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J. E. WHITE.

RAILWAY CAR.

No. 273,922. Patented Mar. 13, 1883.

Fig 1.

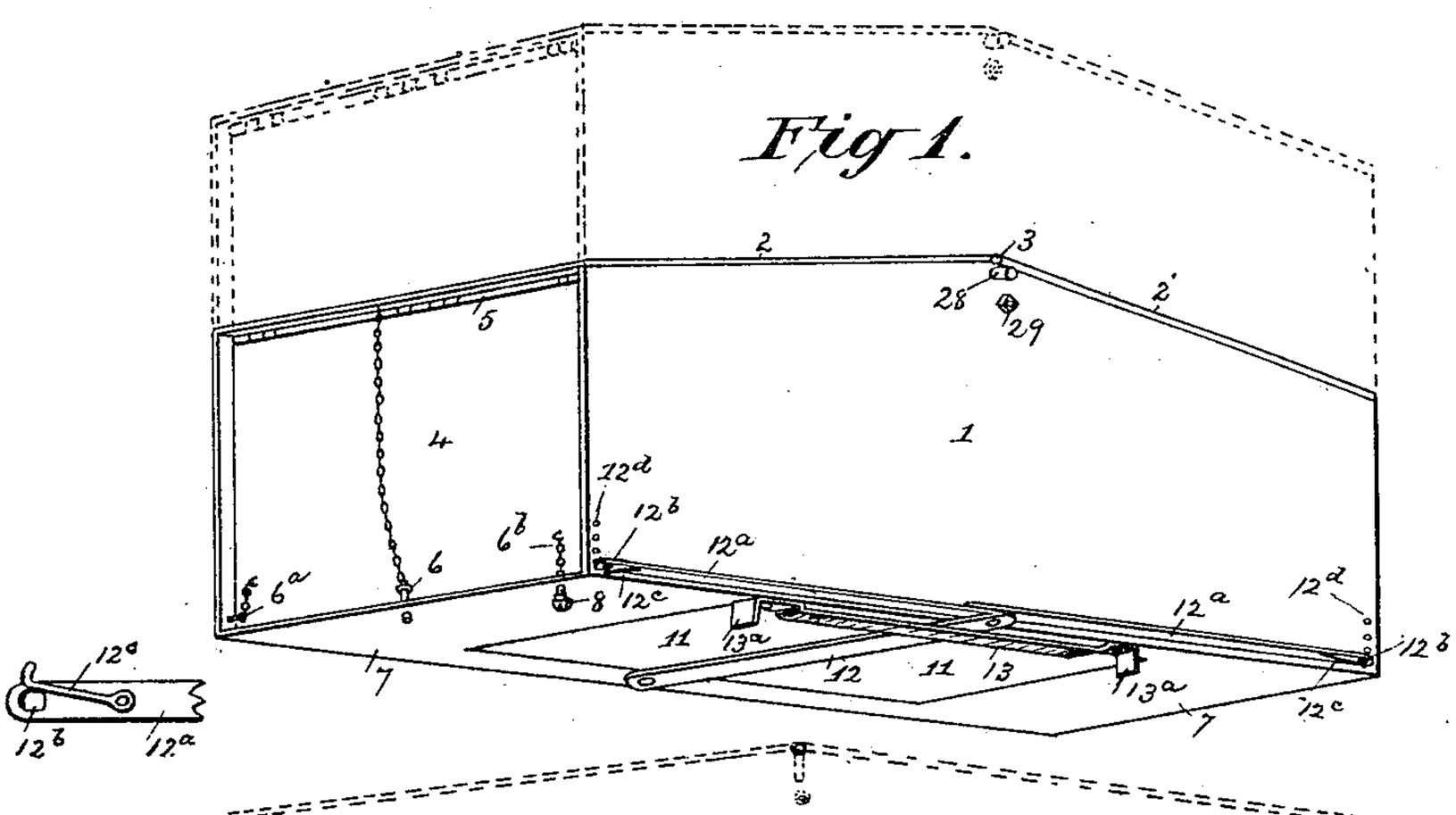

Fig 2.

