(No Model.)

3 Sheets—Sheet 1.

W. HUBBARD.

RAILWAY CAR.

No. 282,324. Patented July 31, 1883.

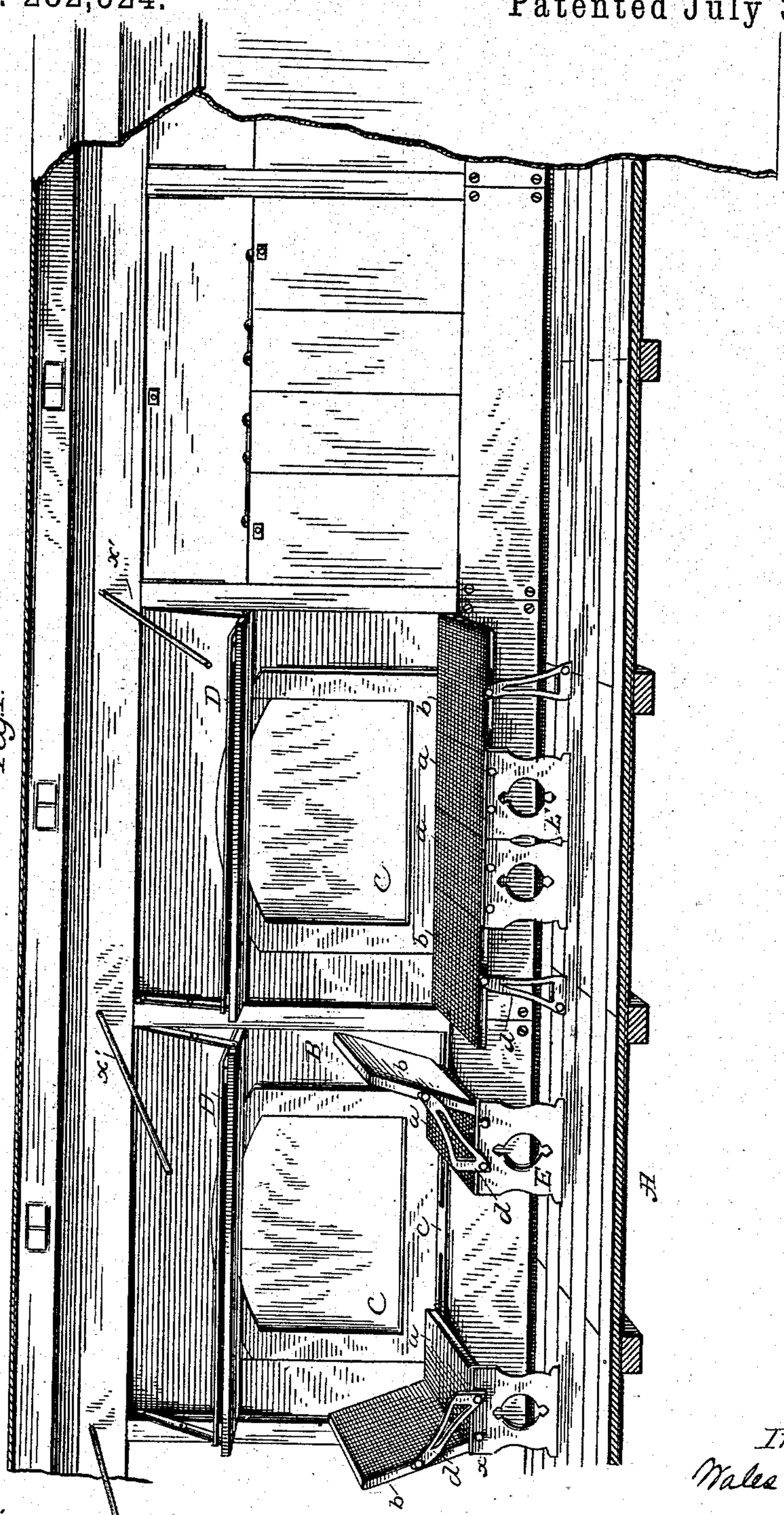

Fig. 1.

