

(No Model.)

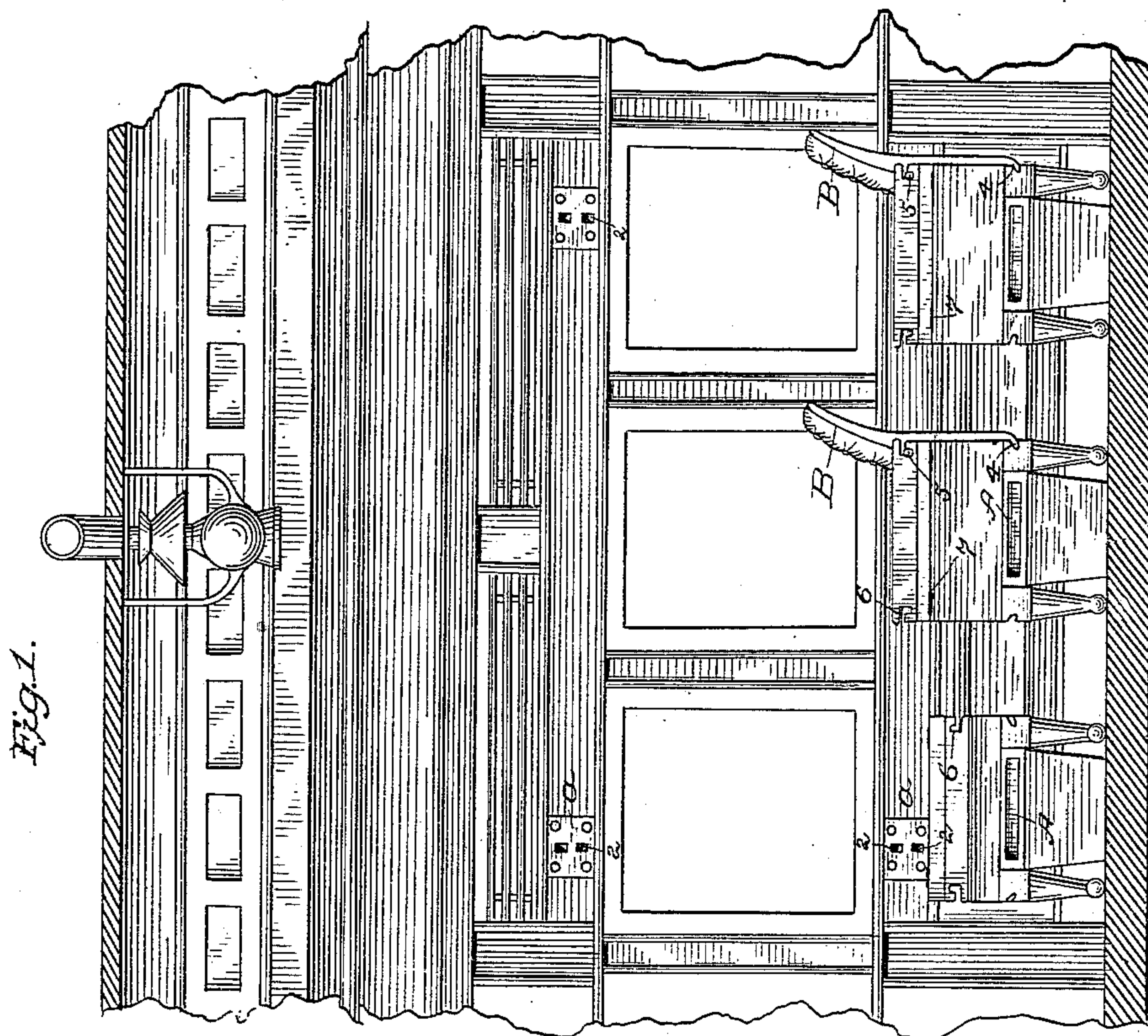
2 Sheets—Sheet 1.

M. B. CHURCH.

SLEEPING CAR.

No. 259,496.

Patented June 13, 1882.



