

(No Model.)

2 Sheets—Sheet 1.

F. W. HUNTER.  
Sleeping Car.

No. 238,236.

Patented March 1, 1881.

Fig 1

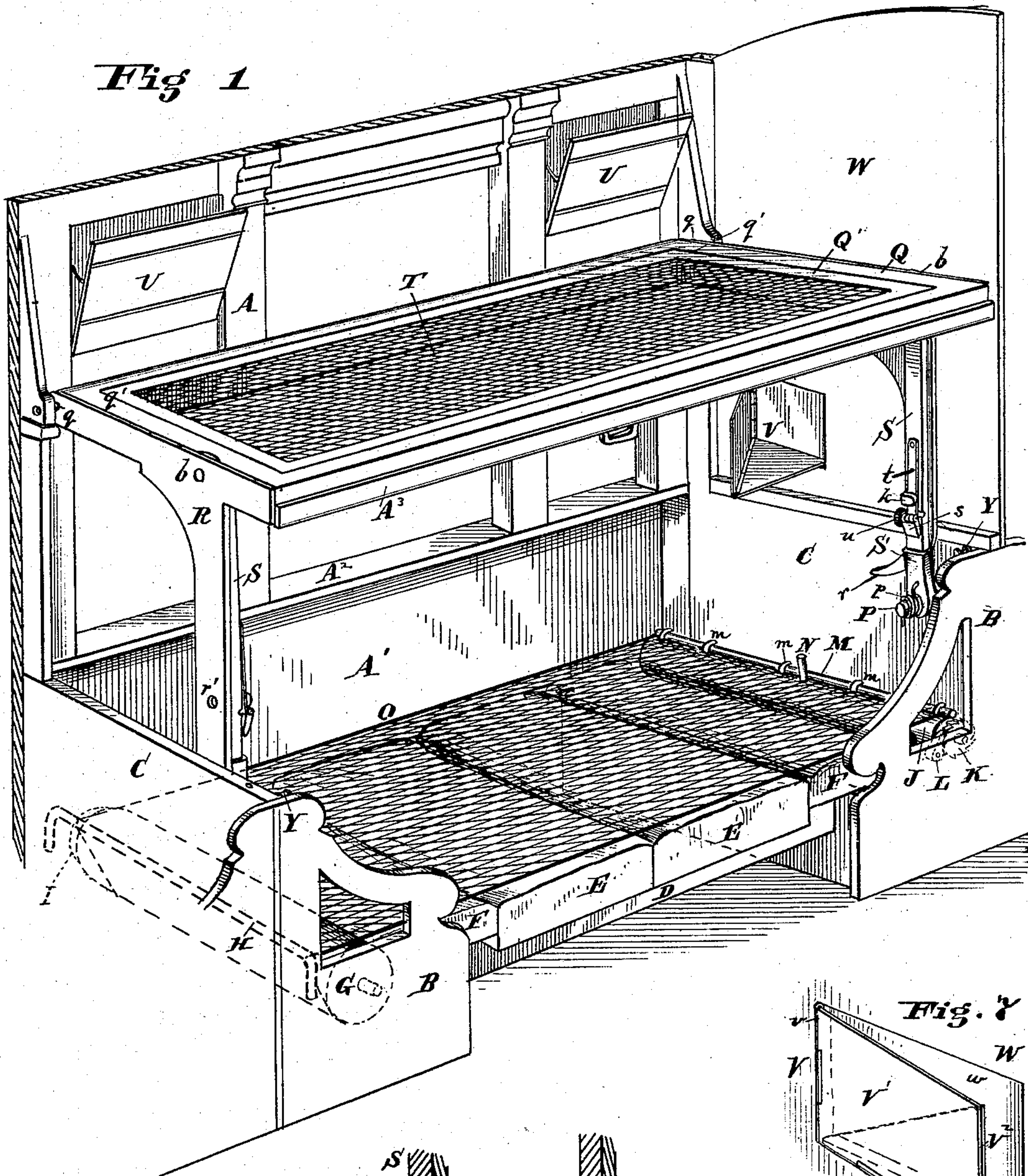


Fig. 5

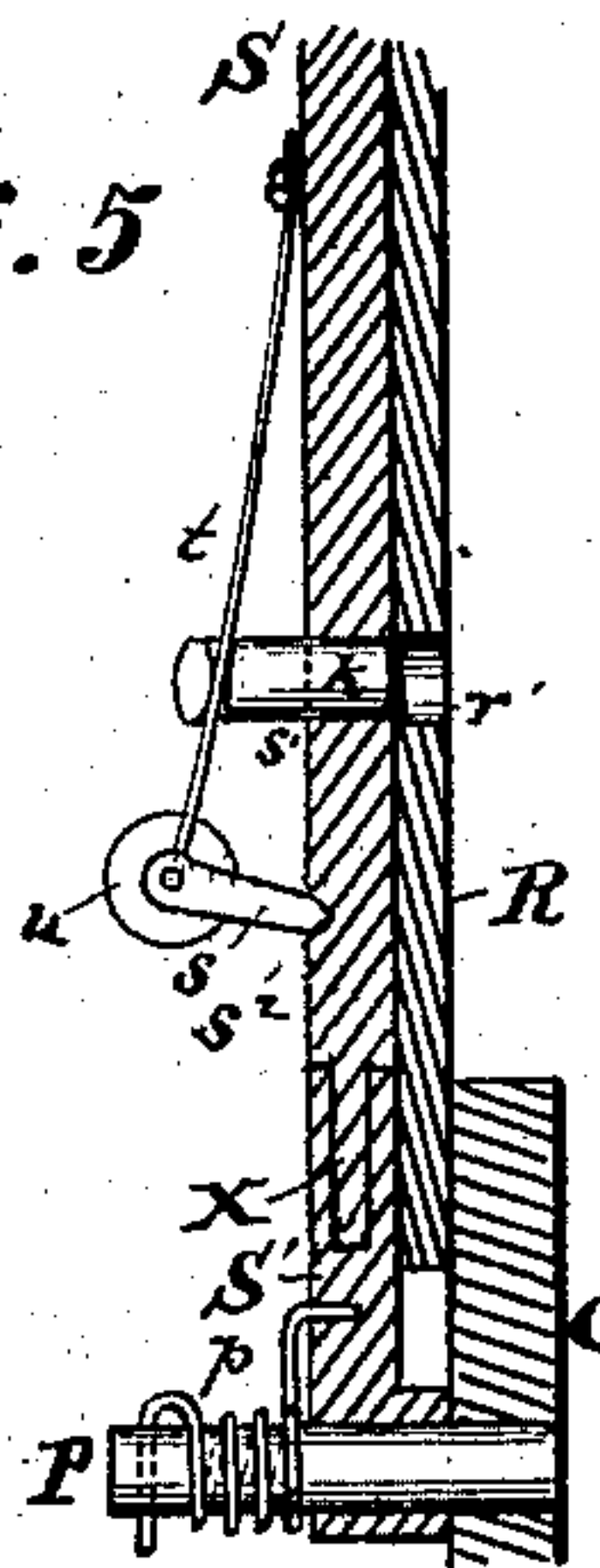
