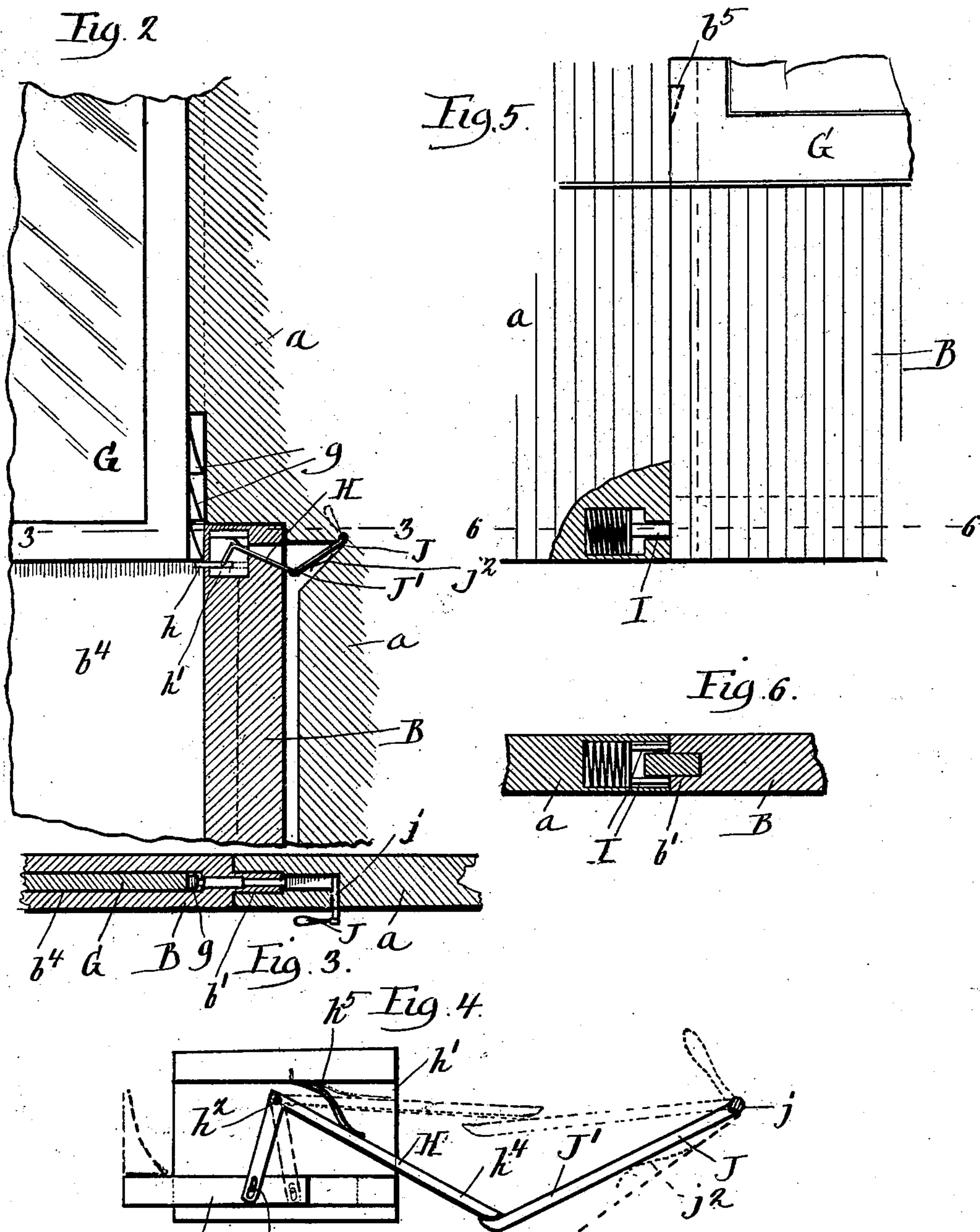
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3 SHEETS—SHEET 2.

NO MODEL.