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by Joyce & Spear
Attys.

(No Model.) 3 Sheets—Sheet 2.

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RAILWAY CAR.

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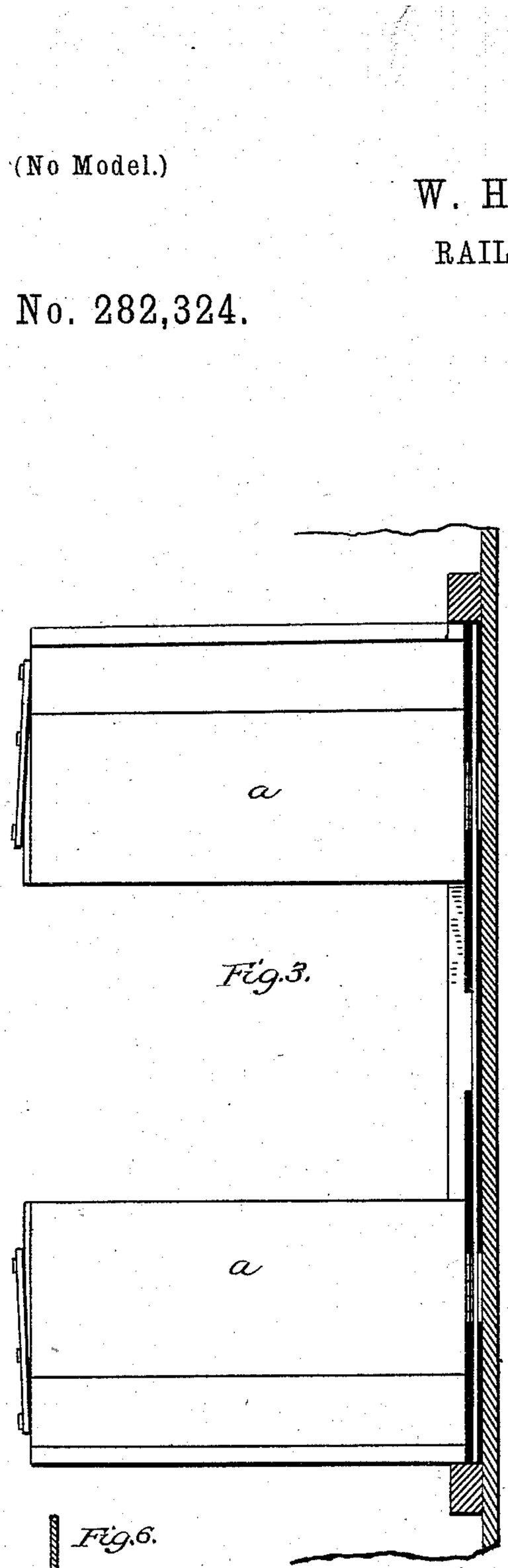

Fig. 3.