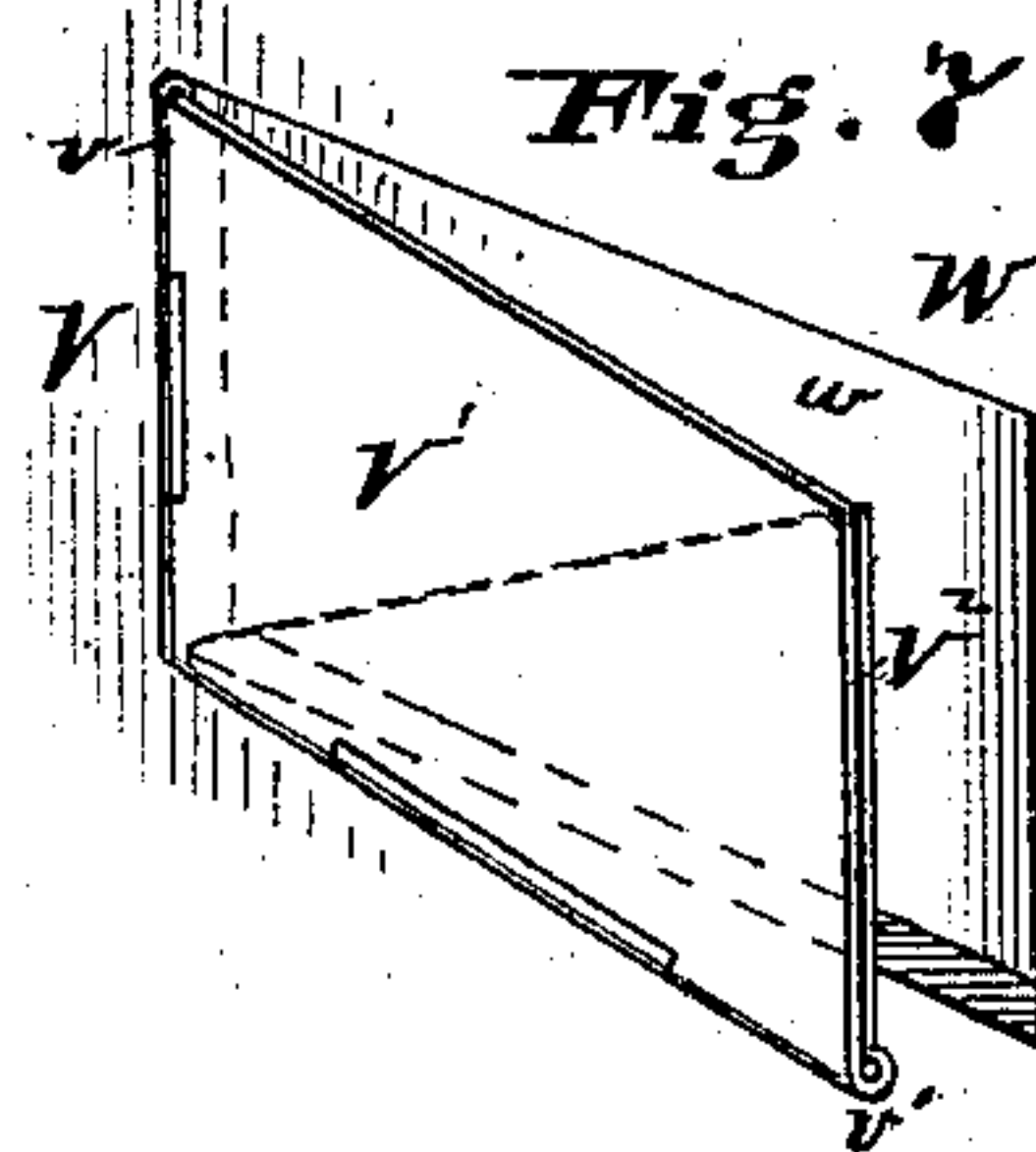
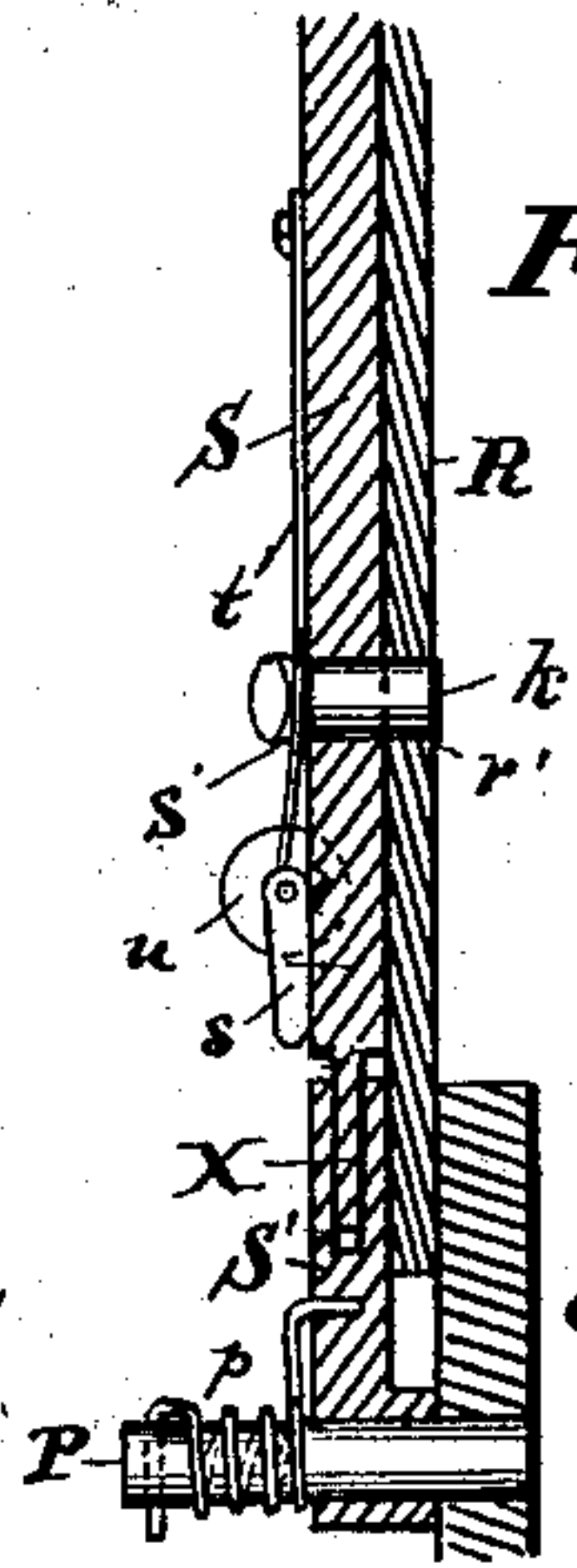