Witnesses: h h³
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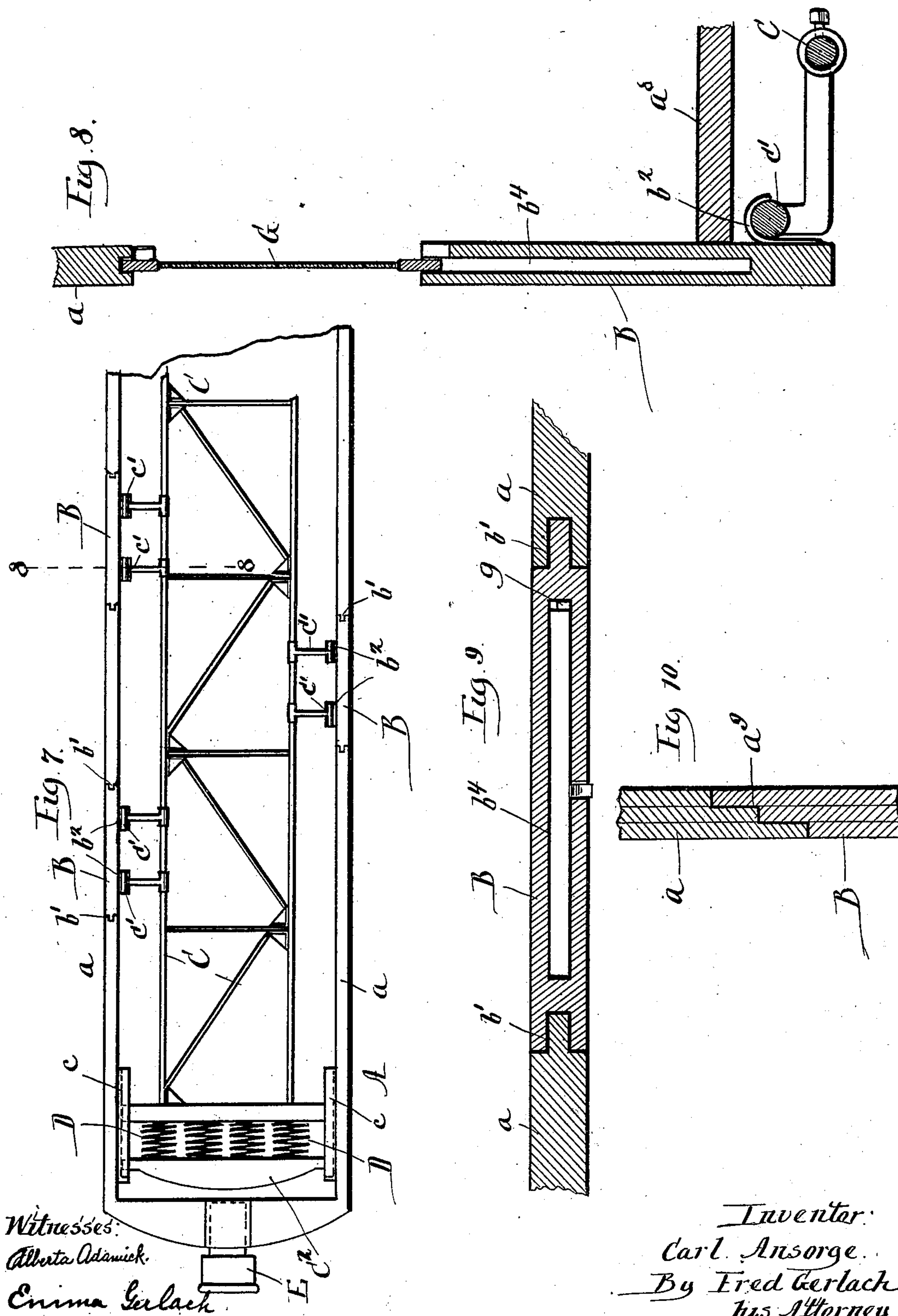
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3 SHEETS—SHEET 3.



UNITED STATES PATENT OFFICE.

CARL ANSORGE, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO JAMES ERICHSEN, OF CHICAGO, ILLINOIS.

RAILWAY-COACH.

SPECIFICATION forming part of Letters Patent No. 722,795, dated March 17, 1903.

Application filed January 17, 1902. Serial No. 90,112. (No model.)

To all whom it may concern:

Be it known that I, CARL ANSORGE, a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful
5 Improvements in Railway-Coaches, of which the following is a full, clear, and exact description.

The invention relates to passenger-coaches, and more particularly to means for providing
10 exits for facilitating escape of passengers in case of railway accidents and closures for such exits.

The invention designs to provide means whereby passengers will be permitted to
15 readily escape or pass out of the coaches in case of a railway accident and in addition to the usual exits provided for convenience in passing into and out of the coaches.

The invention consists in the several novel
20 features hereinafter described and more particularly defined by claims at the conclusion hereof.