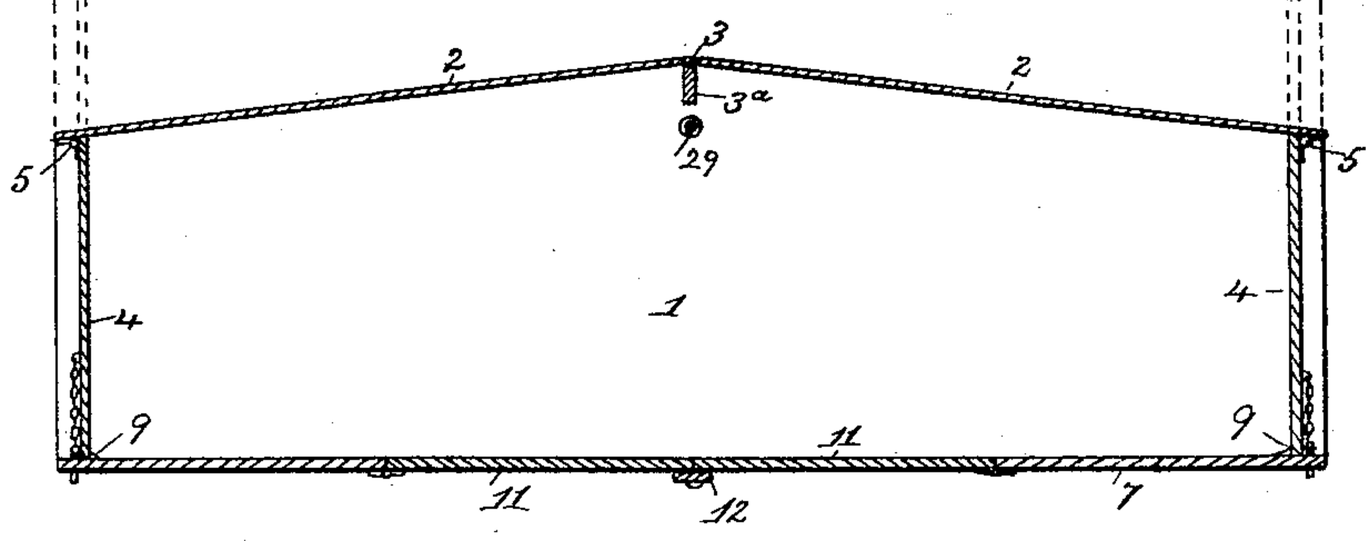

Fig 3.

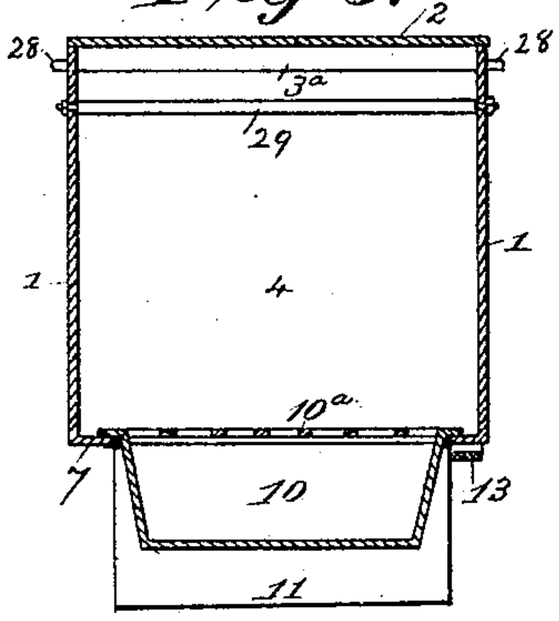

Fig 3a

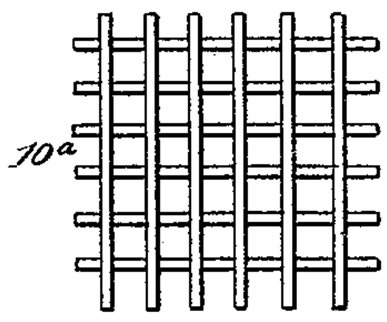

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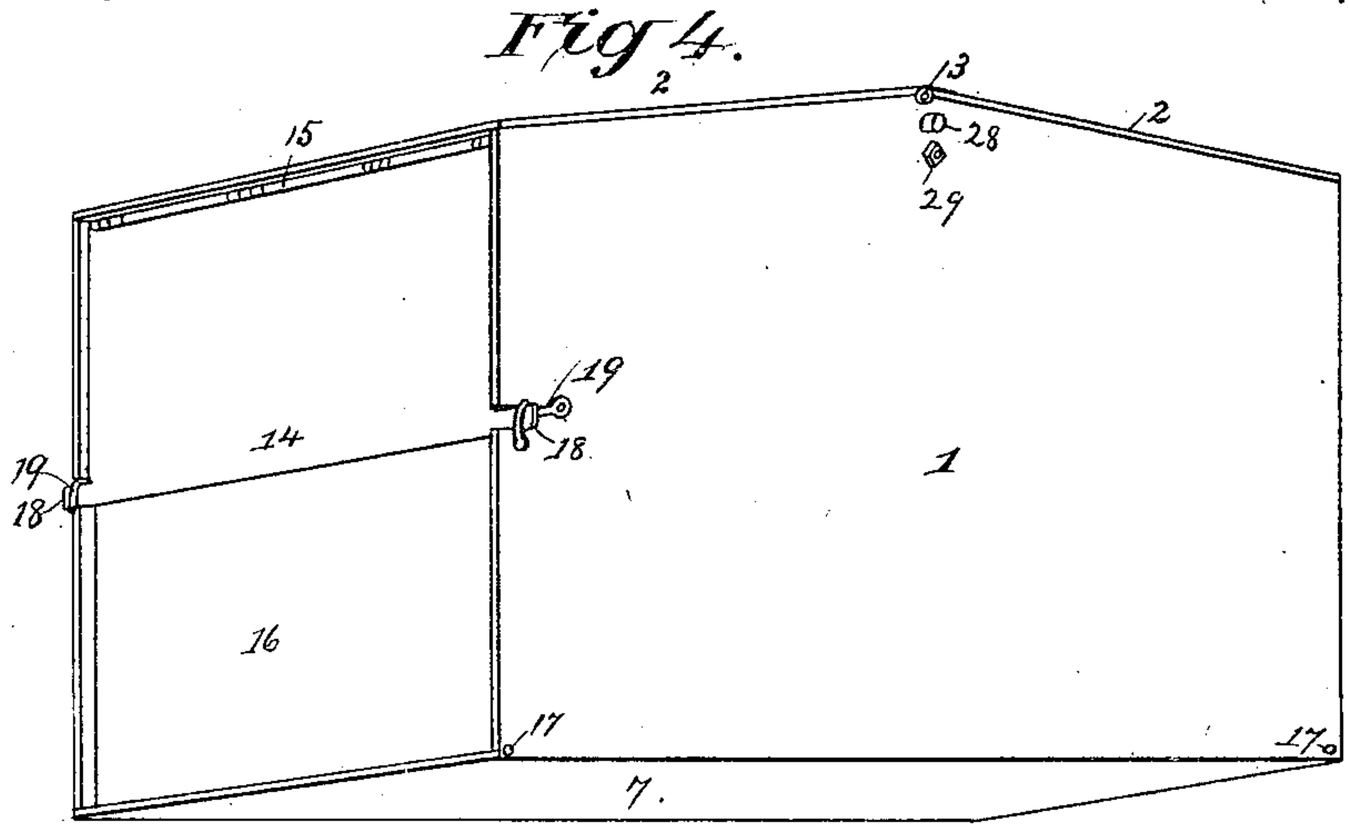
Fig 4.