Witnesses

*Walter D. Malorou*

WARREN SEELY.

Inventor

MELVIN B. CHURCH

by *Ellis Spear*

Atty

(No Model.)

2 Sheets—Sheet 2.

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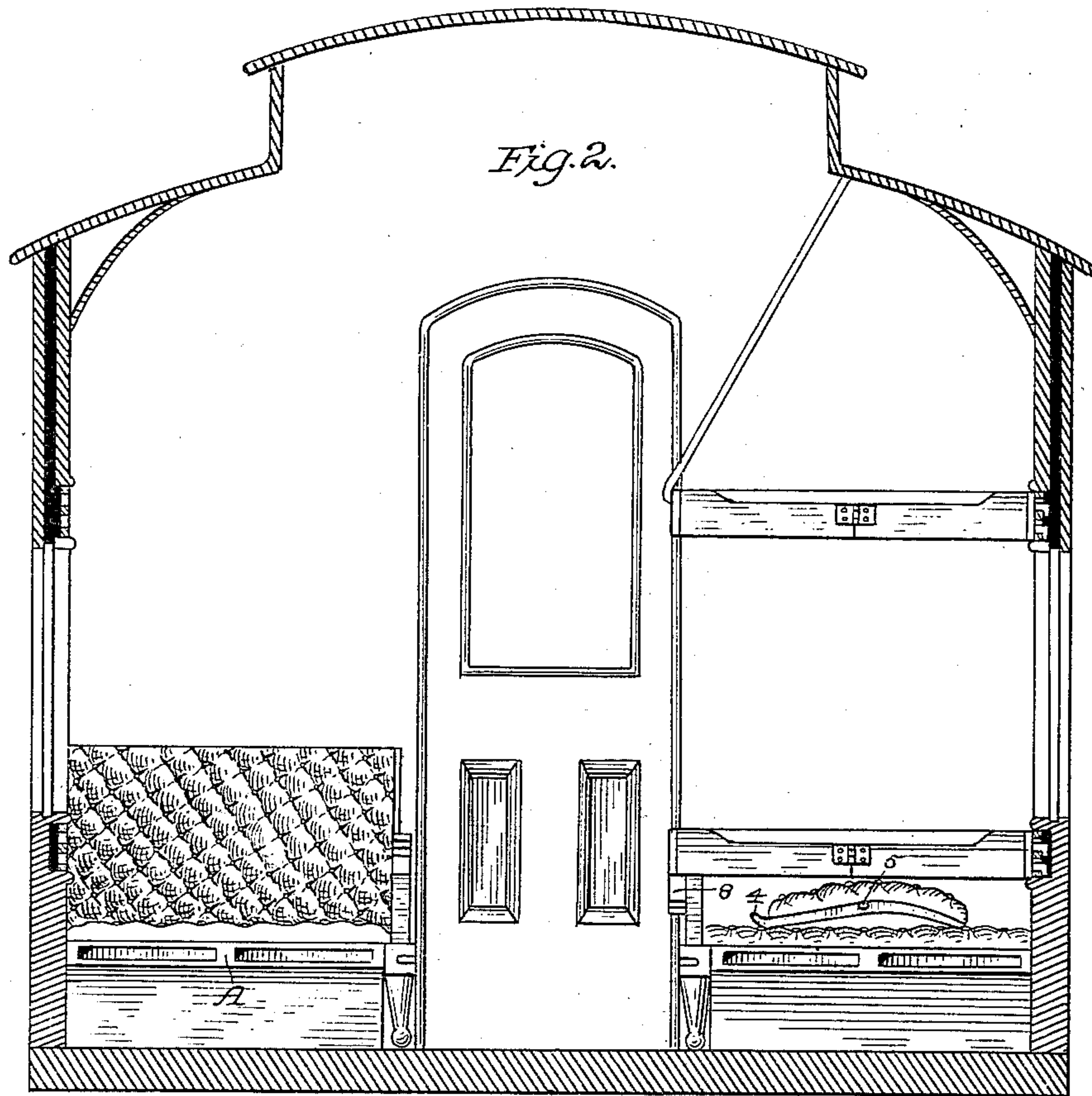


Fig. 3.

