E. ROBINSON.
Sleeping-Car.

No. 204,684. **Patented June 11, 1878.**

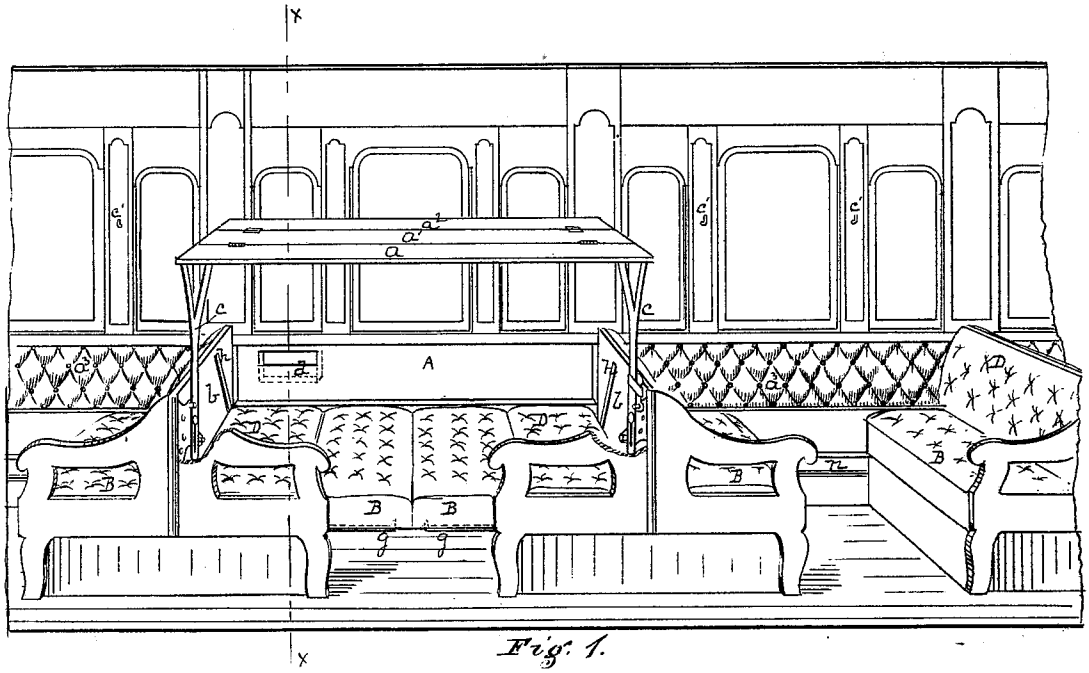


Fig: 1.

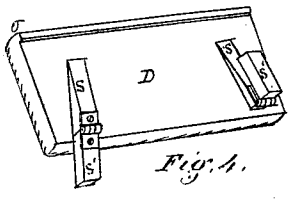


Fig: 4.

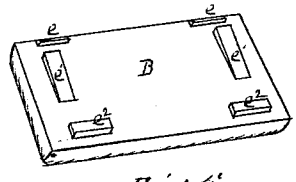


Fig: 5.

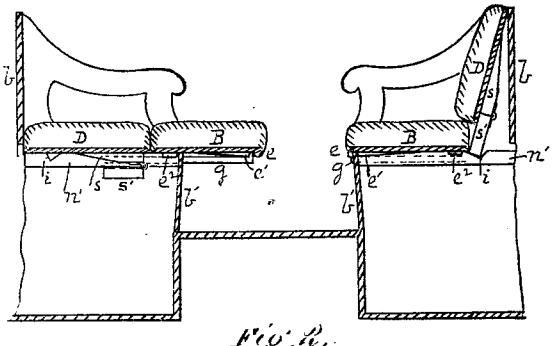


Fig: 2.

Fig: 3.

Witnesses.
A. C. Christy
E. L. Parker

Inventor Edward Robinson,
By Attorney George H. Christy.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

EDWARD ROBINSON, OF WILMINGTON, DELAWARE, ASSIGNOR TO THE WOODRUFF SLEEPING CAR AND PARLOR COACH COMPANY, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN SLEEPING-CARS.

Specification forming part of Letters Patent No. **204,681**, dated June 11, 1878; application filed April 5, 1878.

To all whom it may concern:

Be it known that I, EDWARD ROBINSON, of Wilmington, county of New Castle, State of Delaware, have invented or discovered a new and useful Improvement in Sleeping-Cars; and I do hereby declare the following to be a full, clear, consise, and exact description thereof, reference being had to the accompanying drawing, making a part of this specification, in which—like letters indicating like parts—

Figure 1 is a perspective view of a portion of a sleeping-car illustrative of my improvement. Fig. 2 is a longitudinal vertical section through one section, illustrating the arrangement of seats and backs. Fig. 3 is a sectional view through *x x* of Fig. 1, showing the upper berth-frame stowed away, but with seats and backs not in place. Fig. 4 is a back view of the seat-back, and Fig. 5 is a bottom view of the seat.

The present invention, while applicable in some or all of its features to sleeping-cars generally, relates more particularly to certain improvements in the class of sleeping-cars referred to in Patents Reissue No. 6,019 and originals Nos. 147,538 and 147,539. Features not herein otherwise described may be made as set forth in said patents or as otherwise known in the art.