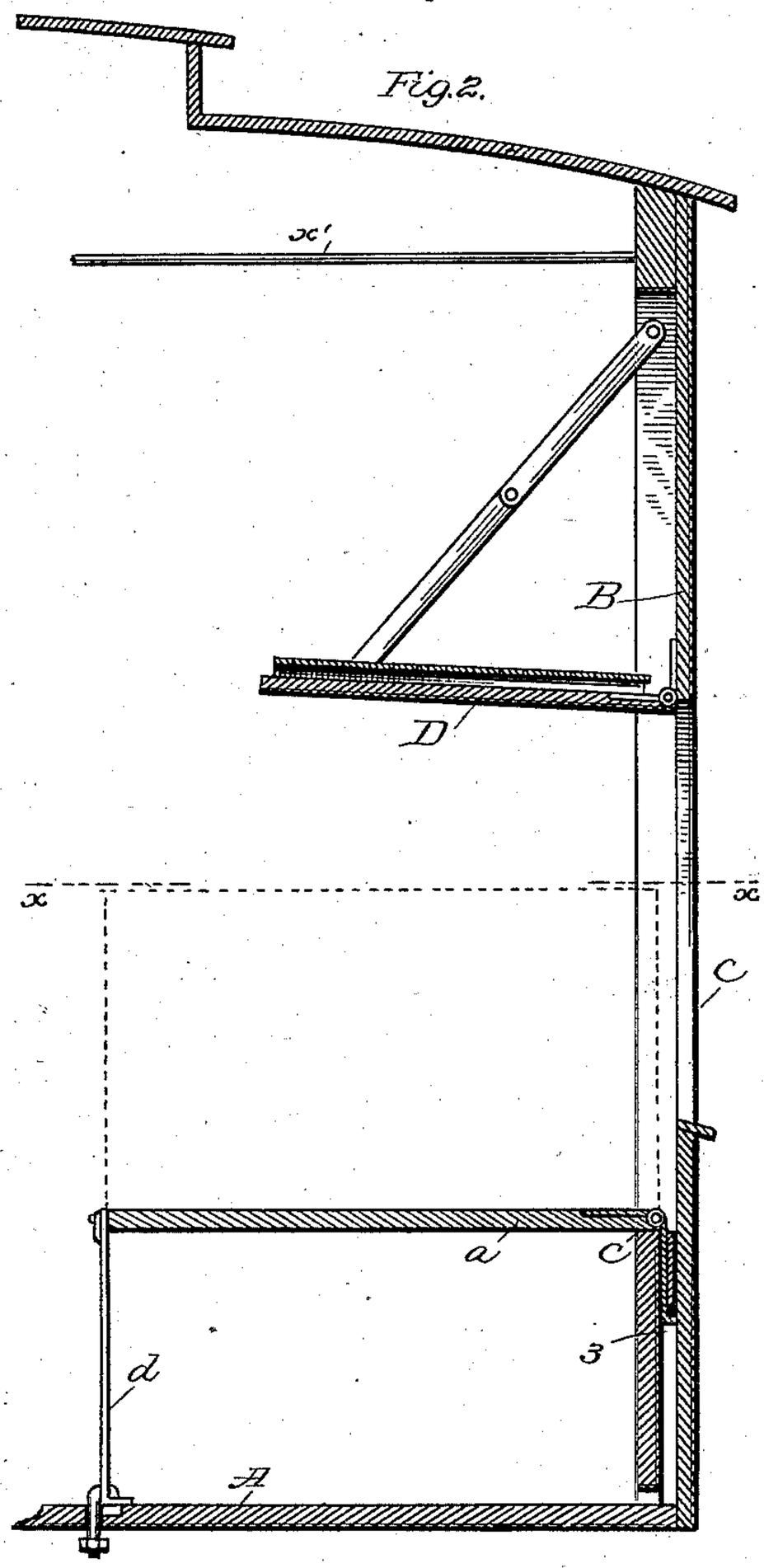

Fig. 2.

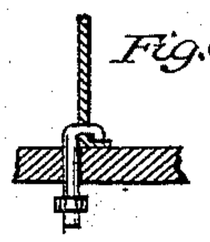

Fig. 6.