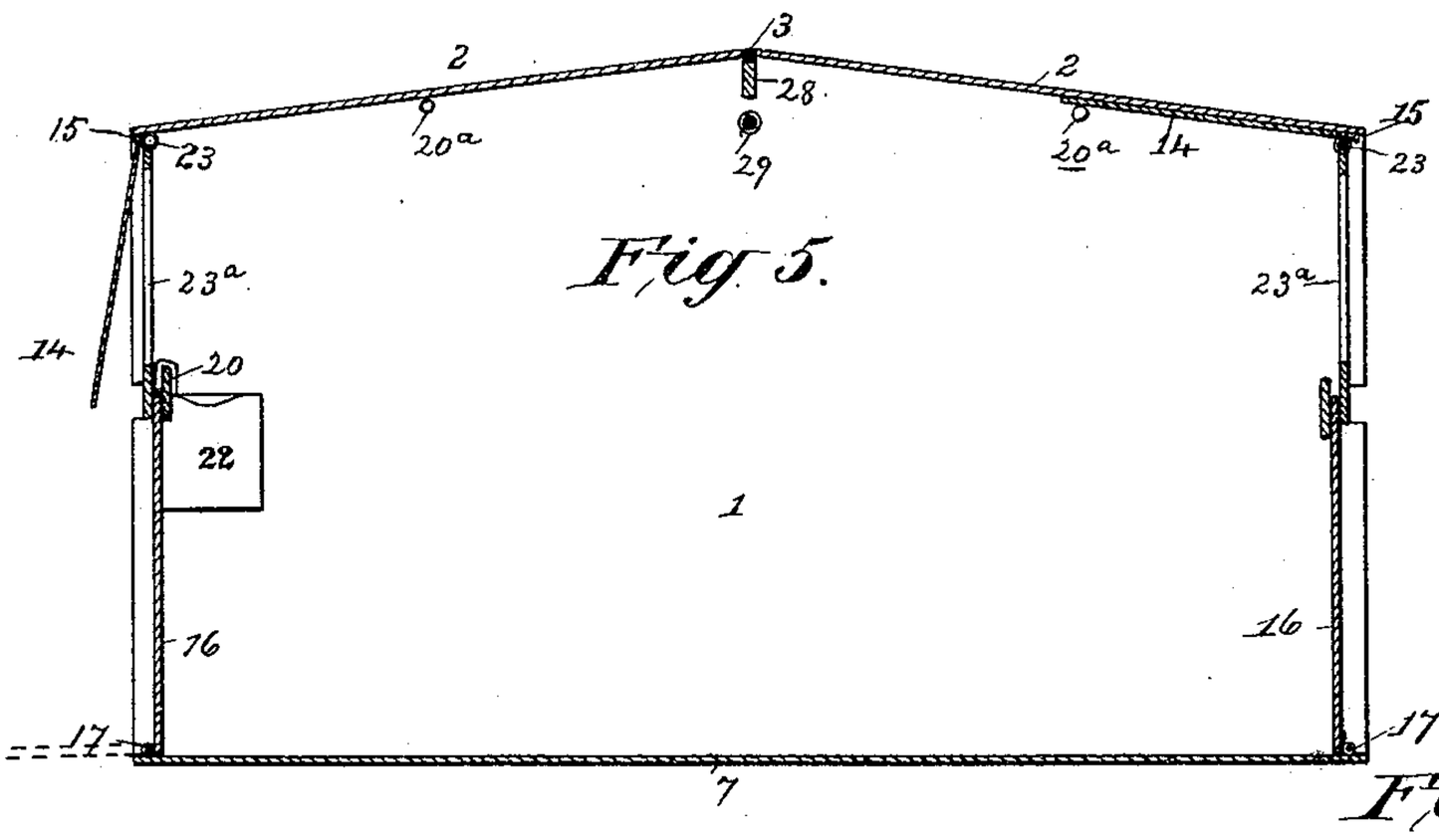


Fig 5.

