

A. M. SMITH.  
Sleeping-Car.

2 Sheets—Sheet 1.

No. 204,855.

Patented June 11, 1878.

Fig. 1.

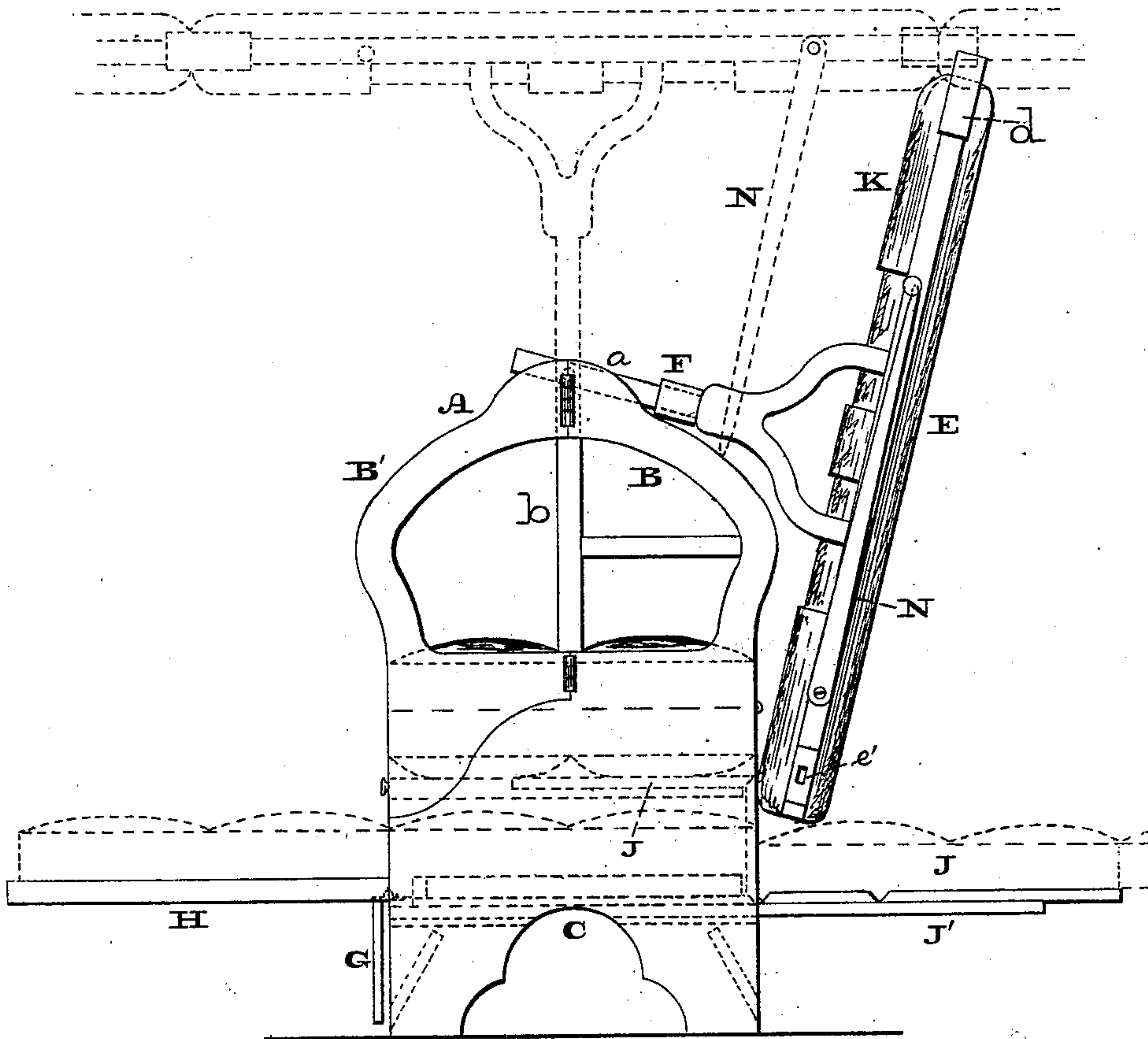


Fig. 2.

