

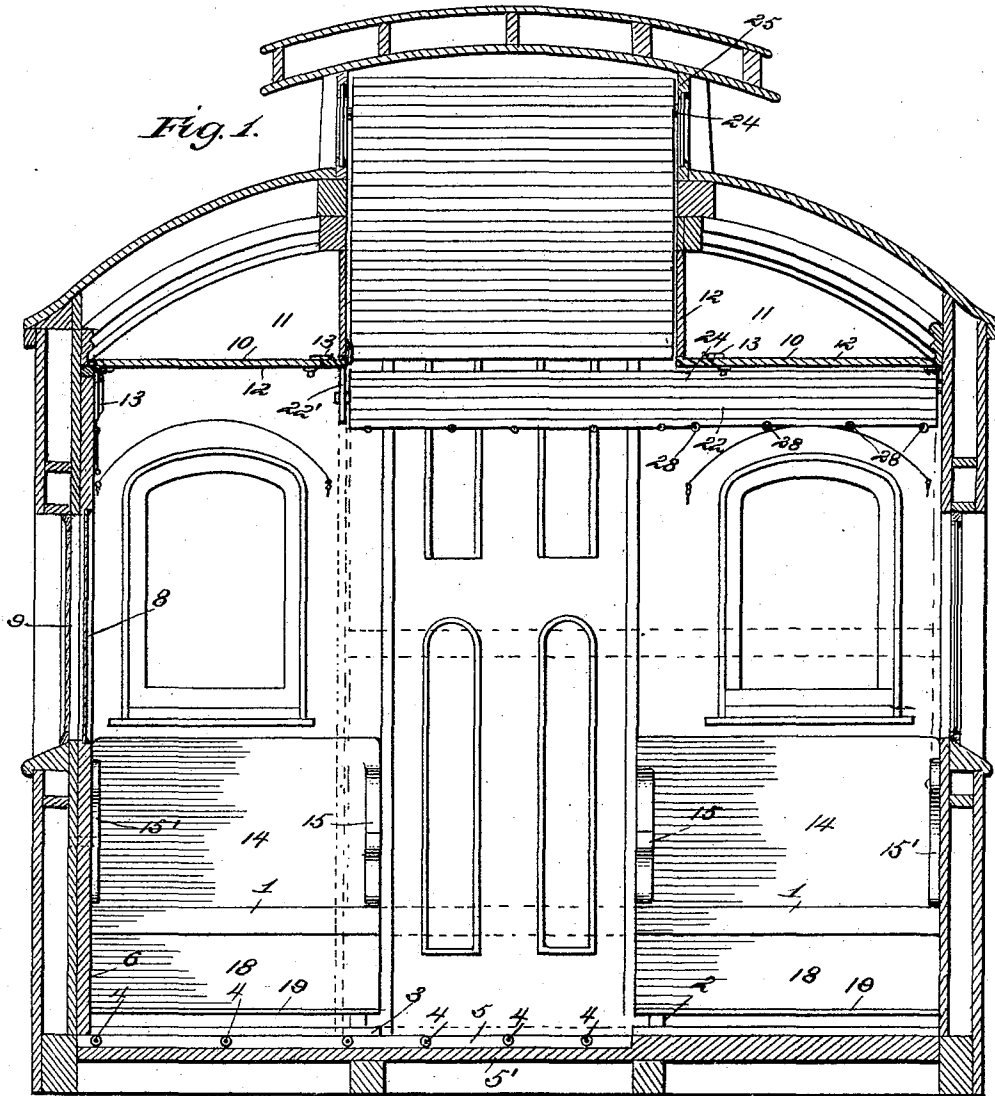
(No Model.)

3 Sheets—Sheet 1.

C. L. ARNOLD.  
SLEEPING CAR.

No. 407,563.

Patented July 23, 1889.



WITNESSES:

*W. R. Harris.*  
*C. Sedgwick*

INVENTOR:

*C. L. Arnold*

BY

*Munn & Co.*

ATTORNEYS.

