

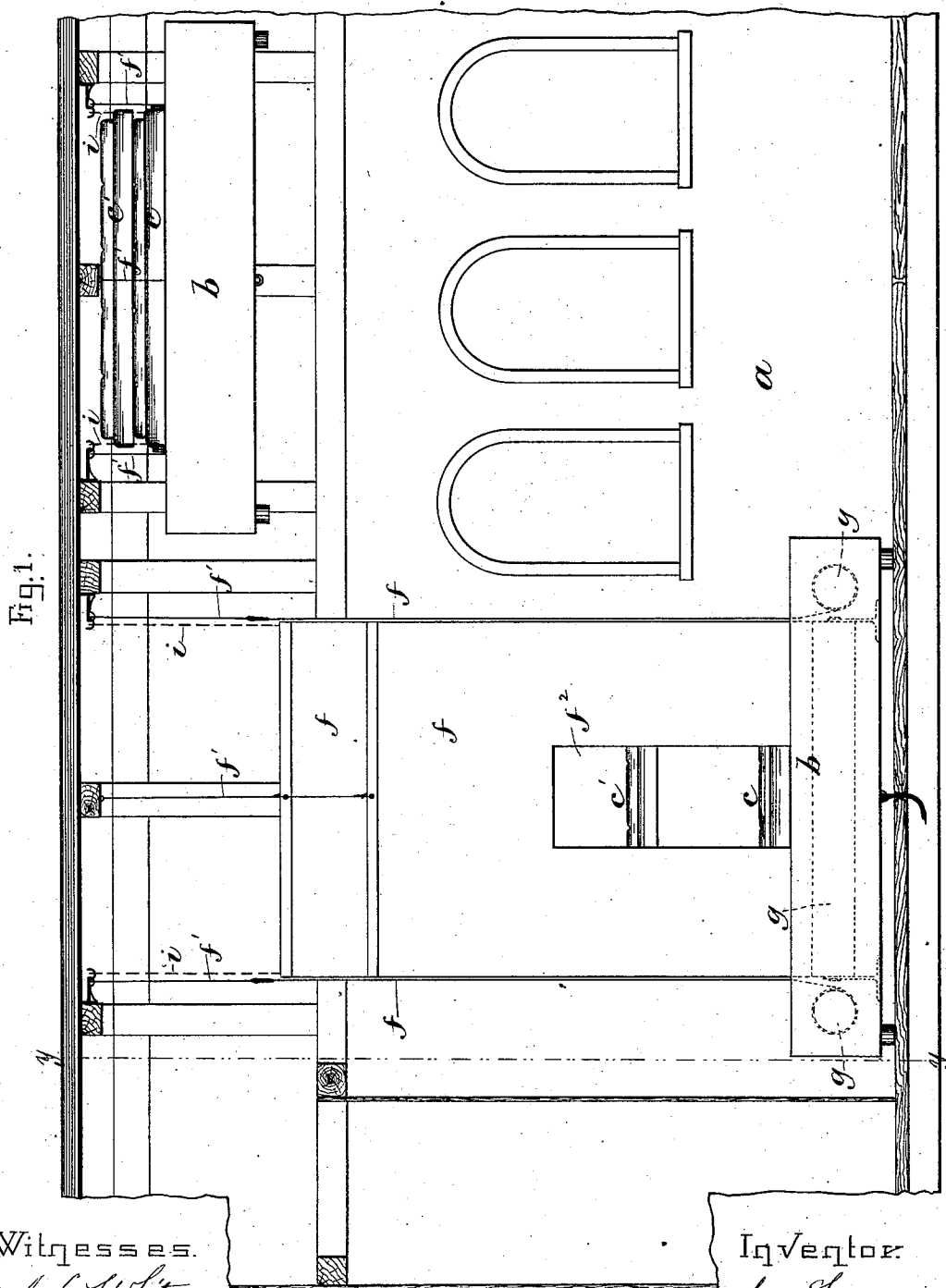
(No Model.)

