

A. JUDSON.
Sleeping-Car Berth.

No. 80,184.

Patented July 21, 1868.

Fig. 1.

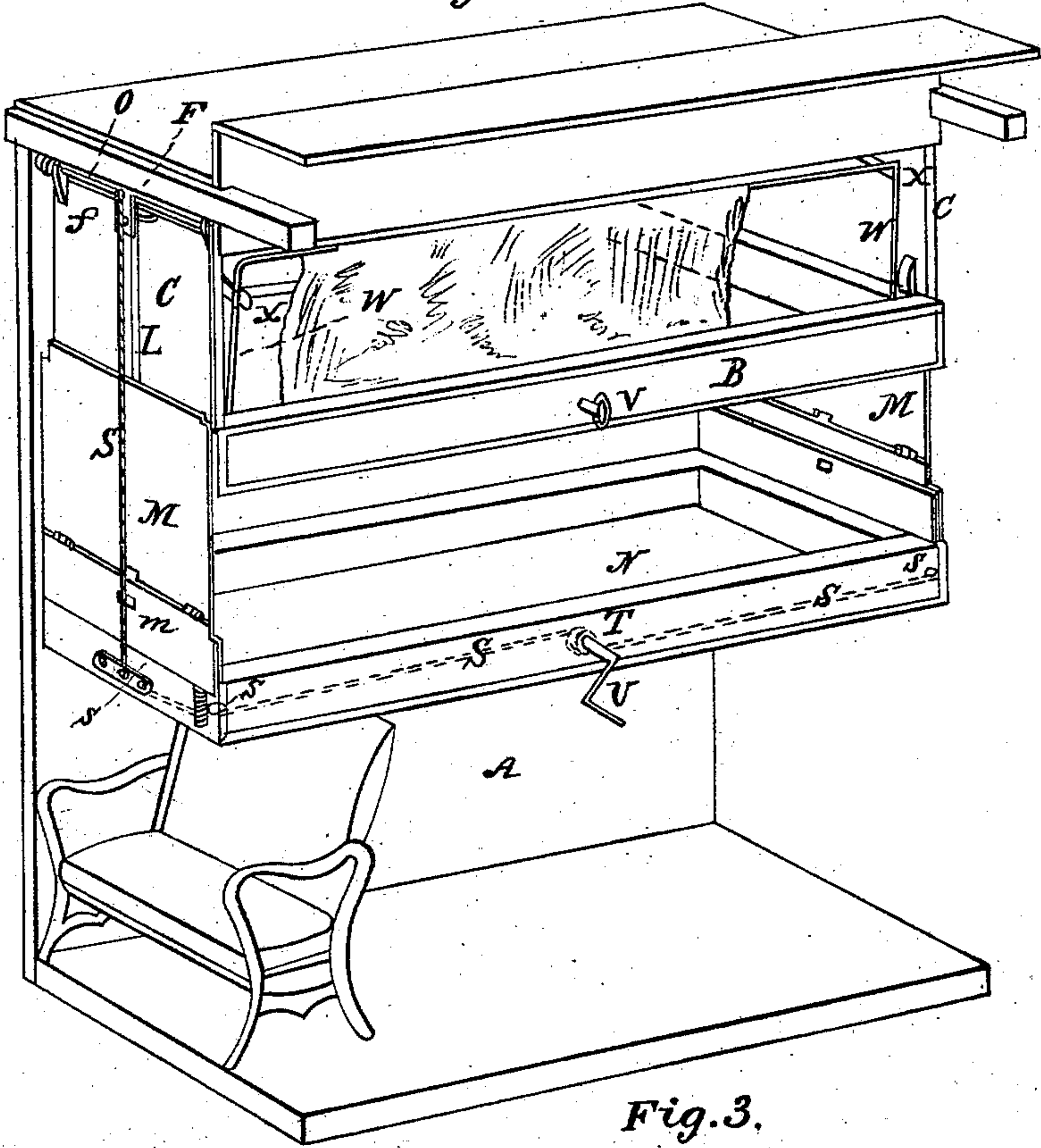


Fig. 2.

