No. 868,002. PATENTED OCT. 15, 1907.

D. T. OWEN.

COMBINED BERTH AND SEAT FOR PASSENGER CARRIAGES.

APPLICATION FILED AUG. 25, 1905.

3 SHEETS—SHEET 1.

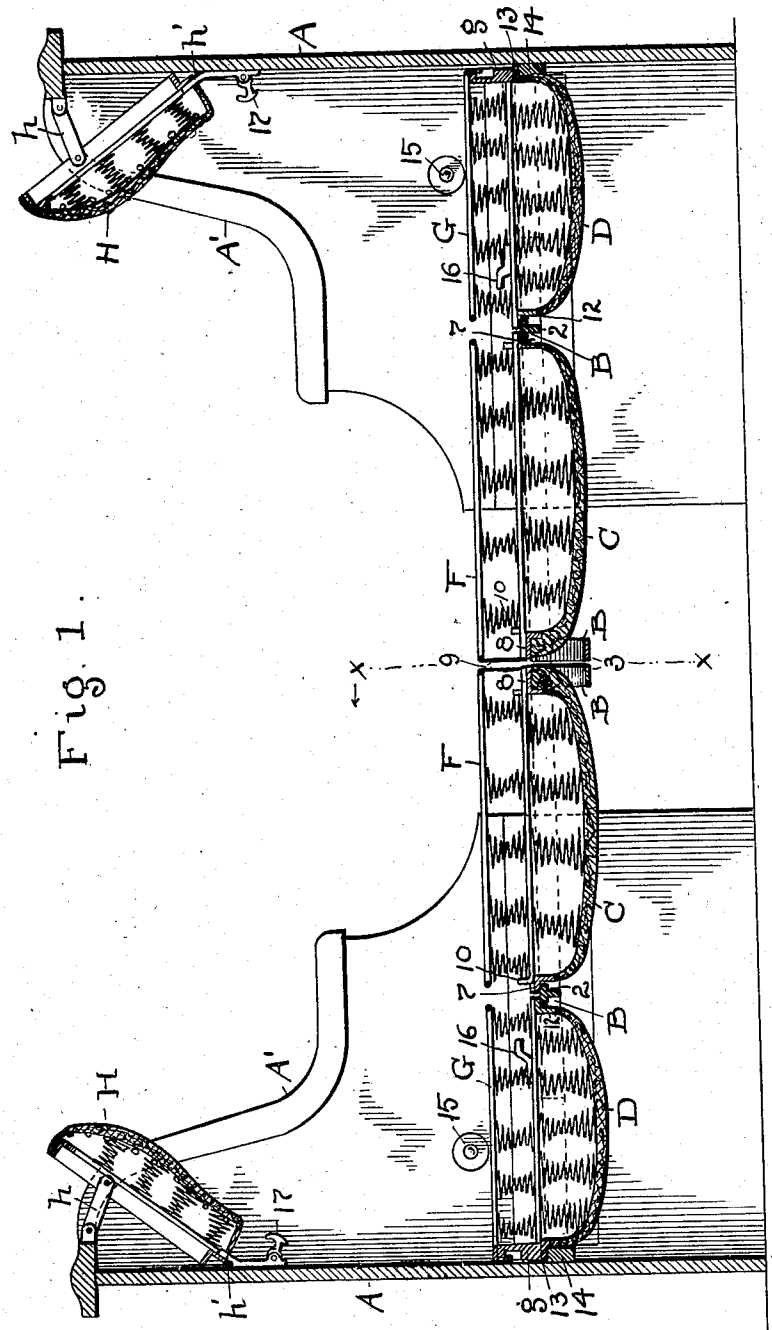

Fig. 1.

ATTEST

R. B. Moser

A. M. Moser

INVENTOR.

DAVID T. OWEN

BY H. J. Fisher ATTY.