4 Sheets—Sheet 1.

J. SHOREY.
SLEEPING CAR.

No. 292,595.

Patented Jan. 29, 1884.



Witnesses.

A. L. White
W Rogers

Inventory

John Shorey
by Night & Broom
Atty.

(No Model.)

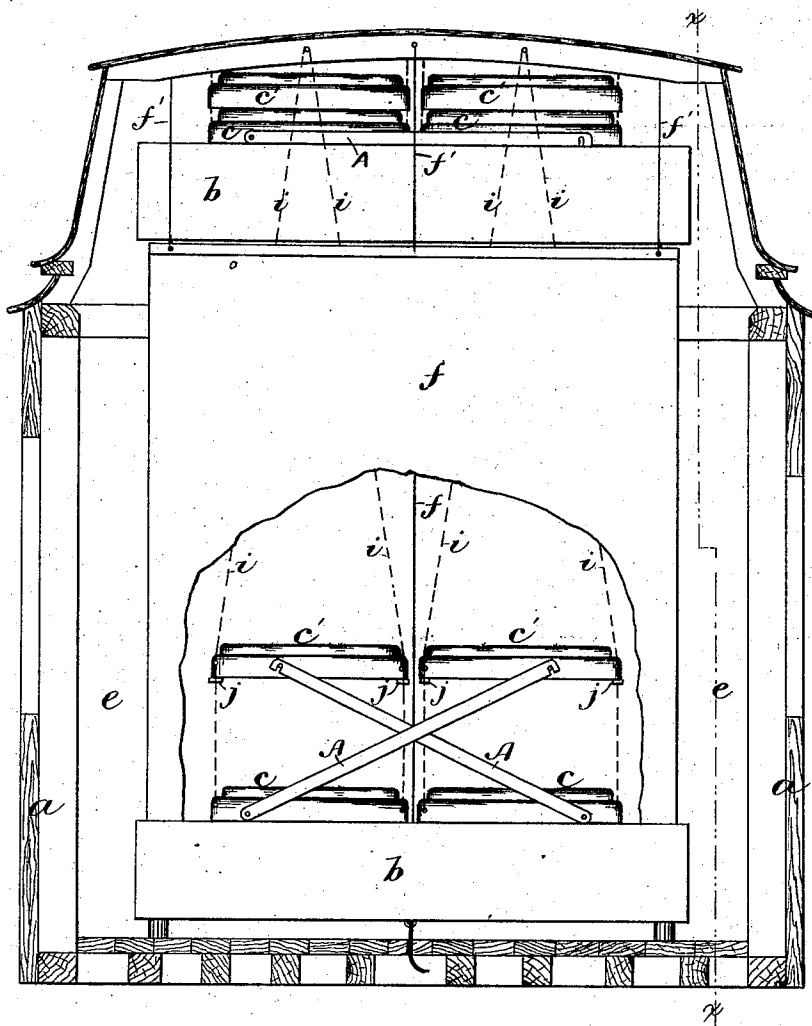
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Fig. 2.



Witnesses.