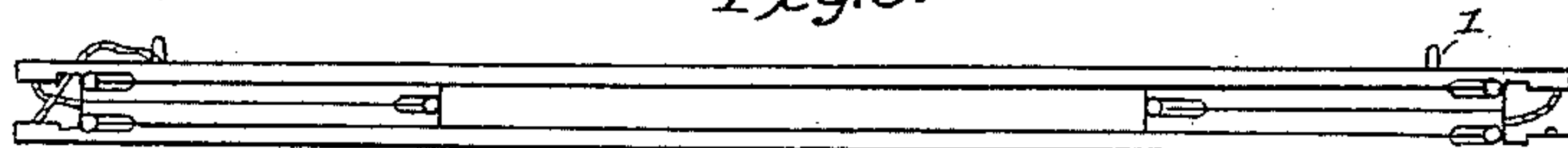
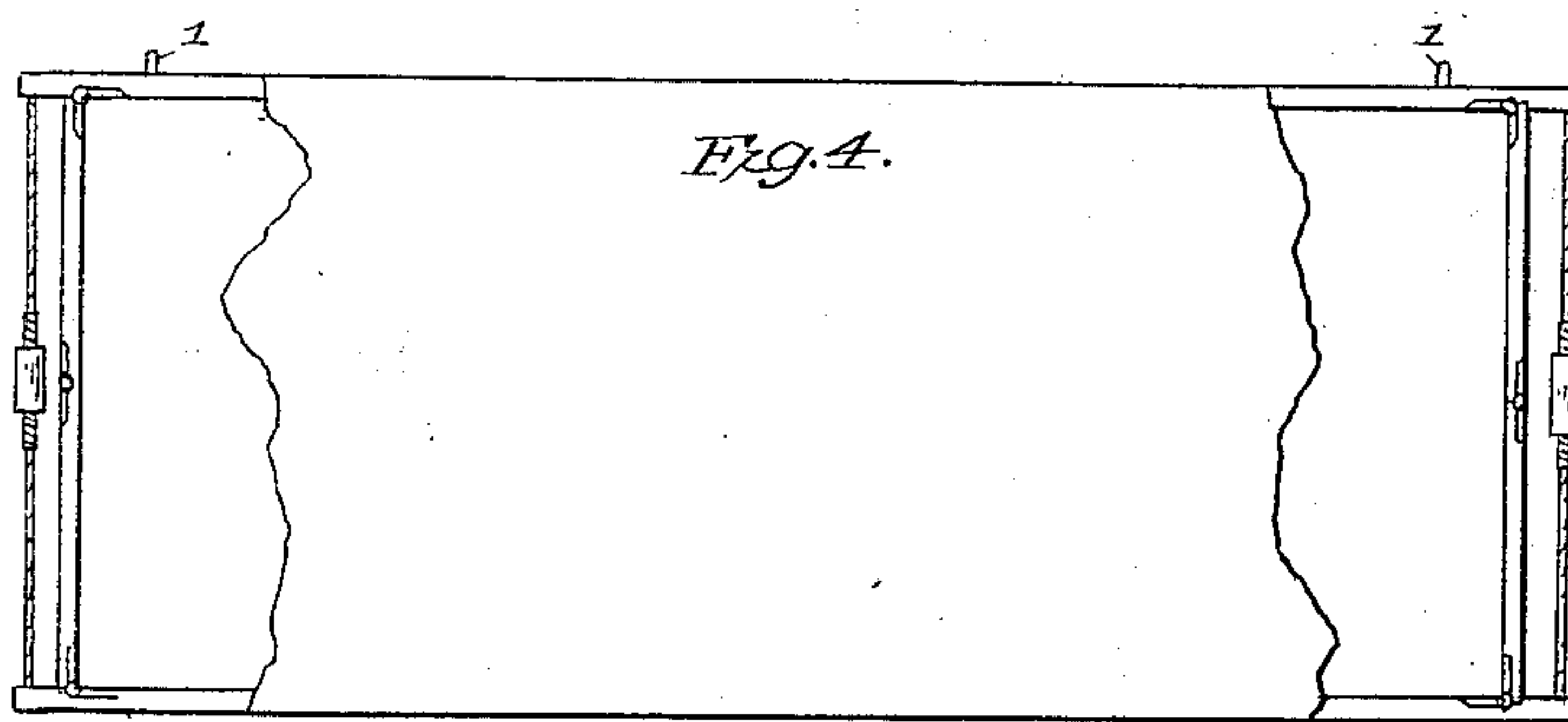