Fig. 6



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L. J. Matos.

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Frederick W. Hunter  
By his atty

*[Signature]*



(No Model.)

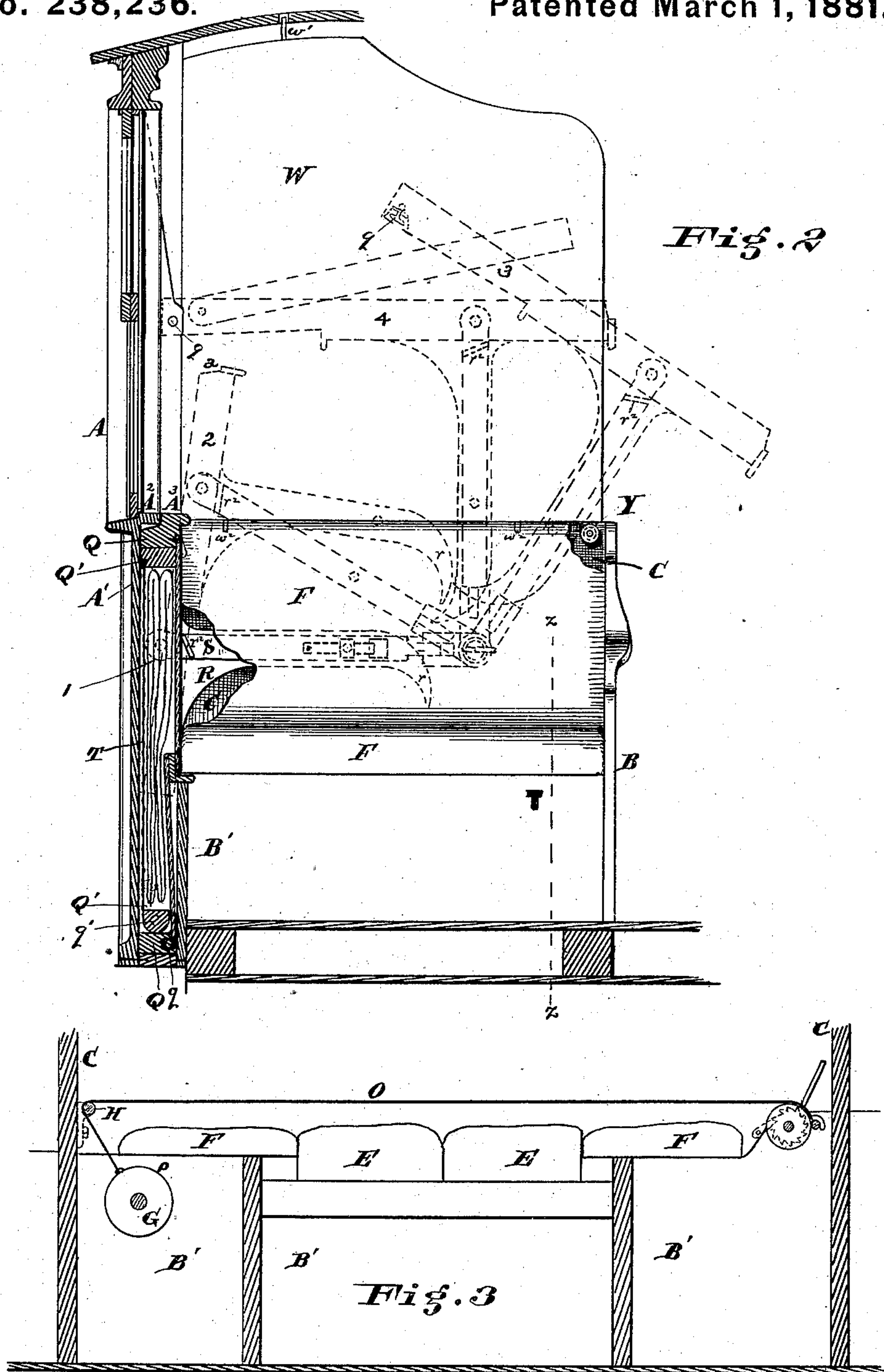
F. W. HUNTER.