In the drawings, Figure 1 is a view in side elevation of a portion of the body of a passenger-coach embodying the invention. Fig.
25 2 is a view, partly in section and partly in side elevation, showing the mechanism whereby the window-frame is held in elevated position and whereby the frame can be manually released. Fig. 3 is a view in horizontal
30 section, taken on line 3 3 of Fig. 2. Fig. 4 is a detail view, upon an enlarged scale, of the mechanism for holding the window-frame in elevated position and for releasing said frame.
35 Fig. 5 is a detail view showing the stop for restricting the downward movement of the window-frame. Fig. 6 is a sectional view taken on line 6 6 of Fig. 5. Fig. 7 is an inverted plan view of the car-body and parts
40 sustained beneath the floor of the coach. Fig. 8 is a view in vertical transverse section, taken on line 8 8 of Fig. 7. Fig. 9 is a section taken on line 9 9 of Fig. 2, the window-frame being shown in elevation. Fig. 10 is a detail view
45 of the joint between the upper edge of the movable section and side wall of the car.

A denotes the body of a passenger-coach provided with side walls a and usual windows a' . At desired intervals openings a^2 are
50 formed in the side walls a . Each opening a^2 is preferably arranged beneath a window-

frame G and is normally closed by a door or movable section B, held in manner free to slide in the side walls a by interlocking tongue-and-groove joints b' . Movable sections B extend to the lower edge of the side wall, so the sections will, when released, have an unobstructed downward movement and so a passenger can easily pass through openings a^2 . A notch b^5 , formed in the upper portion of one edge of each section B, and a spring-pressed bolt I restrict the downward movement of the movable section. A stepped joint a^9 is preferably employed between the upper edges of section B and wall a . The
65 invention designs to provide means which will automatically release the movable sections when the train is suddenly stopped by reason of an accident.

A horizontally-movable frame C of suitable
70 construction is sustained in guides c , conveniently secured to the frame of the car-body at each end thereof (one only being shown) and between a series of springs D at each end of the car. A series of retaining lugs or studs
75 C' are secured to be shifted with frame C, and these lugs are arranged to normally engage hooks or plates b^2 , secured to and projecting inwardly from the lower portion of each movable section B and beneath floor a^3 of the car
80 and serve to hold the movable sections in elevated position. An abutment C² is secured at each end of the car, and against said abutment springs D will bear. Abutments C² are mounted in manner free to slide in guides C
85 and are arranged to be engaged and shifted by the draw-head or coupling E or the support for the draw-head at their respective ends of the car when either coupling or the draw-head support is forced inwardly by im-
90 pact thereagainst, resulting from a collision or the sudden stoppage of the train on account of accident. Preferably two studs C' and plates B² are provided for each movable section, and studs C' are adjustably secured
95 to frame C by a screw (see Fig. 8) for convenience in placing the parts in position. Each of the abutments C² is positioned normally out of the range of travel of the draw-head E and so it will be shifted longitudinally by
100 the draw-head only when the draw-head is shifted beyond its ordinary range of travel—

e. g., by the impact resulting from a collision or when the end sill whereby the draw-head is supported is broken or when the draw-head is loosened or removed from its support. In the construction shown the end sill whereby the draw-head is sustained is constructed so that a collision would result in breaking the end sill and allowing the draw-head to engage and shift abutment C².

In each movable section B a recess b⁴ is formed to permit the superposed window-frame G to pass into the section. Each window-frame is provided with one or more projections g, adapted to be engaged by a bolt h of a locking mechanism for holding the window-frame in elevated position. The locking mechanism comprises a plate h', secured within and movable with the movable section, a lever H, pivotally sustained in plate h', as at h², connected with bolt h by a stud and slot h³ and having an arm h⁴ and a spring h⁵ for holding the locking mechanism normally in position to secure window-frame. The locking mechanism may be manually released to permit the window-frame to be lowered by a lever J, pivotally secured to the side wall a, as at J, and having an arm J' extending beneath arm h⁴ of the locking mechanism. A spring J² engages lever J, holds said lever normally in position to engage arm h⁴, and permits lever to be moved out of the path of arm h⁴. Arm J also trips lever H and withdraws bolt h, when the movable section is automatically released.