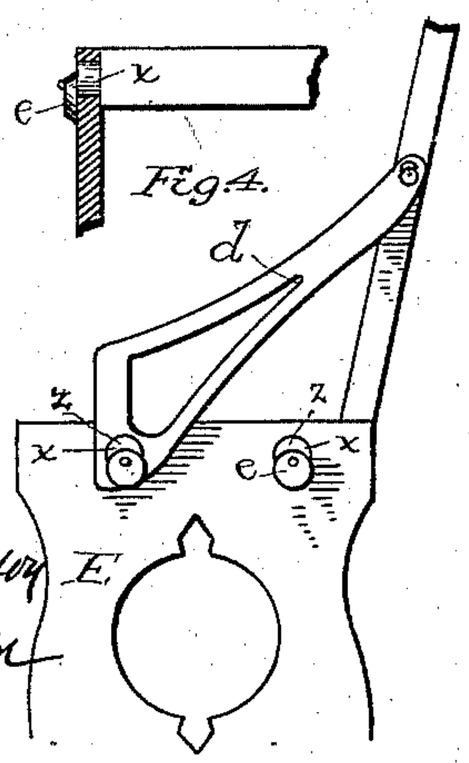

Fig. 4.

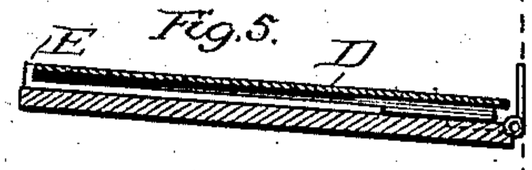

Fig. 5.

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(No Model.) 3 Sheets—Sheet 3.

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RAILWAY CAR.

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Fig. 7.