2 Sheets—Sheet 2.

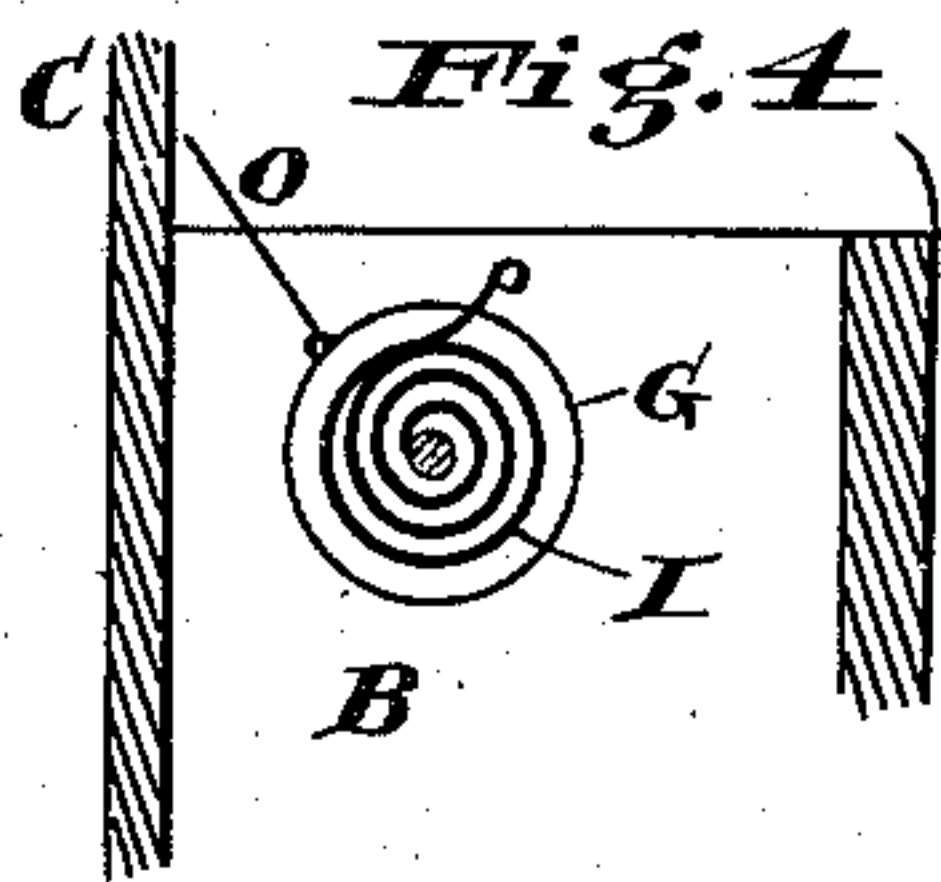
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Inventor  
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*[Signature]*



# UNITED STATES PATENT OFFICE.

FREDERICK W. HUNTER, OF CHICAGO, ILLINOIS.