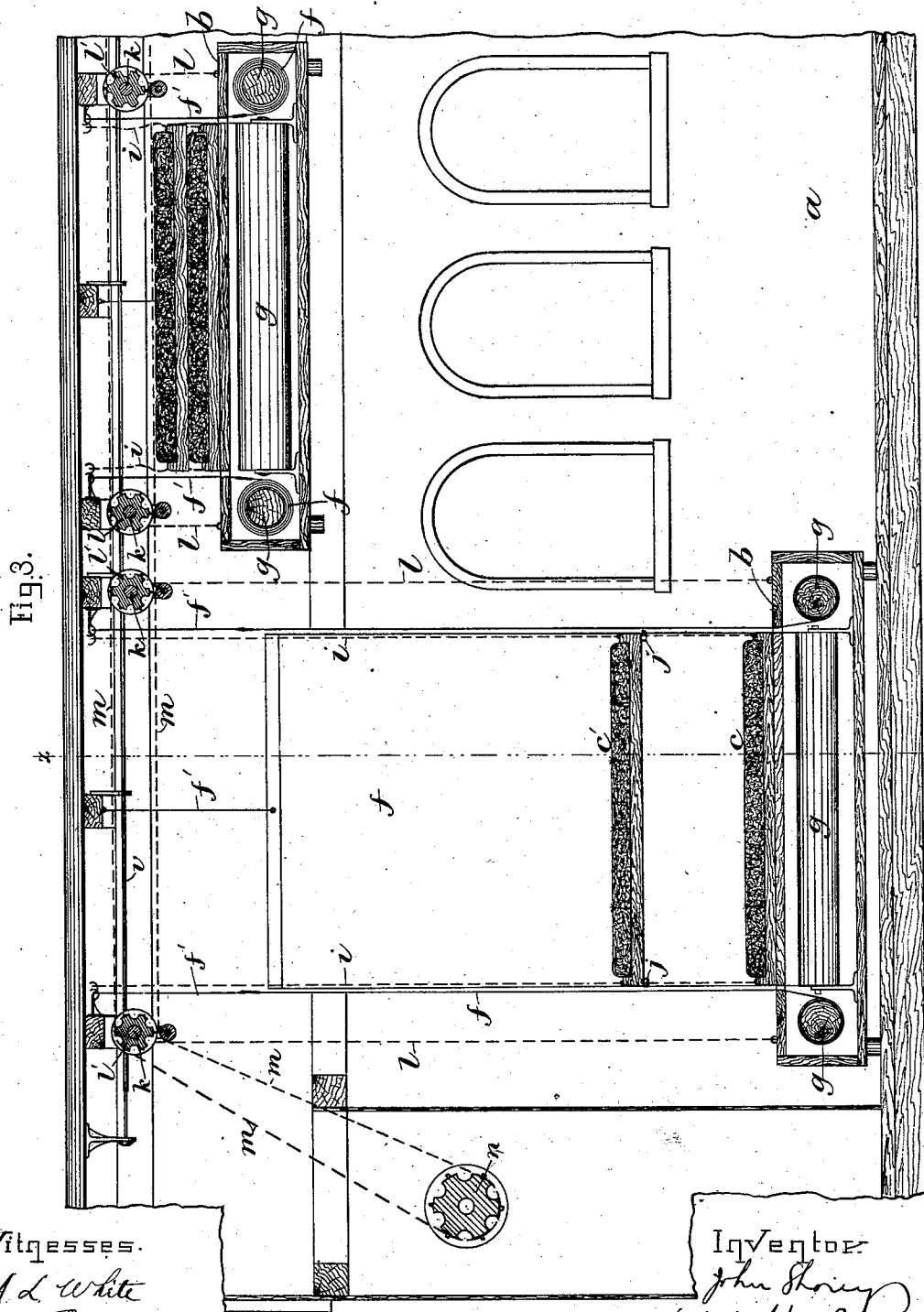
A. L. White
W. Rogers

Inventor.

John Shorey
by Wright & Brown
Attys.

4 Sheets—Sheet 3.

Patented Jan. 29, 1884.



A. L. White
W. Rogers

John Shroy
by Night & Borne
Atty.

(No Model.)

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Fig. 4.