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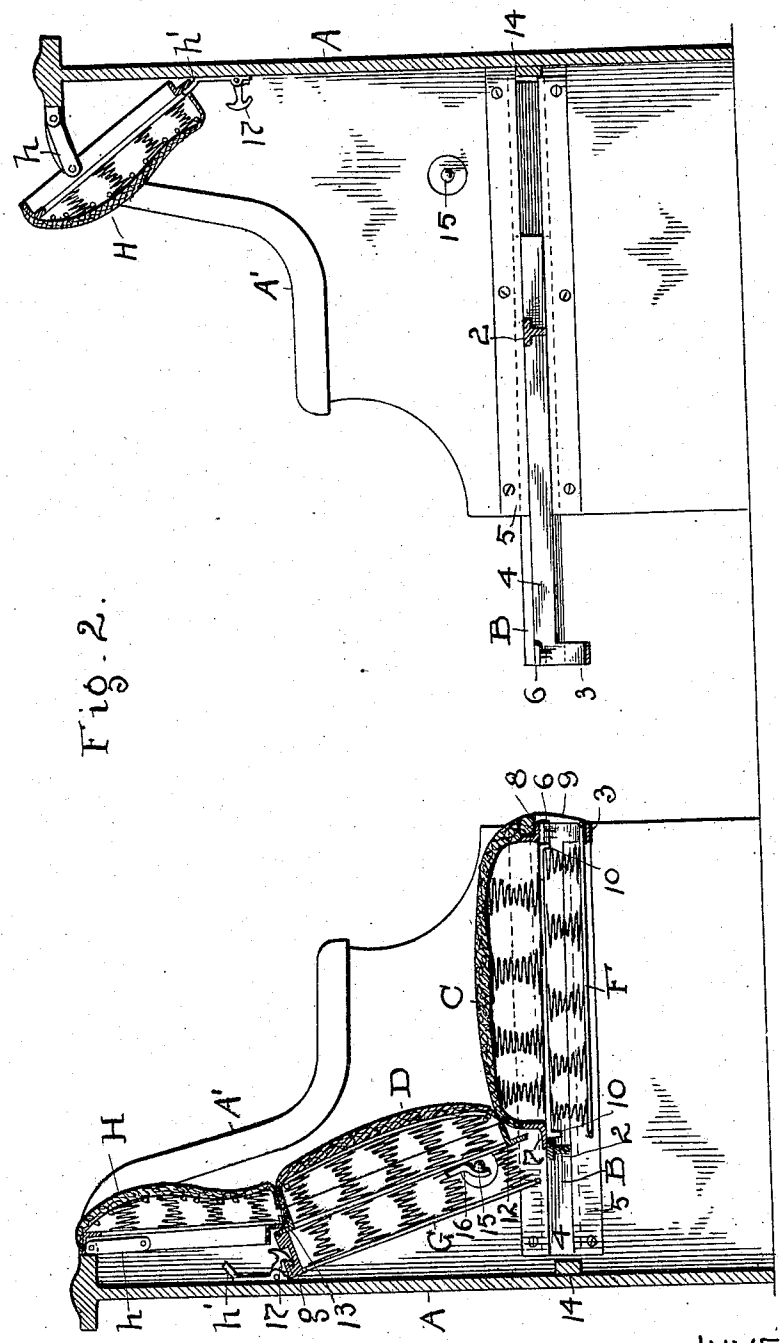

Fig. 2.

ATTEST.

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3 SHEETS—SHEET 3.

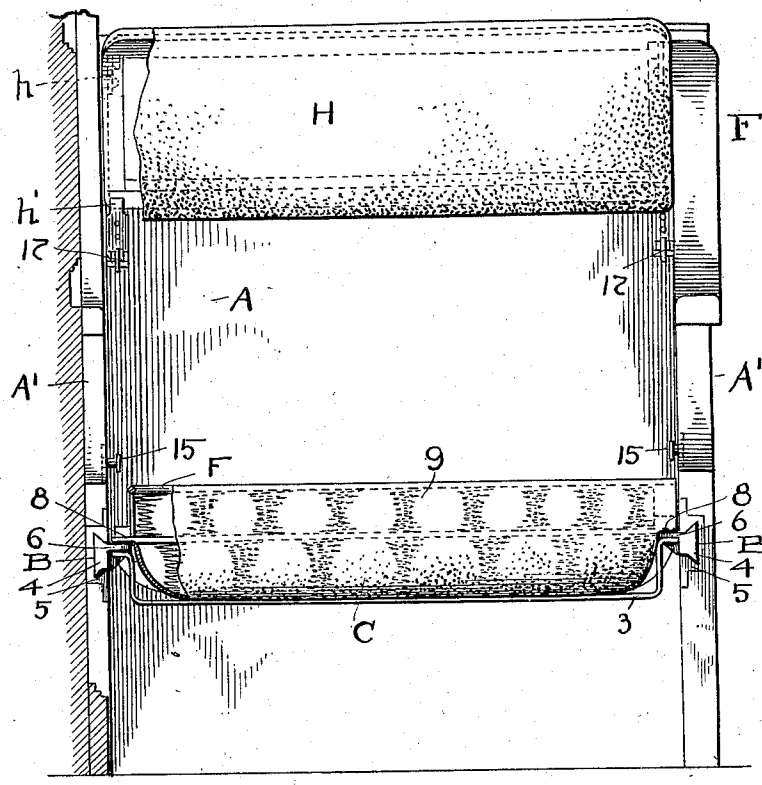

Fig. 3.

