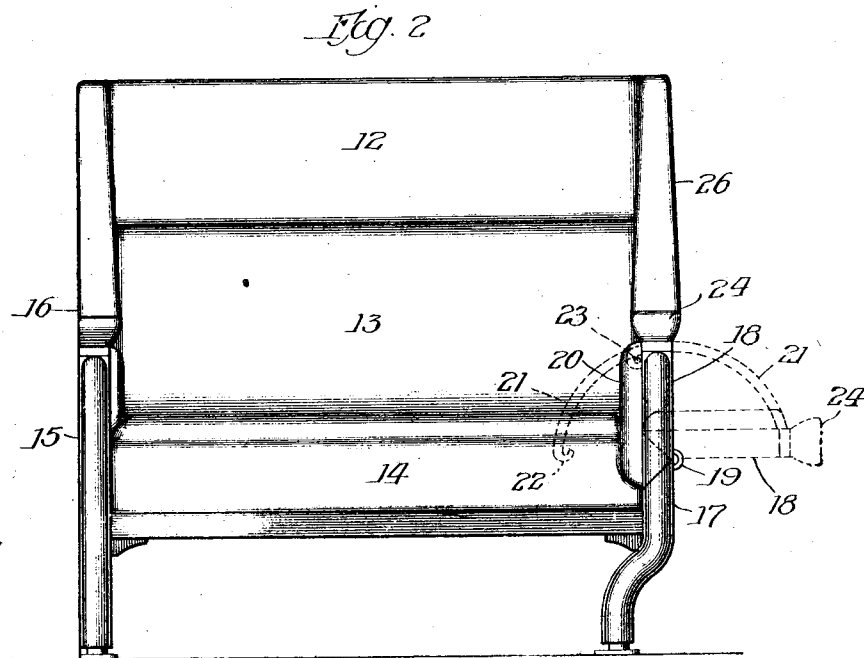
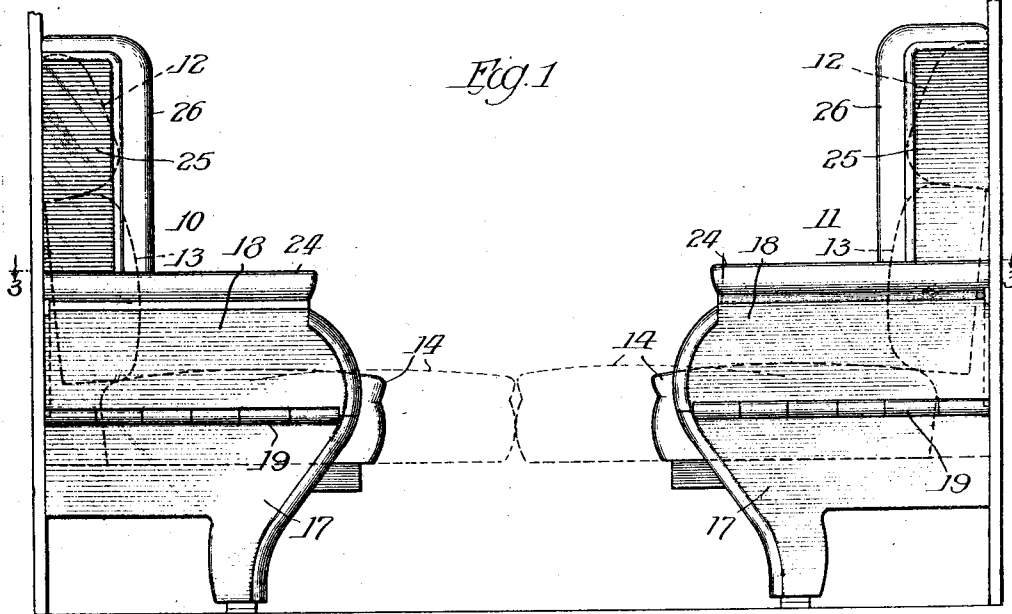


R. C. SMITH.
 CONVERTIBLE CAR SEAT.
 APPLICATION FILED FEB. 19, 1912.

1,060,293.

Patented Apr. 29, 1913.

