(No Model.) 4 Sheets—Sheet 1.

W. EBERLE.

RAILWAY CAR.

No. 557,061. Patented Mar. 24, 1896.

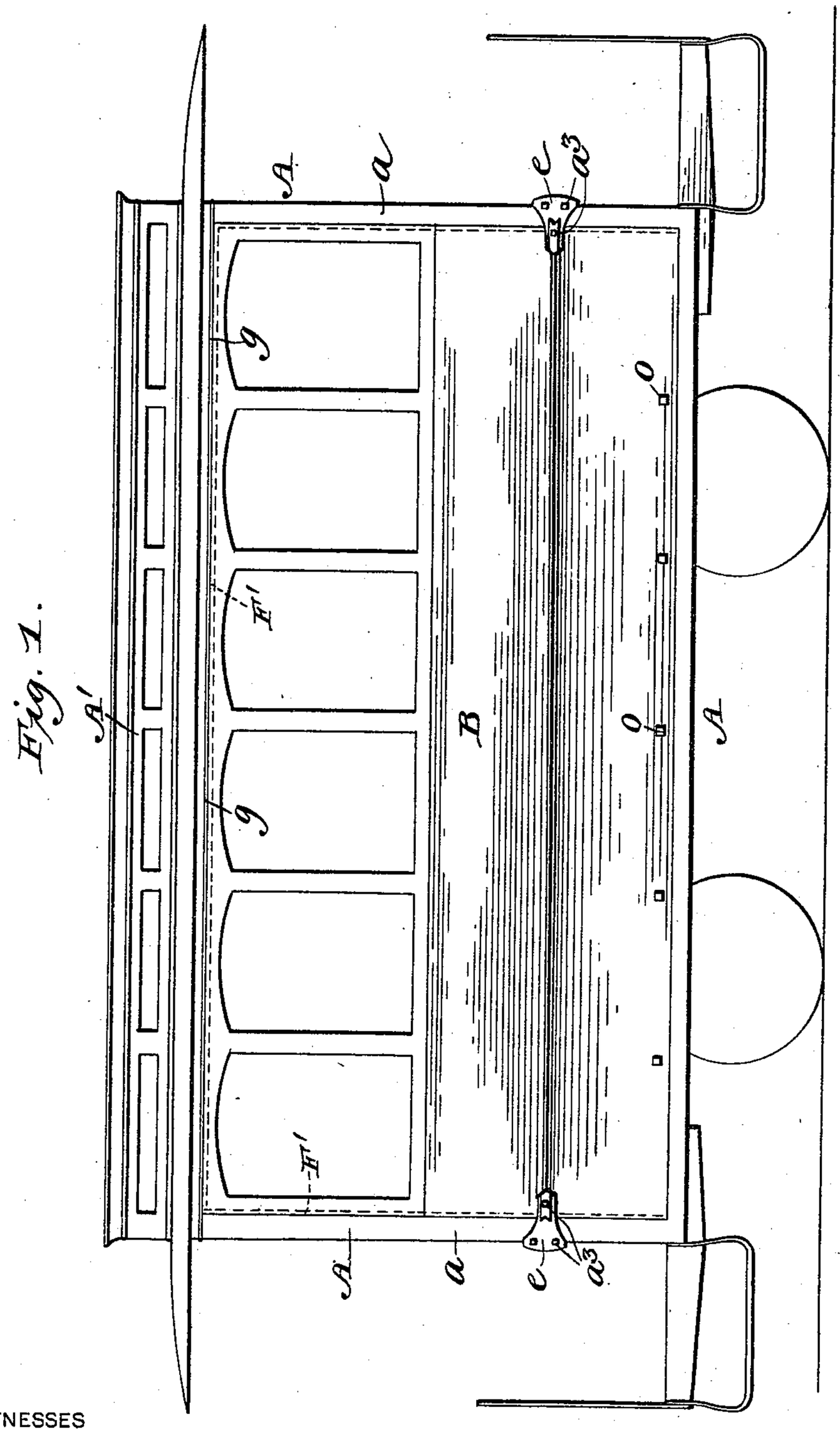

Fig. 1.