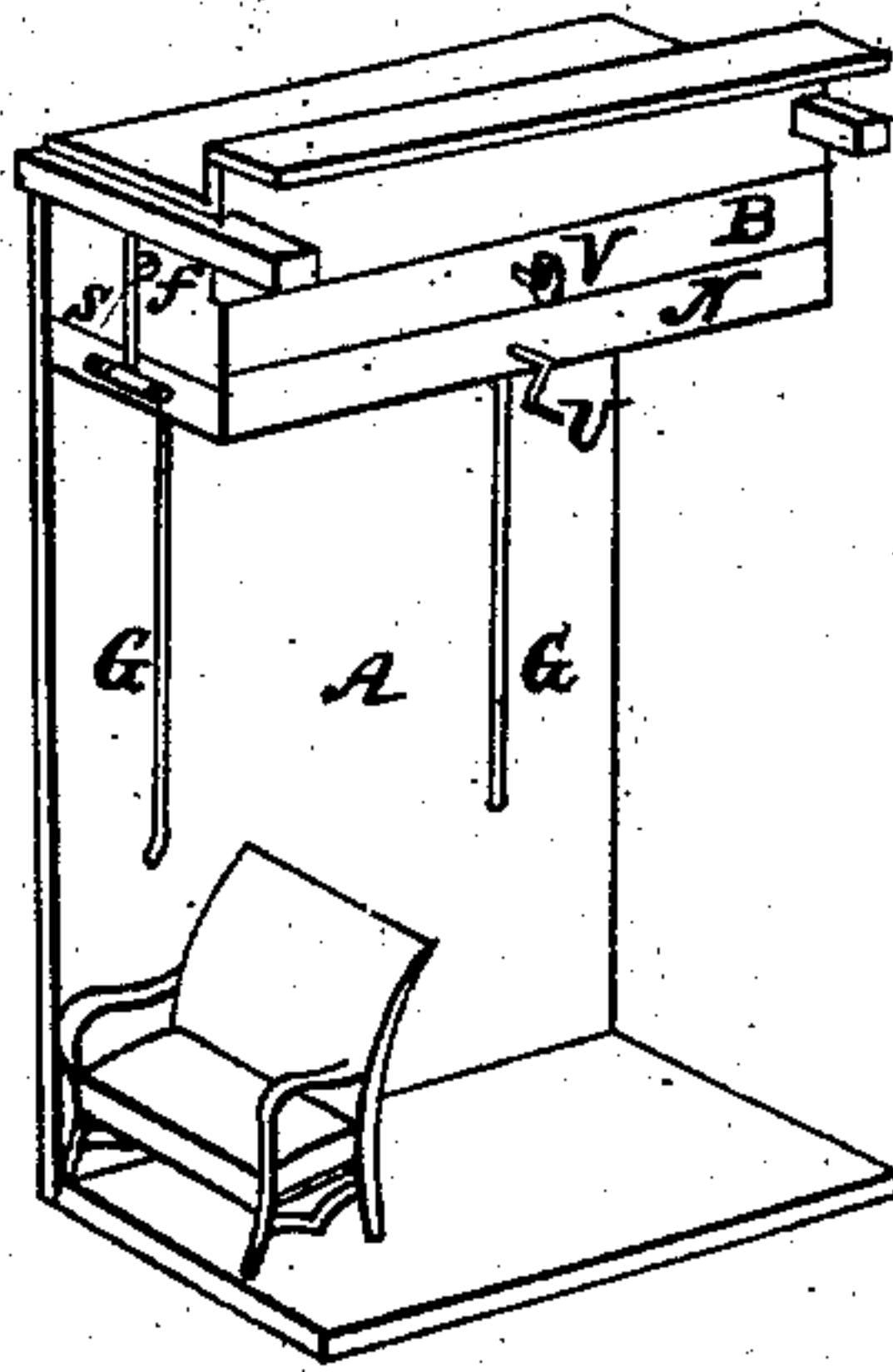


Fig. 3.