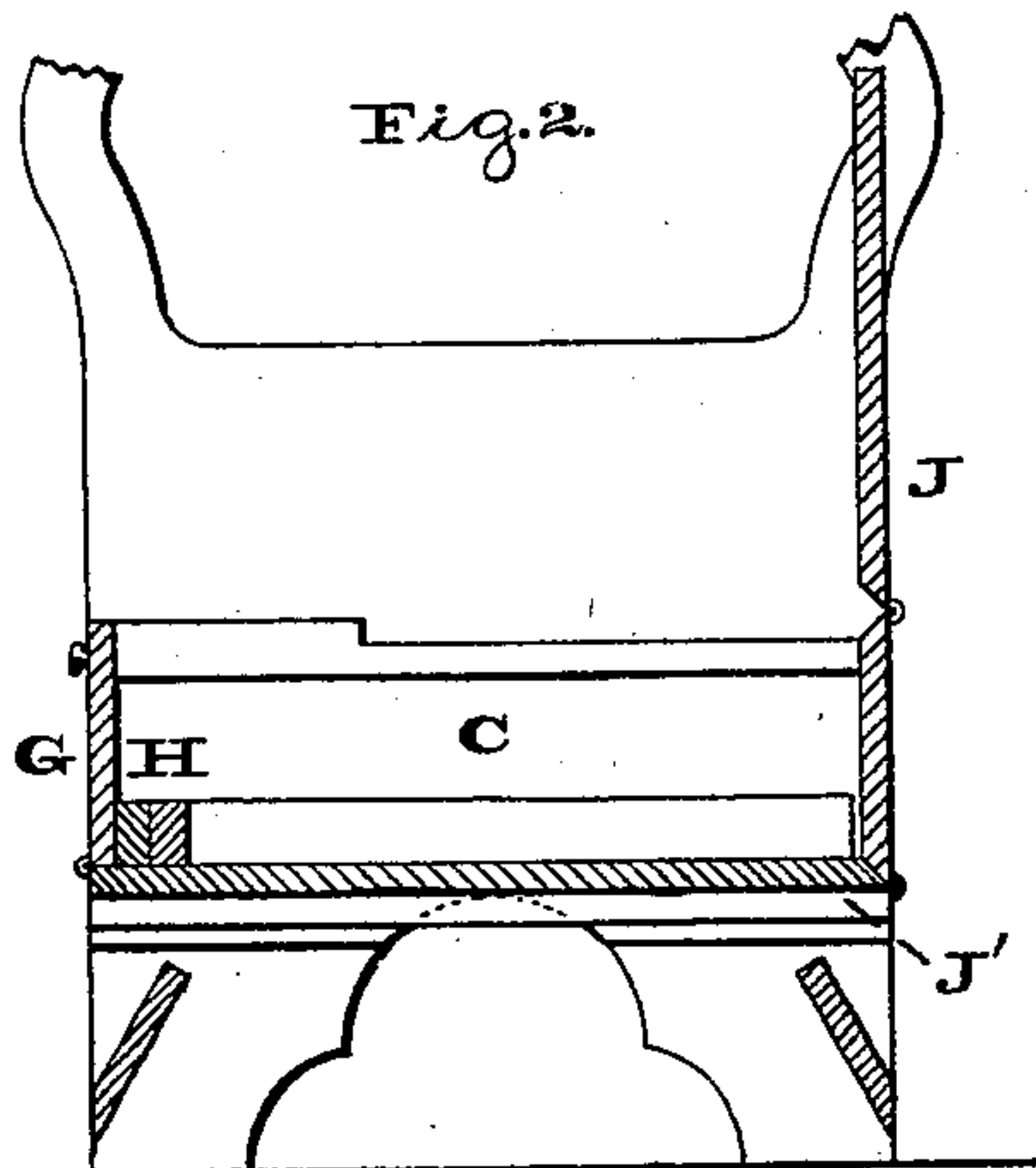