WITNESSES

Geverance.

W Harvey Mundy

INVENTOR

William Eberle
by his Attorneys
Mason, Fenwick and Lawrence

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4 Sheets—Sheet 2.

W. EBERLE.

RAILWAY CAR.

No. 557,061. Patented Mar. 24, 1896.

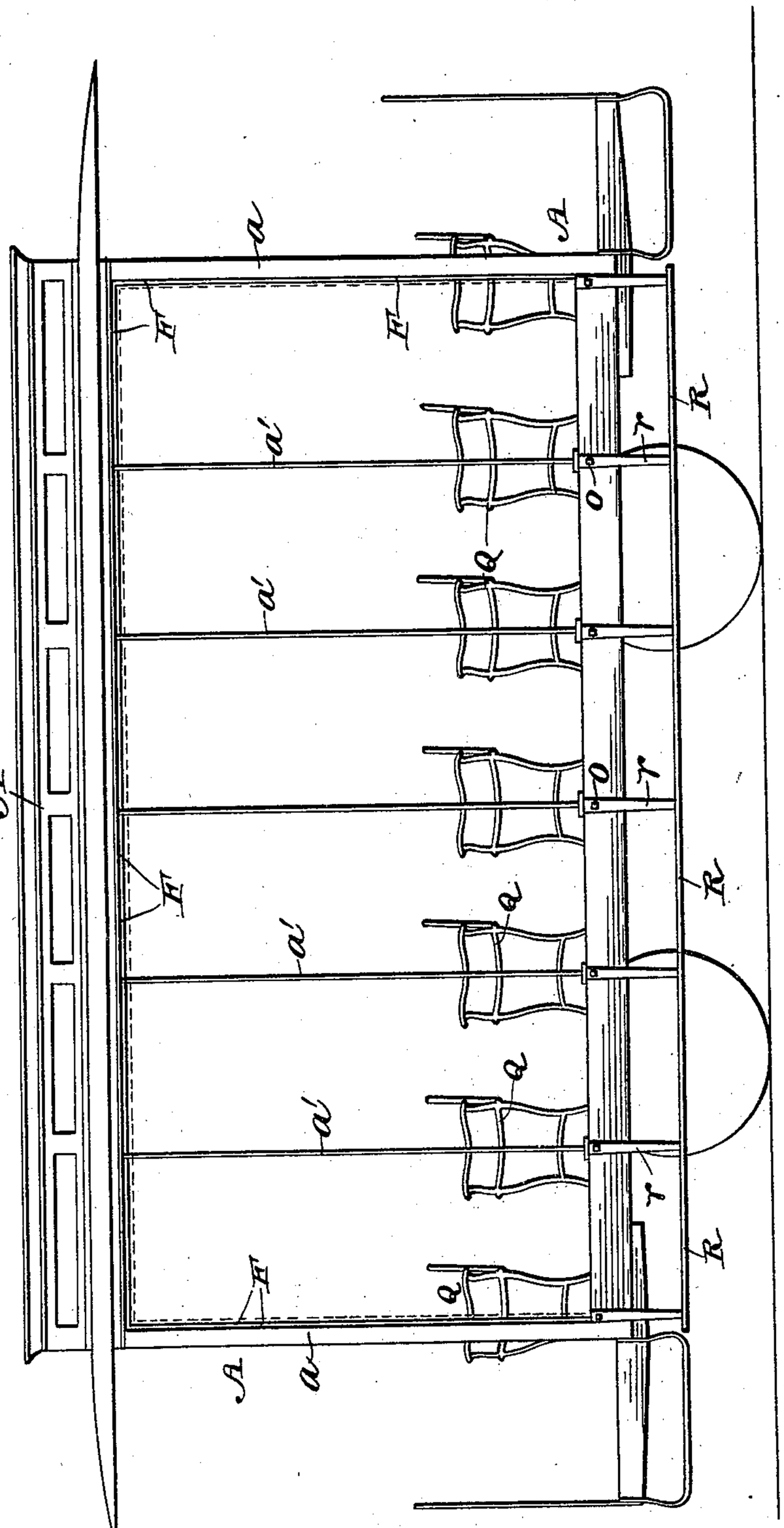

Fig. 2.