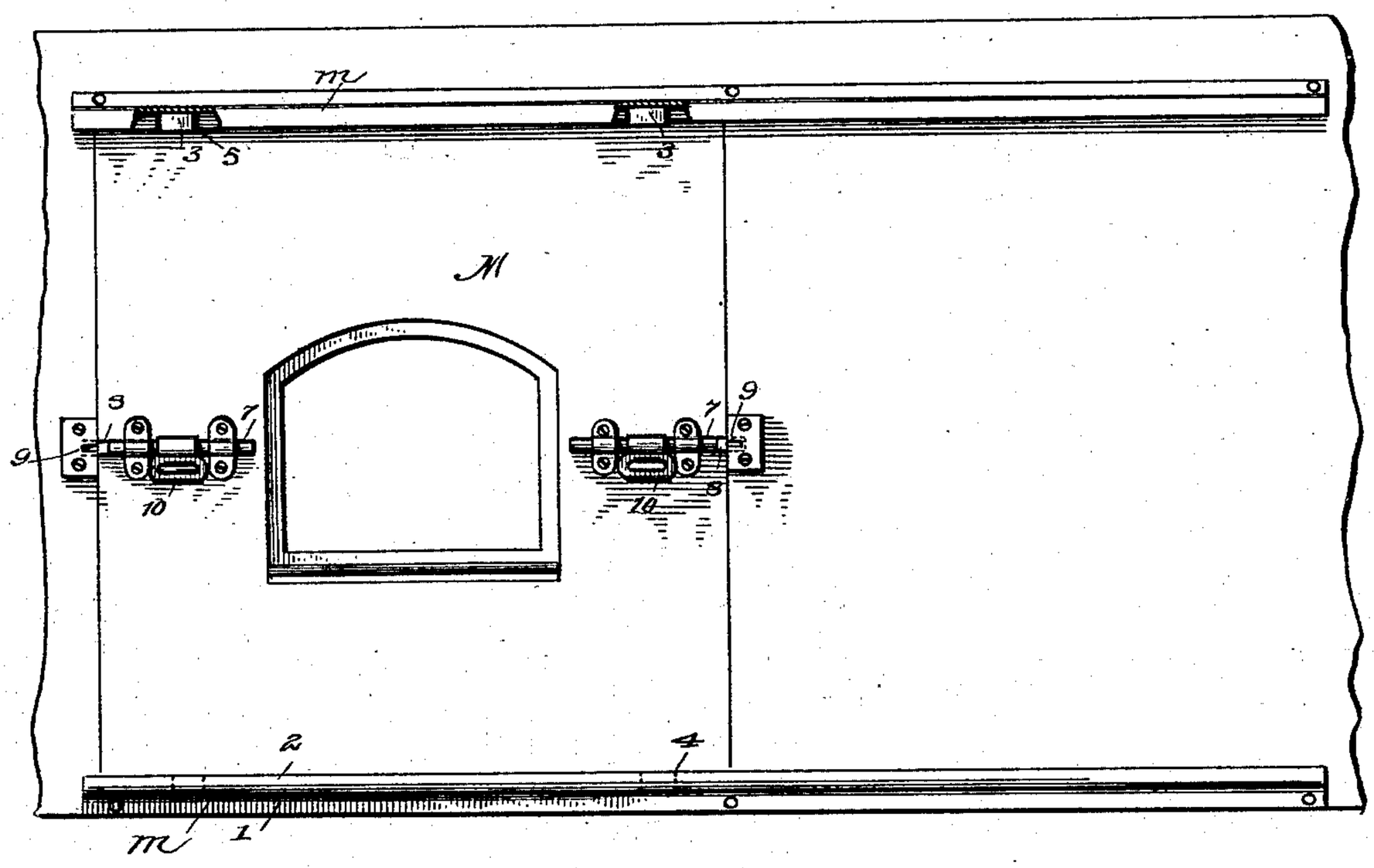
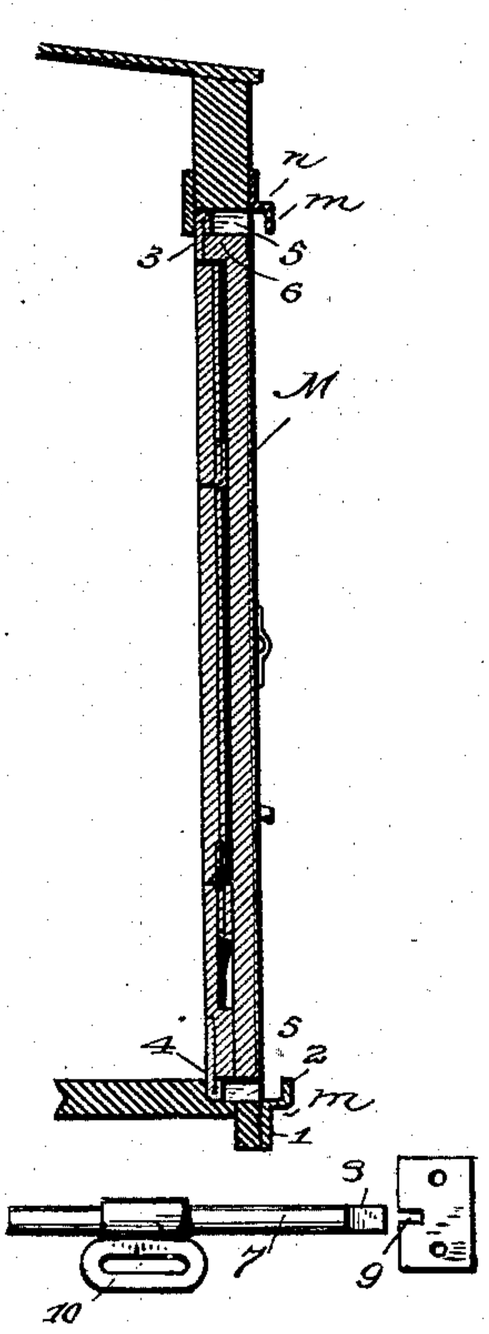


Fig. 8.



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UNITED STATES PATENT OFFICE.

WALES HUBBARD, OF WISCASSET, MAINE, ASSIGNOR OF ONE-FOURTH TO JAMES H. MAY, OF WASHINGTON, D. C.

RAILWAY-CAR.

SPECIFICATION forming part of Letters Patent No. 282,324, dated July 31, 1883.

Application filed April 25, 1883. (No model.)

To all whom it may concern:

Be it known that I, WALES HUBBARD, of Wiscasset, in the county of Lincoln and State of Maine, have invented a new and useful Improvement in Railway-Cars; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates to railway-cars; and it consists of a car convertible at pleasure into a passenger or freight car.