Fig 7

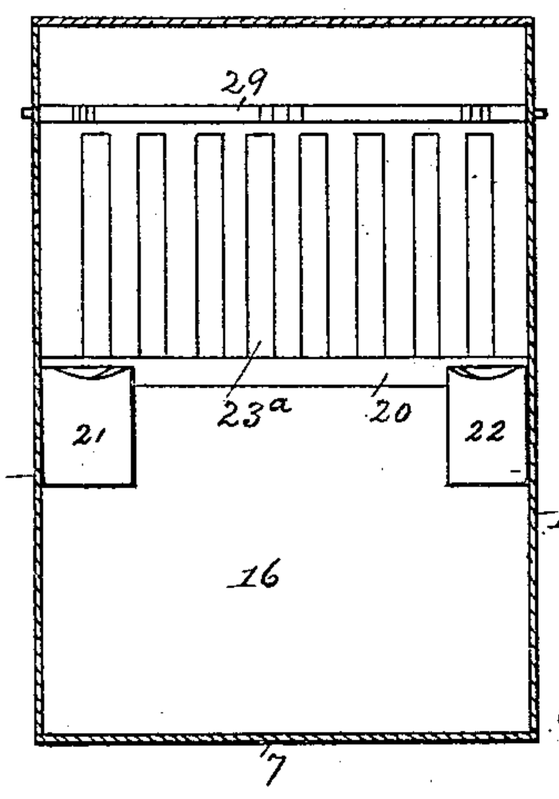
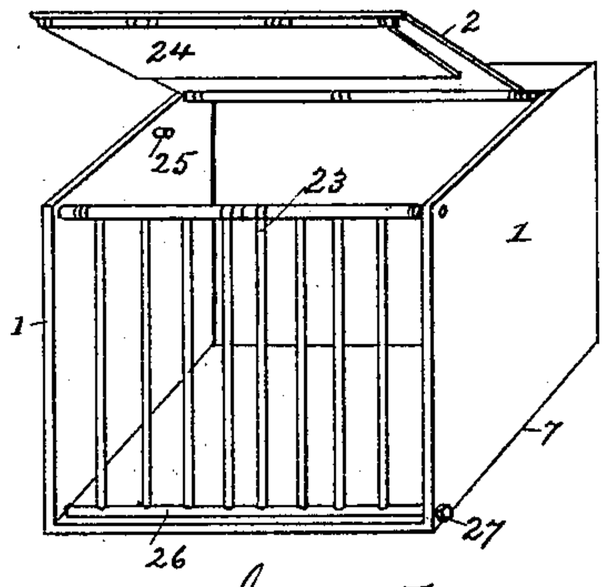


Fig 6.



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RAILWAY CAR.

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Fig 9.

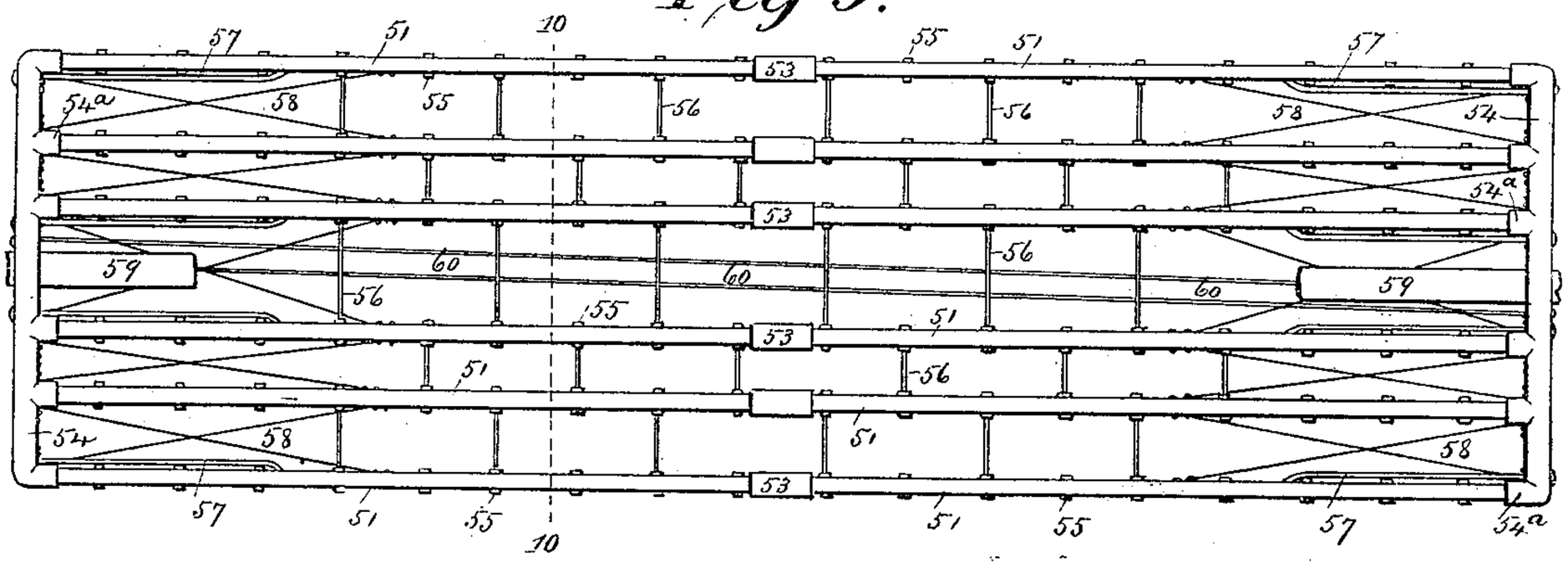

Fig 10.