WITNESSES

Geverance.
W. Harvey Shuggy.

INVENTOR

William Eberle
by his Attorneys
Mason, Fenwick & Lawrence

(No Model.) 4 Sheets—Sheet 3.

W. EBERLE.

RAILWAY CAR.

No. 557,061. Patented Mar. 24, 1896.

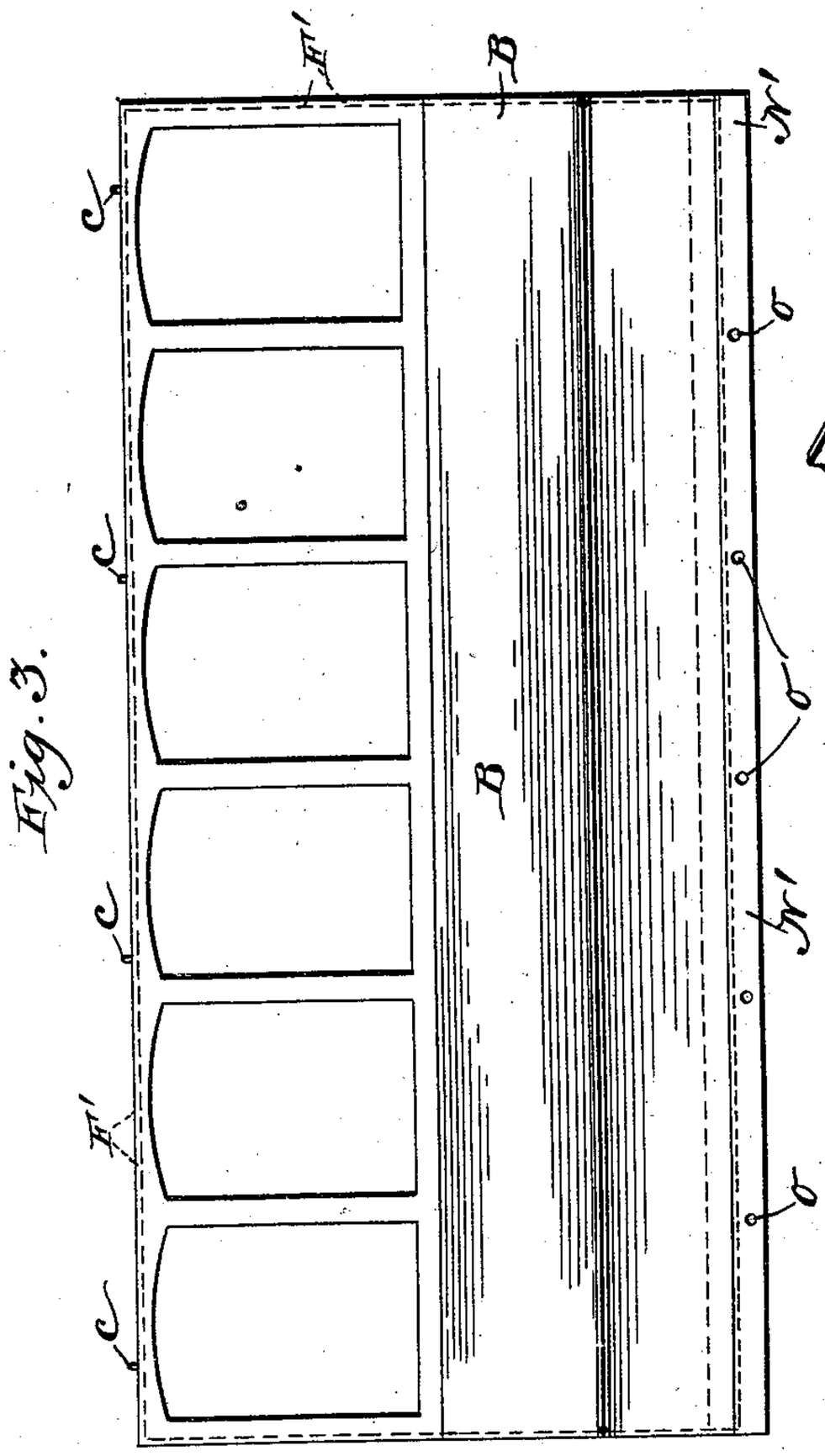

Fig. 3.

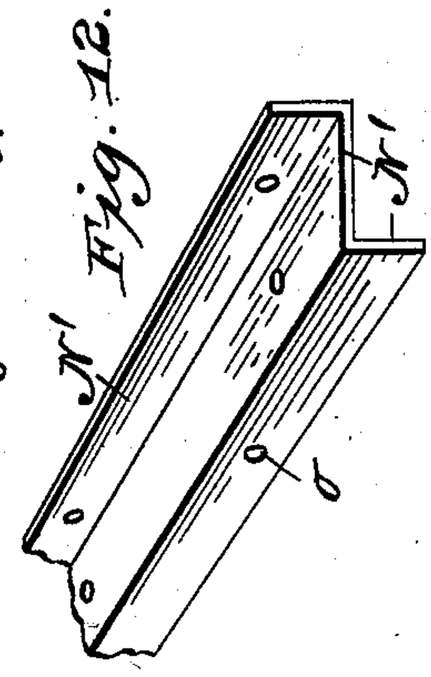

Fig. 12.

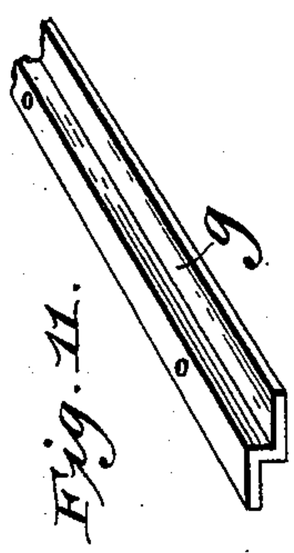

Fig. 11.

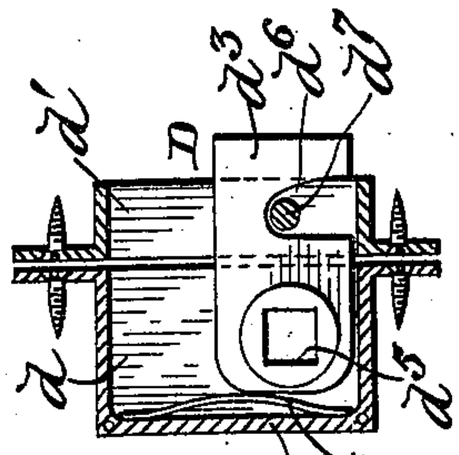

Fig. 10.

