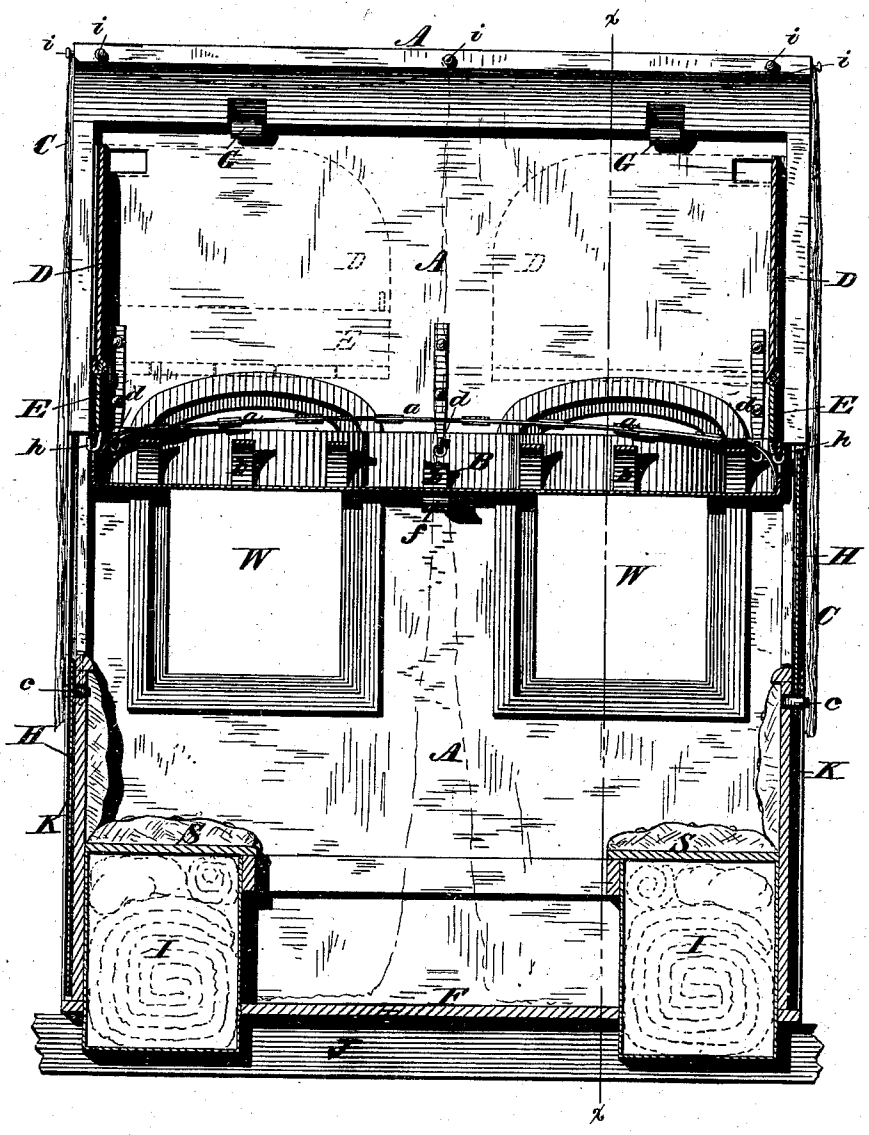
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C. E. LUCAS.

SLEEPING-CAR.

No. 193,009. Patented July 10, 1877.

Fig. 1.



Witnesses.

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Fig 2.