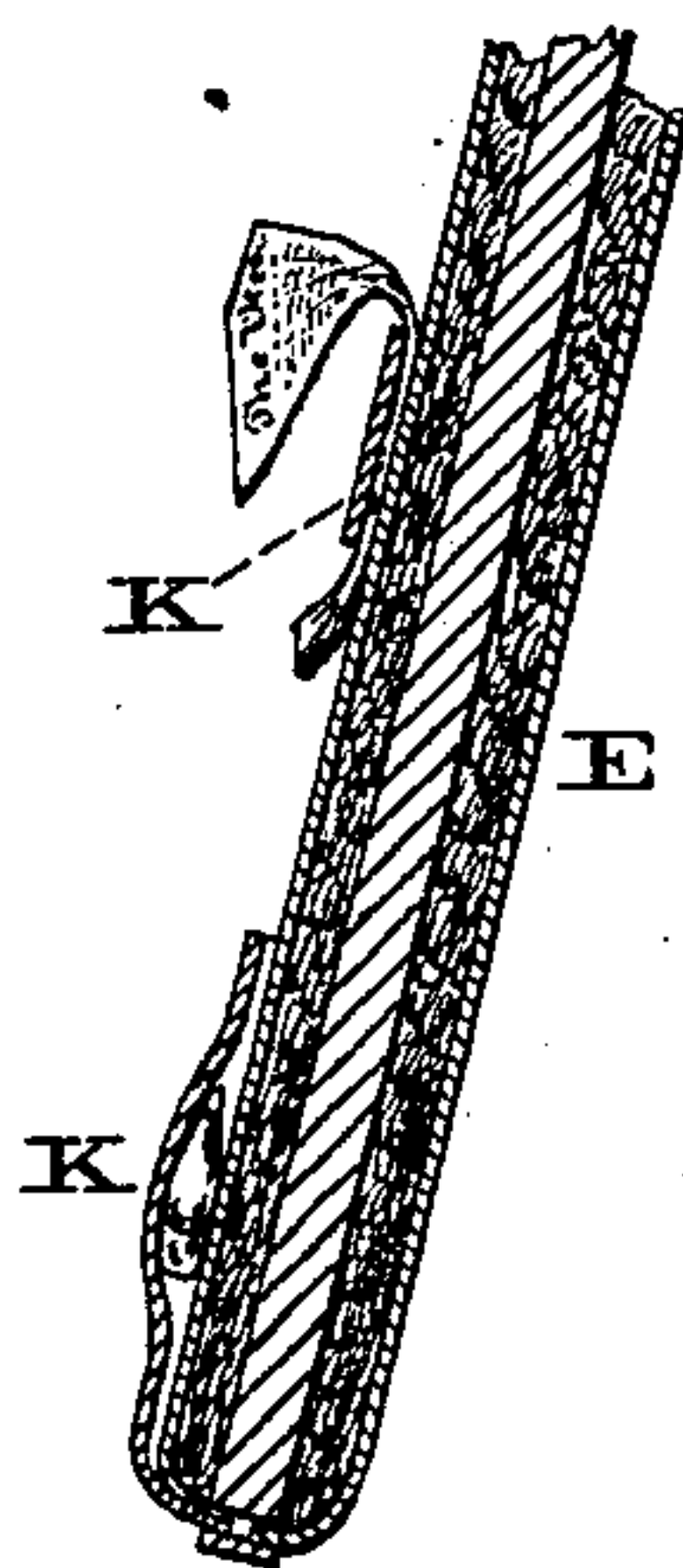