3 SHEETS—SHEET 1.



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Inventor:
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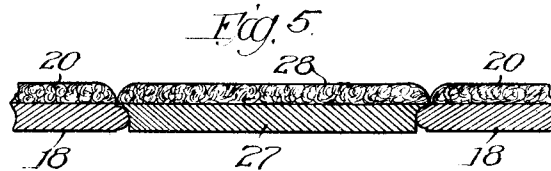
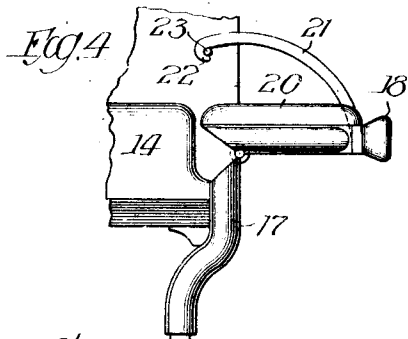
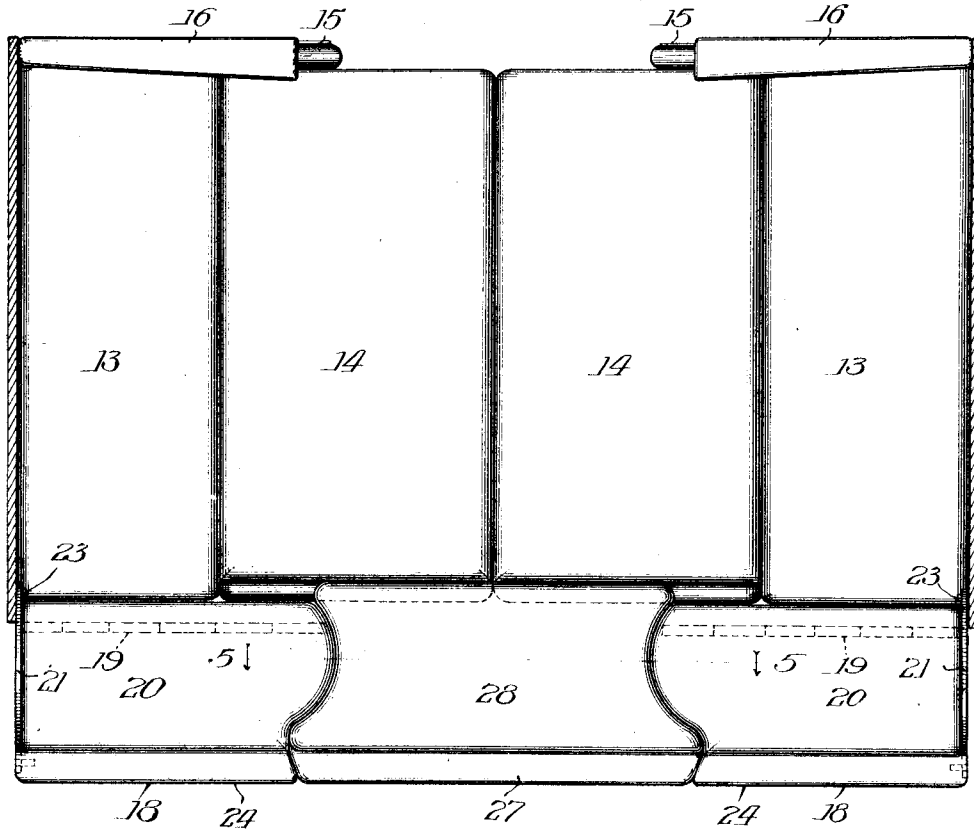
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3 SHEETS—SHEET 2.