Under the present arrangements and with the cars now in use, special cars of the second or poorer class are used in what are called "emigrant trains" on the through lines of Western railroads; but as the movement of emigration is all in one direction these cars are occupied only in going one way. They are returned for the most part empty. On the other hand the freight-cars on the same roads carry less in going westward and bring back the more bulky produce. Thus, for lack of interchangeability in the cars, empty cars are hauled both ways. To remedy this is the object of my invention.

In the accompanying drawings I have illustrated the mode best known to me for carrying out my invention.

In these drawings, Figure 1 represents a central longitudinal section of my improved car. Fig. 2 is a cross-section of one-half the car. Fig. 3 is a horizontal section on line *x x* of Fig. 2. Fig. 4 shows an end view of the seat. Fig. 5 represents a section of the upper berth with the end pieces or supports of the seats in position for storage. Fig. 6 represents detail of the seat. Figs. 7 and 8 show in elevation a form of door which is adapted to be used when the car is converted into a freight-car without disturbing the arrangement of the seats, &c., against the wall of the car.

The general principle of the construction of my car includes the convertibility of both seats and berths into an inner wall or lining for the car, thereby freeing the interior of the car from all obstructions, and at the same time furnishing substantial coverings to the car-windows.

In the drawings, A is the floor, and B the wall, of the car, these not being materially different from those of an ordinary box or freight car, except that the walls are provided with windows, as shown in Fig. 1 at C C.

The upper berth, D, is of the construction and arrangement ordinarily used in sleeping-cars, except that for this class of cars no bedding is provided for passengers, and the swinging upper berth may be only of the thickness of a single board and without rail or headpiece.

The berth D may be hinged, if preferred, to slanting pieces, so that it may be lifted as it is swung up into place. It forms, when thus swung up, the lining of the car for that panel. The straps or cords by which it is suspended may be included in the cavity when the berth is closed.

The lower berths are formed wholly out of the seats. The bottoms *a* of these seats are provided with hinges, one leaf of which is made long and slides in a groove in the side of the car, as shown in Fig. 3. Instead of this, the seat-bottom may be hinged to any suitable piece adapted to slide on the side of the car. The backs *b b* are hinged to the seat-bottoms *a a*, so that they may be laid down longitudinally, as shown in Fig. 1. When so laid down the inner end of the back is supported on the ledge *c*, Fig. 2, and the outer ends upon leg *d*, which serves, when the seat-back is raised, as an arm connecting the back to the bottom, as shown on the left of Fig. 1. To secure the seats in their proper position, the end pieces, E F, may be secured to the car-floor by adjustable clamps, as shown in Fig. 6, or by any other similar device.

The leg or arm *d* is pivoted on the end of the seat-back at 1, and is provided with a slot, *z*, by means of which it is connected to a pin in the end of the seat-bottom, as shown in Fig. 2.

The leg or arm *d*, as also the end pieces, E F, are fastened to the seats by the following devices, as shown in Fig. 4: Affixed to the outer end of the seats are projecting pins *x x*, which pass through corresponding openings, *z*, in the arm-rest *d* and the supports E E. Upon the face of each pin is a circular button, *e e*, pivoted eccentrically. To adjust this arm-rest *d* and support E, the circular plate *e* is moved so as to fully cover the ends of the pin, and when the supports are in position the plate is

then turned (or of its own weight falls downward) so that the lower edge of the plate extends beyond the face of the pin, thereby fastening the supports on the pins.

