

(No Model.)

3 Sheets—Sheet 1.

C. J. SEYMOUR.
RAILWAY CAR.

No. 484,119.

Patented Oct. 11, 1892.

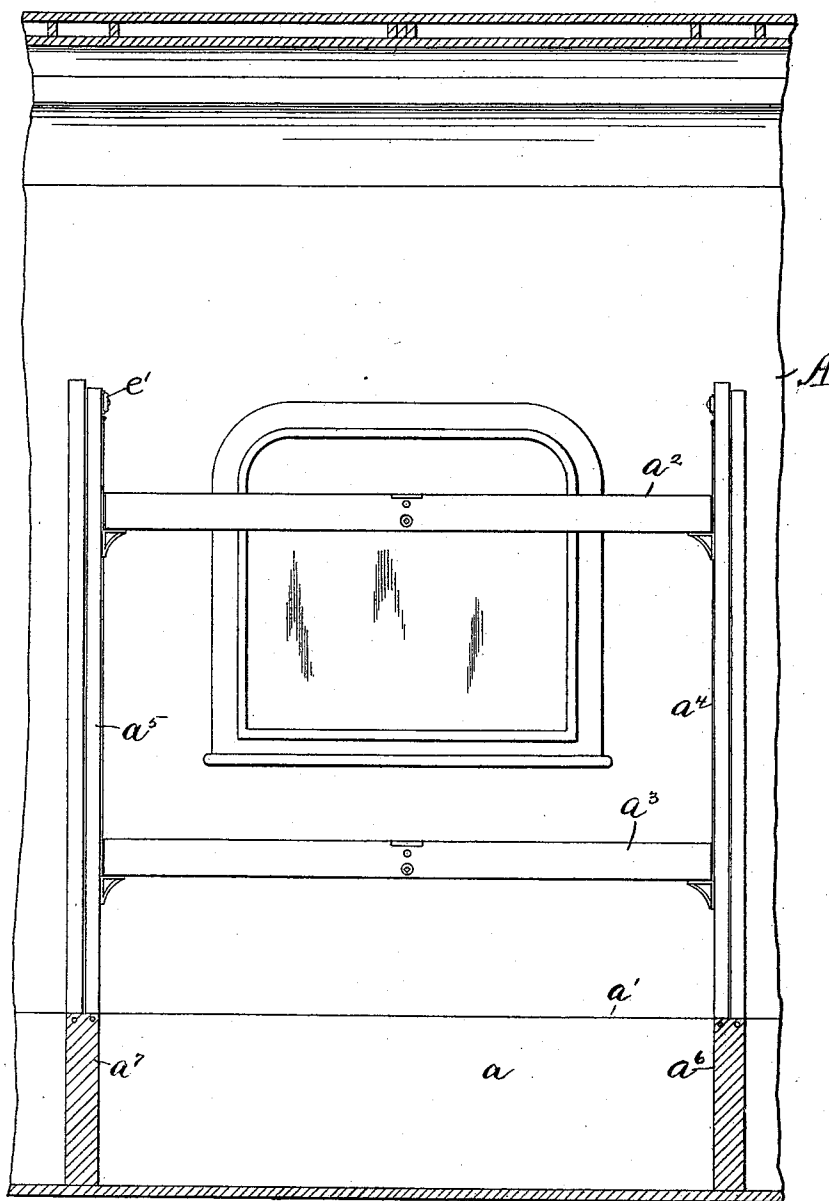


Fig. 1.

WITNESSES

Charles E. Moss,
S. C. Feaving.

INVENTOR.

Charles J. Seymour
By Jas. H. Churchill
Att'y.