Fig. 3



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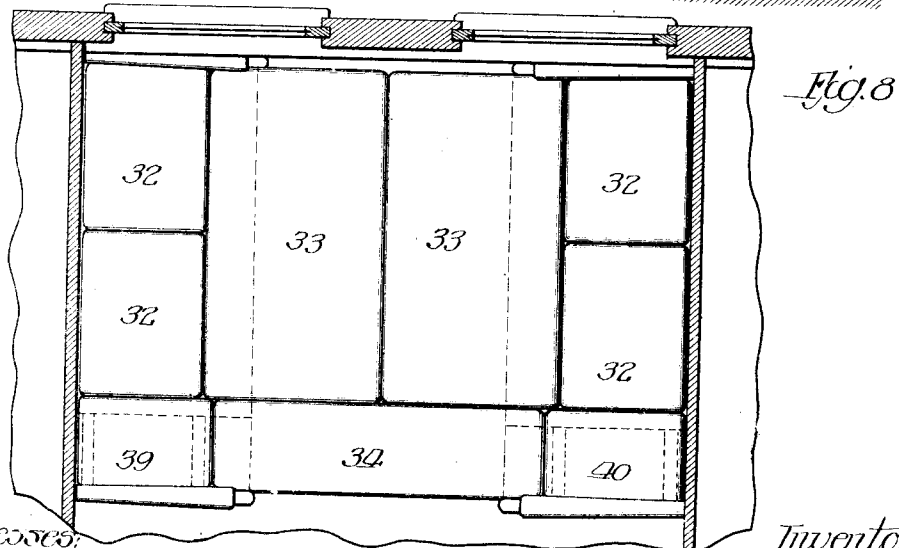
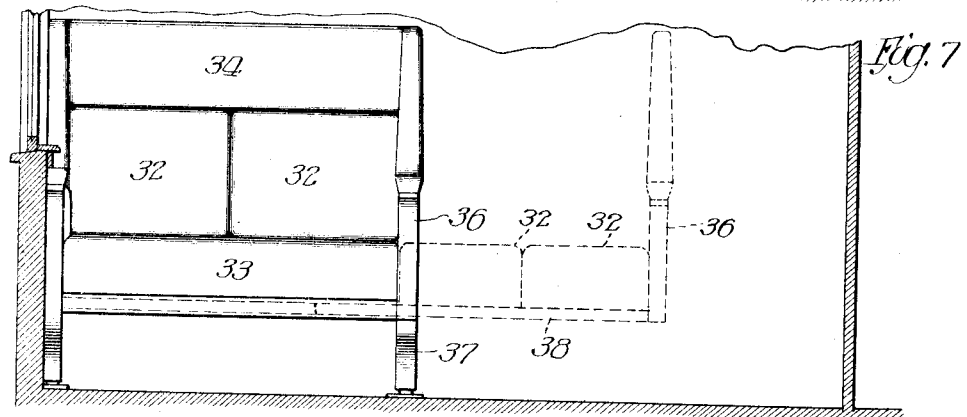
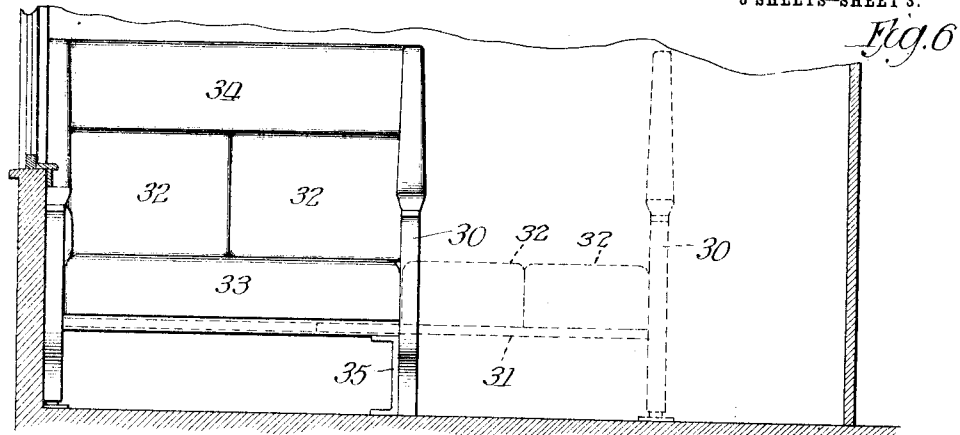
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

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CONVERTIBLE CAR-SEAT.

1,060,293.

Specification of Letters Patent.

Patented Apr. 29, 1913.

Application filed February 19, 1912. Serial No. 678,459.

To all whom it may concern:

Be it known that I, RUSSELLA C. SMITH, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Convertible Car-Seats, of which the following is a specification.

The drawing rooms of railway sleeping cars as distinguished from what are termed compartments, are equipped with two seats capable of conversion into a lower berth or bed, an upper berth, and a couch, but the compartments, because of their shape and lack of space, are not provided with such couches or equivalent means permitting lying down of the occupant during the day time unless the seats are made up into a bed, which, of course, destroys their usefulness as seats.

One of the objects of this invention is to so construct the oppositely-facing seats in the railway car compartment that either or both of them may be elongated or lengthened into couch-like form, affording convenient and comfortable couches during the day time without at the same time preventing the occupant or occupants sitting on the seats, the couches in effect constituting seats of greater length than the ordinary seats.