Fig. 3.



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Fig. 4.

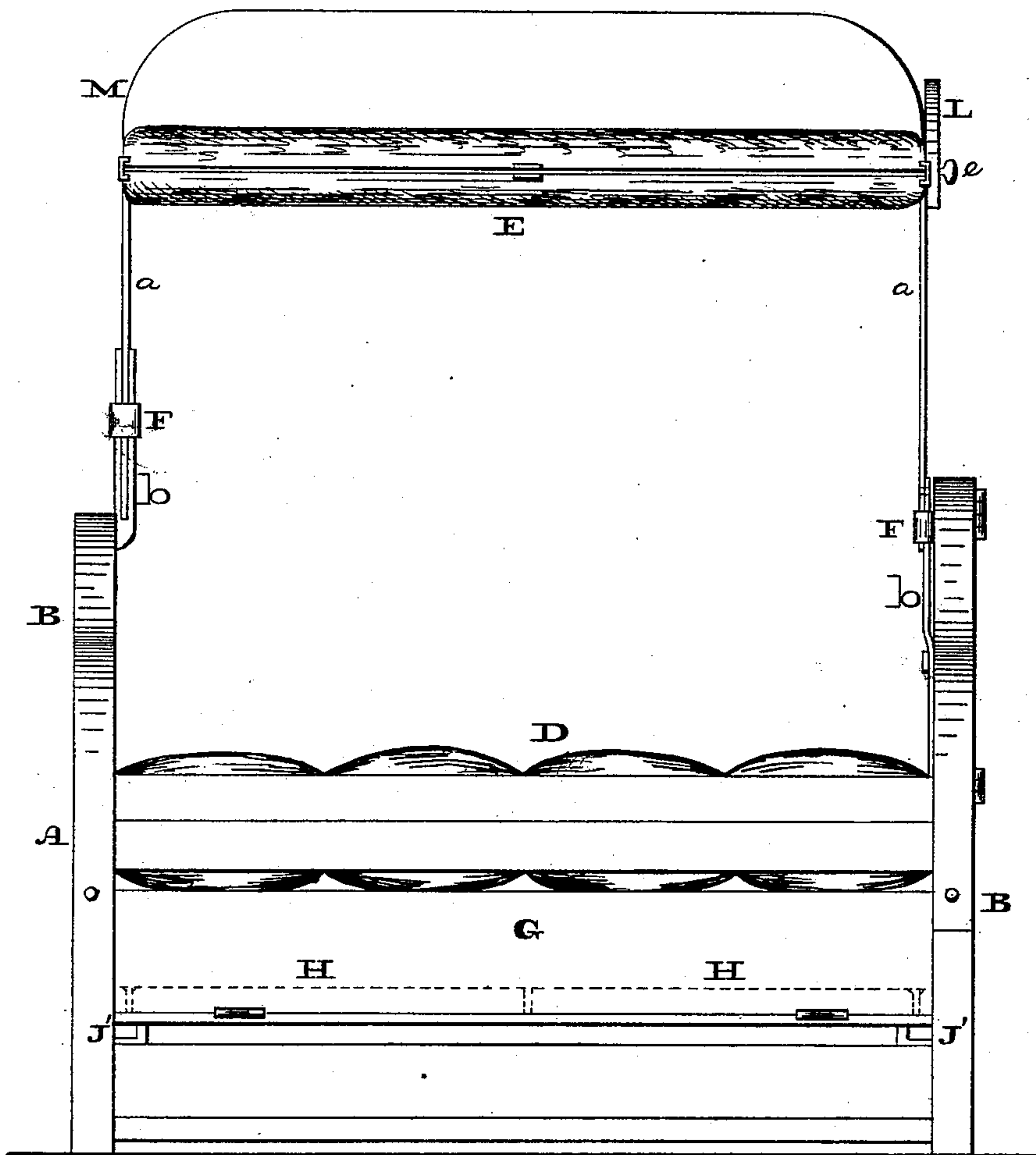
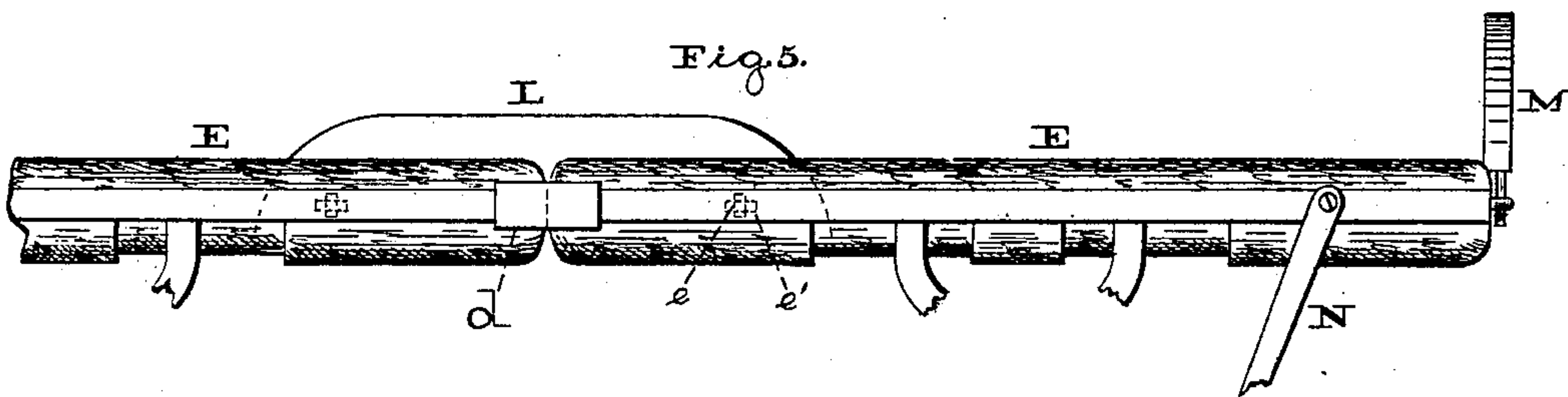


Fig. 5.



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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN SLEEPING-CARS.

Specification forming part of Letters Patent No. 204,855, dated June 11, 1878; application filed May 15, 1878.

*To all whom it may concern:*

Be it known that I, ANDREW M. SMITH, of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Converting Car-Seats into Sleeping-Berths, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a side elevation of the car-seat embodying my invention. Figs. 2 and 3 are vertical sections of portions thereof. Fig. 4 is a front or rear view thereof. Fig. 5 is a side elevation of the backs of seats converted.

Similar letters of reference indicate corresponding parts in the several figures.

My invention relates to sleeping-cars in which the backs are adapted to be swung into a horizontal position so as to form upper berths, while the seats are extended to constitute lower ones.