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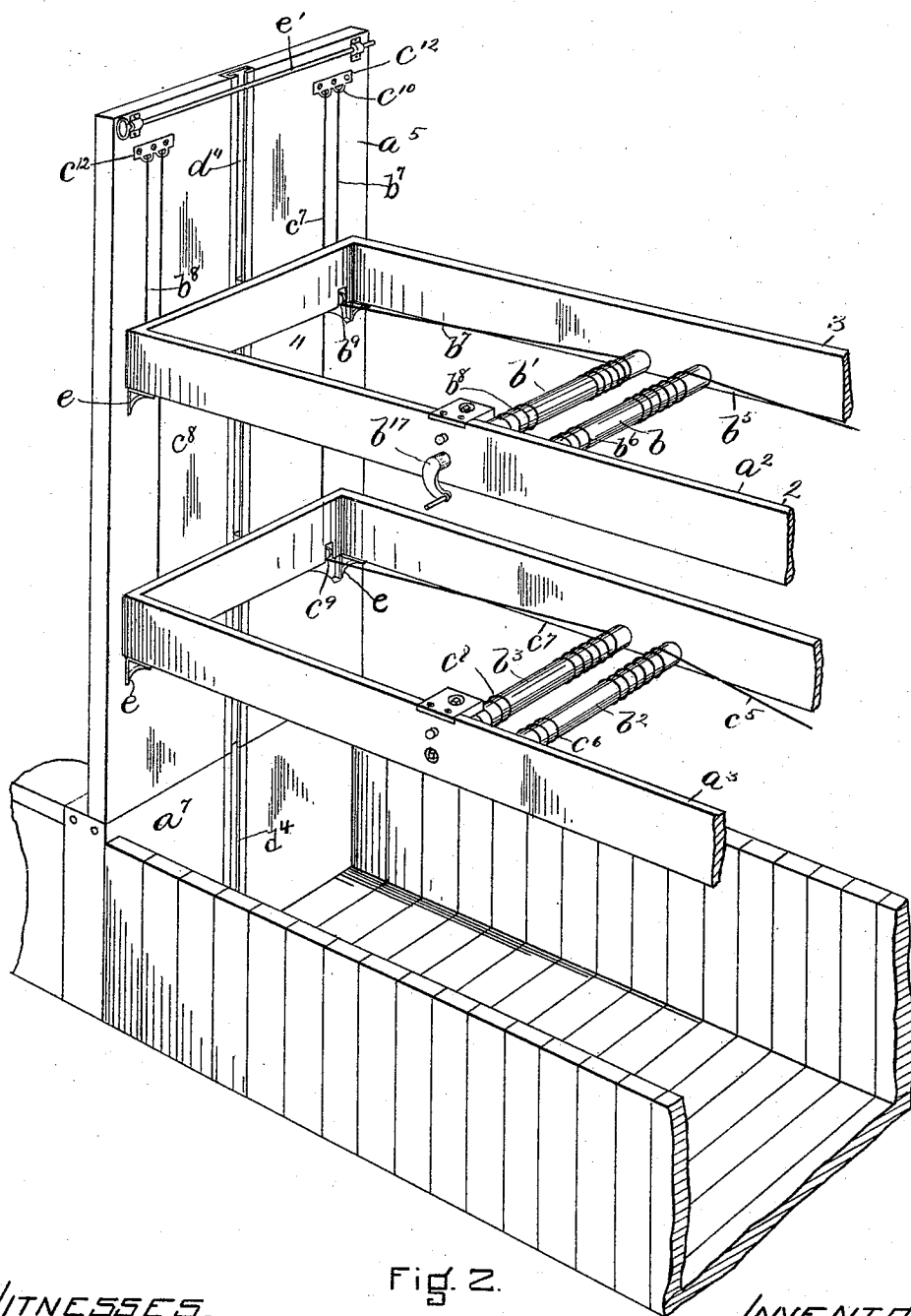


Fig. 2.

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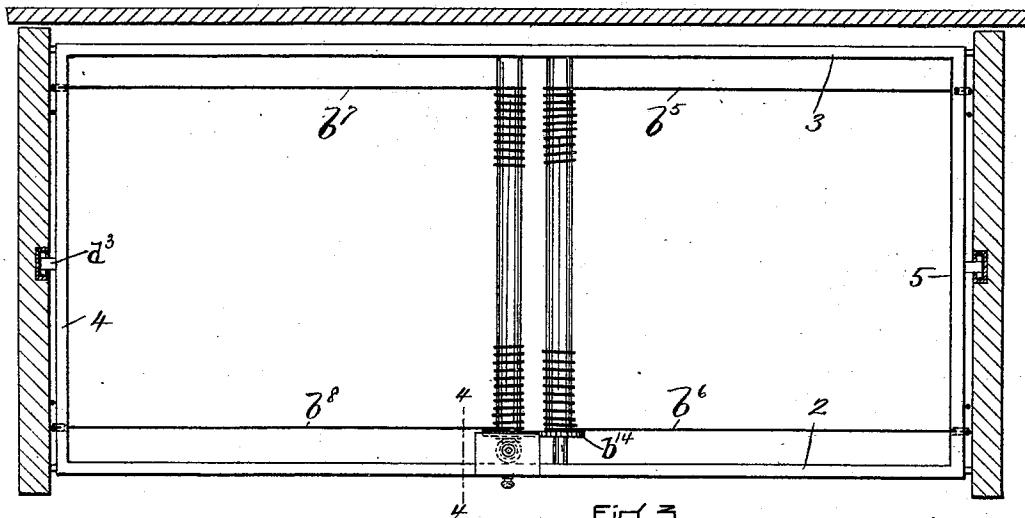


Fig. 3.