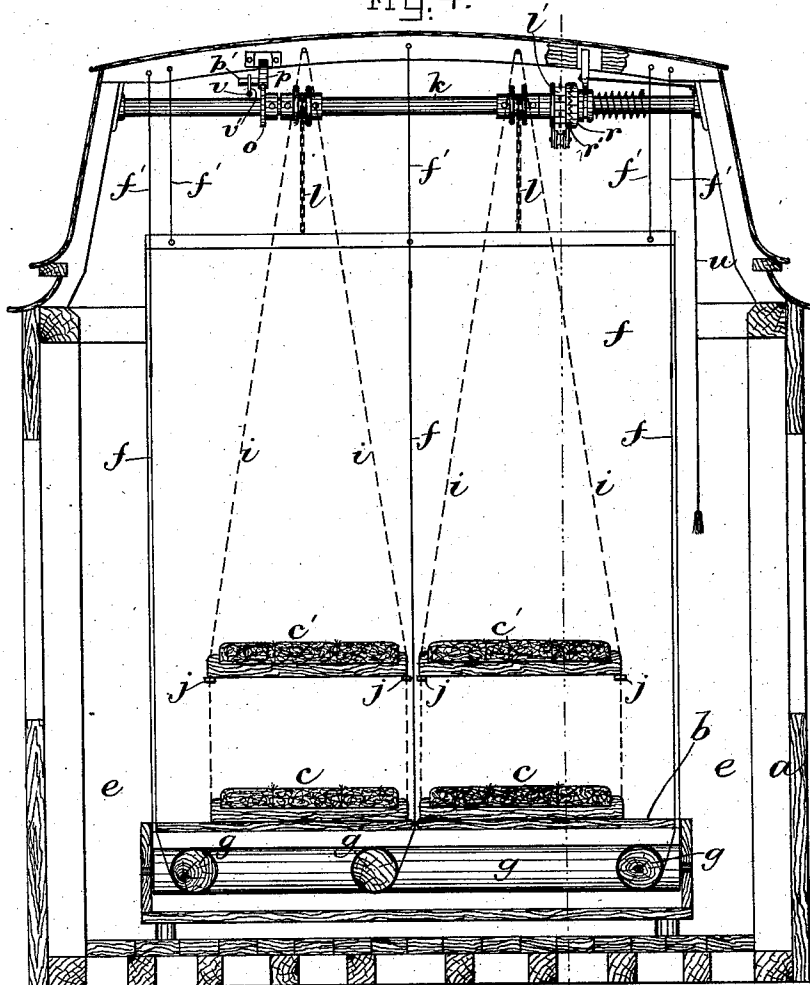
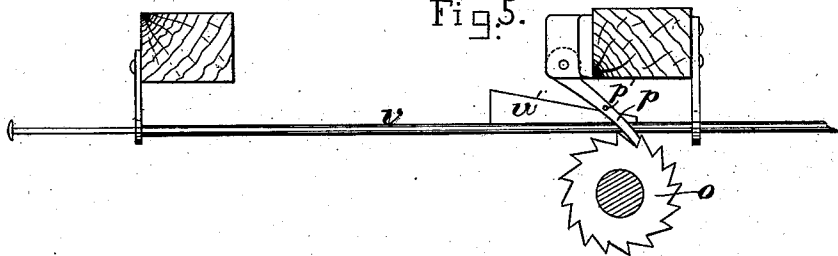


Fig. 5.



Witnesses.

A. L. White.
W. Rogers

Inventor.

John Shorey
by Wright & Brown
Attys.

UNITED STATES PATENT OFFICE.

JOHN SHOREY, OF LOWELL, ASSIGNOR OF TWO-THIRDS TO PHINEAS E. MERRIHEW, OF FAIRHAVEN, MASSACHUSETTS.

SLEEPING-CAR.

SPECIFICATION forming part of Letters Patent No. 292,595, dated January 29, 1884.

Application filed May 17, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN SHOREY, of Lowell, in the county of Middlesex and State of Massachusetts, have invented certain Improvements in Sleeping and Parlor Cars, of which the following is a specification.

This invention has for its object to provide a car adapted for use either as a sleeping or as a parlor car, the beds or couches for sleeping purposes being suspended from the top of the car, and capable of being lowered for sleeping purposes, and raised, so as to leave the entire floor-area of the car and a sufficiently high space above the same unobstructed for ordinary use.

The invention consists in certain details of construction and combination of parts, all of which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a longitudinal vertical section of a portion of a passenger-car, taken on the plane of line *x x*, Fig. 2. Fig. 2 represents a transverse vertical section of the car on the plane of line *y y*, Fig. 1. Fig. 3 represents a longitudinal vertical section of a portion of a car, showing the berths in section, and certain berth-operating mechanism differing from that shown in Figs. 1 and 2. Fig. 4 represents a section on line *z z*, Fig. 3. Fig. 5 represents a detail view.