Referring to the drawings, A represents a car-seat, of which B B' are the sides or arm-rests; C, the body; D, the folding or two-part cushions, and E the swinging back, the body C being of box form to receive the blankets, sheets, pillows, &c.

The arms *a* of the back E are pivoted to vertical arms *b* secured to the arm-rests B, and fitted on said arms *a* are sleeves F, which are adapted to slide on and embrace the arms *a* *b* when the arms *a* are in vertical positions, due to turning the backs E horizontally, and thus support said backs.

To either the front or rear of the body C there is pivoted a downwardly-opening bar, G, and adjacent thereto there are pivoted to the body braces H, which may be operatively folded out, as in Fig. 1, or inoperatively folded within the body C, as in Fig. 2, the bar G being closed, thus concealing the braces and preventing their accidentally opening out.

To the body, opposite to the bar G, there is hinged a jointed board, J, which may be folded over the body, as shown by the dotted lines, Fig. 1, in which case the cushion D partly rests thereon, opened, as shown by the full lines, same figure, or placed in a vertical position, as in Fig. 2.

The arm-rest is formed of parts divided vertically, and one part, B', is hinged to the stationary part B by vertical joints, whereby the

said part B' may be folded against the other part, thus increasing the space for access to the lower bed, when formed.

K represents pockets formed on the back E, and adapted to receive papers, lunch, &c., when the back is in its normal position, and when it is converted into a berth the pockets provide convenient means for stowing articles of clothing, &c., overhead or out of the way of the occupants of the berth.

L represents a guard and support for the sides of the backs, and M represents a foot or head piece for the ends of said backs, which parts are employed when the backs are turned horizontally, but stowed in the body C when the car-seat is in its normal state.

The operation is as follows: In order to form the upper berths, swing the backs to horizontal positions, and connect them by means of bolts *d* or other fastenings at adjacent ends. Attach the guards L to adjacent backs, for which purpose I may employ buttons *e* having T-heads, which enter slots *e'* in the side pieces of the backs and engage with the walls thereof. Affix the head or foot boards to the ends of alternate backs, said boards having pins, which enter eyes in the backs, or other means of fastening.

As the guards L connect two adjacent backs, they also provide supports for the joints thereof, and strengthen parts otherwise weak. The seats may be further supported by means of braces N, which may be hinged to the backs and rest on the arm-rests, or vice versa.

The boards M separate the lengths of backs, and define the extent of the upper berth formed thereof.

By lowering the bar G and extending the braces H, the cushions D may be placed or unfolded on the latter, and thus form the lower berths; and, if desired, the board J may be lowered and supported on braces J', which, when not required, are folded in the body C; but should said board J not be required for support of the unfolded cushion, it may be placed in an upright position, as in Fig. 2, and thus serve as a head or foot board.

It will be seen that a car-seat adapted for two persons may be easily converted into a sleeping-berth capable of accommodating two persons,



The upper berth will be firmly supported and braced by the sleeves F, bolts *d*, guard and supporting piece L, and brace N, if the latter is desired.

When the brace N is not required, it may be folded on the side of the back, as seen in Fig. 1.

After the hinged part B' of the arm-rest has been opened and the berth is occupied, the occupant may close said part B' from within.

Suitable fastenings are provided for locking or holding the bar G and the hinged part B' of the arm-rests in closed positions, the same being conveniently accessible.

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

1. The arms *b* secured to the arm-rests, in combination with the sliding sleeves F, and the arms *a* secured to the seat-back and pivoted to the said arms *b*, substantially as herein shown and described, and for the purpose set forth.

2. In combination with the box C, the bar and brace G H, hinged thereto, substantially as shown, and adapted to be swung round and lowered, for the purpose of supporting the extended seat, or swung upward and back again, with the brace H returned within the

box, and the bar G closing up the opening along the side of the same, substantially as specified.

3. In combination with the body of the seat, a jointed board, J, hinged thereto, and provided with a suitable brace, J', for the support of the same when in an unfolded and horizontal position, said hinged and jointed board being also adapted to be folded over the body and partly under the cushion D, or unfolded in a vertical position for the purposes of a partition, substantially as shown and described.

4. In combination with the backs E, arranged to be brought into a horizontal position, the guard L, adapted to connect together and strengthen two adjacent backs in above-said position, and also to extend above the same, whereby a side board or guard is formed, as and for the purpose specified.

5. The backs E, provided with pockets K, substantially as and for the purpose set forth.

6. The arm-rest formed of an opening part, B', having a vertical joint, substantially as and for the purpose set forth.

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Witnesses:

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