Inasmuch as the space in railway sleeping cars available for the seats convertible into beds at night is necessarily limited and restricted, another purpose of the invention is to increase the size and width of such beds, particularly those of the lower berths, without encroaching upon the necessary floor space used during the day time, and without necessarily increasing the size of the car seats or materially modifying their appearance. The use of this novel form of seats and beds in compartments increases the capacity of such compartments, and improves the conditions under which the traveler sleeps, by making the bed of the lower berth of full double width rather than of a width corresponding to the ordinary length of the car-seats, as is customary in the present practice. In carrying out my invention I so construct the seats that they may be enlarged or elongated to form couches, such enlargement being taken advantage of so as to render the bed when made up of the required extra width to make it of ordinary double bed width.

In order that those skilled in this art may

have a full and complete understanding of this invention, I have illustrated preferred and desirable embodiments of the same in the accompanying drawings which form a part of this specification and to which reference should be had with the following detailed description.

In these drawings: Figure 1 illustrates the two oppositely-facing car-seats such as are employed in the compartments of railway sleeping cars, but modified so as to incorporate and include certain features of my invention; Fig. 2 shows in full lines a face view of the right-hand seat illustrated in Fig. 1 and indicates by dotted lines a possible lengthening or elongation of the seat to convert it into a couch; Fig. 3 is a horizontal section through the car-seats on line 3—3 of Fig. 1 showing the seats converted into a bed of double width, and indicating the positions of the various cushions, which, of course, are covered when the bed is completely made up, with a mattress and bed clothing; Fig. 4 is a fragmentary elevation showing the portion of the car-seat end folded down to form either an extension of the seat to provide in combination with the seat cushion a couch, or a lateral extension of the bed when the seats are made up into bed form; Fig. 5 is a horizontal section on line 5—5 of Fig. 3; Fig. 6 illustrates a modified construction indicating a lengthening of the seat to provide a couch-like structure, the back cushions being employed for the extra length necessary to convert the seat into the couch; Fig. 7 illustrates in elevation another modification, and Fig. 8 shows how either of the structures of Figs. 6 and 7 may be employed with the various cushions to form the bed of extra width.

By reference to these drawings, and more particularly Figs. 1 to 5 inclusive, it will be observed that the two seats 10 and 11 are arranged as is customary in railway sleeping cars, facing one another, and that each seat is supplied with an upholstered head rest 12, a back cushion 13, and a bottom or seat cushion 14 supported as is usual so as to be capable of sliding forwardly to form the central portion of the bed structure, as is indicated in dotted lines in Fig. 1 and in full lines in Fig. 3. Each seat has the customary inner or wall seat-end 15 equipped with the upholstered arm rest 16. The outer seat-end 17 for each seat has a section 18 thereof hinged

at 19 so as to be capable of swinging downwardly and outwardly as shown in dotted lines in Fig. 2 and in full lines in Fig. 4, to form the necessary extension to convert the seat into a couch, or, in case the bed is made up, to form the side extension of the bed structure. The inner face of the section 18 is provided with a suitable pad or cushion 20 adapted to form a cushion extension of the seat cushion 14 when the seat is converted into a couch, and adapted to comprise an extension portion on which the mattress rests when the bed is made up. In order to support and hold such seat-section 18 in the turned down horizontal position, I fasten to the same at one end thereof a curved or arcuate bar 21 having a shoulder or hook 22 at its inner end which engages a suitable stop or pin 23 to limit the downward swinging of the seat-section. This section, when in vertical position, has on its upper edge an arm-rest cushion or pad 24, and the seat end in addition is supplied with a seat head-end 25 provided on its edge with the usual upholstery or pad 26. In order to complete the bed structure and fill in the space between the spaced-apart seat-sections 18, I may employ a removable bed section or filler piece 27 shaped to conform to the seat sections 18 and provided on its top surface with a suitable cushion 28 in the same plane as the tops of the cushions 13, 14 and 20. This bed-section or member 28 fits neatly in position as shown in Fig. 3, and is prevented from dislodgment by its shape, unless it is lifted out of position, which may be readily effected. The member 27 is supported not only by the seat-sections 18, but also by the companion cushions 14, 14, as is clearly illustrated.