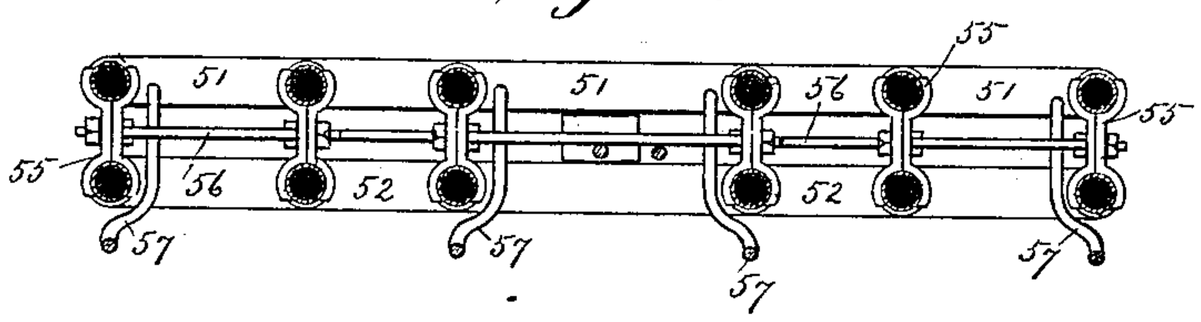

Fig 11.

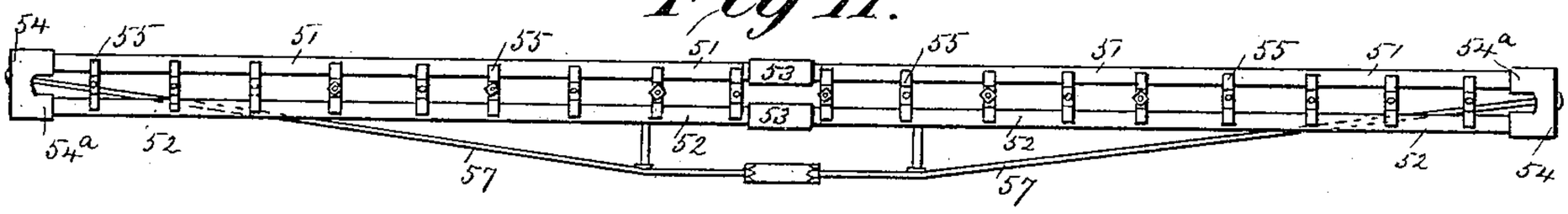

Fig 8.

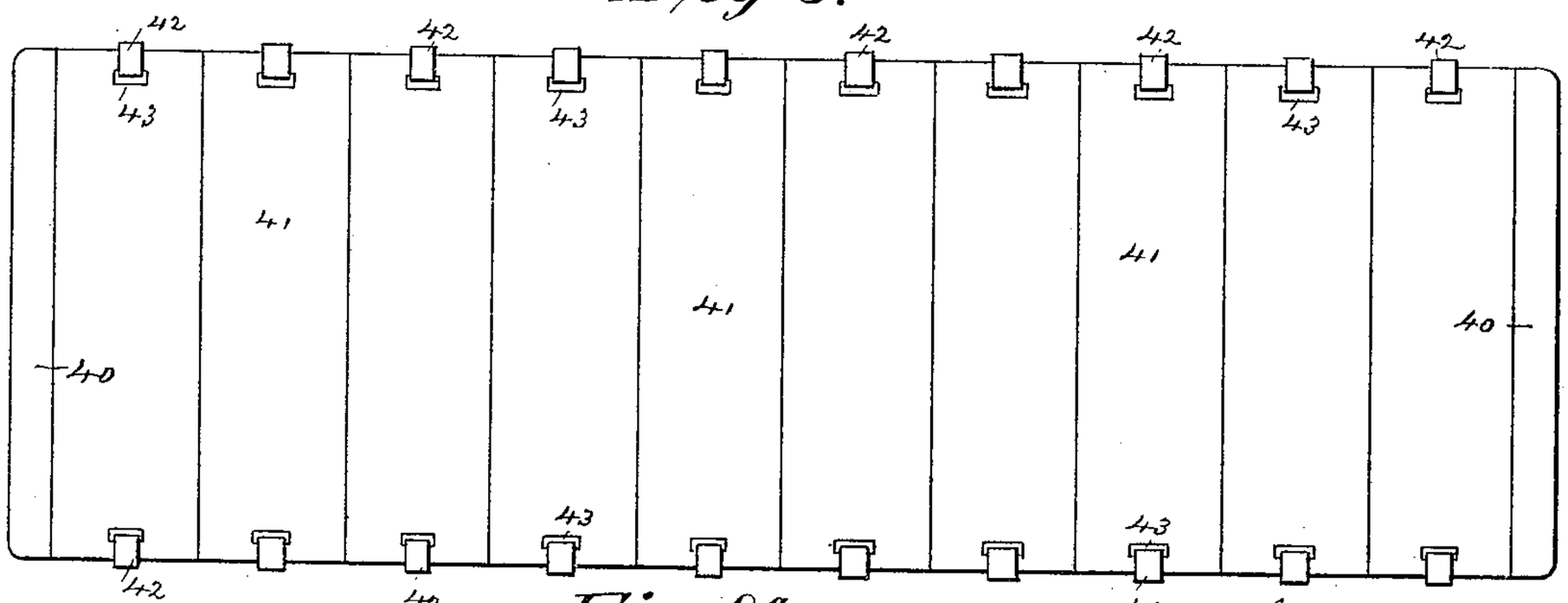

Fig 8a.