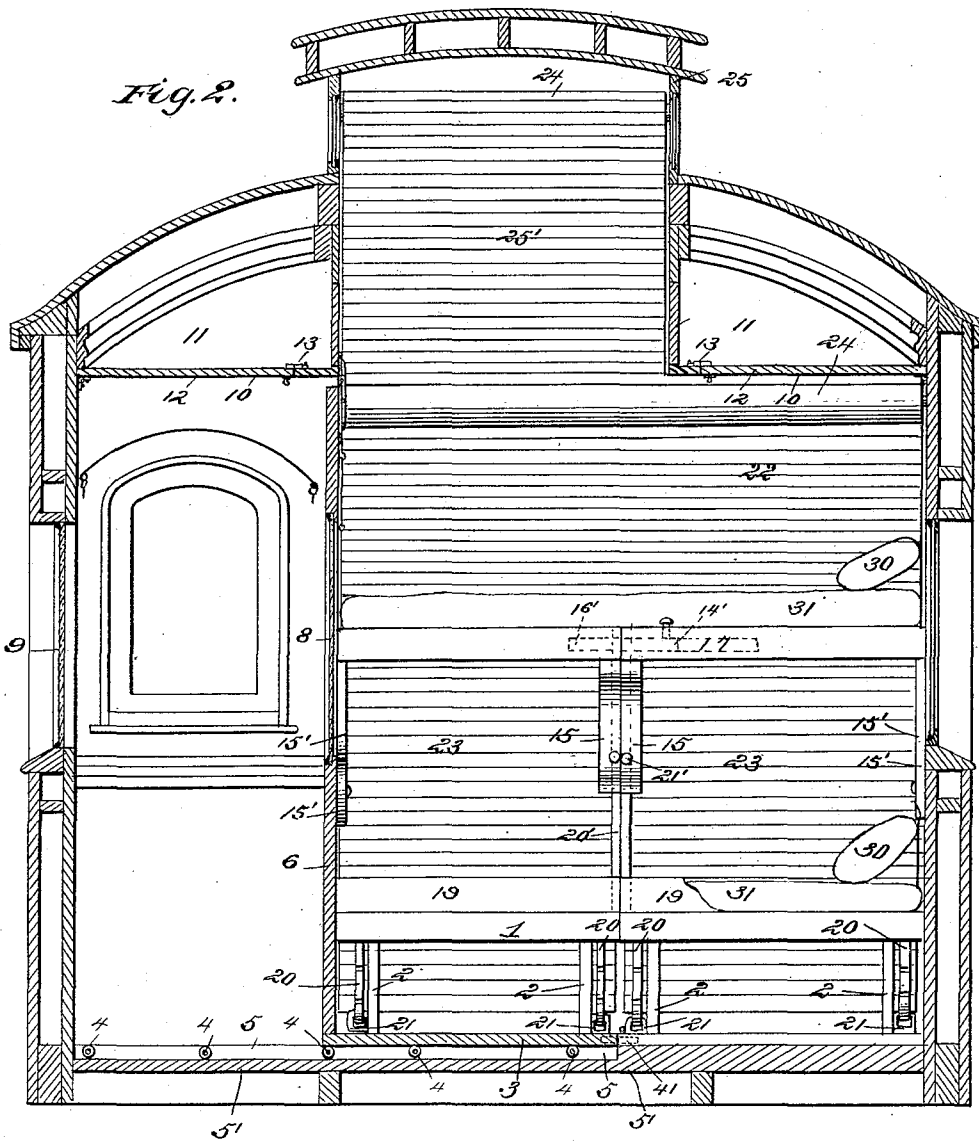
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3 Sheets—Sheet 2.

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WITNESSES:

*W. R. Davis*  
*C. Sedgwick*

INVENTOR:

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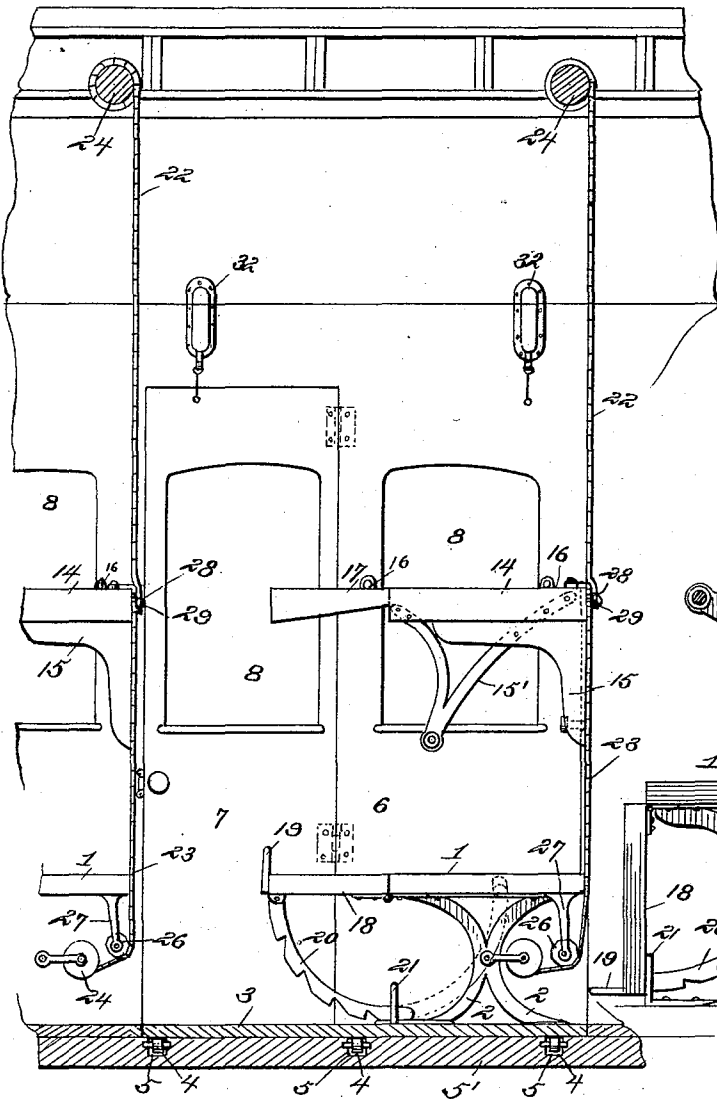
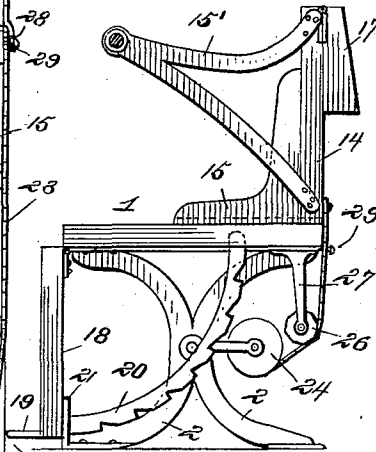


Fig. 3.

Fig. 4.



WITNESSES:

*W. R. Davis*  
*C. Sedgwick*

INVENTOR:

*C. L. Arnold*

BY

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# UNITED STATES PATENT OFFICE.

CHARLES L. ARNOLD, OF WILMINGTON, NORTH CAROLINA.

## SLEEPING-CAR.

SPECIFICATION forming part of Letters Patent No. 407,563, dated July 23, 1889.

Application filed October 17, 1888. Serial No. 288,354. (No model.)

### *To all whom it may concern:*

Be it known that I, CHARLES L. ARNOLD, of Wilmington, in the county of New Hanover and State of North Carolina, have invented a new and Improved Sleeping-Car, of which the following is a full, clear, and exact description.

This invention relates to sleeping-cars, and has for its object to provide a sleeping-car so constructed and arranged as to be readily converted from an ordinary passenger-car into a sleeping-car, and by means of which the greatest amount of room may be obtained and the utmost privacy secured.

The invention consists in a railway sleeping-car and in details thereof, constructed and arranged as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a vertical transverse section of a railway passenger-car constructed according to this invention and shown as arranged for day use. Fig. 2 is a vertical transverse section of the invention, showing the car with berths arranged for sleeping. Fig. 3 is a vertical longitudinal section of a portion of the car with parts broken away, and Fig. 4 is an end view of one of the seats as arranged for day use.

In carrying out this invention the car-seats 1 are normally arranged in the ordinary way upon metallic standards 2, forming a center passage-way. Upon one side of the car the car-seats 1 are mounted on platforms 3, extending underneath said seat from the back of one seat to the back of the seat in front and resting on rollers 4. The rollers 4 are located and contained in grooves 5, extending in the car-floor 5' to the seats 1 on the opposite side of the passage-way. Upon the end of each platform 3, adjacent to the wall of the car, is mounted a partition 6, which rests against the wall of the car during the day and forms a vertical partition lengthwise with the car, and extending over and past one end of a seat to the back of the seat in front, when the seat is moved away from the side of the car to form with the corresponding seat on the opposite side of the car the berths for the

night. Each partition 6 is provided with a door 7, closing an opening equal in width to the space between two seats.