During the day time, that is, when the bed is not made up, the pair of oppositely-facing seats may present the appearance indicated in full lines in Fig. 1, the cushions 13, 13, being in place beneath the head-cushions 23, 23, to form the backs of the seats, while the body or seat cushions 14, 14, are in the ordinary position beneath the inner and outer seat-ends, as is well indicated in Fig. 1. Under these conditions the hinged sections 18 are in vertical position in register with the remainder of the outer seat-ends, and are held or locked in such raised position by any suitable form of clamp or catch. If it is desired to convert or change either of the seats into couch form, its hinged section 18 is unlocked or uncatched and turned down into horizontal position, wherein it forms an extension or prolongation of the seat sufficient to change the seat structure into a couch of substantial length. If the head-section 25 is in the way it may be hinged to the back of the seat or the wall, and be capable of turning or folding against the wall out of the way.

At night, or at any time when it is desired to make up the bed the companion seat cushions 14, 14, are slid forward toward one another until they abut, and the back cushions 13, 13, are brought into the same horizontal plane as the seat cushions, occupying the spaces vacated by the seat-cushions. The two hinged sections 18, 18, are swung or folded down into horizontal position with their cushions 20, 20, in the same plane as the cushions 14, 14, these seat-cushions being maintained in proper relation to the other parts of the seats by the supporting action of the curved bars 21. Then the intermediate filler-piece or bed-section 27 is placed in position between the seat-sections, being partially supported by the latter and also the cushions or seat bottoms 14, 14. In this way a bed of substantial width, practically equaling that of an ordinary bedstead is provided, and on top of the cushions 13, 14, 20 and 28 the mattress and bed clothing are placed in the usual manner.

Where such a construction is taken advantage of in a compartment of a railway car, such room can be made to accommodate three persons, two in the lower double berth and one in the usual upper berth, so that by incorporating the features of construction of my invention in the seats, the capacity of each compartment is increased from two to three persons, or if two persons only occupy the room they can use this lower double berth and thereby avoid the necessity of ascending into the upper berth.

From the above description, it will be obvious that by replacing the seat cushions in their ordinary positions, removing the intermediate filler 27 and folding up the seat-end sections 28, the seats will be in their ordinary condition and complete in every respect, the intermediate filler being accommodated in the pillow box below one of the seats or in any other convenient place. As soon as any of the occupants of the compartment desire to recline, one of the seat ends can be folded down, changing such seat into a comfortable couch without materially modifying the appearance of the compartment and without interfering in any way with the other occupants or the furnishings of the room. A further advantage of the construction is that the bed may be made up in the old way with a narrow mattress, the filler piece not being required as a support therefor, under which arrangement one or both of the seat ends may be extended horizontally to a position beyond the side of the bed to form at the head or foot of the same, or both, a seat for use in dressing, a table for food, books, medicine, etc., or a step for use in ascending into the upper berth.

In Fig. 6 a modified construction is indicated. In this form of construction the entire inner seat-end 30 is connected to the

seat structure proper by means of a plurality of bars 31, having telescoping or sliding connection with the main portion of the seat construction, permitting the seat-end 30 to occupy its normal position as shown in full lines, or permitting it to be pulled out into the dotted line position shown in the same figure. In this embodiment of the invention the back cushion of the seat, instead of being in the single piece, may be desirably divided so as to provide two cushions 32, 32', which may be employed as shown in dotted lines in Fig. 6 to form the extension or enlargement of the seat resting upon the bar 31 and being in the same plane as the bottom or seat cushion 33, the head cushion 34 remaining in its usual place. It will be noted therefore, that in a structure of this kind no additional cushions are required to form the couch, the back cushion being merely divided and its two sections placed crosswise of the bars 31. Furthermore, by moving the entire seat-end 30 to the end of the couch, it forms a convenient support for the extension-portion of the couch, the adjacent end of the seat proper being supported on any suitable standard 35, which, being under the seat, is inconspicuous and practically out of sight when the seat-end 30 is in the full line position shown.

In Fig. 7 a somewhat changed structure is shown, differing from that illustrated in Fig. 6 in that the upper portion 36 only of the seat-end is pulled out when it is desired to convert the seat into a couch, the lower section of the seat-end remaining in its ordinary position and acting as a support for the seat structure. As in the preceding instance, the part 36 of the seat-end is connected to the seat structure proper by means of the sliding bars 38 connected to the section 36 and slidably associated with the seat. In this case, the extension of the seat which converts it into a couch is overhanging, as is clearly illustrated.