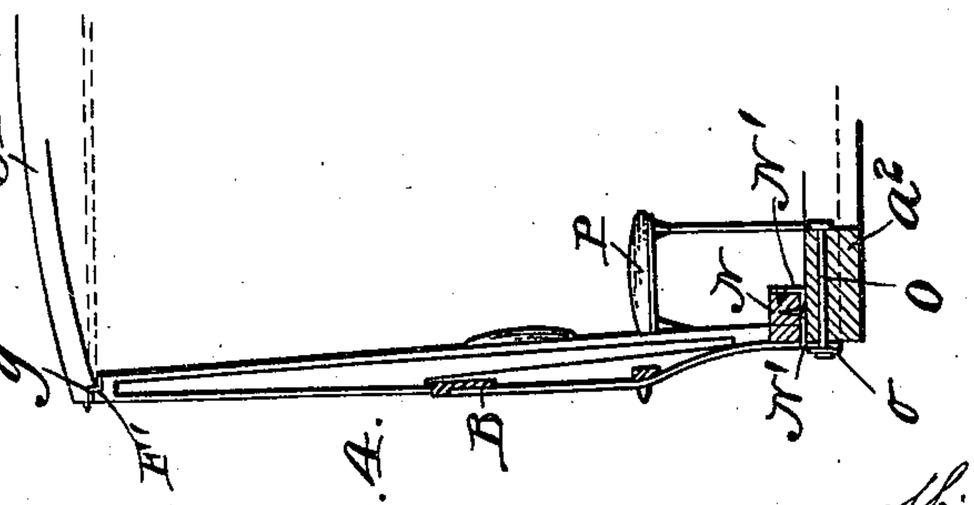

Fig. 4.

WITNESSES

Geverance.

W Harvey Muzzy.

INVENTOR

William Eberle
by his Attorneys
Mason, Fenwick & Lawrence

(No Model.) 4 Sheets—Sheet 4.

W. EBERLE.

RAILWAY CAR.

No. 557,061. Patented Mar. 24, 1896.