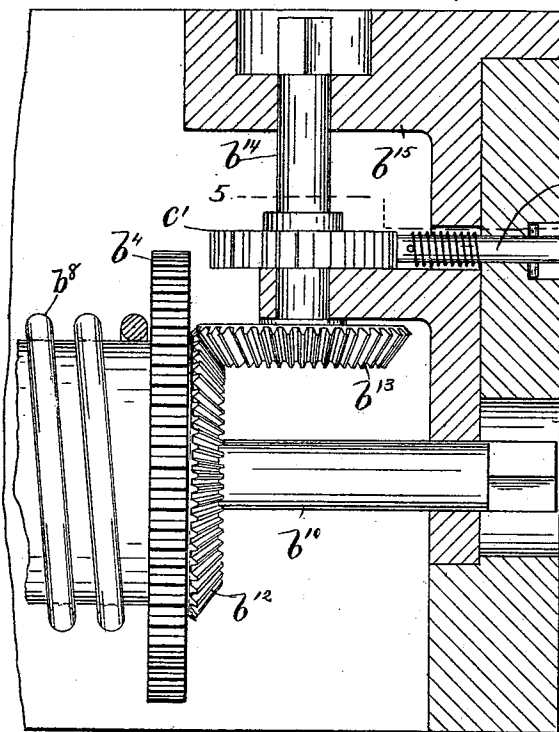


Fig. 4.

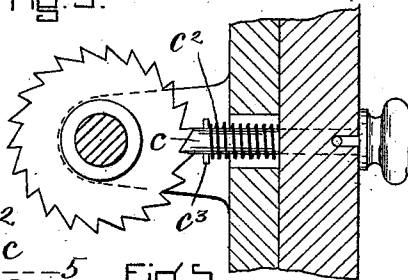


Fig. 5.

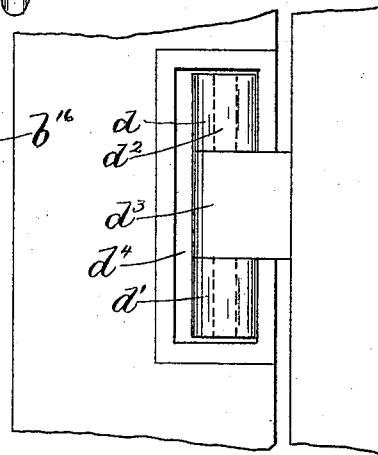


Fig. 6.

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S. C. Fearing.

UNITED STATES PATENT OFFICE.

CHARLES J. SEYMOUR, OF BROOKLINE, MASSACHUSETTS.

RAILWAY-CAR.

SPECIFICATION forming part of Letters Patent No. 484,119, dated October 11, 1892.

Application filed January 6, 1892. Serial No. 417,165. (No model.)

To all whom it may concern:

Be it known that I, CHARLES J. SEYMOUR, residing in Brookline, county of Norfolk, and State of Massachusetts, have invented an Improvement in Railway-Cars, of which the following description, in connection with the accompanying drawings, is a specification, like letters and figures on the drawings representing like parts.

This invention relates to passenger cars or coaches of that class in which the car-body is provided with a series of pockets or wells below the car-floor and in which an upper and lower berth are stored while the car is being used as a parlor or chair car and in which the chairs are stored when the berths are raised and the car is to be used as a sleeping-car.

My present invention relates more particularly to the mechanism employed to raise and lower the berths from the pockets or wells, and has for its object to provide a simple and efficient mechanism for this purpose and one which may easily and quickly be handled.

The particular features of my invention will be pointed out in the claims at the end of this specification.

Figure 1 is a section and side elevation of a sufficient portion of a passenger car or coach embodying my invention to enable it to be understood, the berths being shown in their elevated position; Fig. 2, a detail in perspective and on an enlarged scale to more clearly show my invention; Fig. 3, a top or plan view of the berths shown in Fig. 1 with the car-body in section; Fig. 4, a sectional detail, on an enlarged scale, to be referred to, the section being taken on the line 4 4 of Fig. 3; Fig. 5, a sectional detail to be referred to on line 5 5 of Fig. 4, and Fig. 6 a detail to be referred to.