In the drawings, *a* represents a railway passenger-car of the ordinary or any suitable construction, but having no furniture attached to its floor, the latter being substantially unobstructed by any fixed objects. From the roof or top of the car I suspend by suitable flexible supports, hereinafter more fully described, a series of horizontal platforms, *b*, each being of sufficient size to support two berths or beds, *c c*, and leave passage-ways *e e*, of suitable width to enable persons to pass between its sides and the sides of the car.

The said flexible supports are, in the construction shown in Figs. 1 and 2, flexible curtains or partitions *f*, attached to rollers *g*, journaled in bearings on the platforms *b*, and connected at their outer ends by cords, chains, or other flexible devices, *f'*, with hooks or supports at-

tached to the top of the car. The rollers *g* are provided with springs operating on the principle of ordinary curtain-roller springs, and of sufficient power to wind up the flexible curtains or partitions, and thus raise the platforms from the bottom to the top of the car, and hold said partitions in the last-described position, as shown at the right-hand end of Fig. 1. Each platform *b* has four of said curtains or partitions, one at each of its four sides, and a fifth curtain located between the berths *c c*. Said curtains, therefore, when the platform *b* is lowered, form walls around the berths and separate each berth from the other. The under surface of the platform *b* is finished in any suitable ornamental manner, so that when raised to the top of the car it will constitute an ornamental substitute for the usual ceiling. *c' c'* represent upper berths, each supported by four cords or chains, *i*, passing through the four corners of said berths, and attached, respectively, to the platform *b* and to hooks or supports at the top of the car. The berths *c' c'* are adapted to slide on the cords *i*, and when lowered in position for use rest on collars *j j* or other suitable stops affixed to said cords *i* at a suitable height above the lower berths, *c c*. When the platform *b* is raised, the lower berths, in rising, come in contact with the upper berths, and raise the latter, all the berths rising together to the top of the car.

From the foregoing it will be seen that when the car is to be adapted for sleeping purposes the platforms *b* are drawn downwardly to the floor of the car, thereby lowering all the berths and unwinding the curtains *f*, so that when the berths are in position for use each berth is inclosed on four sides, and a desirable degree of privacy is insured to the occupant. The upper berths, *c'*, are lowered with the platform *b* and lower berths until the suspending cords or chains *i* are straightened out from the top of the car to the collars or stops *j j*, said upper berths being then arrested, while the lower berths descend to a lower level. It will be seen that the compartments formed by the curtains *f* serve both for the lower and the upper berths. The curtains *f* at the outer sides of the berth have openings *f'*, (see Fig. 1.)

for ingress and egress of the occupants, and said openings are provided with suitable curtains adapted to slide on horizontal rods attached to the curtains *f*. Suitable fastening devices should be employed to connect the curtains *f* together at their vertical edges, to prevent them from being separated at the corners of the compartments formed by said curtains. The platforms *b*, when lowered, are made fast to the floor or other fixed portion of the car by any suitable means, to prevent the spring-rollers *g* from raising the platforms. When the berths are to be removed and the car adapted for day use, the platforms *b* are released, and are immediately lifted, with the berths *c* and *c'*, to the top of the car by the action of the spring-rollers *g* in rolling up the curtains *f*. The main portion of the car is thus left unobstructed, the platforms *b* being raised to the higher central portion or "monitor-top" of the car high enough to be beyond the reach of the head of the tallest passenger. The car may then be provided with portable chairs or seats for day use.

The curtains *f* may be made of any suitably strong and flexible material, such as stout canvas.