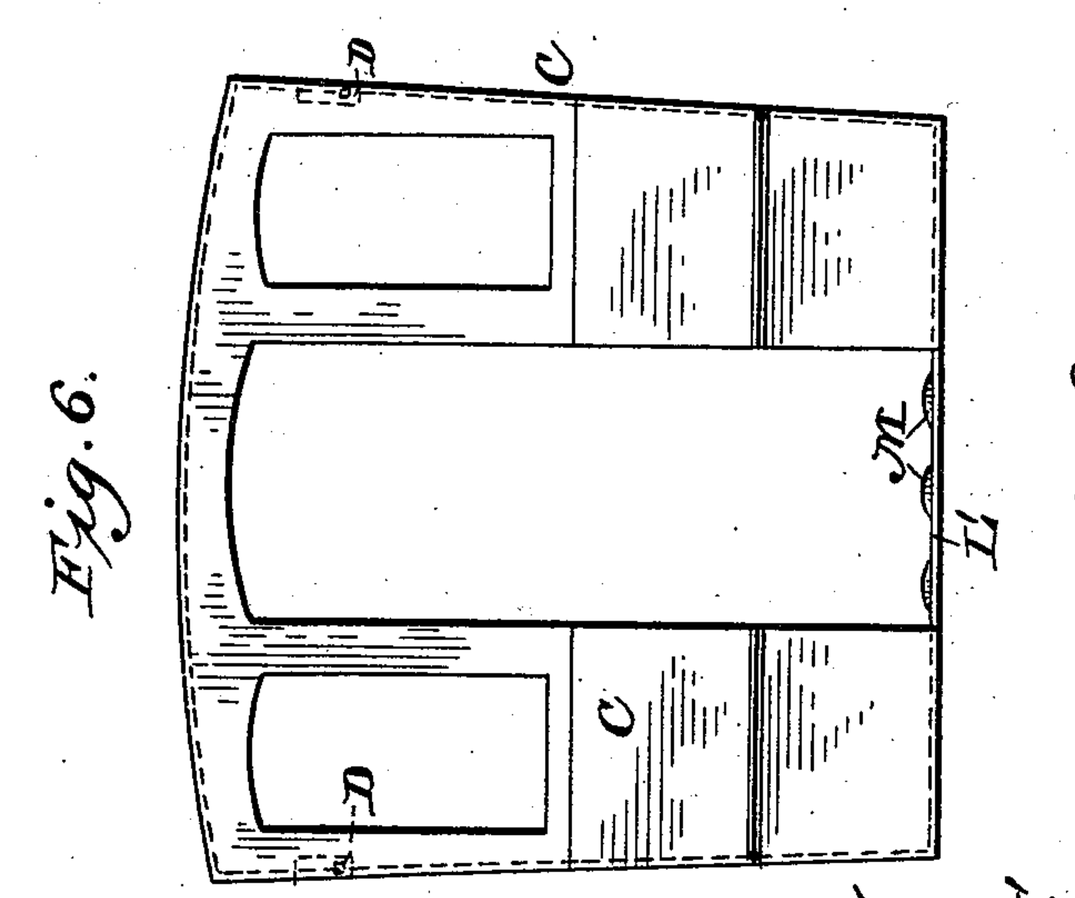

Fig. 6.

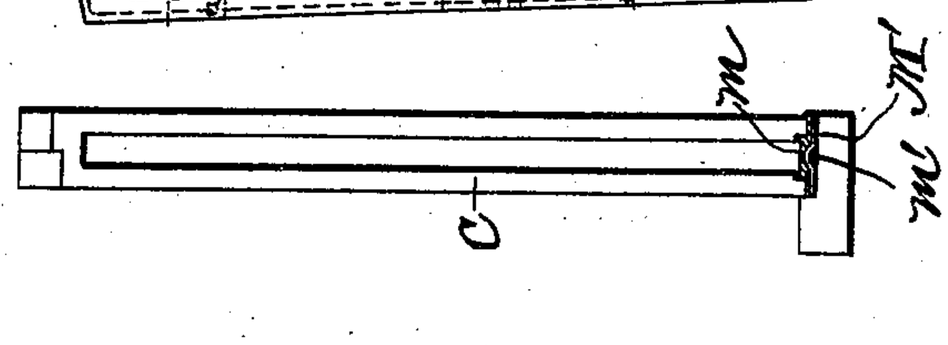

Fig. 7.

Fig. 9.

