

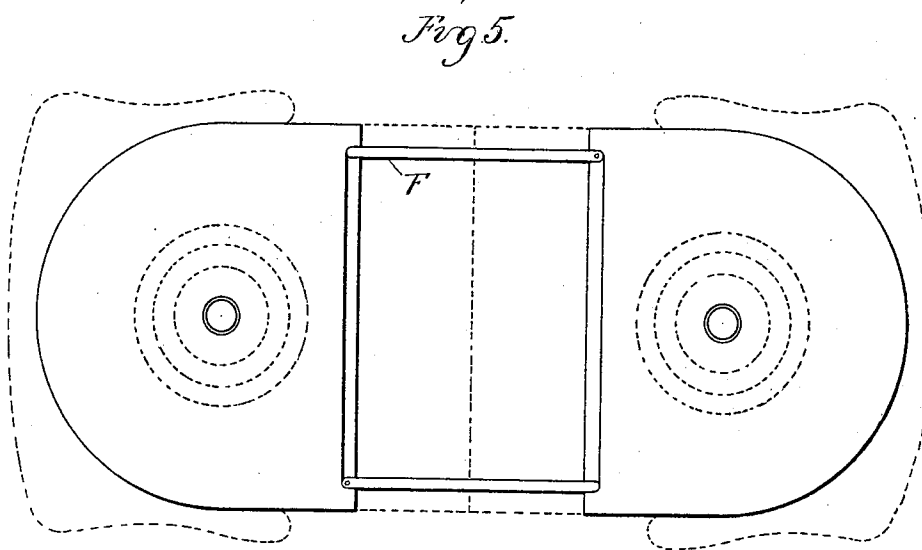
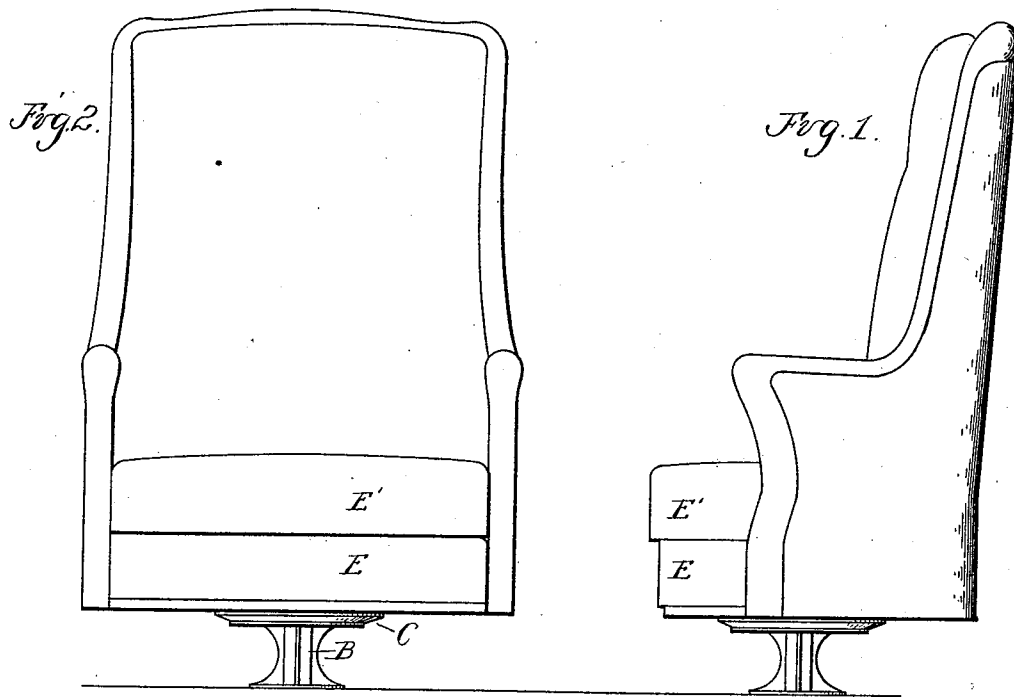
(No Model.)

2 Sheets—Sheet 1.

J. KREHBIEL.
· CONVERTIBLE SEAT AND BERTH.

No. 544,510.

Patented Aug. 13, 1895.



Witnesses
L. J. Whittemore
a. L. Hobby

Inventor
John Krehbiel
By Mr. S. Sprague
Attys.

(No Model.)

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Fig. 3.

