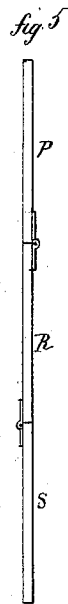
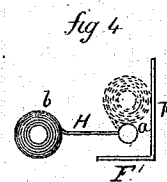
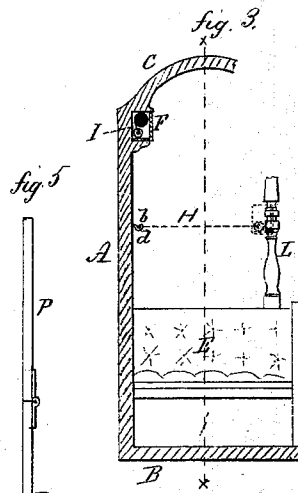
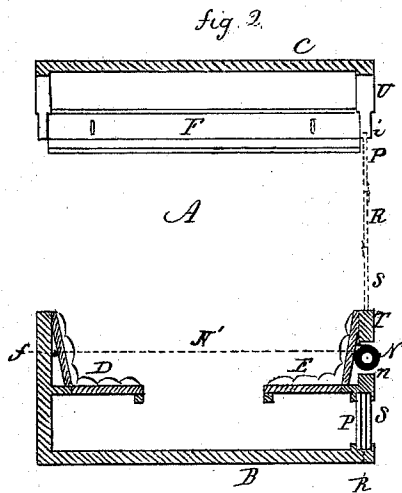
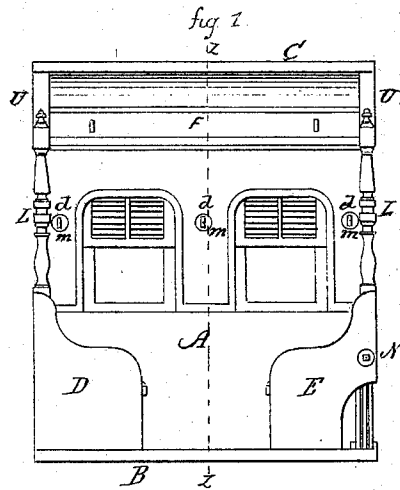


J. T. & D. R. LEIGHTON.
Sleeping-Cars.

No. 139,587.

Patented June 3, 1873.



Witnesses,

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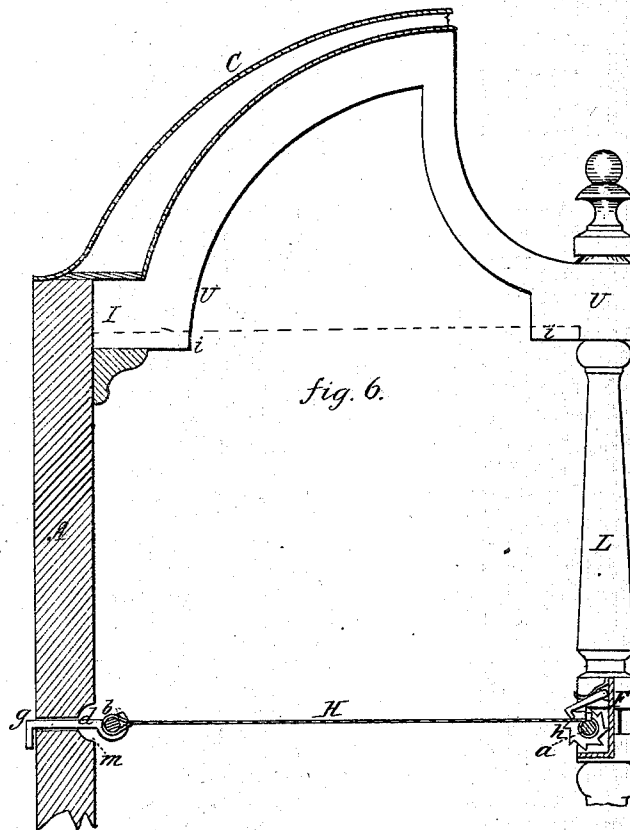


fig. 6.

