

(No Model.)

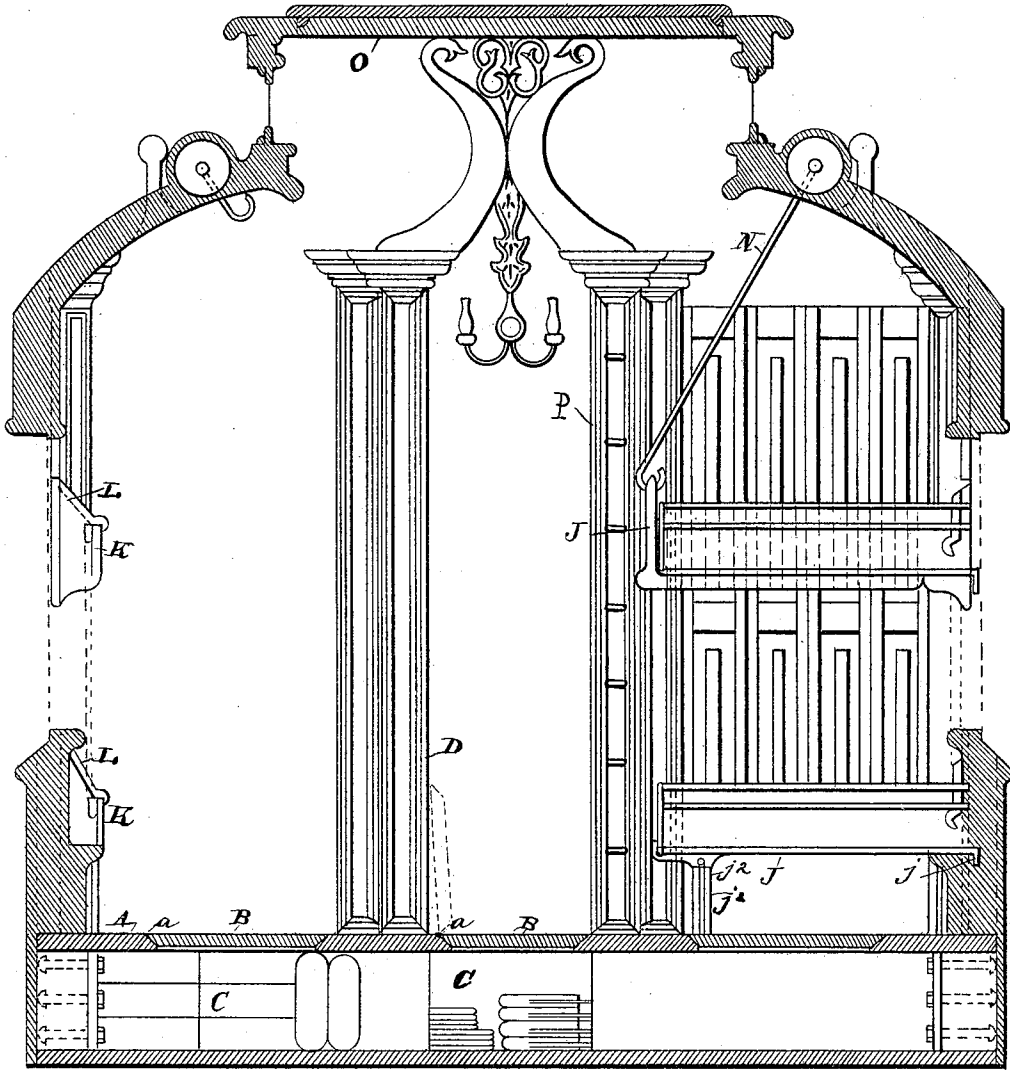
2 Sheets—Sheet 1.

F. S. TULL.
SLEEPING CAR.

No. 389,344.

Patented Sept. 11, 1888.