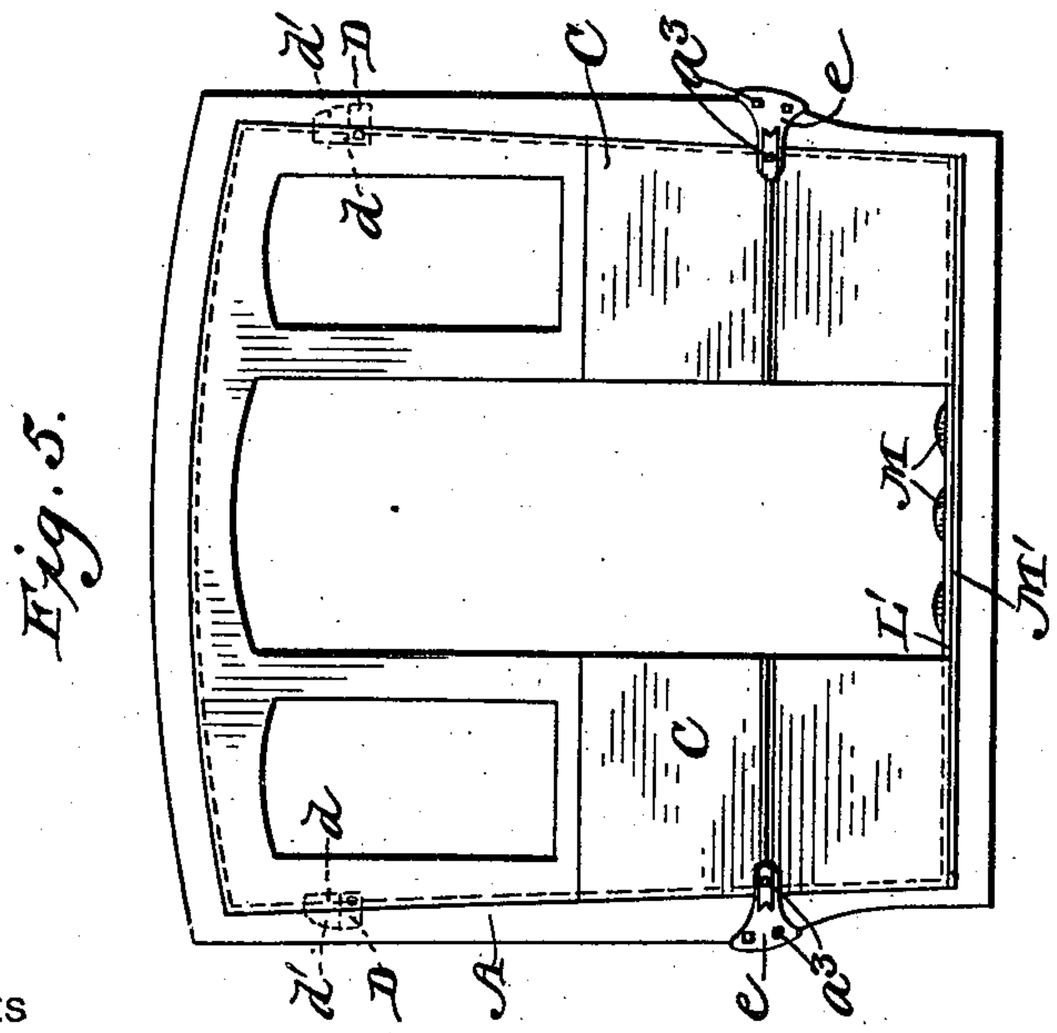

Fig. 5.

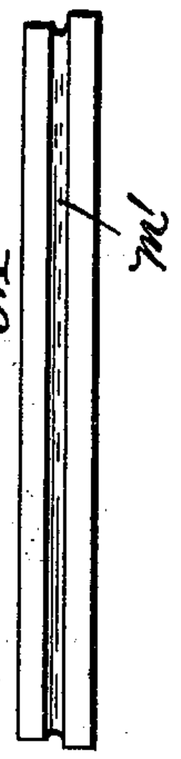

Fig. 8.

WITNESSES

Severance.

W. Harvey Muzzy.

INVENTOR

William Eberle

by his Attorney

Mason, Fenwick & Lawrence

UNITED STATES PATENT OFFICE.

WILLIAM EBERLE, OF PHILADELPHIA, PENNSYLVANIA.

RAILWAY-CAR.

SPECIFICATION forming part of Letters Patent No. 557,061, dated March 24, 1896.

Application filed May 7, 1895. Serial No. 548,457. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM EBERLE, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented an Improvement in Railway-Cars, of which the following is a specification.

My invention relates to improvements in passenger-cars, and has more particularly to do with the railway-cars that can be readily converted into either closed winter-cars or open summer-cars.

The invention consists of certain novel constructions, combinations, and arrangements of parts, all of which will be hereinafter more particularly set forth and claimed.

In the accompanying drawings, forming part of this specification, Figure 1 represents a side elevation of a closed car embodying my invention. Fig. 2 represents the same with the sides removed and arranged for summer use. Fig. 3 represents a side elevation of one of the removable sides. Fig. 4 represents a detail vertical section through one-half of my closed form of car. Fig. 5 represents an end elevation of the closed form of car. Fig. 6 represents a side elevation of the end of the car removed. Fig. 7 represents a central vertical transverse section through said end. Fig. 8 represents a bottom plan view of the bottom member of the interlocking members for securing the bottoms of the ends in position. Fig. 9 represents a top plan view of the upper member of the interlocking members for securing the bottoms of the ends in position. Fig. 10 represents a central vertical section through the lock for securing the ends. Fig. 11 represents a detail perspective view of a portion of one of the rabbet-irons, and Fig. 12 represents a detail perspective view of a portion of one of the angle-irons.

A in the drawings represents the frame of the car, B the sides, and C the ends.