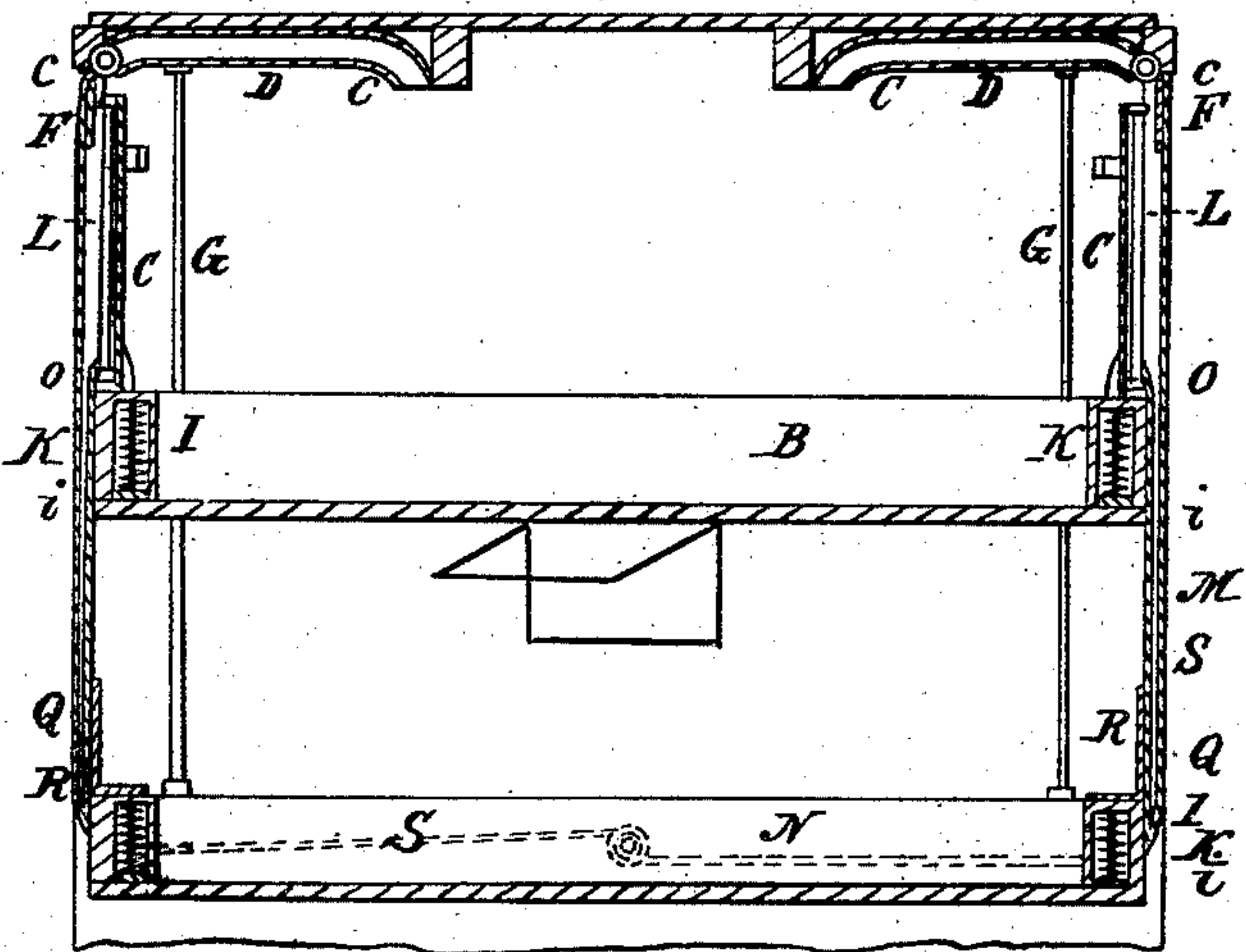
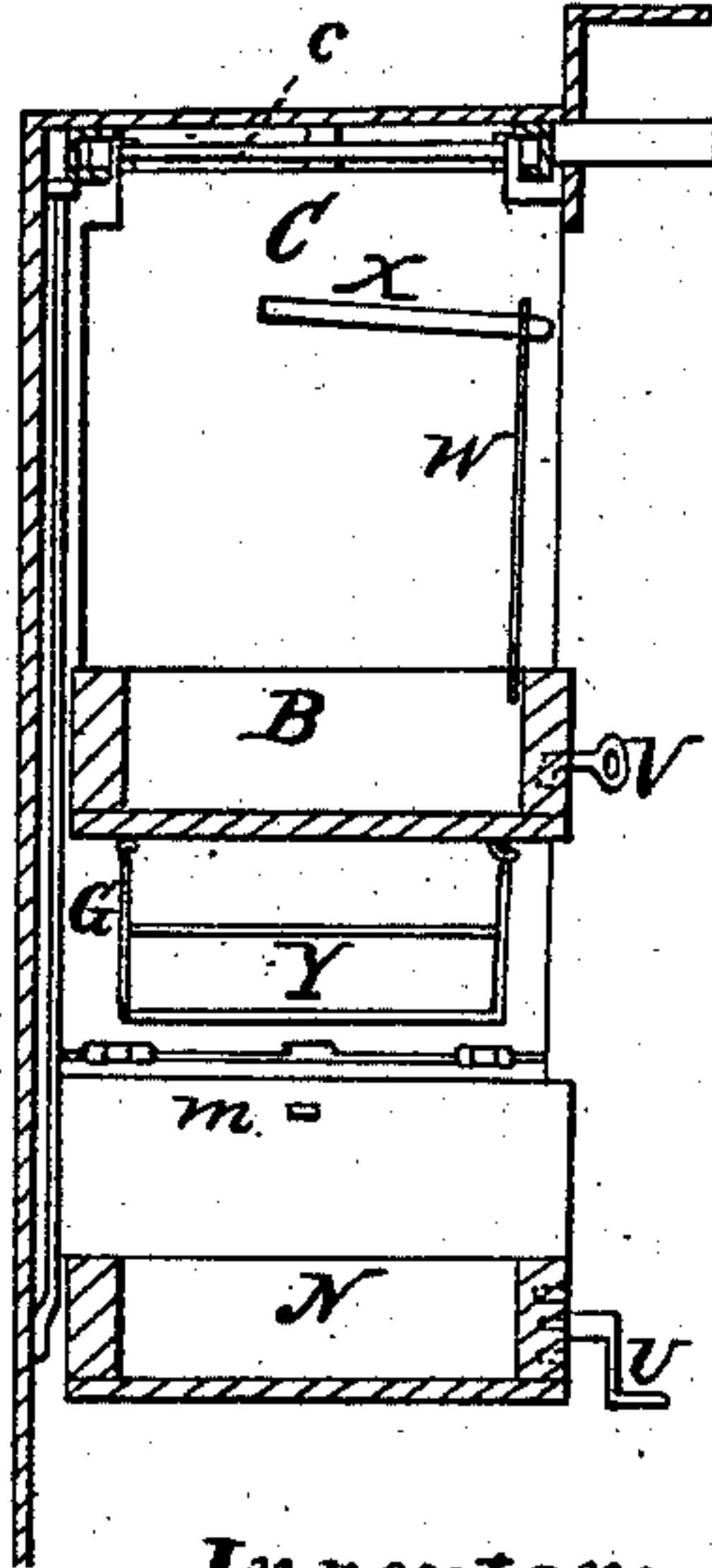