Fig-1 -



Witnesses
Wm J. Quintemann.
G. B. Harris

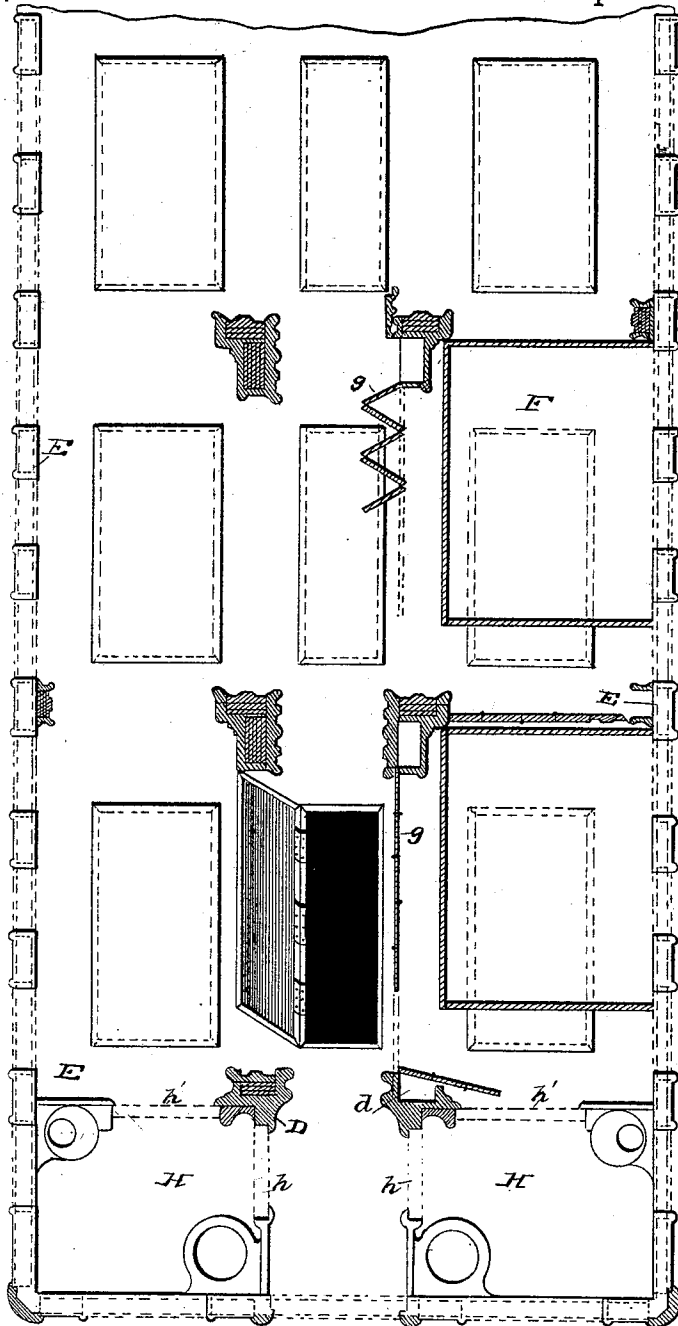
Inventor,
Francis S. Tull,
 By his Attorney
J. O. McHenry

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Fig-2.



Witnesses.

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UNITED STATES PATENT OFFICE.

FRANCIS SHALIS TULL, OF GALVESTON, TEXAS.

SLEEPING-CAR.

SPECIFICATION forming part of Letters Patent No. 389,344, dated September 11, 1888.

Application filed October 6, 1886. Renewed April 11, 1888. Serial No. 270,279. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS SHALIS TULL, of Galveston, in the county of Galveston and State of Texas, have invented certain new and useful Improvements in Sleeping-Cars; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to sleeping-cars, the primary object being to combine with the maximum interior space for sleeping accommodation strength, convenience, and durability of car structure.

A further object of the invention is to provide a car which will be adapted for day use as a parlor or chair car, and may be readily converted into a sleeping-car with independent state-rooms, thus insuring privacy and comfort to passengers.

A further object of the invention is to provide a sleeping-car with improved means and devices for facilitating the egress of passengers in case of danger.

With these several ends in view the invention consists in the combination, with a car, of a series of vertical columns or supports located in the body of the car, to serve the double purpose of supporting the roof of the car and furnishing a place of concealment for folding or movable state-room partitions.

The invention further consists in the various features of construction and combinations of parts hereinafter fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a transverse section of my improved car. Fig. 2 is a plan view with the top of the car removed.

A represents the floor of the car, provided with a series of openings, *a*, covered by trap-doors B. Beneath the floor are arranged storage compartments or boxes C, to which access is had through the openings *a*.

D represents vertical supports or columns of the peculiar form shown, one side of each support (which I will call the "front" side) being preferably finished with a molding, while the rear portion extends backward and is recessed to form a space, *d*, to receive the sections of the folding partitions, as will be described. The supports D are arranged in

pairs well out from the sides of the car to constitute boundaries for the central aisle. Additional supports, E, are arranged adjacent to the sides of the car, and are also recessed to receive partition-sections.

The storage boxes or compartments may be of any desired number; but it is my design to employ them in parallel rows of three each, so that there will be one compartment under each state-room and an aisle-compartment between every two opposite rooms.

The state-rooms F are made by employing partitions G, consisting of a series of narrow sections, *g*, hinged together and adapted to be folded upon one another, and concealed within the supports D and E. The portions which bound the outsides of the state-rooms are folded within the aisle-supports D, and those which bound the ends of the rooms are folded against the sides of the car within the recessed columns E. Said partitions are hinged at one end to the columns, and may be secured at their other ends when unfolded by any preferred devices.