The seat-bottoms are supported at one end when let down upon end pieces or supports E E. These may be connected to the ends of the bottoms detachably by means of the devices above described, or in any convenient way. The end pieces and arm-rest may be made of sheet metal or of castings, and can be conveniently stored within the upper berth, as shown in Fig. 5. Each lower berth is composed of two seat-bottoms, *a a*, and two backs, *b b*. When the seats are turned toward each other, there is space left for the backs to be lowered, as shown in the middle of Fig. 1. When the seats are formed and when they are converted into a bed, the window is unobstructed. On the right-hand side, Fig. 1, the whole bed-bottom—that is to say, the seat bottoms and backs—is swung up from the position shown in the center of same figure. This closes the window effectually. Manifestly the construction of the wall both above and below must be adapted to receive these upswung pieces.

The seat bottoms and backs may be covered with cloth or any suitable material to render the bed more comfortable, and when in use may be partitioned off by curtains suspended by hooks from the rods *x' x'*. (Shown in Fig. 1.)

When the seats are swung up, as shown in Fig. 1, on the right-hand side, the sides of the car are completely formed for a freight-car. The construction is such that the upper berth may be left down while the seats are arranged for day use, thus accommodating children or sick persons. There is no bedding to be stored in the cavity, as in ordinary sleeping-cars. The upper berths swing snugly in to the wall and form the inner lining thereof.

Fig. 7 shows a modification of my invention adapted to the door of the car in the side. In this, M represents a suitable door for a freight-car. It is adapted to fit snugly into the opening in the side of the car and to be moved bodily outward to run upon rails *m m*. The lower rail is composed of a plate, 1, an upturned flange, 2, forming a channel. It extends underneath the opening from side to side and along the side of the car a distance equal to the length of the opening. The upper track is formed of the upper and angle iron *n*. The door is provided, both above and below, with tongues 3 3 4 4. The lower tongues, 4, rest in the channel formed in the lower track; the upper, when the door is moved out or in, in the groove or channel formed by the upper track. When the door is moved they move in mortises 5 5, cut both above and below, and they are so arranged in relation to the track that they come into proper place when the door is placed at a distance clear of the side of the car. The seats are arranged on this door in the manner heretofore described, and the upper berth is hinged to swing up against it, so as to be flush with a flange, 6, on the inner end of the door. The upper and lower berths, when folded against the door, are secured by suitable catches, the whole forming a plane surface.

A window may be cut in the door, and may be covered by the parts which form the lower berth. The door may be secured by bolts 7, having a shank, 8 8, flattened so as to pass in through a notch, 9, in the metal plate on the side of the car. The bolt is then turned up to bring this shank sidewise to prevent it entering the notch, and then may be turned down to secure the door. An ear, 10, fixed on the bolt, is provided with a slot, and is adapted to fit down over a staple on the door for the purpose of securing the bolt with a lock.

Having thus described my invention, what I claim is—

1. In a railway-car, a seat adapted to swing up and form a part of the wall or lining of the car.

2. In a railway-car, a seat connected at one end to a sliding hinge, and having a back hinged directly to said seat, substantially as described.

3. In a car of the class described, the seats *a a*, connected at one end to sliding hinges and adapted to slide toward each other, in combination with the backs *b b*, hinged to the said seats *a a*, as described, the seats and backs being adapted to form a bed or to be swung up to form a part of the wall of the car, substantially as described.

4. In combination with the hinged and sliding seat-bottoms and hinged backs *b b*, the arms *d*, adapted to serve also as legs.

5. In combination with the arm-support *d* and end pieces, E, of the seat, the projections or pins *x x* on the outer edge of the seat, and the eccentric plates *e e*, pivoted thereon.

6. In combination with the hinged and sliding seats, the detachable end pieces, E, and arm-supports *d*.

7. In a railway-car, a door adapted to be moved outward beyond the plane of the walls of the car, and provided with tongues or projections, combined with suitable rails or tracks projecting from the wall of the car, upon which the said tongues or projections slide, and thus open the door.

8. In combination with a door of a railway-car adapted to be moved from its opening, berth and side pieces hinged thereto, and adapted to be folded up against the door, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WALES HUBBARD.

Witnesses:
F. L. MIDDLETON,
WALTER DONALDSON.