The car-body A, provided with a series of pockets or wells a on opposite sides of the longitudinal center of the car-body and located below the floor-line a' of the car and between the trucks supporting the car-body, may be of any usual or well-known construction, such as now commonly found in passenger cars or coaches of the class upon which my invention is an improvement. Each pocket or well a , which is preferably made of sufficient depth to receive within it an upper berth or bed-supporting frame a^2 and a lower berth or bed-

supporting frame a^3 , is normally closed by covers a^4 a^5 , hinged or otherwise pivotally secured to the end walls a^6 a^7 of the pockets, the said covers being made of sufficient length to fit in and close the pocket or well when lowered down, one of the said covers forming a section of the car-floor when in its lowered position. The berths a^2 a^3 , composed of side bars 2 3 and end bars 4 5, may be raised from and lowered into the well a by mechanism, as will be described. The side bars 2 3 of the berth a^2 have mounted in them, preferably, two drums or rollers b b' and the side bars 2 3 of the berth a^3 have mounted in them like drums or rollers b^2 b^3 , the drums or rollers b b' being provided with gears b^4 , which mesh with each other, and the drums b^2 b^3 of the berth a^3 being provided with like gears in mesh with each other.

The berths a^2 a^3 are sustained in their elevated position by flexible supports—such as wire ropes, cords, chains, &c.—herein shown as four in number for each berth, the cords b^5 b^6 b^7 b^8 , connected to the berth a^2 , having one end secured to the rollers b b' and their other end extended toward the opposite ends of the berth and preferably passed under suitable pulleys b^9 in the cross-bars 4 5, and only one of which is shown in Fig. 2, the said ropes being secured at their freed end, preferably, to the covers a^4 a^5 , the cords or chains b^5 b^6 being secured to the cover a^4 and the cords or chains b^7 b^8 secured to the cover a^5 .

One of the drums or rollers of each berth—as, for instance, the drum or roller b' —has mounted upon its shaft b^{10} a bevel-gear b^{12} , (see Fig. 4,) meshing with the bevel-gear or pinion b^{13} on a vertical shaft b^{14} , preferably extended up through a suitable casting or bracket b^{15} , secured to the side bar 2 of the berth. The shaft b^{10} of the roller b' is extended, as shown, through the lower portion of the casting b^{15} and into a hole or opening in the side bar 2, and has its end made square or other than round in shape to receive a suitable key or crank b^{17} , (see Fig. 2,) by which the shaft b^{10} may be turned to wind the flexible cords or supports upon the drums or rollers b b' when it is desired to raise the berth or to unwind the same when it is desired to lower the berth. The shaft b^{14} is also made square or other than round at its upper

end to receive the same or a like crank or key b^{17} , whereby rotation may be imparted to the drums or rollers $b\ b'$ when the berths are in their lowered position within the pockets, and by which the berths may be raised a sufficient distance to uncover the opening b^{16} in the side bars 2 to permit the key or crank b^{17} to be fitted upon the shaft b^{10} .

The rollers $b\ b'$ are prevented from rotating backward when the berths are elevated by a clutch or locking device, shown as a pawl or rod c , the said pawl or rod engaging a ratchet-wheel c' on the shaft b^{14} , the said pawl or rod c being shown in Figs. 4 and 5 as normally pressed into engagement with the teeth of the ratchet-wheel c' by the spiral spring c^2 , which encircles it, and one end of which bears against the side bar 2 of the berth and the other end of which bears against the pin or collar c^3 on the said rod.

The rollers or drums $b^2\ b^3$ of the lower berth a^3 have wound upon them like flexible supports or cords $c^5\ c^6\ c^7\ c^8$, which extend toward the opposite ends of the berth and are passed under suitable pulleys c^9 and have their ends fastened to the covers $a^4\ a^5$. The flexible supports for the berths $a^2\ a^3$ may, and preferably will be, permanently secured to the covers $a^4\ a^5$, they being herein represented as fastened to eyes c^{10} on plates c^{12} , screwed or otherwise fastened to the covers $a^4\ a^5$; but I do not desire to limit myself in this respect, as it is evident the flexible supports or cords may be detachably secured to the covers $a^4\ a^5$, or they may be detachably secured to a cross-bar extended from the side of the car-body.

The berths $a^2\ a^3$ are controlled in their movements by means of a guide represented in Fig. 6 as friction-rollers $d\ d'$, loosely mounted on a shaft d^2 , extended through a lug d^3 , secured to the outside of the cross-bars 4 5, the said lug being located substantially near the center of the cross-bars and projecting into a T-shaped slot or guideway d^4 , extended centrally through the length of the covers $a^4\ a^5$ and centrally through the end walls $a^6\ a^7$ of the pockets or wells a .