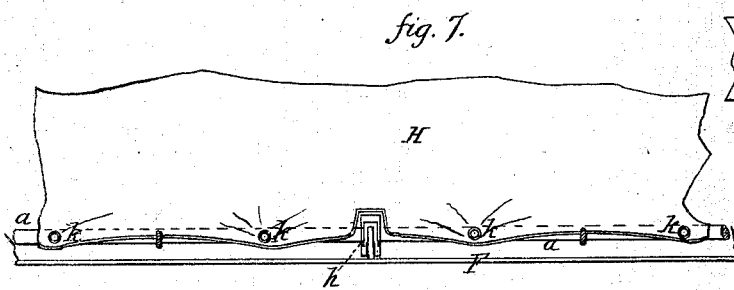
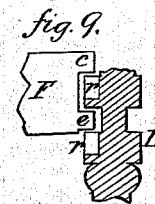
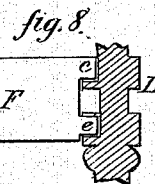


fig. 7.



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UNITED STATES PATENT OFFICE.

JAMES T. LEIGHTON AND DOMINICUS R. LEIGHTON, OF NEW HAVEN, CONN.

IMPROVEMENT IN SLEEPING-CARS.

Specification forming part of Letters Patent No. **139,587**, dated June 3, 1873; application filed December 13, 1871.

To all whom it may concern:

Be it known that we, JAMES T. LEIGHTON and DOMINICUS R. LEIGHTON, of New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Sleeping-Cars, of which the following is a specification:

The object of our invention is to obtain sleeping-couches for railway travel with as little additional weight as possible, while effecting the most convenient and economical disposition of the parts for the purpose, and without interfering with the arrangement of the interior of the car for day travel; and to this end our improvements consist in the combination, with a canvas bottom for the upper couches, of an angle-rail and a tightening-rod for the canvas, in connection with movable holding-hooks in the side of the car, the said angle-rail serving to receive the canvas when rolled, and the tightening-rod, and to be interlocked in position with the posts of the sections, to effect an easy and secure connection without fastenings and form a seat, upon which it may be stowed away into a side recess with the canvas when not in use, the hooks being pushed into recesses and concealed; also, in locating and arranging the roller for the canvas bottom for the lower couch within an opening in the seat-back and between two adjacent seats, for the inclosure of the roller and its canvas when not in use, and conceal it within a chamber in convenient position for use; and of detachable hinged partitions, in combination with flying grooved buttresses or pendants from the roof and fixed seat-backs, for the purpose of receiving, supporting, and securing the section sides in place, and allowing them to be easily removed, folded, and placed in ways beneath the fixed seat-back, thereby rendering the sides separate from the couch-sections, and avoid permanent-hinged sides, which must be folded out of the way against the roof of the car.

In the accompanying drawings, Figure 1 represents a view of one sleeping-section of a car with the couches rolled and put away; Fig. 2, a vertical section at the line *xx* of Fig. 3, which is a section at the line *zz* of Fig. 1. Fig. 4 is a detached view of the angle-rail; Fig. 5, a view of the detachable hinged-section side; Fig. 6, an enlarged view, showing

the upper canvas bottom and angle-rail in position for use; Fig. 7, a top view of the angle-rail, showing the canvas bottom secured to the tightening-rod thereof; and Figs. 8 and 9 show the manner of interlocking the ends of the angle-rail with the front posts of the sleeping-sections.