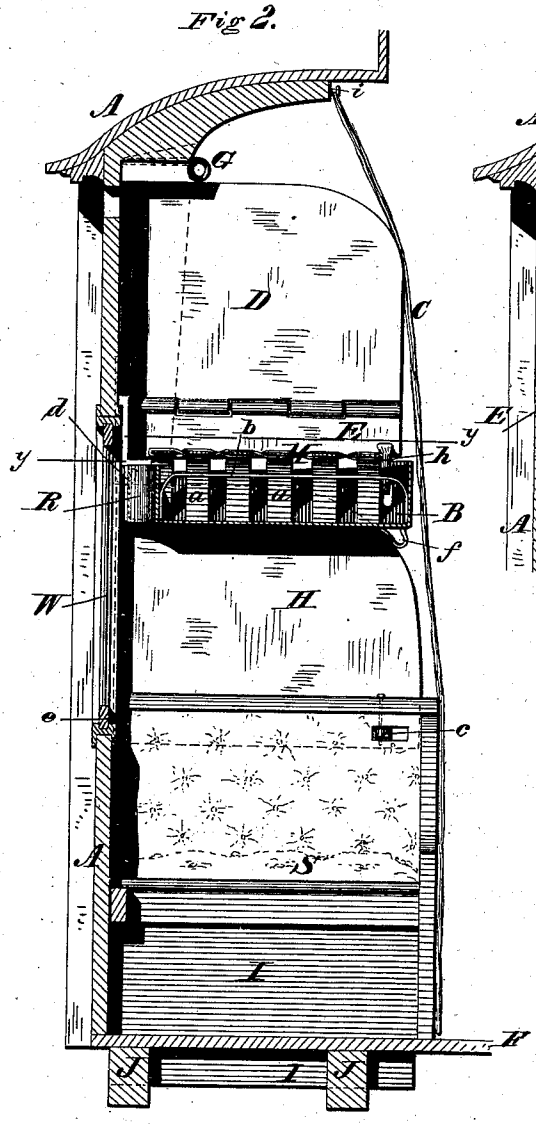
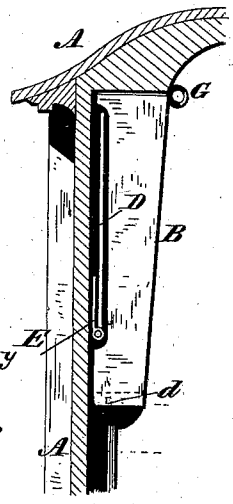


Fig 3



Witnesses

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Fig 4.

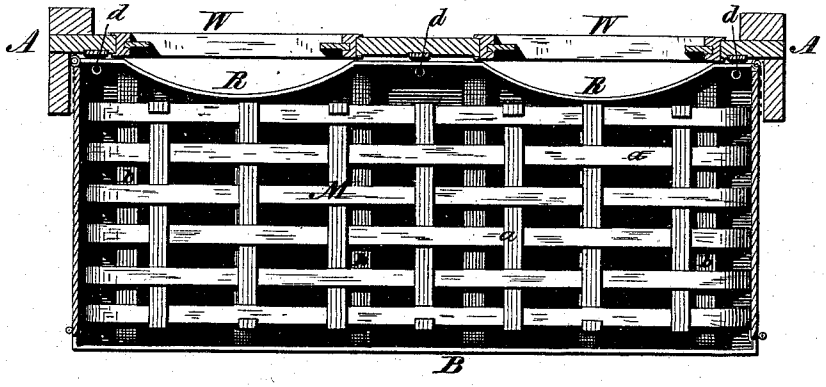
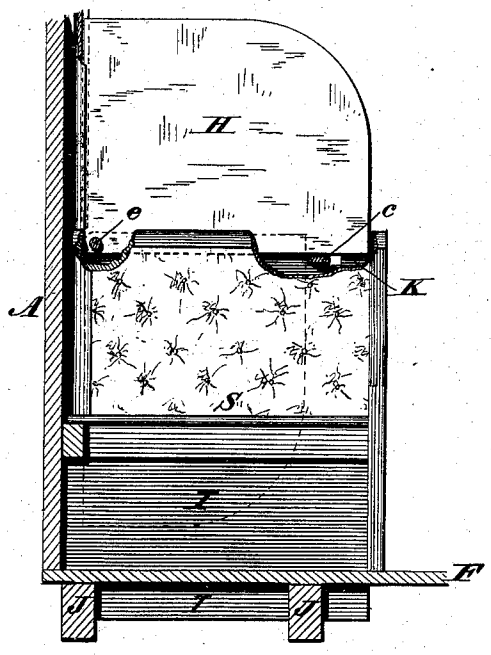


Fig 5.



Witnesses.

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UNITED STATES PATENT OFFICE.

CHRISTIAN E. LUCAS, OF ATLANTA, GEORGIA.

IMPROVEMENT IN SLEEPING-CARS.

Specification forming part of Letters Patent No. **193,009**, dated July 10, 1877; application filed May 5, 1877.

To all whom it may concern:

Be it known that I, CHRISTIAN E. LUCAS, of Atlanta, in the county of Fulton and State of Georgia, have invented certain new and useful Improvements in Sleeping-Cars; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Figure 1 is a vertical longitudinal section of a sleeping-compartment of a railway sleeping-car having my improvements introduced. Fig. 2 is a vertical transverse section on line *x x* of Fig. 1. Fig. 3 is a detail section, showing the upper berth folded up against the side of the car. Fig. 4 is a top view or plan of the upper berth. Fig. 5 is a detail view of the lower head-board, seat, and bedding-box.