Fig. 4.



Witnesses:
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United States Patent Office.

AGUR JUDSON, OF NEWARK, NEW JERSEY.

Letters Patent No. 80,184, dated July 21, 1868.

IMPROVED SLEEPING-BERTH FOR RAILROAD-CARS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, AGUR JUDSON, of the city of Newark, in the county of Essex, and State of New Jersey, have invented certain Improvements in Sleeping-Berths for Railroad-Cars; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention sufficient to enable those skilled in the art to practise it.

The object of my invention is to combine a day and night railway-car, by rendering a day-car, of ordinary construction, capable of being readily converted into a sleeping-car; and also to render the berths themselves more comfortable and convenient.

My improvements consist in certain novelties of construction, whereby one or more upper berths may be suspended from the ceiling or roof of the car, and readily let down and lifted up, and locked to place out of the way, when not in use, and when so locked to place, leaving beneath them a perfectly free, clear space between them and the usual seats for passengers, and occupying no room required for the accommodation of the traveller in ordinary day travel. They consist also in other details, hereinafter enumerated.

In the drawings—

Figure 1 represents a perspective view of my improvements applied to an ordinary day-car, the berths being let down.

Figure 2 represents the same on a smaller scale, the berths being closed.

Figure 3 is a front view, and

Figure 4 a cross-section.

The same letters designate the same parts in all the figures.

A represents a portion of one side of the interior of a car, with two of my improved berths, B N, applied thereto, the berth B being suspended, as hereinafter described, from the roof of the car, and the other one, N, suspended from B.

C C are metallic sheets or wings, of about the breadth of the berth, and hinged, one at the head and the other at the foot of the berth, so that they may, when the berth is locked up out of place, fold up above the same, and lie in a horizontal position, and, when the berth is down, sustain it in the whole line of its breadth.

In order to insure their leaving their vertical position, and assuming this horizontal position by the mere act of elevating the berth, the top of each wing C is provided with a horizontal rolling shaft, *c*, having disks or rollers at each end, and having its bearings in the wing, and these rollers are of proper size to run in ways or grooves D, in fixed side pieces E E, secured to the ceiling, and at the front and back of the berth, a pair of such pieces being at the head, and a pair at the foot of the berth. The curvature given to these grooves is such that, at the commencement of the rising of the berth, the tops of the wings will immediately be deflected inward, and will gradually, as the berth ascends, approach each other, until, when the berth is at its highest point, they will lie flat upon its top, the converse of this motion taking place when the berth is let down.