Fig. 4.



witnesses

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# UNITED STATES PATENT OFFICE.

MELVIN B. CHURCH, OF GRAND RAPIDS, MICHIGAN.

## SLEEPING-CAR.

SPECIFICATION forming part of Letters Patent No. 259,496, dated June 13, 1882.

Application filed March 3, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, MELVIN B. CHURCH, of Grand Rapids, in the county of Kent and State of Michigan, 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 is an improvement in sleeping-cars of that class in which, when the berths or beds are folded and the car is fitted for day use, the seats are like those of ordinary day-cars, and are adapted to hold two persons.

My invention is in cheapness and convenience in manipulation well adapted to form a very cheap passenger-car, convertible either to day or night use, and is also adapted to the most elaborate and expensive finish applied to any kind of cars.

The kind of berth which I use in connection with this car is adapted to fold or collapse side-wise upon or into the wall of the car, or may be detachable therefrom. The form of such a collapsible berth and the manner of providing a receptacle therefor in the wall of the car, as well as the means for supporting the upper berth, and other details, are shown in application filed by me in the United States Patent Office of even date herewith.

In the accompanying drawings, Figure 1 shows the inside of the wall of the car with the seats in side elevation. Fig. 2 shows a transverse section of the car, and Figs. 3 and 4 details of the berth.

For more particular description of the details of the berths and the receptacles therefor reference is made to the application aforesaid. In the drawings, however, the berths are shown as detachable from the walls, both for the upper and for the lower. These berths are shown in detail in Figs. 3 and 4. They are composed of side pieces, 10, preferably elastic, so that when a weight is placed upon the flexible covering attached to the upper edges of said side pieces the torsional flexibility of said side pieces shall give sufficient spring for the bed. These side pieces are extended and held apart by means of end pieces, 11, hinged to the sides and in the middle, so that they may collapse and be folded snugly together, but when extended the ends hold them apart securely. There are strained cords 12 to give greater se-

curity to the structure. These berths, when extended, are in the form shown in Fig. 4, and are substantially the same as the cot shown in applications filed by me in the United States Patent Office on the 6th day of October, 1881, and the 6th day of January, 1882. They are specially applicable in the form shown, as they are self-bracing, and need only vertical support, while folding in small space for storage.

The berths may be closed in the form shown in Fig. 3 for stowage in any convenient part of the car. One side of the berth is provided with stout lugs 11, a pair at each end or near each end, those of each pair being arranged one directly above the other. These lugs hook into openings 22 in a metallic plate, *a*, fixed to the side of the car, as shown in Fig. 1. By this construction the berth, whether upper or lower, may be securely hooked into the side of the car and held firmly in place, the hooks furnishing a secure support for that side of the bed next to the wall of the car. When the berths are extended they are held in that position, and the covering securely stretched by the end pieces described in my said applications. The outer edge of the upper berth I support by stout wire cables in the manner explained in my application of even date herewith. The lower berth, instead of being supported upon legs at the outer edge, as in my said application, is supported on the seats, as in the manner hereinafter explained.

The seats, according to my present invention, are of a form approximating that of the ordinary sleeping-car, or, more strictly, that of the ordinary day-car.