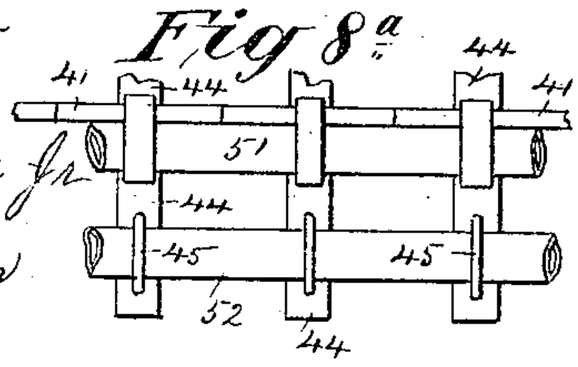

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Fig 12.

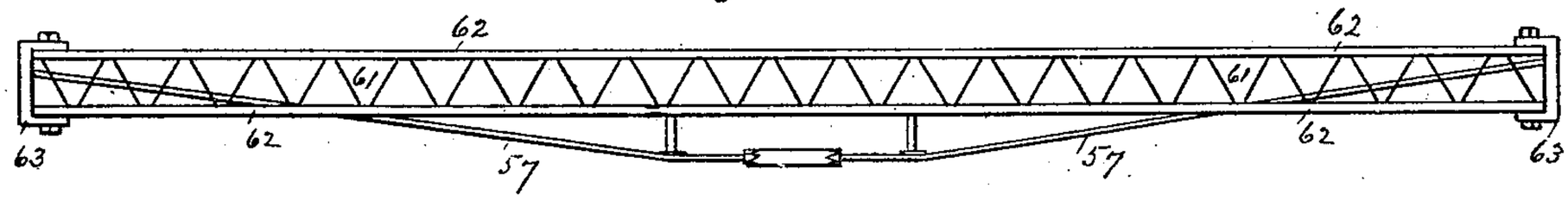


Fig 13.

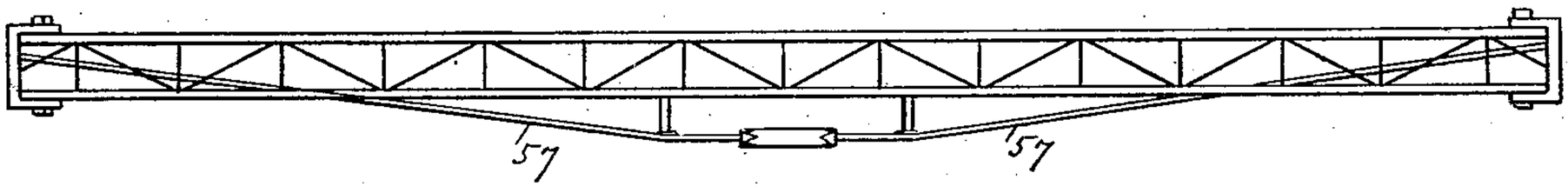


Fig 14.

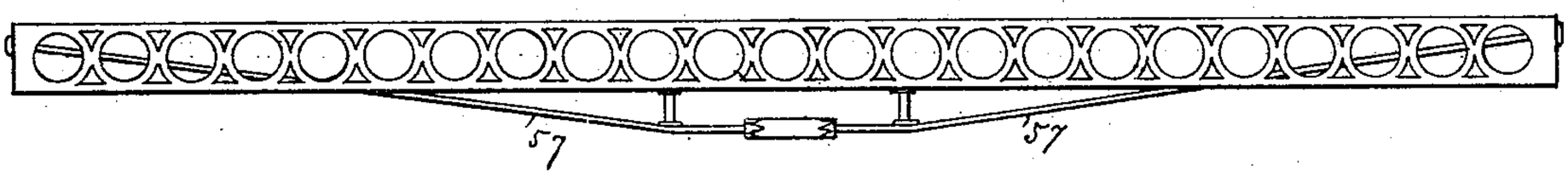
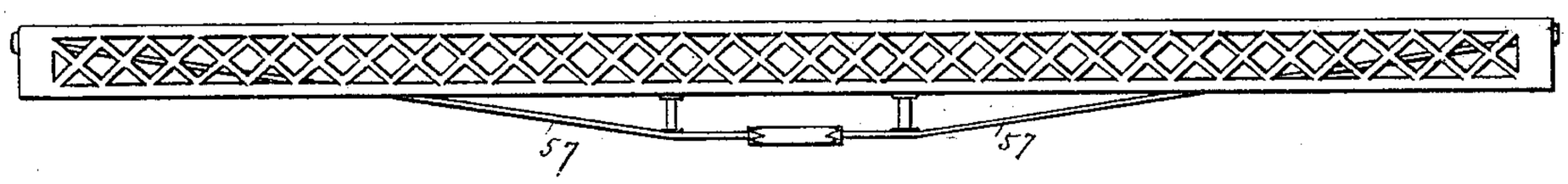


Fig 15.



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RAILWAY CAR.

No. 273,922. Patented Mar. 13, 1883.