## SLEEPING-CAR.

SPECIFICATION forming part of Letters Patent No. 238,236, dated March 1, 1881.

Application filed November 22, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK W. HUNTER, of the city of Chicago, in the county of Cook and State of Illinois, have invented an Improvement in Sleeping Drawing-Room Cars, of which the following is a specification.

My invention relates to sleeping and drawing-room cars combined, in which during the day-time there is no trace of sleeping-berths to be seen; and it consists in certain constructions whereby the car is better adapted to the requirements and comfort of the traveling public, all of which constructions are fully set forth in the following specifications, shown in the accompanying drawings, and referred to in the appended claims.

Figure 1 is a perspective view of a section of my improvement in sleeping and drawing-room cars when ready for use as a sleeping-car. Fig. 2 is a cross-section of the same. Fig. 3 is a longitudinal section of the lower berth on lines *z z* of Fig. 2. Fig. 4 is an end view of the spring attachments to roller upon which the lower spring-mattress is wound. Figs. 5 and 6 show a sectional view of the supporting-arms and their locking mechanism. Fig. 7 is a perspective view of a wall or partition pocket.

A represents the side of the car; B, the side of the seats; C, the back of the seats; D, a bar suspended between the seats, upon which the cushions are supported during the night and when the berth is ready for use, as shown in Fig. 1.

G is a large roller situated in the box of one of the seats, and secured to one or both ends of said roller is a spring or its equivalent, I. Situated near the back of the seat and slightly above the roller G is a bar, H.

The spring-mattress O may be of any desired light, elastic construction, and is connected to the roller G on one end, and passes over bar H and is secured to the bar M. This bar M, when in use, prevents the end of the mattress O from being wound upon the roller G through the agency of the spring I, since the bar M is arrested between bar H and the back C. Situated in the box of the opposite seat is a second roller, J, to which is secured a ratchet-wheel, K, with which a pawl, L, works, and the shaft of said roller may project through the

end of the seat, and provided with a square head for the application of a crank to turn the same. Secured to the surface of the roller J, in line, are a series of hooks, *m*, for the purpose of detachably securing the mattress-bar M to the roller J.

Instead of using a crank to rotate the roller J, I may use a simple handle, N, secured to said roller J. The length of spring-mattress O is just sufficient, when the spring I is completely wound up, to reach the roller J, to which it is hooked, and the tension of the mattress is given by more or less rotation of said roller J.

The upper berth consists of one or two frames, two being preferable. The outer frame, Q, is made box shape and corners hinged to it at the inner or mattress frame, Q', to which is secured spring-mattress T. The space between said mattress T and the bottom of the box-frame is utilized as a receptacle for carrying the bedding for the upper and lower berths. By using a close spring-mattress, the bedding required may be much lighter than that now commonly in use. The pillows may be carried in the box of the seat in which the tension-roller J is located.

Pivoted to the frame Q at *b* are supporting-bars S, which bars work in socket X of socket-pieces S'. These socket-pieces S' work upon pivots P, and are always pressed from the side of the car toward the middle of the same by the springs *p*, to counteract the weight of the frames Q Q' and their appendages when being raised or lowered, as hereinafter described.

Secured to the ends of the frame Q are arms R, provided with holes *r'* and curved feet *r*, which during raising work upon idler-rollers Y to level the said berth.

Secured to the bars S are springs *t*, the lower ends of which are hinged to locking-feet *s*. Working through holes *s'* in bars S are bolts K, which bolts are reciprocated by the movement of the springs *t*. The roller Y shoves the arms R into positions parallel to the bars S, so that the holes *r'* register with the holes *s'*. When unlocked the locking-feet *s* are turned in by rotating the handle-wheel *u*, and the spring is pressed out, withdrawing the bolts K, and they are locked in this position by the feet engaging into notches *s*<sup>2</sup> in the



bars. When the holes  $r'$  and  $s'$  register, the feet  $s$  are disengaged from the notches, and the springs force the bolts through the holes. I do not confine myself to this construction of locking device, as any other suitable construction will answer.