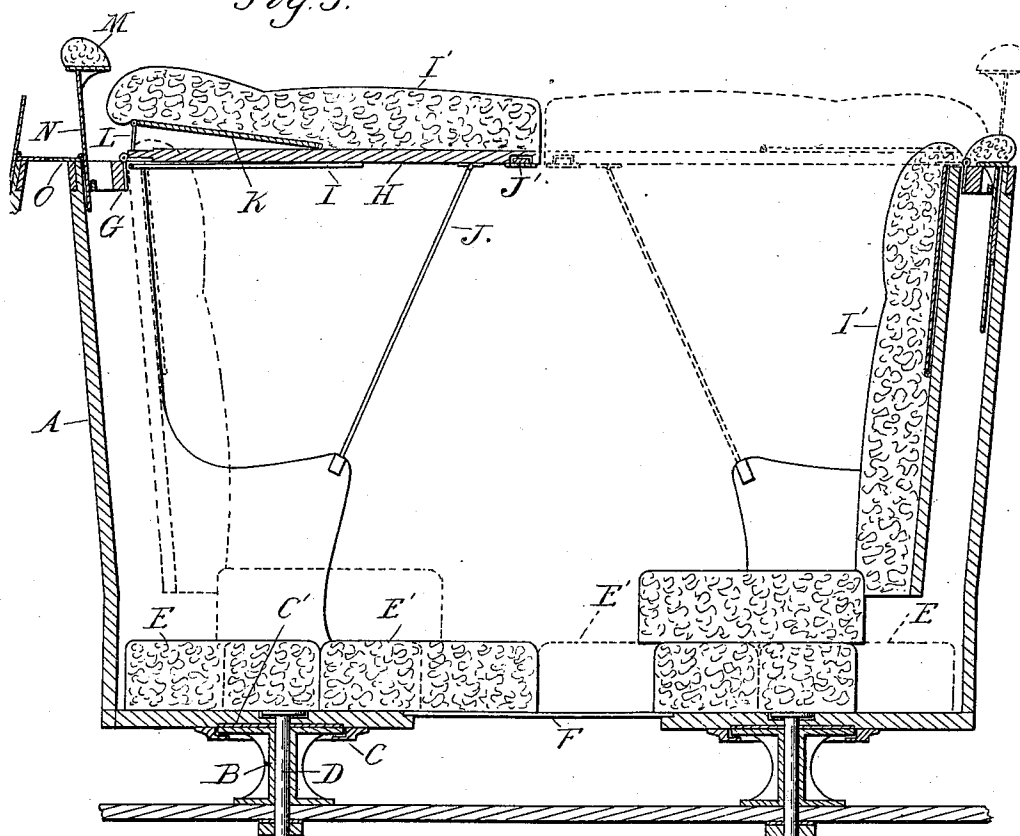
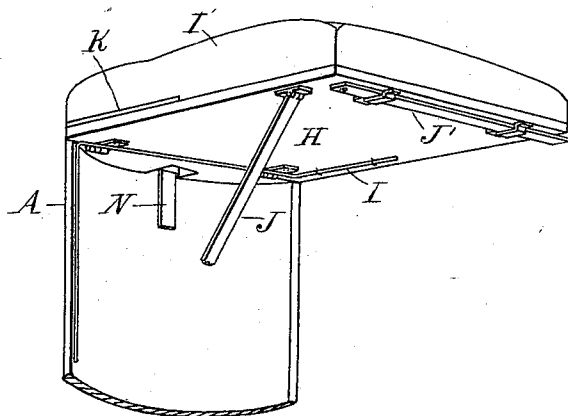


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN KREHBIEL, OF CLEVELAND, OHIO.

CONVERTIBLE SEAT AND BERTH.

SPECIFICATION forming part of Letters Patent No. 544,510, dated August 13, 1895.

Application filed October 29, 1894. Serial No. 527,122. (No model.)

To all whom it may concern:

Be it known that I, JOHN KREHBIEL, 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 Convertible Seats and Berths, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention consists in the peculiar construction of a seat having back and seat cushions designed to be shifted from the ordinary seat use to form cushions for berths.

The invention consists particularly in the peculiar construction of the seat-back and back-cushions, and, further, in the construction, arrangement, and combination of the various parts, all as more fully hereinafter described.

In the drawings, Figure 1 is a side elevation of a railway-car seat embodying my invention. Fig. 2 is a front elevation thereof, the two seats being arranged opposite each other, as in a car, and being swiveled into the positions described. Fig. 3 is a vertical central section through the two seats arranged opposite each other, showing them (in full and dotted lines) as both seat and berth. Fig. 4 is a perspective view of one of the seat-backs. Fig. 5 is a top plan view of the seats with the cushions removed.