The partitions 6 and their doors 7 are formed with openings or windows 8, which register with the car-windows 9. The windows 8 may have a fixed glass, as shown, or a sliding sash. The tops of the partitions 6 abut against a portion of the ceiling 10 of the car, which forms, with the roof of the car, a series of receptacles 11, in which bedding may be stored during the day. The receptacles 11 are closed by hinged doors 12, which swing down and are secured by bolts 13 when closed.

The backs 14 of the car-seats, with arms 15, which serve as braces when the backs are turned up to form upper berths, are secured to brackets 15', which in the case of the movable seats 1 are pivoted to the partitions 6, and in the case of the fixed seats 1 are pivoted to the wall of the car. The backs 14, when turned up, may be held in place by means of suitable catches or bolts 16 on the backs 14, engaging sockets in partition 6. The backs 14, when turned up, are also fastened by a bolt 14' in one of the backs, which engages a socket 16' in the other back.

When the berths are made up, the width of the seats 1, forming the lower berths, and the width of the backs 14, forming the upper berths, may be extended by means of an extension 17, hinged to the backs 14, and in the day-time hanging down against the back and serving as a shelf, and an extension 18, hinged to the seats 1 and having a foot-board 19, which serves as a guard when the berth is made up. The extension 18 is held up by a curved notched bar 20, which projects through a plate 21 and engages plate 21 when extended, and is located under seat 1 when not in use. The platforms 3, when rolled into position for making up the berths, are secured to the car-floor by bolts 41'.

The backs 14, when turned up to horizontal position, are supported by bars 20', located in sockets in the arms 15 and held in extended position by pins 21'.

To cover up the openings between the seats at one side of and in the center of the car when arranged to form berths, rolling slat partitions 22 and 23 are provided, the upper slat partition 22 being mounted on a spring-

roller 24, hung at one end to the side of the car and at the other in a bracket 22' on the top of the car, located beneath the central elevated portion 25 of the car and beneath the receptacles 11 on one side of the car, and the lower slat partitions 23, mounted on spring-rollers 24, located beneath the fixed and movable seats 1. The lower slat partitions 23 pass over a guide-roller 26, mounted in brackets 27, secured to seats 1, and are attached at their outer ends to the lower end of backs 14. When the latter are turned up, as shown in Figs. 2 and 3, the lower slat partitions 23 are drawn up and close the space between seats 1 and horizontal backs 14, as shown in Fig. 2. The elevated portion 25 is covered transversely by a rolling slat partition 25'. The spaces between the unrolled slat partitions 23 are closed by the bars 20'. The upper slat partitions, when drawn down, are held in place by rings 28 on their lower ends, which engage buttons or pins 29 on the lower slat partitions 22 and close the space between horizontal backs 14 and the top of the car at the center and one side, as shown in Fig. 2. By means of this arrangement a series of compartments are provided, each containing a lower and upper berth extending part-way across the car, the compartments closing the center passage-way and forming a passage-way at one side of the car. Access is had to the compartments from this side passage-way by means of doors 7, and the compartments are fully lighted by day from the windows 8 and 9 and at night by a suitable arrangement of safety-lamps located conveniently in movable partitions. Suitable heating and ventilating apparatus and wash-stands may be provided.

The advantages of a car arranged for day and night service, as herein set forth, are apparent. A series of private compartments are provided, the unsightly upper berths in other constructions are dispensed with, and a better arrangement of space by day obtained. The pillows 30, mattresses 31, and other bedding may be readily stowed away in receptacles 11, and the car readily converted into a day-car or sleeping-car by means of the seats 1, backs 14, movable platforms 3, with partitions 6, and the rolling slat partitions 22 and 23, the latter rolling up out of the way by the action of their spring-rollers when the ends of the slatted partitions are unfastened.

As the seats 1 are preferably not reversible, folding chairs facing the seats may be secured to platforms 3 for use when the compartments are made up and to be closed up or used during the day to accommodate passengers when the train is running in the opposite direction from that which the fixed seats face.