The side of the car directly under the outer portion of the window-sill is recessed, as at  $A'$ , from the bottom of the car to the outer portion of said sill, a space being left between the partition  $B'$  at the inner end of the seats and the side  $A$  of the car. The remainder of the sill forms part of the upper-berth frame. When the upper berth is shut up during the day it is turned down and fits in this recess  $A'$ . The part  $A^3$ , secured upon the end of the frame  $Q$ , meeting with the sill  $A^2$ , forms a continuation of the same, and does not necessitate so great a depth to the recess directly under the outer or permanent sill,  $A^2$ . By the division of the window-sill the upper-berth frame is easily adjusted or placed within the recess or withdrawn from the same. The same object would be attained by hinging the sill to the side of the car and turning it up, or making the entire or any portion of the sill removable. The frame and end of the frame  $Q$  is furnished with a handle or handles to withdraw and raise it, and at the back with a locking-handle, which reciprocates bolts  $q$  at the inner ends of the frame to lock it into position, as shown in Fig. 1. To the side of the car may be pockets  $U$ , if desired.

The division-boards  $W$  are arranged so as to fit in between the top of the back of the seats and the ceiling of the car, and are fastened by means of pins  $w^2 w^2$  in the end, which fit into holes made in the top of the back of the seats, and also by pin  $w'$ , which fits in a hole in the ceiling of the car—the length of the pins in the lower end of said partition or division-board being a trifle shorter than the distance between the ceiling and board  $W$ , as shown on Fig. 2—and are provided with pockets  $V$ , formed of two or more hinged plates,  $V' V^2$ , hinged at  $v$  and  $v'$ , and which, when not in use, fold into a recess,  $w$ ; but when in use they are opened, as shown in Fig. 1. The rest  $r^2$ , secured to the bar  $R$ , prevents too much movement to the berth-frame during raising.

The operation is as follows: It being desired to change the drawing-room car into a sleeper, the porter removes the cushions to the middle or adjusts them in position, and then catches the handle of the berth-frame  $Q$  and pulls it with a forward and upward movement at the top, closing the sleeve  $X$ , as shown in Fig. 5, and as the berth rises it oscillates upon the bearings  $b$  until arrested by the rest  $r^2$ , as shown in position marked 2 in Fig. 2. It is still raised, and as it oscillates back of the pivots  $P$ , the curved feet  $r$  of arm  $R$  strike rollers  $Y$ , which bring the said arms parallel to bars  $S$ , causing the berth to oscillate upon pins  $b$  and to assume an angle perpendicular to the bars  $S$ , and make the holes  $r'$  register with holes  $s'$ , as shown at position 3 in Fig. 2. The

bolt  $k$  is then passed through, locking them. The berth is then oscillated toward the side of the car, and then the bolts  $q$  are passed through their corresponding holes and the upper berth is horizontal and ready to be made up, as shown at position 4 in Fig. 2. The cushions being placed as shown in Fig. 1, and the pillows being removed from the seat-box, the bar  $M$  is drawn across and hooked to the tension-roller  $J$ , thereby spreading out the mattress  $O$ , and roller  $J$  is rotated to put the mattress under tension. The thin bedding is then taken from the upper berth and made into beds, the division-boards  $W$  are placed in position, and the berths are ready for use.

I am aware of the Patents Nos. 147,538 and 147,539, of October 14, 1873, and do not claim anything therein shown or described, for in those patents the recess is the full depth of the sill, and only extends from above the seats to a point under said sill, and the upper berth has to be doubled up in the middle, leaving no place in which to put the bedding, and the lower berths are made upon the cushions themselves.