The side, floor, and roof of the car are represented by A, B, and C, and the seats D and E are arranged in the usual manner. The upper couch is formed by a canvas bottom, H, secured to rods *a b*, the latter of which is mounted in bearings in the internal angle of an angle-rail, F, shown in Figs. 4, 6, 7, 8, and 9, and runs nearly the entire length of said rail, and is for making the canvas H taut, as will be presently described, while the angle-rail serves to receive and inclose the canvas when rolled. The angle-rail F, when in position to form the couch, is interlocked with the front section-posts L by means of tongued ends *c e* fitting into grooves *r* by a side and vertical movement of the tongues *c e*, as shown in Figs. 8 and 9, making a firm and secure connection, while the rod *b* is fitted into hooks *d* on the side of the car. The hooks for this purpose are made to slide in and out in openings *g*, and when connected with the canvas H the latter is drawn taut upon the rail-rod *a* by a ratchet, *h*, and held by a spring-pawl or other device, giving a firm bottom to the canvas so that the rod *b* can only be detached from the hooks *d* by releasing the ratchet-lock. In this arrangement the angle-rail serves to carry the rolled canvas H with its rods *a b* and ratchet *h* within its angle, vertical, and seat sides F F', as shown by dotted lines in Fig. 4, in which position it is placed in a side recess, I, and secured upon its seat F' out of the way, appearing only as a base cornice to the roof, as shown in Figs. 1, 2, 3, and 6. The canvas H is rolled upon the rod *b*, and rests when rolled upon the rod *a*, and it is attached to the latter by pins *k*, Fig. 7, by which it is made taut when said rod *a* is turned, the said pins serving as holders on the rod *a* for the purpose. The hooks *d* are slid out and into recesses *m* in the side A when not in use, as shown in Fig. 6. The lower couch is formed by a canvas, N', stretched from a roller, N, between the seats, and fastened to the seat-back at *f*, in Fig. 2, the roller

N being held to keep the canvass taut by a ratchet and pawl. This arrangement is made practically useful and convenient by locating and arranging the roller N in an opening, *n*, in a fixed seat-back, T, between two adjacent seat-backs, so that the canvas when rolled is concealed within a chamber formed by the two seat-backs and the opening *n*, as shown in Fig. 2.

In using this canvas bottom the seat-backs are turned down. The sleeping sections are formed by a detachable partition of three or more hinged pieces fitted into a groove, *i*, in a flying buttress, U, and held by dowel-pins in the lower-seat division T so that it can be removed to open the sleeping-sections and leave the seats uninterrupted. The partition pieces P R S are hinged on alternate sides so as to make the partition as one piece when fastened in place, and allow it to be folded and put away into grooves beneath the seat and in line with the seat-back T and secured. This partition is light and easily managed to put into and out of place in building up and removing the couches; and in this respect is a very great advantage over permanently hinging such partitions and folding them at the top of the car, whereas the seat-back T and grooved buttress U are used as a support and hold for the partition, as shown in Fig. 2.

Every addition necessary to form a couch in the car is light, convenient, and durable, the changes easily and quickly made, and all

the parts stowed at points out of the way and unseen.

Having described our invention, we claim—

1. In a sleeping-car couch, the angle-rail F F', in combination with the canvas bottom H, the holding and tightening rod *a*, and hooks *d*, substantially as and for the purpose described.

2. The angle-rail F having lip projections *e* for interlocking with the posts L, to effect an easy and secure connection in forming the couch without fastenings, as described.

3. The angle-rail F, constructed to receive and hold the rolled canvas bottom H, and to form a seat, F', for sustaining it in the side recess I of the car, as described.

4. The detachable hinged partition P R S, in combination with the upper buttress having receiving-groove *i*, and the supporting and holding seat-back T, as and for the purpose described.

5. The roller N for the canvas bottom N', located and arranged within an opening, *n*, in the seat-back T, and between two adjacent seat-backs, for the inclosure of the roll N and canvas when rolled, as described.

In witness whereof we have hereunto subscribed our names.

JAMES T. LEIGHTON.

DOMINICUS R. LEIGHTON.

In presence of—

A. J. TIBBITS,

J. H. SHUMWAY.