The T-shaped slot forms a guide for the berths and prevents side motion of the same. When the berths are raised into the position shown in Figs. 1 and 2, they are supported by means of the flexible cords or chains, and, if desired, auxiliary supports for the said berths may be provided, the said auxiliary supports being herein represented as brackets e , pivoted to the covers $a^4\ a^5$ and adapted to be swung under the berths $a^2\ a^3$, as clearly shown in said figures. The covers $a^4\ a^5$, when raised into their elevated position represented in Figs. 1 and 2, form partitions between adjacent berth-sections, and the said covers may be locked in their upright position by means of a rod e' , secured to the said covers and adapted to enter a suitable socket or hole in the side of the car-body.

I have herein shown the flexible supports for each berth as two independent sets of

ropes or cords wound upon two drums or rollers, and while I may prefer this construction I do not desire to limit myself in this respect, as the flexible supports for each berth may be connected to diametrically-opposite sides of a single roller or winding-drum.

I claim—

1. In a railway passenger-car, the combination, with the car-body provided with pockets or wells beneath the floor of the car and with covers for said pockets, forming sections of the car-floor, of one or more berths or bed-supporting frames normally concealed in said pockets, a drum or roller supported by the berth or bed-supporting frame, and flexible supports for said berth or bed-supporting frame, adapted to be wound upon the said drum or roller to raise the said berth from the pocket and to be unwound from the said drum to lower the said berth into the pocket, substantially as described.

2. In a railway passenger-car, the combination, with the car-body provided with pockets or wells below the floor of the car and with covers for said pockets, forming sections of the car-floor, of one or more berths or bed-supporting frames normally concealed in said pockets, a drum or roller supported by the berth or bed-supporting frame, and flexible supports having one end secured to the said drum or roller and adapted to be wound thereon and having its other end extended in the direction of the length of the berth and under the same and secured to a rigid support, substantially as described.

3. In a railway passenger-car, the combination, with the car-body provided with pockets or wells below the floor of the car and with covers for said pockets, forming sections of the car-floor and provided with a guideway, of one or more berths or bed-supporting frames normally concealed in said pockets, a drum or roller supported by the berth or bed-supporting frame, and flexible supports having one end secured to the said drum or roller and adapted to be wound thereon and having its other end extended in the direction of the length of the berth and under the same and secured to a rigid support, and a guide on the said berth or bed-supporting frame to enter the said guideway and provided with a friction-roller, substantially as described.

4. In a railway passenger-car, the combination, with the car-body provided with pockets or wells beneath the floor of the car and with covers for said pockets, forming sections of the car-floor, of one or more berths or bed-supporting frames normally concealed in said pockets, a drum or roller supported by the berth or bed-supporting frame, and flexible supports for said berth or bed-supporting frame, secured to the drum or roller and to the said floor-sections, substantially as described.

5. In a railway passenger-car, the combination, with the car-body provided with pockets or wells beneath the floor of the car and with

covers for said pockets, forming sections of the car-floor, of one or more berths or bed-supporting frames normally concealed in said pockets, a drum or roller supported by the
5 berth or bed-supporting frame, and flexible supports for said berth or bed-supporting frame, adapted to be wound upon the said drum or roller to raise the said berth from the pocket and to be unwound from the said
10 drum to lower the said berth into the pocket, and a locking device for said drum or roller, substantially as described.

6. In a railway passenger-car, the combination, with the car-body provided with pockets
15 or wells beneath the floor of the car and with covers $a^4 a^5$ for said pockets or wells, forming sections of the car-floor, of one or more berths or bed-supporting frames normally concealed in said pockets and consisting of side bars 2

3 and end bars 4 5, drums or rollers $b b'$, supported by the side bars 2 3, gears b^4 on said rollers in mesh with each other, a beveled gear b^{12} , secured to one of said rollers, a bevel-gear b^{13} in mesh with the bevel-gear b^{12} , a substantially-vertical shaft b^{14} , on which the bevel-
25 gear b^{13} is mounted, a locking device for the said shafts, and flexible supports secured to the drums or rollers and extended under the cross-bars 4 5 and attached to the covers $a^4 a^5$, substantially as described.

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

CHARLES J. SEYMOUR.

Witnesses:

JAS. H. CHURCHILL,
SADIE C. FEARING.