I am aware of the patent to Woodruff, No. 105,288, and do not claim a recess as therein shown or claimed.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a railway-car, a lower berth which consists of a spring-mattress of coiled wire secured upon a roller provided with a coiling spring within the box under one of the seats, and adapted to be drawn out across and secured within the box of the seat opposite, in combination with a supporting-bar over which it is drawn as it is spread out from the roller, substantially as set forth.

2. In a railway-car, two seat-boxes arranged to face each other, in combination with two rollers arranged therein, one of which has secured to it and carries a wire mattress, which, when rolled up, is entirely under the seat-cushion and in the box, the other being located in the opposite seat-box and adapted to put the mattress under tension, substantially as shown and described.

3. In a railway-car, an adjustable window-sill, in combination with a recess,  $A'$ , adapted to allow easy access or egress of the upper-berth frame  $Q$  into or from out said recess, substantially as and for the purposes specified.

4. In a railway-car, an upper-berth frame the full width of the berth, in combination with arms which support it and are pivoted to said berth-frame and the seat-backs, and mechanism to level the berth-frame upon the supporting-bars when raised, adapted to work in such a manner that the berth-frame shall be deposited or withdrawn from a recess in the side of the car, substantially as shown and described.

5. In a railway-car, an upper berth consisting of the frames  $Q Q'$ , or their equivalent, pivoted upon supporting-bars  $S$ , working on pins  $b$ , in combination with arms  $R$ , secured



to said frames, and a roller, or its equivalent, to cause said arm to properly level and adjust the frames upon said bars, substantially as and for the purposes specified.

5 6. In a railway-car, an upper-berth frame, Q, pivoted to supporting-bars, one of which is located at either end, and pivoted at their lower ends to the seat-backs behind the cushions, in combination with mechanism to adjust said frame to the horizontal when ready for use, substantially as and for the purpose specified.

15 7. In a railway-car, an upper berth consisting of an exterior box-frame, Q, in combination with an inner open frame, Q', pivoted to it, and carrying a spring wire mattress stretched and secured upon it, the inner frame being adapted to be raised without moving the outer or box frame, as shown and described.

20 8. In a railway-car, the upper berth consisting of the following parts in combination: the berth-frames Q Q', supporting-bars S, connected by a sleeve, S', or its equivalent, and pivoted to the frame Q at *b* and to the pins P at the bottom, springs *p*, to counteract the weight during raising, arm R, secured to the frame Q, and provided with a curved foot, *r*, and provided with a hole, *r'*, a latching mechanism to secure the arm and bars together, a rest, *r*<sup>2</sup>, forming part of bars S, and a roller, Y, or its equivalent, to operate the arm R to adjust the frame Q upon the bars S, substantially as and for the purposes specified.

35 9. In a railway-car, the lower berth consisting of roller G, situated within one seat-box and provided with a spring, I, or its equivalent, a spring-mattress, O, secured to said roller, a supporting-bar, H, over which said mattress is stretched, a tension-roller, J, situ-

ated in the opposite seat-box and provided with a ratchet-wheel, K, and pawl L, and mechanism to connect and disconnect the mattress to said roller, substantially as and for the purposes specified.

10. In a sleeping-car, a lower berth consisting of a spring-mattress, O, spread across from one seat to the other, said mattress being secured to a roller, G, located under the seat-cushions and down in the seat-box, and attached to a second roller, J, located in the seat-box opposite, and adapted to put the mattress under tension by a crank applied to its end, a ratchet-wheel, K, and a pawl, L, substantially as and for the purpose specified.

11. A wall-pocket consisting of a rectangular plate of wood or metal, hinged to the wall along one of its vertical edges, in combination with a wedge-shaped plate, hinged at one of its inclined edges to the bottom horizontal edge of the rectangular plate, substantially as shown and described.

12. In a railway-car, a division-board, W, made in a single piece, to fit between the upper edge of the seat-backs and the ceiling, and adapted to be secured in place by means of pins *w'* *w*<sup>2</sup>, those upon the upper part of said board being about twice the length of those secured to the lower part, said board being shorter than the distance between the seat-back and the ceiling a length equal to or greater than the length of said lower pins.

In testimony of which invention I hereunto set my hand.

FREDERICK W. HUNTER.

Witnesses:

R. M. HUNTER,  
SAMUEL E. CAVIN.