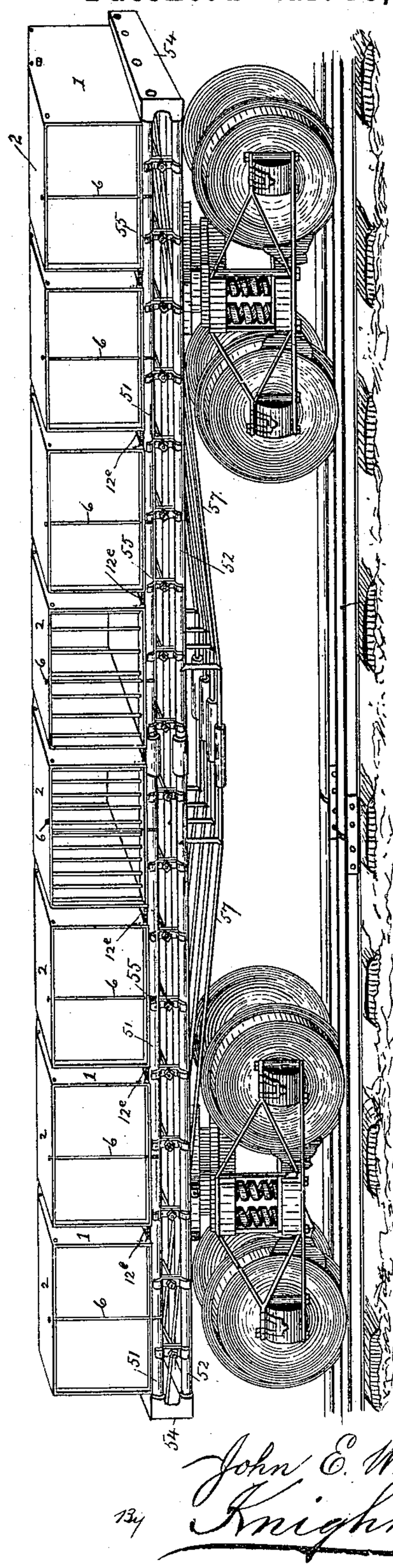

Fig 16.

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Inventor:
John E. White
by Knight Bros Attys

UNITED STATES PATENT OFFICE.

JOHN E. WHITE, OF CLEVELAND, OHIO, ASSIGNOR TO HENRY A. COIT, OF CONCORD, NEW HAMPSHIRE.

RAILWAY-CAR.

SPECIFICATION forming part of Letters Patent No. 273,922, dated March 13, 1883.

Application filed July 13, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN E. WHITE, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented Improvements in the Construction of Convertible Cars for the Transportation of Ore, Coal, Grain, Stock, and Freight, of which the following is a specification.

The object of my invention is to provide improved means by which property can be more securely transported from place to place without unloading at intermediate points, thus preventing theft and pilfering, so common by the present mode of transportation. I aim, as far as possible, to utilize iron, steel, or other suitable metal in the place of wood, so as to present a lighter structure, while more property can be transported in a given space.

My invention relates, first, to the body or upper frame-work; secondly, to the platform; and, thirdly, to the bed or lower frame-work of the car.

In order that the invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1 is a perspective view of a compartment or section adapted to transport grain, ore, coal, or freight, having trap-doors at bottom for dumping the contents and end doors for side dumping or shoveling. The increased height of the compartment or section for the transportation of bulky freight is indicated in dotted lines. Fig. 2 is a vertical longitudinal section thereof. Fig. 3 is a vertical transverse section thereof, showing the trap-doors open, and an ice tank or receptacle supported in the opening. Fig. 3ª is a grating or cover for the tank or receptacle. Fig. 4 is a perspective view of a compartment or section adapted for the transportation of animals. Fig. 5 is a vertical longitudinal section of the same. Fig. 6 is a vertical transverse section of the same, the rear and outer upper doors being down or in closed position. Fig. 7 is a perspective view of a compartment or section adapted to transport small animals, the outer and inner upper doors being folded back under the roof. Fig. 8 is a top view of the platform. Fig. 8ª is a side view of the same, the stakes being inserted and secured. Fig. 9 is a top view of my skeleton bed or lower frame-work. Fig. 10 is a vertical transverse section thereof on the line 10 10, Fig. 9. Fig. 11 is a side elevation. Figs. 12, 13, 14, and 15 are side elevations of beds or lower frame-works of modified construction, adapted for use with my improved compartments or sections. Fig. 16 is a perspective view of a car provided with a series of my independently removable compartments or sections.

Referring to Figs. 1 to 3, inclusive, 1 represents the sides of a compartment or section adapted to support a roof, 2, divided transversely and hinged to a rod, 3. Beneath the eaves of the roof are hinged, by rods 5, upwardly-opening doors 4, secured by rods 6, (see Fig. 16,) extending from the eaves of the roof through the bottom or floor 7 of the compartment or section; or these doors may be secured by bolts 6ª or 6ᵇ, passing through the floor and provided with keys or suitable locking devices, 8. Cleats 9 form stops to prevent the doors from passing inward. An opening is formed in the bottom of the compartment for the purpose of dumping the contents when they consist of ore, coal, or grain, as shown in Figs. 1 and 2, or for the purpose of receiving an ice tank or receptacle, 10, which may be provided with a grating or other cover, 10ª, as shown in Figs. 3 and 3ª. The opening is provided with doors 11, which are preferably hinged, securely supported at their meeting edges by a pivoted bar, 12, held by a strap, 13, having downturned ends 13ª, adapted to hold the section to the bed or lower frame-work from endwise movement. To the outer end of the bar 12 are secured bars 12ª, extending to the ends of the compartment, and forming handles by which the pivoted bar 12 can be vibrated to drop the doors. The ends of these bars 12ª have openings 12ᵇ, to receive the hand of the operator, and hooks 12ᶜ, for fastening the bars to either one of a series of perforations, 12ᵈ, on the sides of the compartment, to prevent the pivoted bar from shifting. Where the bottom doors are dispensed with, plain bars 12ᵉ, Fig. 16, may be employed to keep the sections or compartments separate. For the purpose of carrying bulky freight the compartment or section may be increased in height, as shown in dotted lines in Figs. 1 and 2.