A is the seat-frame, which is pivotally supported on a bracket B, the upper end of which is secured by a guide-ring C on the under side of the seat-frame bottom, bearing against the wear-plate C', and D is a pivot-bolt extending through the bracket and through the car-floor and seat-bottom, as plainly shown in Fig. 3, so that the seat-frame may swivel about the pivot to turn in any desired position around the same. On the seat-bottom are two seat-cushions E and E', adapted to be supported one upon the other to form a seat of the usual height. These cushions may be arranged to form a berth by turning the seats to face each other, as shown in Fig. 3, connecting the adjoining edges of the seats by means of the connecting-bars F, which are pivoted to the opposite edges of the adjoining seats and are adapted to span the space between the frames. When not in use, these connecting-bars are turned parallel with the

edge of the seat-bottom. The cushions, being arranged upon the seat-bottoms and connecting-bars F, will form a lower couch or berth, as shown in Fig. 3. At the top of the back of the frame is a cross-bar or filler-block G, projecting forwardly. From the back to the upper forward edge thereof is hinged the upper edge of the seat-back frame H. The hinge-joint of the back is provided with a suitable spring I to act as a counterbalance for the weight of the seat and to assist in lifting the seat to form the upper berth. These seat-backs are provided with suitable cushions I' and, near the outer ends at the outer edge, with the pivot-braces J, which, when the seat-backs are raised into a horizontal position, are adapted to engage with bearings on the arms of the seat-frames to support the backs in their adjusted position, as plainly shown in Fig. 3.

J' are sliding bars engaging in transverse bearings on the under face of the seat-back frame H, at the outer end thereof, adapted to be shot into supporting-bearings in the side of the car to further support the ends of the backs when turned to form the upper berth.

The seat-back cushion, at one end on its under face, is provided with the frame K, hinged at its inner edge to the seat-back and at its outer edge provided with means for raising or lowering it to give the end of the seat-cushion an inclination, as plainly shown at the left hand in Fig. 3.

The means I have shown consists of a pivot-link L, adapted to be turned to a vertical position between the frame K and the seat-back H, thus raising the head of the couch the desired distance.

For the purpose of lengthening the couch without occupying any more room for the seat-frames in the car, and at the same time to provide a satisfactory head-rest, I arrange a detachable top cushion M across the top of the seat-frame, supported on standards N, sliding in guideways in the seat-frame, with any suitable means for supporting it in its adjusted position. It will be seen that this cushion, when resting as shown in Fig. 3, will act as an extension of the cushions and will also be sufficiently raised to form a satisfactory head-rest, so that no pillow need to be used. This is a desirable feature, not only in connection

with the construction which I have shown herein, but in connection with any other form of berth, as it really adds several inches to the length of the berth without adding to the length of the space for the seat-frames in the car.

In order to brace the top of the seat-backs, I may connect them in any desired manner, but prefer to employ the plates O, hinged to the standard N and in their raised position adapted to extend half-way across the space between the adjoining seat-backs, as shown in Fig. 4, the corresponding plate of the adjoining seat abutting against it and thus acting as a brace therefor.

With this construction of swivel seat I am enabled to get all the advantages of the ordinary chair-car for day use, and at the same time to get an exceedingly comfortable berth for sleeping purposes.

What I claim as my invention is—

1. In a convertible seat and berth, the combination with the seat frame, of a seat back hinged at its upper end to the frame adapted to form a section of an upper berth, and a head rest carried by the frame independent of the back adapted to form an extension of the upper berth, substantially as described.

2. In a convertible seat and berth, the combination of the seat frame, the seat back hinged thereto and adapted to be turned in horizontal position to form a section of an upper berth, the removable section of the top of the seat frame independent of the seat back, and the extensible support therefor to permit of such top being raised to form an end extension of the upper berth, substantially as described.

3. In a convertible car seat, the combination with the seat frame, of a vertically adjustable head rest carried thereby, a seat back,

means for securing the same in a horizontal position, and means for adjusting the upper end of the seat back to vary the inclination thereof, substantially as described.

4. In a convertible seat and berth, the combination of the seat frame, the seat back hinged thereto at the top and adapted to be supported in a horizontal position to form an end section of an upper berth, of the hinged frame K on the upper face of said seat back frame, the end of the cushion supported on the end of said frame K, and a support for the outer end of said frame, such as the links L, substantially as described.

5. In a sleeping car, the combination with swiveled seat frames adapted to be arranged in pairs, each pair adapted to be converted into sleeping berths, of hinged connections between the tops of the adjoining frames of each pair, substantially as described.

6. In a sleeping car, the combination with the swiveled seat frames adapted to be converted into sleeping berths in pairs, of the hinged plates O on the tops of the seat frames adapted to form a brace for the adjoining frames of each pair, substantially as described.

7. In a convertible seat for sleeping cars, the combination with a seat frame, of a seat back, means for supporting the back in a horizontal position, and an independently adjustable section on the frame adapted to constitute an extension of the berth section formed by the back, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN KREHBIEL.

Witnesses:

M. B. O'DOHERTY,
O. F. BARTHEL.