The frame A comprises end-supporting posts a, a top A′ and iron side-supporting posts a'. The end-supporting posts and the lower edges of the top are cut to form rabbets F, over which similarly-shaped rabbets F′, cut in the sides and ends, are adapted to fit. The rabbets on the lower edges of the sides of the top are covered with rabbet-irons g, provided at intervals with dowel-receiving apertures. The tops of the sides of the cars are also provided with rabbet-irons, which have dowels c arranged thereon at intervals, so as to enter the dowel-holes in the top of the car when the sides are applied to the same.

The bottoms of the sides of the cars are provided upon the inside with longitudinal beams N and angle-iron strips N′, attached to the same and extending down flush with the side of the car. This downwardly-extended portion is provided with bolt-apertures o o. Bolts O pass through said apertures and the side floor-beams a^2 of the frame and thus secure the sides firmly in position.

It will be seen from the above that when the sides are applied in place they will be prevented from moving outward at the top by the dowels c and from moving downward by the side beams N′ and the angle-irons N. To remove the sides the bolts O must first be removed, so that the angle-irons N can be slipped forward off the support afforded by the beams a^2, and thus allow the side to descend sufficiently to withdraw the dowels from the holes. The side is then free to be removed. The rabbet-joints between the sides and ends and the frame prevent any warping of said sides and ends.

The ends C are secured in position by spring-locks D, comprising two members d and d' respectively. The member d consists of an outer casing d^2 and a latch d^3 pivoted therein and engaged by an angular spring d^4, which holds it either in a raised or lowered position. The latch is provided with a square aperture d^5, into which a square key is adapted to be inserted to turn the latch either up or down. The outer end of the latch is recessed, as at d^6, to take over a pin d^7 on the member d'. The member d is secured in the vertical edge of the end and the member d' in the end posts of the frame. The lower edges of the ends are confined in position by beads L formed on plates L′. These plates are provided upon their upper sides with door-guides M M and upon their lower sides with grooves m. The grooves m fit over beads m', formed on plates M′, which are attached to the cross floor-timbers.

It will be seen from the aforegoing that to remove the ends the locks D are first unfastened, the end tilted outward at the top and

then raised slightly, so as to lift the groove m off the bead m', and thus allow the bottom of the end to slide out.

When the sides and ends are in position I use clamps e to connect the ends of the same, said clamps being applied by bolts a^3. The seats P are removed with the sides and suitable summer-seats Q placed in the cars between the posts a'. Side steps R are also mounted along the sides of the car by hangers r, secured in position by bolts O.

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

1. In an interchangeable summer and winter car, the combination with the car-frame, of sides for the same each removable as a whole and provided along their upper edges with dowels adapted to fit into dowel-holes in the frame and at their bottoms with side-supporting beams adapted to rest upon the frame, and angle-irons adapted to be bolted to the sides of the frame, substantially as described.

2. In an interchangeable summer and winter car, the combination with the car-frame, of sides and ends each removable as a whole from the same and each formed along its upper edge and sides with rabbet-joints and secured against lateral displacement by bolts, substantially as described.

3. In an interchangeable summer and winter car, the combination with the car-frame, of sides and ends each removable as a whole and each formed along the upper edge and sides with rabbet-joints and secured against lateral displacement by bolts and corner-clamps adapted to be bolted to the frame and the ends of the sides and ends of the car, substantially as described.

4. In an interchangeable summer and winter car, the combination with the car-frame, of sides each removable as a whole, metal rabbet-strips provided with dowels and attached along the top edges of said sides, metal rabbet-strips provided with dowel-holes attached along the top of the frame, and bolts for securing the lower edges of the sides in position, substantially as described.

5. In an interchangeable summer and winter car, the combination with the car-frame, of ends each removable as a whole and formed with rabbet-joints along its upper edge and sides, a grooved plate applied to the lower edge of each end piece and beaded plates attached to the frame and adapted to enter the grooved plates and hold the end pieces against lateral displacement, substantially as described.

WM. EBERLE.

Witnesses:
LOUIS BAYHA,
AARON REEVES.