For the purpose of transporting animals singly, I use the form of compartment or section shown in Figs. 4, 5, and 6, in which a

pair of doors are used at each end, one door, 14, being hinged to a rod, 15, beneath the eave of the roof, the lower door, 16, being hinged to a rod, 17, at the base of the compartment, so as to form a platform or landing when lowered for unloading. The doors are secured in closed condition by a bar or bead, 18, which is preferably secured to or formed in one piece with the edge of the upper outside door, so as to cover the meeting edges of the doors, and, projecting beyond the body of the upper door, is recessed into the ends of the sides, where it is locked by suitable catches, 19. The upper doors are adapted to be raised and turned back under the roof when the latter is raised, the projecting ends of the bead resting on the tops of the sides. Within the upper doors, 14, are hinged on rods 23 supplemental skeleton or open doors 23ª, which are provided with horizontal bars 20 at their lower edges, adapted to support a feed-trough, 21, and water-vessel 22. These supplemental doors can be raised and turned back, so as to rest on suitable projections, 20ª, on the sides of the compartment.

Fig. 7 shows the form of compartment or section I employ for small animals, in which a weather-door, 24, is provided in front of a skeleton door, 23. The outer door is hinged to the roof so as to fold under it, and the skeleton door is hinged to the sides to permit it to turn up and back under the roof, and rest on horizontal pins or ledges 25. The water and feed receptacles are placed on either side of the compartment. The lower edge of the skeleton door consists of a tubular bar, 26, into the ends of which bar horizontal bolts 27 are inserted through the sides to lock the door in closed position. I prefer to form all the hinges of tubular bars, through which rods are passed having suitable securing devices on their ends.

28 is a bracing or lifting bar, extending through the sides near the center of the roof or apex of the compartment. Brace-rods 29 are also employed, and may be of the same construction as the hinges.

It will be seen that property differing in character can be transported in separate compartments on the same car-bed or lower frame-work.

Where the compartment is used wholly for freight the opening in the bottom may be dispensed with.

In Figs. 8 and 8ª, I show a platform consisting of a series of plates, 41, laid side by side between the end plates, 40, of a bed or lower frame-work. These plates 41 are secured by suitable clamps, 42, and are provided with openings 43, for the reception of stakes 44, whose lower ends extend down beneath and are secured by clips 45, having nuts (not shown) holding the clips in place. This platform furnishes a floor to those compartments or sections which are not provided with bottoms. It also, when provided with stakes, adapts the bed or lower frame-work to carry lumber.

In Figs. 9, 10, and 11, I represent my bed or lower frame-work, which consists of an upper and lower series of longitudinal tubes, 51 52, secured at their inner ends by suitable couplings, 53, and at their outer ends to sockets 54ª in metal draw-head frames 54. 55 are clamps by which the tubes are held in their proper positions. The clamps consist of plates having hook-formed ends and bolted together in pairs. Ties 56, passing through the clamps, are employed to brace the frame-work transversely, while truss-rods 57 brace it longitudinally. Over the trucks the frame-work is further braced by oblique crossed ties 58. 59 are the draw-heads, secured by rods 60, which extend to the rear of the frame-work from their respective draw-heads.

In Fig. 12, I show a modification in the construction of the lower frame-work. This consists of steel frame-work 61, resting in grooved stringers 62, bolted to end plates 63.

In Fig. 13, I show another form of bed constructed of wrought-iron, and in Figs. 14 and 15 frame-works formed of cast-iron.

In Fig. 16 is represented a series of compartments and improved truck.

Having thus described my invention, the following is what I claim as new therein, and desire to secure by Letters Patent:

1. A compartment or section consisting of sides 1 1, doors at the ends, centrally-hinged covers 2 2, and suitable means, 28, to adapt the compartment or section to be removed, as set forth.

2. A compartment or section consisting of sides 1 1, ends 4 4, covers 2 2, flat floor 7, having doors 11 11, pivoted supporting-bar 12, and strap 13, and means for shifting said bar, as set forth.

3. A compartment or section consisting of sides 1 1, end doors, 4 4, centrally-hinged covers 2 2, floor 7, having opening, trap-doors 11 11, and receptacle 10, having suitable cover, 10ª, as set forth.

4. A compartment or section consisting of sides 1 1, end doors adapted to form landings or platforms, skeleton inner doors, centrally-hinged covers 2 2, and floor 7, as set forth.

5. A platform consisting of a series of removable plates, 41, fixed end plates, 40, clamps 42, openings 43, receiving the clamps, stakes 44, and clips 45, as set forth.

6. A lower frame-work consisting of longitudinal tubes 51 52, paired clamps 55, brace-ties 56, transverse of the tubes and clamps, truss-rods 57, oblique cross-ties 58, couplings 53, and draw-head frames 54, having sockets 54ª, as set forth.

7. In combination with said lower frame-work, substantially as described, the draw-heads 59 59, secured by rods 60, extending to each end of the frame-work from their respective draw-heads, as set forth.

JOHN E. WHITE.

Witnesses:
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WALTER ALLEN.