The same part is marked by the same letter of reference wherever it occurs in the drawings.

My improvements consist, first, in constructing the upper berth of sheet metal, and providing it with swinging and jointed sheet-metal head-boards, which, when the berth is closed, fold up clear of the mattress, and snug against the wall of the car; second, in providing the upper berth with one or more recesses corresponding in shape with the upper portion of the car-windows, to prevent the windows from being in any degree obstructed by the berth; third, in providing the upper berth with a double set of springs to receive the mattress, the supplemental set being placed permanently below the set on which the mattress rests, to assist them with a reserved elastic force in resisting and relieving unusual jars or shocks; fourth, in separating the lower berths by a sheet-metal head-board pivoted at one corner to the upper and inner corner of the abutting seat-frames, and, when not in use, wholly concealed between them, but when in position turned up so that the outer or back edge rests in a groove in the side framing of the car, and the front corner is securely held by a bolt or catch arranged to pass through the head-board and seat-backs.

One of the principal peculiarities of my present system of manufacture consists in the use of sheet metal in place of wood in the making of the upper berths and upper and lower head-boards. I find this change to be attended with the advantages of economy of space, increase of strength, ease and cheapness of manufacture, freedom from vermin, accessibility for cleaning, and greater safety in case of injury to the car by collision or other violent accident, by avoiding the sharp and dangerous splinters which result from the fracture of wooden structures.

In the accompanying drawings, A marks the frame-work of the car. Each sleeping compartment or section consists of a lower and an upper berth, the lower one formed by the backs and bottoms of the seats S, supported in the usual way, the seats being placed on the bedding-boxes I I, let through the bottom F of the car, and into the beams J J. The abutting backs of the seats have a narrow recess, K, left between them, in which is placed the metallic head-board H, pivoted at *e* by one of its corners to the seat-back, so as to be capable of being turned up, as shown in Fig. 5, into position to form a partition between the adjoining lower berths. It is held up by a suitable bolt or latch, *c*, passing through it and the adjoining seat-backs.

The upper berth B is a sheet-metal tray suspended at back upon hooks *d d*, attached to the wall of the car, and at the front corners by hooks *h*, attached to the flaps E of the folding head-boards D. These head-boards are hinged to the side of the car, and are folded close against it when the berth is closed. They are provided with flaps E, hinged to their lower edges, and folding up upon them, so as to be out of the way of the mattress, when the berth is folded up against the side of the car.

The berth B is formed with recesses R R on its outer side, (see Figs. 2 and 4,) corresponding in shape with that of the tops of the car-windows, so that the berth, when closed, shall allow the light to be wholly unobstructed.

In the berth B, I place a spring-bottom, M, for the support of the mattress. This bottom is formed of two sets of springs, *a b*, one above the other, and at right angles to each other, the lower set, *b*, being intended to supplement

the upper set, *a*, whenever extraordinary shocks or jars may call for a reserve of elastic force to relieve them.

The berth is provided with a handle, *f*, by which it is lowered and lifted. It is held up by spring-catches G, and when in use is protected by a curtain hung upon pins *i*, in the common way.

I claim—

1. The sheet-metal head-board H, concealed, when the car is used for day travel, between the abutting seat-backs, and turned up edgewise on its pivot, so as to form a separating-partition between the lower berths, when the car is used as a sleeper, all as described.

2. The combination and arrangement of the head-board H, pivot *e*, latch *c*, and recess K, all in the manner and for the purpose set forth.

3. The sheet-metal upper berth B, provided with the spring-bottom M and recesses R, and hung and supported in the manner specified.

4. The folding berth B, consisting of a sheet-metal tray removably hinged to the wall of the car, substantially as described.

5. The hinged folding metallic head-boards D, for separating the upper berths, and provided with the folding flaps E, hinged to their lower edges, in the manner and for the purpose stated.

6. An upper berth provided on its outer or lower side with recesses corresponding in shape with the tops of the car-windows, for the purpose of permitting the unobstructed admission of light through that part of the windows, all as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

CHRISTIAN E. LUCAS.

Witnesses:
E. F. HOGE,
HOKE SMITH.