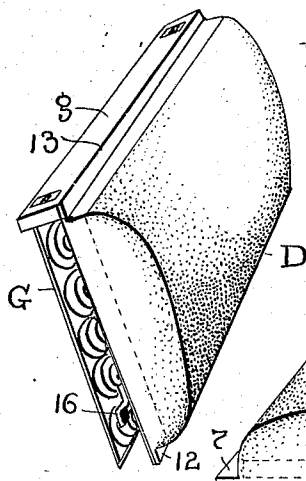

Fig. 4.

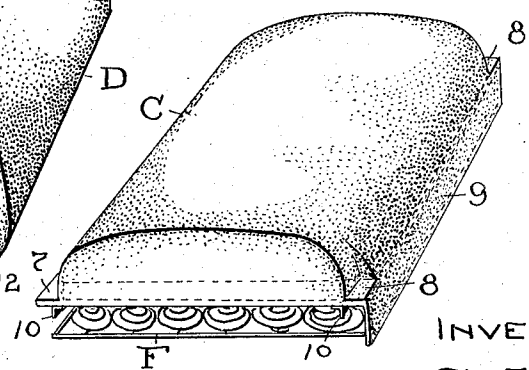

Fig. 5.

ATTEST.

R. B. Moses

Assistant

INVENTOR.

DAVID T. OWEN.

BY H. J. Fisher ATTY.

UNITED STATES PATENT OFFICE.

DAVID T. OWEN, OF CLEVELAND, OHIO, ASSIGNOR TO THE D. T. OWEN COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

COMBINED BERTH AND SEAT FOR PASSENGER-CARRIAGES.

No. 868,002. Specification of Letters Patent. Patented Oct. 15, 1907.

Application filed August 25, 1905. Serial No. 275,764.

To all whom it may concern:

Be it known that I, DAVID T. OWEN, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in a Combined Berth and Seat for Passenger-Carriers, and do declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in combined berths and seats for passenger coaches and carriers, and the invention consists in a construction wherein the back and the seat proper may be inverted to form a berth or bed bottom, or bottom for the mattress of the berth or bed, all substantially as shown and described and more particularly pointed out in the claims.

In the accompanying drawings Figure 1 is a longitudinal sectional elevation of the parts made up as a berth or bed, presumably in a sleeping-car. Fig. 2 is a longitudinal sectional elevation showing the parts at the left of the view made up as a seat, and at the right with the seat and bed portions omitted and disclosing more particularly the means for supporting said parts, as will hereinafter appear. Fig. 3 is a view on line x, x, Fig. 1 looking to the left, and Figs. 4 and 5 are perspective views in detail of the seat and back, respectively.

The essential novelty of the invention as thus shown lies in the adaptation of the separate seats and the backs, respectively, to be converted into the bed-bottom proper, so that when these parts have served their purpose for comfortably seating passengers they can be utilized, also, for providing them with comfortable places of sleep rest, the only change necessary in such case being that said parts be lifted from their original positions and placed in inverted positions side by side in the bed frame or supports. In these latter positions said parts themselves form the bed-bottom proper, and they contribute to the utility and comfort of the berth by being themselves provided with springs that come into more or less helpful service through the spring mattress above.

In the present development of the invention I show the usual cross partition or wall A between adjacent seats back to back in a sleeping car, and the combined seat and bed supports A′ at the sides, which, however, have mostly the appearance of sides for the seats.

B represents a sliding support or supports for both the seat and the bed, and in this instance is shown as a rigid frame supported in the sides of the supports A′ and adapted to be drawn bodily out, as at the right in Fig. 2, half way the space between seats and to be met thereby the like frame or supports from the other side, Fig. 1. These frames or supports comprise a cross-bar 2 at their rear flush with the sides of the said frame at its top, and a downwardly curved or bent cross-bar or strap 3 at the front of the frame connecting the sides 4 thereof. Suitable guide-ways 5 carry the said sides or side-bars 4, and in this instance the said guide-ways and bars 4 are dovetailed, but not necessarily, especially if both cross connections 2 and 3 are used. If these cross connections were omitted the bars 4 would require lateral projections at their insides front and rear to rest the seat and back upon when inverted, as is now used at 6 for the front of the seat, Fig. 1, and this would be the equivalent of what is shown herein as a rigid frame.

The downward bend of cross portion 3 serves to accommodate the cushion of the seat when the seat is inverted. Otherwise it would preferably be straight. Now, it will be seen that seat C rests upon frame B, Fig. 2, at its front and rear, having a flange or projection 7 at its rear lying on top of cross-bar 2, and a similar flange or projection 8 at its front resting on lateral projections 6 to which the cross piece 3 is secured, as shown herein, but this construction might be changed and afford equivalent supports. A flexible apron 9 along the front of the seat or seat frame makes a finish at this point, and distinct stops 10, front and rear on the bottom of the seat frame prevent it from slipping back and forth when used as a seat.