The operation will be as follows: In ordinary use the window-frames and movable sections will be held in elevated position, as shown by dotted lines in Fig. 1—i. e., sliding frame c will lock the movable sections in such position and locking-bolt h, held in the movable section, will retain the window-frame in elevated position. In event of a collision or other accident which causes sudden stoppage of the train the resultant impact will cause one of the draw-heads or one of the draw-head supports to shift frame C horizontally and longitudinally, so studs C' will pass from engagement with hook-plates and out of the vertical path of said plates, so the movable sections will be free to gravitate. The sections will then descend into lower position (seen in full lines in Fig. 1) and until arrested by spring-pressed bolt I, when said bolt passes into notch b⁵ in each section. During the descent of the sections the locking mechanism which holds the window-frame will release the window-frame to telescope or pass into recess b⁴, because arm h⁴ of lever H will be swung about its pivot by lever J during the initial part of the downward travel of the movable section and will withdraw bolt h out of the path of teeth of the window-frame, thus releasing the window-frame, so it will gravitate into the movable section. The several parts will then be in position seen in full lines in Fig. 1, and thus a number of emergency-exits will be provided to facilitate

exit of the occupants when needed. The parts can be easily restored to normal position by lifting the door-sections and positioning studs C' beneath plates b² and lifting the window-frame until bolt h and teeth g of the window-frame interlock.

The window-frame can, if desired, be lowered independently of the movable section by shifting lever J manually, which shift will swing lever H about its pivot and withdraw bolt h from engagement with teeth of the window-frame, and thus release the window-frame.

The invention possesses several important advantages. In event of accident or collision emergency-exits are automatically provided throughout the length of the car at convenient intervals, thus preventing danger of death to the occupants resulting from inability to escape therefrom, and particularly if usual doors at the ends cannot be opened. By employing a construction in which the window-frame is automatically released and telescope into each movable section an exit of convenient size is provided. The construction of the locking mechanism is such that the window-frame can be lowered independently of the movable section when desired and is under manual control for ordinary uses. Furthermore, the parts can, if not damaged, be quickly restored to position to effect a closure of the emergency-exits after an accident, so the car can be again used.

Manifestly the invention is not to be understood as restricted to the details of construction shown and described, but may be varied without departing from the spirit of the invention.

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

1. The combination with a railway-coach having a series of openings formed in the side walls thereof, of a slidable section normally held in each of said openings and forming a closure therefor, and means whereby all of the section will be simultaneously released, to permit all of the sections to fall.

2. The combination with a railway-coach having a series of openings formed in the side walls thereof of a slidable section normally held in each of said openings and forming a closure therefor, and means whereby all of the section will be simultaneously released, to permit all the sections to fall, said means comprising a horizontally-movable frame sustained beneath the floor of the car.

3. The combination with a railway-coach having one or more openings formed in the side walls thereof, of a slidable section normally held in position to close each opening and means whereby said sections will be automatically released in event of a collision or accident.

4. The combination with a railway-coach having one or more openings therein, of a closure held to normally close each opening or

openings, and means whereby said closure will be released in event of a collision or accident, said means comprising a horizontally-movable frame sustained beneath the floor of the car, and springs at each end of the car, and yieldingly holding said frame in normal position.

5. The combination with a railway-coach having one or more openings therein, of a closure held to normally close each opening or openings, and means whereby said closure will be released in event of a collision or accident, said means comprising a horizontally-movable frame sustained beneath the floor of the car, and springs at each end of the car for yieldingly holding said frame in normal position a plate on each section, and a stud engaging said plate.

6. The combination with a railway-coach having a series of openings therein, and arranged throughout its length, of a closure for each opening, and means whereby said closures will be automatically released in event of a collision or accident, comprising a longitudinally-movable frame extending lengthwise of the car and beneath the floor of the car.

7. The combination with a railway-coach having an opening formed in the side wall

thereof, a slidable section held normally in position to close said opening, a window-frame held above said section and arranged to slide into said section and means whereby the frame will be held in elevated position.

8. The combination with a railway-coach having an opening formed in the side walls thereof, of a movable section held normally in position to close said opening, a window-frame held above said openings, and arranged to slide into said section, means whereby said means will be automatically released in event of a collision or accident, and means whereby said window-frame will be released to fall into said section when said section is released.

9. The combination with a railway-coach having an opening formed in the walls thereof, of a movable section held normally in position to close said opening, a window-frame held above said opening, and arranged to slide into said section, means whereby said section will be automatically released in event of a collision or accident, and means whereby said window can be manually released.

CARL ANSORGE.

In presence of—

FRED GERLACH,
JAMES F. ERICKSEN.