In Fig. 8 I have shown the arrangement and disposition of the cushions and other parts when the seat constructions of Figs. 6 and 7 are made up into bed form. In either case the seat-end 30 or 36 is pulled out the desired amount, the seat and back cushions take their usual horizontal position forming the main portion of the bed, and the side extensions of the bed is formed by means of two extra cushions 39 and 40, between which may be placed one of the detachable head cushions 34, so that the parts of the bed structure over which the mattress and bed clothing are placed occupy the positions indicated in this figure. The extra cushions 39 and 40 may, under ordinary circumstances, be kept in one of the pillow boxes, and as I have shown, the seats when the bed is made up, need not necessarily be elongated to the same length that they are

when employed as couches, because in this case the back cushions are needed to complete the bed, as is well shown.

Although I have herein described with some degree of particularity, different embodiments of the invention, it is not to be understood that the latter is limited or restricted to the precise and exact mechanical features of construction of the device illustrated and described, because the various parts of these seats may be modified within comparatively wide limits without departure from the substance of my invention and without the sacrifice of any of its substantial benefits and advantages.

I claim:

1. In a convertible seat and bed construction for railway cars, the combination of a pair of oppositely-facing car-seats having one end abutting against the side wall and the other provided with seat-ends, cushions for said seats and their backs adapted to be shifted into a horizontal plane to form a portion of the bed, one of said seat-ends having at least a portion thereof movable to form a side extension at the end of the bed, substantially as described.

2. In a convertible seat and bed construction for railway cars, the combination of a pair of oppositely-facing car-seats having one end abutting against the side wall and the other provided with seat-ends, bottom cushions, back cushions and head cushions for each of said seats, said bottom and back cushions being adapted to be shifted into a horizontal plane to form a portion of the bed, said seat-ends having at least a portion thereof movable to form a side extension of the bed, whereby to provide a bed of greater width than the length of the seats, one of said head cushions forming at least a portion of the cushion for said extension when the bed is made up, substantially as described.

3. In a sleeping car, the combination of a pair of fixed oppositely facing seats each having one end abutting against the side wall and the other provided with seat ends, said seat ends movable to form a side extension of the two seats, and a filler piece adapted to occupy the space between the extended seat ends whereby to provide a bed of width greater than the length of the seats, substantially as described.

4. In a sleeping car, the combination of a pair of fixed oppositely facing seats each having one end abutting against the side wall and the other provided with seat ends, said seat ends hinged to swing to a horizontal position to form a side extension of the two seats, and a filler piece adapted to occupy the space between the extended seat ends whereby to provide a bed of width greater than the length of the seats, substantially as described.

5. The combination in a sleeping car compartment, of a pair of fixed oppositely facing seats disposed transversely of the compartment at one side thereof, the seat ends hinged to drop to a substantially horizontal position into the space between said seats and the compartment side wall, and a filler piece adapted to occupy the space between the extended seat ends whereby to utilize a portion of the space within the compartment to provide a bed having a width greater than the length of the seats, substantially as described.

6. In a sleeping car, the combination of a pair of facing double seats having portions adapted to bridge the space between the seats to constitute thereof a bed, the end of at least one of the seats movable to form a horizontal side extension of said seat, substantially as described.

7. In a sleeping car, the combination of a pair of facing seats having portions adapted to bridge the space between the seats to constitute thereof a bed, the end of at least one of the seats hinged to drop to a horizontal position to form a side extension at the end of the bed, substantially as described.

8. In a sleeping car, the combination of a

pair of facing double seats having portions adapted to bridge the space between the seats to constitute thereof a bed, one of the seat ends hinged at a point substantially equidistant from its lower end and from the upper edge of the seat bottom whereby to drop to a horizontal position and to constitute a substantially unbroken continuation of the seat bottom, substantially as described.

9. In a sleeping car, the combination of a pair of facing double seats having portions adapted to bridge the space between the seats to constitute thereof a bed, the end of one of the seats hinged to drop to a horizontal position, the said seat end hinged at a point substantially equidistant from its lower end and from the upper edge of the seat bottom and at a distance below the plane of said upper edge corresponding substantially to the thickness of the seat end whereby to bridge the interspace and to constitute a substantially unbroken continuation of the seat bottom when dropped to its prone position, substantially as described.

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