It will be apparent from the description thus far that the interior of the car may be readily subdivided into a number of entirely independent rooms, and when it is desired to convert the car into a day car the partitions are quickly folded and concealed within the respective columns, thus adding to the strength and appearance of the latter.

In addition to their value as a means of concealing the partitions, the columns D and E serve to support the roof of the car and enable me to employ sides of the minimum weight and thickness, thus contributing materially to the interior space of the car.

In Fig. 2 the end rooms, H H, of the car are shown as retiring-rooms, having aisle-doors *h*, and also end doors, *h'*, the latter communicating with the adjacent state-rooms, whose side partitions join the retiring-rooms, thus enabling the occupants of said state-rooms to pass into the retiring-rooms directly from their state-rooms without passing into the car-aisle.

Having thus described the general arrangement and plan for providing state-rooms, I will now explain the manner of constructing the berths within the rooms and of concealing them when not desired for use.

I contemplate the use of both an upper and

a lower berth in each room, although, when desired, only one berth may be used. Each lower berth is supported at each end by a bar, J, the inner end, j , of which is hooked to engage a suitable opening, j' , in the side of the car. The outer end of the bar J is supported by folding legs j'' . These bars receive the berth, which consists of any desired number of folding sections.

I do not limit myself to any particular form of berth proper, it being only necessary that the berth shall be adapted to fold upon itself or roll up to be concealed within longitudinal receptacles K K', formed on the side of the car and provided with hinged covers L. The folding berths, in connection with the covers L, form ornamental projections from the sides of the car when the latter is used as a day car.

The upper berths are arranged substantially like the lower, except that the outer ends of the bars J' of the upper berths are supported by a hook or chain, M, suspended from the top of the car and adapted to be concealed from view when desired. During the day the bars J J' are removed and stored beneath the car-floor, together with the bedding, &c., and the berths are folded against the sides and concealed, as above described.

It will be seen in Fig. 1 that I form the staterooms of sufficient size to leave ample space for the occupant to stand upright and dress and for the accommodation of portable wash-stands and toilet articles, thus enabling the passenger to make his toilet privately in his own room and without the annoyance of walking the length of the car, as is customary. After the berths are concealed and the folding screens or partitions adjusted to place within the columns, the car is clear of all obstructions and may be used as a parlor-car.

Referring now to Fig. 1, O represents a hatch or removable roof-section, provided with any suitable means for securing it in place, so that it may be displaced from within the car. In connection with this hatch I employ on one of the columns a series of hand-holds or foot-staples, P, so that in case egress from the car cannot be had through the doors passengers may escape through the roof-hatch. The outside of the car roof and side may be provided with any preferred escape devices, so that the passenger may readily descend after passing through the hatch.

An important feature of my car as thus described over those commonly used is that I save the space usually occupied by the upper berth when folded to an inclined position, thus adding materially to the interior space of the car.

It is apparent that many slight changes or modifications of the details of my improved car might be resorted to without departing from the spirit of my invention. Hence I would have it understood that I do not limit myself to all the details herein described and

shown, but reserve the right to myself to make all such changes, additions, or variations as may properly fall within the scope of the following claims.

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

1. The combination, in a sleeping-car, with a series of recessed vertical supports arranged in the body of the car, of folding partitions secured to said supports and adapted to fold in the recesses of the supports, substantially as described.

2. The combination, in a sleeping-car, with a series of recessed vertical supports arranged in the body of the car and against the sides of the same, of folding partitions secured to said supports and adapted to fold in the recesses thereof, substantially as described.

3. The combination, in a sleeping-car, with a series of recessed vertical supports arranged in the body and at the sides of the car and adapted to serve as supports for the roof and sides of the car, of a series of folding partitions hinged to said supports and adapted to fold in the recesses thereof, substantially as described.

4. The combination, with the car floor and sides, of vertical supports, folding partitions secured thereto, receptacles on the sides of the car to receive both the upper and lower berths, said receptacles being provided with hinged covers and forming ornamental projections on the sides of the car, and supports adapted to be removably secured to the sides of the car to support the berths when in use, substantially as described.

5. In a sleeping-car, the combination, with the upper and lower receptacles having hinged covers, said receptacles being adapted to receive the berths, of the rods J J, removably secured to the sides of the car, folding legs for supporting the lower bar, and a removable rod or chain for supporting the upper bar, substantially as described.

6. The combination, with a car, of roof doors or hatches and interior columns provided with hand-holds, substantially as described.

7. A sleeping-car having covered receptacles arranged below its floor, a series of recessed vertical supports arranged in the body and at the sides of the car, folding partitions to fit in said recesses, berths removably secured to the sides of the car, and the covered receptacles forming ornamental projections on the sides of the car, substantially as described.

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

FRANCIS SHALIS TULL.

Witnesses:

JAS. W. HALE,

RICHARD B. S. GRIM.