Depending from the ceiling, and at both ends of the berth, is a stout bracket, F, situated in line with the longitudinal centre of the berth. In each of these brackets is an opening, *f*, to receive the end of a locking-bolt, to hold the berth securely in place when elevated.

G G are vertical supporting-rods secured to the side of the car, and which, by means of eyes upon the back of the berths, and through which the rods pass, steadily guide and aid in firmly sustaining the berths at all times.

The wings C C, which also answer the purpose of head and foot-boards, and serve as partitions between the berths and those next adjacent, are provided at their bottoms with rods I, having knobs or nuts *i* thereon, and a spiral spring, K, surrounding the knob, the lower part of the spiral resting on the knob, and the upper part bearing against the frame of the berth, so that the whole weight of each berth rests directly and entirely upon the springs, of which there are four for each berth, namely, one for each of its corners. This provision allows each berth to yield to the jolting and jostling of the car, and, in a great measure, to meet and neutralize

them; thus affording a spring-bed, instead of the unyielding and uncomfortable car-berths now in use, and which so effectually prevent quiet repose.

Secured centrally to each wing C is a guide-rod, L, for the purpose of supporting other hinged wings, M M, from which hang the lower berth, N, the rods I passing through eyes O on the wings M, these lower berths also being sustained and steadied by the guide rods G and eyes, in the manner above described. These wings M are hinged to metallic plates Q, which rise from the ends of the lower berth, and when this berth is elevated, so that its top shall meet the bottom of the upper berth, the wings M rise and slide on the rods L, until they become parallel with the wings C C, after which the upper berth is elevated, and the wings C C, in passing to their horizontal position, as before described, carry with them and fold away similarly the wings M, thus shutting both up in the space above the top berth.

A small opening, m, is provided in each of the wings M, to receive the ends of the same locking-bolts, which are employed, as above mentioned, to lock the top berth to the bracket, the lower berth being first locked to the upper, and this latter next locked to the bracket, the same lock answering for both purposes.

Any ordinary lock will answer in which the bolt may first be projected a given distance to lock one berth, and then a further distance to lock the other one, and hence I have not illustrated it, as I claim no novelty therein.

R R are pieces secured to the head and foot of the lower berth, and inside of the plates Q Q.

S S represent a cord secured to the ceiling at opposite ends of the top berth, and thence descending to and around guide-pulleys s s, and thence to a pulley or windlass, T, operated by a removable hand-crank, U.

V is an ordinary key, for operating and locking the bolts which fasten the berths up out of the way, as shown in fig. 2, in which case the key and crank are both removed by the attendant.

W represents a swinging wire curtain-frame for each berth, (one only being shown,) which, when in use, is sustained, in the position shown in the drawings, by stationary springs X, having slight notches or bends therein to grasp the wire, but when not in use, this frame is pressed backwards, to dislodge it from the springs, and laid flat within the berth as in a box.

Y is a quadrangular box or chest, depending from the under side of a berth, as a convenient receptacle for packages, &c. It is made with all its sides and back and front hinged, so that it may be folded into a flattened condition when the berths are to be closed against each other and put up.

The red lines show the same with its sides and bottom partially flattened to place. The back first folds within the box, the sides then fold over it, and the front then folds upon the sides, the whole, like the curtain and frame and bed-clothing, interposing no obstacle to prevent the berths closely closing up against each other and against the ceiling.

Whilst I contemplate the application and adaptation of the above-named novel features to cars as ordinarily constructed for day travel, except, perhaps, that in some cases it may be found desirable to make the roof at the sides of the car a little higher than usual, to allow ample room for elevating the berths out of the way, yet it is evident that my whole construction permits the ordinary seats (such as are shown in the drawings) to be used, or, instead, such as are capable of being converted into beds or couches may be used equally well with my improvements.

I claim—

1. The combination, with the lower plate M and its guide, of the upper plate and its guides, substantially in the manner and for the purpose herein described.
2. Also, the combination, with the berths, of the fixed hanging pieces F, having an opening, f, to receive the bolts which lock the berths to place.
3. Also, the arrangement, substantially as described, of windlass, cords, and pulleys, in combination with the berths, whereby the latter may be raised and lowered.
4. Also, the arrangement, substantially as described, of springs within the berths, when supported and held in position by the plates C C and M M.
5. Also, the combination, with a car-berth, of a folding case or chest, substantially as and for the purpose set forth.
6. Also, the combination, with a car-berth, of a hinged or pivoted curtain-frame, and self-acting springs or catches, to hold it in position for use, substantially as set forth.

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Witnesses:

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