The back D for the seat is provided with projections or flanges 12 and 13 at its edges adapted in one instance to rest on cross portion or projection 2 on the bed frame and in the other on ledge or projection 14 on the wall A. This occurs when the bed is made and frame B is drawn forward and the back is inverted and laid thereon behind the seat to complete the bed bottom adapted to receive the spring mattress. The said back is sustained in its position, Fig. 2, by means of short lugs or projections 15 on the side supports A′, which are engaged by catches 16 on the back and serve to hold the back firmly in the appointed relation to the seat and yet leave the back free to be lowered and inverted when a bed is to be made. These projections do not interfere with the use of the bed because they come below the top plane of the hair mattress, which overspreads the spring mattress beneath.

The spring mattress, for convenience, is made in four sections F and G, two of each, which are carried by the respective seats and backs and are preferably supported thereon so as to go with said parts to both positions of use. This takes care of said mattress sections when the invention is made up for seating, and brings them at once to the top in using relation when a bed is made, as in Fig. 1.

When down, as in Fig. 1, the backs of the seat rest at their front on frames B and at their rear upon ledge 14 on wall A, and the mattress sections G have rigid cross portions g at what becomes the end of the bed when they are down and which serve as rests at the top for the

backs D, when used as in Fig. 2. In this position, if preferred, a dog or catch 17 may be employed to secure said parts against any tendency to tilt forward.

H is the hood or head section of the seat back hinged at its top and adapted to be swung up out of the way when not in use, Fig. 1. In this particular instance links *h* serve as the hinges or hangers for said hood, and a catch *h'* to hold it up out of the way. When down it rests at its lower edge back against the top edge of back D.

When seat C is inverted it is simply turned end for end upside down with the same edge at the front, and the upper edge of the back D becomes the outer edge when in the bed and inverted. The mattress sections have about the same width as the seat and back, respectively and the slight gap or space between them when down as in Fig. 1 is bridged by the hair mattress and does not become noticeable. This makes an exceedingly comfortable bed and leaves abundance of room beneath for disposing of dress-suit cases and other usual baggage. The space behind and within hood H may be utilized for the storing of bedding.

What I claim is:—

1. In combined seats and berths for passenger carriers, the combination of separate invertible seats and invertible seat backs respectively provided on their rear with spring mattress sections, and means to support said seats and backs edge to edge in inverted positions to form a complete bed bottom comprising slidable frames and fixed rests.

2. In combined seats and berths for passenger carriers, the combination of separate invertible seats and seat backs, separate bed mattress sections for said seats and backs, respectively, means to support said seats and backs in angular relation and also edge to edge in inverted position on the same plane with said mattress sections uppermost, and a movable head rest adapted to form a continuation of the back at its top.

3. In combined berths and seats for passenger carriers, slidable supports having inwardly extending projections, in combination with separate seats and backs constructed at their edges to rest upon said supports in inverted position, and fixed rests for the said backs at their outer edges independent of said slidable supports.

4. In combined berths and seats for passenger carriers, a complete berth comprising two slidable frames adapted to meet edge to edge at the middle of the berth, in combination with inverted seats and backs in said frames, the bottom of said seats and backs constituting the bottom for said berth.

5. In a combined berth and seat for passenger carriers, slidable supports adapted to be drawn toward each other and to meet half way, in combination with invertible seats and seat backs provided with projections at their edges adapted to rest on said slidable supports and to constitute a bed bottom, and a separate mattress section for each seat and back.

6. In a combined berth and seat, stationary supports, and side-bars constructed to carry the seats and the berth slidably engaged in said supports, in combination with inverted backs forming the ends of said berth, inverted seats forming the middle portion thereof, and the said backs adapted to rest in part on said stationary supports.

7. In a combined berth and seat, an invertible seat having a spring mattress section upon its bottom, and a supporting flange at its front and rear, a couch back adapted to be lowered to form a berth with said seat when inverted, and having flanges at its front and rear edges, supports for said back and seat flanges when used both as couch and berth, and a head rest above said couch back.

8. In a combined berth and seat, a couch seat adapted to be shifted for a bed, a couch back provided with a spring mattress upon its back and adapted to be lowered and inverted to combine with said seat to form a berth, a head rest above said couch back and supports for said seat and back.

In testimony whereof I sign this specification in the presence of two witnesses.

DAVID T. OWEN.

Witnesses:
R. B. MOSER,
C. A. SELL.