In the ordinary sleeping-car the necessity for providing for a lower berth has rendered it necessary to place the seats in pairs facing each other and in fixed position, thus making it sometimes necessary for passengers to sit facing each other, and not affording the desired privacy, and also requiring the passengers, or a certain number of them, to ride backward. I am able by my present invention to obviate this difficulty by providing detachable backs and by making the ends of the seats movable upon hinges, the object of the latter device being more especially to give room for a wider berth.

The construction of the seats is shown more



particularly in Figs. 1 and 2. In these the bottoms of the seats (marked A) are laid in the ordinary manner, with the customary upholstering and springs. The backs B may be of any  
 5 desired height and of any required shape. They are connected to the seat by means of dowels 4, set in the bottom of the back and entering holes in the edge of the seat-frame. These hold the bottom edge of the back in  
 10 place. The back is further supported by means of lugs 5, which enter slots 6 on one side in the wall of the car and on the other in the arm or end of the seat. These slots are made inclined, as shown in Fig. 1, so that the  
 15 back may be slipped into its place by downward movement, and cannot be displaced except by an upward movement against its own weight, so that when once adjusted there is no danger of displacement. It will be ob-  
 20 served that the slots and holes for the dowels 4 are the same upon both sides of the seat, and as the seat is provided upon both sides with the lugs 5 it may be transferred from one side of the seat to the other by simply reversing it,  
 25 leaving the same end uppermost, which enables me to provide a back of any height and to give to the back a suitable and comfortable form.

If only a narrow bed be required, the seat  
 30 may be prepared therefor simply by removing the backs, which, when removed, may be placed upon the seats or between them. When laid upon the seats, or partly upon and partly between the seats, the berth is set in its place  
 35 and extended out over the seat-backs, as shown on the right hand of Fig. 2.

In order to permit the berths to extend to a greater width, I hinge the end of the seat, as shown in Fig. 1 at 7, so that the end may be  
 40 partly turned down as at 8 in Fig. 2. This allows the berth to be extended any desired distance laterally. It is not absolutely necessary that the lower berth should be attached to the side of the car. It may be simply placed  
 45 upon its rest upon the seats, or may be placed upon or within the arms of the described seats or of the ordinary reversible seats. The hinged end piece is held in place by means of a simple offset on the lug 5 of the back.

50 I provide boxes underneath the seats to hold the bedding, as in the ordinary Pullman cars.

The divisions between the sections may be ordinary curtains, such as are now used, or such as I have described in my application

aforesaid of even date herewith. For cheaper 55 kind of cars ordinary curtains will be sufficient, and for a second-class sleeping-car curtains may be used or dispensed with at pleasure, persons traveling in such cars lying upon the  
 60 couches as they ordinarily sit upon the seats.

It will be understood that the upper berth is arranged above the windows and the lower directly below the same.

As the described kind of cot has a flexible support for the occupant, and is elastic, no 65 mattress is required, and ample room for storing all the required curtains and bedding is provided in the boxes underneath the seats.

Where the berths fold into the cavity no storage room is required therefor. Under any cir- 70 cumstances the upper berth may be left in its place by simply folding it sidewise and securing it to the side of the car, and may be extended and used, as for children or invalids, while the seats below are used by other persons; but 75 when the lower berths are made detachable I provide storage-room therefor by suitable closets in any convenient part of the car. The space required for all the lower berths (twelve in number) in the car would be only six feet 80 long by six inches wide and six feet high, which can be provided by utilizing the space over the ordinary closets in the car.

Having thus described my invention, what I claim is— 85

1. In a railway-car, fixed seats having removable backs and hinged ends, in combination with the described collapsible bed or cot, having flexible covering, and adapted to rest on said seats and to extend over or beyond 90 them, substantially as described.

2. In a railway-car, and in combination, fixed seats having removable backs, a lower berth consisting of the collapsible frame, having flexible covering, adapted to rest on said 95 seats, and an upper berth composed of the collapsible frame and flexible covering, with lugs and holes for connection with the car and cords to support the outer edge, substantially as described. 100

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

MELVIN B. CHURCH.

Witnesses:

F. L. MIDDLETON,  
 WALTER DONALDSON.