I have not shown the springs which operate the rollers *g*, as the same may be of any well-known construction—for example, like those applied to curtain-rollers—but of strength proportioned to the weight they are required to lift. Instead of raising the platforms *b* by the power of the spring-rollers *g*, I may provide other means, as shown in Figs. 3 and 4—viz., a series of transverse arbors, *k k*, two for each platform, journaled in bearings at the top of the car, four chains or cords, *ll*, for each platform, secured to drums on said arbors and to the platform *b*, and mechanism whereby an attendant can rotate said arbors, and thereby raise and lower one platform or the entire series of platforms. Said mechanism consists in a series of sprocket-wheels, *l'*—one on each arbor *k*—an endless sprocket-chain, *m*, engaging the said wheels and passing around a wheel, *n*, located where it can be conveniently reached by the operator, and provided with a suitable operating-crank, whereby the operator can rotate the wheel *n*, and thus impel the chain, rotate all the arbors *k*, and raise or lower all the platforms *b*. The arbors *k* are provided with ratchets *o*, which are engaged by pawls *p*, pivoted to the body of the car, and holding said ratchets from rotating backwardly.

In case it is not desirable to operate all the platforms *b*, the sprocket-wheels *l'* on the arbors *k*, pertaining to the platform or platforms which are to remain motionless, are disengaged from operative connection with the said arbors by the withdrawal from each of said wheels of the sliding member *r* of a clutch, whereof the other member, *r'*, is on the sprocket-wheel *l'*. (See Fig. 4.) The sliding member *r* is connected to the arbor by a feather,

so that it rotates with the arbor, but is free to slide lengthwise thereof. The sprocket-wheel is adapted to rotate loosely on the arbor. The withdrawal of the sliding member *r* is effected by a cord, *u*, which extends from said member to a point within reach of the operator.

The ratchets *o* and pawls *p* retain the platforms *b* at any height to which they may be raised. When said platforms are to be lowered, a horizontal rod, *v*, having a series of inclines, *v'*, one for each pawl *p*, is moved to bring said inclines against pins *p'*, projecting laterally from the pawls *p*, and thus raise said pawls and release the ratchets and arbors, so that the platforms *b* can be lowered. When the last-described means for operating the platforms are employed in lieu of the springs of the rollers *g*, the curtains *f* will be secured to the top of the car, as in the arrangement first described, and the rollers *g* will be provided with springs of sufficient strength only to wind the curtains upon the rolls *g*.

I do not limit myself to either of the described means for operating the berth-platforms, but consider that a vertically-movable suspended platform or platforms supporting berths and provided with any suitable means for vertical adjustment will be no departure from the spirit of my invention. It is obvious that a similar arrangement of berths may be applied to an apartment in a ship or steamer or in a fixed building. If it is desired to use a lower berth only, the upper berth may be raised on its cords *i i* and secured at any desired height by any suitable means. The upper berths, *c'*, are steadied, when in position for use, by braces *A A*, pivoted to the platform *b*, and detachably connected to the ends of the berths *c'*, said braces extending diagonally in opposite directions, as shown in Fig. 2.

I claim—

1. The combination, with the berth-supporting platform *b*, of the curtains *f*, secured to spring-rollers journaled in bearings attached to said platform, and secured to the top of the car, one curtain of each berth being provided with an opening, *f'*, as set forth.

2. The combination of the suspended platform *b*, having berths *c c'*, the upper berths, *c'*, supported by flexible devices *i* over the berths *c*, and braces or steadying devices for detachably connecting said upper berths to said platform, as set forth.

3. In a car, the vertically-movable berth-supporting platform having rollers secured therein, in combination with curtains secured to said rolls and to the top of the car, and adapted to wind upon the rollers, said curtains forming partitions and supports for the lower platform, as set forth.

4. The berth-supporting platform having four spring-rollers arranged at the sides, as shown, in combination with the four curtains secured to the top of the car and to the rolls, and arranged, as described, to be wound on

the rolls, so as to form partitions and supports, as shown.

5 5. The combination, in a car, of the lower-berth platform, having spring-rolls at each side, as set forth, the curtains secured at one end to the rolls and at the other to the top of the car, so as to form partitions and supports for the platform, and the upper berths supported by independent flexible cords extending to the top of the car, directly over

the lower berth, so as to be lifted thereby, all substantially as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 14th day of May, 1883. 15

JOHN SHOREY.

Witnesses:

P. P. MERRIHEW,
C. F. BROWN.