In the present improvement the upper berth platform or frame is made in three folds instead of in two, such improved construction being represented at a a^1 a^2. These folds or sections are hinged to each other, so as to be folded together and stowed away in a recess, A, in the side of the car beneath the windows, as represented in Fig. 3, and the exposed face of the outside fold is upholstered, as represented at a^3 in Fig. 1, so as to present the desired exterior finished appearance. The object I have in view in making this change is more particularly to adapt the Jonah Woodruff improvement for convenient use in a car in which the seats and backs are employed for making the lower berth frame or platform, since, when such use is made of the latter, it is important that the recess A in the side of the car have a less vertical depth than when the seats and backs are folded down onto the car-floor, as in the Jonah Woodruff patents above referred to. In this way I secure the advantages of the Jonah Woodruff construction of upper berth-platform, and dispense with the necessity of using a separate lower berth-platform. This upper berth-platform is secured to and supported by swinging posts *c c* and lugs or hooks *c′ c′*, substantially as described in Patent No. 147,539, or in other equivalent way, and has a like swinging motion in being placed in position for night service, or being stowed away to adapt the car for day service. Devices for attaching the posts *c c* to or connecting them with the partitions *b* or the seat-frames may be varied at pleasure.

In connection with this part of my invention I employ any known construction or arrangement of seats and backs wherein such seats and backs are used for making a lower berth frame or platform; but I have added to such seats and backs as heretofore constructed and used other features of improvement.

The seats B have on their under side the cleats e e^1, which, when the car is arranged for day service, engage the front and rear upper edges of the foot-board *b′*, as shown in Fig. 2, and thereby the seat is held securely in its proper place. To shift it to the proper position for night service, its front edge is raised slightly, and it is shifted forward until the cleats e^2 engage the rear upper edge of the foot-board, as also shown in Fig. 2, and it is now held in the proper adjustment to form part of a lower berth platform or frame. For convenience in sliding it back, the cleats e^1 have each an inclined face, as shown in Fig. 5, so that they will slide readily over the upper edge of the foot-board *b′*, and drop into position. The inner or wall end of the seat, in both adjustments, is supported on the continuous side rail or ledge *n*, usually employed for that purpose. The outer end when used as a seat is supported on a rail or ledge, n^1, Fig. 3, and in its other adjustment it is supported in part by a longitudinally-sliding bar, *g*, which, sliding in a groove of the rail *n′* or in other suitable guides or supports, may be drawn out and slid back as may be necessary.

It is common to hinge backs to seats, and

also to rest the lower edges of the former on the rear edges of the latter, in adjustments for day service. I prefer, however, to give to the seat-backs an independent support. To this end I attach to the rear face of each seat-back D a cleat, *s*, in such position that when the seat-back is shifted to a horizontal position to form a part of the lower berth frame or platform, such cleats will come between or inside the end supports. I attach them, however, in an inclined position, so that a hinged extension, *s'*, attached thereto, will, when turned over, rest on the side rails or in a notch or shoe, *i*, made for the purpose, Figs. 2 and 4, and will thereby give the seat-back the desired support; but when the seat-back is to be thrown down into place for making a part of the lower berth frame or platform, these extensions *s'* are folded back onto the cleats *s*, as shown at the right-hand end of Fig. 4 and the left-hand end of Fig. 2, so as to come within or inside the side supporting rails or ledges.

As an additional feature of improvement, I make a pocket, *d*, in the side wall of the car, preferably in the bottom of the recess A. This pocket may consist of a recess or box in the side of the car, as shown, with an upwardly-projecting ledge covering its lower part, leaving room above for the insertion of the hand. It is designed as a place in which to deposit small articles of dress or ornament which the sleeper does not wish to keep on his or her person while lying down.

In connection with the upper threefold berth-frame (though a four or more fold frame may be employed as its mechanical equivalent) any suitable means may be employed for keeping the folds in a horizontal position when employed, means for such purpose being well known in the art; and where this threefold frame is used, as I prefer to use it, in connection with a lower berth-platform composed of seats and backs, the lower edge of the recess A should be about even with but not much below the upper face of the lower berth-platform so made, as shown in Fig. 1; and, in order to hold the folded sections securely in place in the recess A as against any longitudinal motion which might make a rattle or unpleasant noise, as well as to guide them accurately into the recesses, slats *h* may be added to the diaphragms or partitions *b* as guides and bearings to the posts *c* when down. As an additional support to the seat-backs the upper edge of each may be provided with a cleat, *o*, which may rest upon the top edge of the partition *b*.

I claim herein as my invention—

1. In combination with a lower berth platform or frame composed of seats and backs, a threefold upper berth platform or frame and a recess beneath the car windows adapted to its reception, substantially as set forth.

2. The pocket *d* in the bottom of recess A, substantially as set forth.

3. The bars *g* sliding longitudinally out and in on fixed guides or ways in the seat-frames, so as to bridge over the space between facing seats, in combination with the seats B and side rails, substantially as set forth.

4. The inclined cleats *s* and hinged extensions *s'* attached to a seat-back, in combination with supporting side rails or ledges, substantially as described.

5. The cleats *e* e^1 e^2, in combination with seat and foot-board, arranged substantially as described.

In testimony whereof I have hereunto set my hand.

EDWARD ROBINSON.

Witnesses:
FRANK RAHM,
JNO. H. PUHL,