The compartments may be lighted by a lamp so located in the partitions 6 as to light the car before the compartments are made up and to light the side passage as well as the

compartments after the berths are made up. The windows 8 and lamps may also be provided with opaque screens to darken each compartment upon retiring. The partitions 6 may be fastened in place by bolt-fastenings 32, engaging the top of the car.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A railway passenger-car having seats movable away from the side of the car to the opposite seats, with partitions extending lengthwise of the car, and transverse folding partitions forming with the laterally-movable lengthwise partitions compartments, and a side passage-way extending lengthwise of the car, substantially as described.

2. A railway passenger-car having seats movable away from the side of the car to the opposite seats, the seats having swinging backs with means for fastening the swinging backs in an elevated horizontal position above the seats, partitions extending lengthwise of the car, and transverse folding partitions forming with the laterally-movable lengthwise partitions compartments, and a side passage-way extending lengthwise of the car, substantially as described.

3. A railway passenger-car having seats movable away from the side of the car to the opposite seats, the seats having swinging backs, with means for fastening the swinging backs in an elevated position above the seats, compartments for holding bedding located above the ceiling at the sides of the car above the seats, partitions extending lengthwise of the car, and transverse folding partitions forming with the laterally-movable lengthwise partitions compartments, and a side passage-way extending lengthwise of the car, substantially as described.

4. A railway passenger-car having seats movable endwise across the center aisle of the car to abut end to end with the seats on the opposite side of the car and form a passage-way on one side of the car, the abutting seats being convertible into sleeping-berths, substantially as shown and described.

5. A railway passenger-car having seats mounted on platforms movable from the side of the car to the opposite seats and friction-rollers located in the floor of the car upon which the platforms rest and over which they move, substantially as described.

6. A railway passenger-car having a series of seats 1, the seats 1 on one side of the car being mounted on platforms 3, provided at the end adjacent to the car-wall with a lengthwise partition 6, having door 7 and windows 8, a series of transverse grooves 5 in the floor of the car, with rollers 4 extending from the side of the car to the opposite seats, the platforms 3, resting upon and movable over the rollers 4, a series of compartments 11, with hinged doors 12, located in the ceilings 10 at the sides of the car above the seats, the top of the partitions 6 abutting against the ceilings 10, and a series of upper and lower roll-

ing slat partitions 22, 23, and 25', mounted on spring-rollers 24, located in and beneath the central elevated portion 25 of the car, and the ceiling 10 at one side of the car and beneath the seats 1, the outer ends of the lower slat partitions 23 being fastened to the seats 1, and the outer ends of the upper slat partitions having detachable fastening devices for securing them to partitions 22, substantially as described.

7. A railway passenger-car having a series of seats 1, the seats 1 at one side of the car having vertical partitions on their inner ends and being movable with the partitions across the car to the opposite seats, the seats 1 having backs 14, mounted on brackets 15', pivoted to one side of the car, and partition 6, with fastening devices for holding the backs 14 in horizontal position, and movable partitions extending crosswise of the car between the seats, substantially as described.

8. A railway passenger-car having seats movable from one side of the car to the seats on the opposite side, and slat partitions extensible over the vertical spaces between the floor and seats and the seats and ceiling of the car to form compartments, substantially as described.

9. A railway passenger-car having a series of seats 1, the seats 1 on one side of the car being movable from the side of the car to the

opposite seats, and having vertical partitions 6, extending over their inner ends and movable therewith across the car to form a side passage-way, the seats 1, having backs 14, mounted on brackets 15', pivoted to the partitions 6 and a wall of the car, with fastening devices for holding the backs 14 in a horizontal position, a folding extension 17, hinged to the edge of the backs 14, and an extension 18, hinged to the front edge of the seats 1, and having a foot-rest and guard 19, with a curved notched supporting-bar 20, projecting through a plate 21 on the floor beneath the seats, substantially as described.

10. A railway passenger-car having seats movable from one side of the car to the opposite seats, and the extensible transverse upper and lower slat partitions 22 and 23, mounted on spring-rollers 24 in the vertical elevated portion 25 of the car beneath the ceiling 10 at one side of the car and beneath the seats 1, the slat partitions being adapted to extend in a vertical plane transverse to the car from the top of the car to the floor, thereby dividing the pairs of seats moved end to end into compartments, substantially as described.

CHARLES L. ARNOLD.

Witnesses:

LOUIS J. PIRSSON,  
SHEP. S. AVERITT.