(No Model.)

J. POOLMAN & F. R. MARKS.

RAILROAD CHAIR.

No. 304,559. Patented Sept. 2, 1884.

Fig. 1.

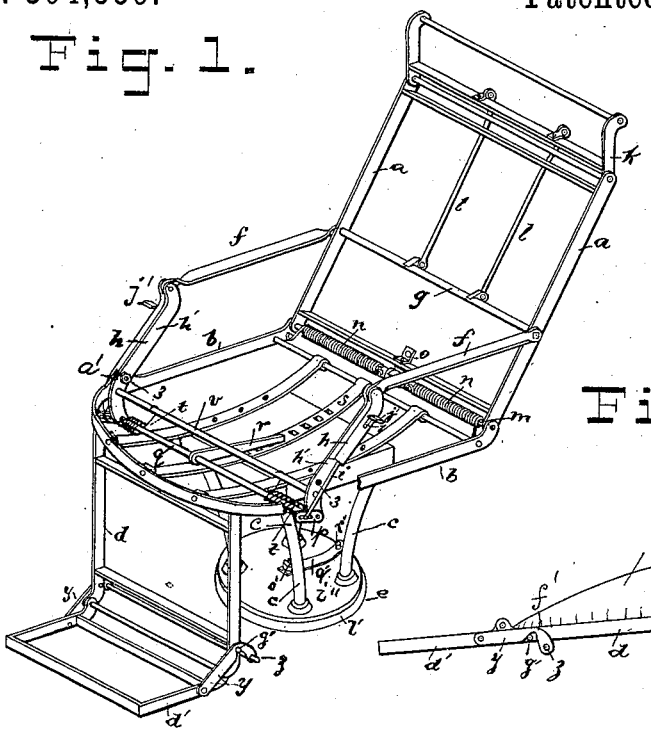


Fig. 2.

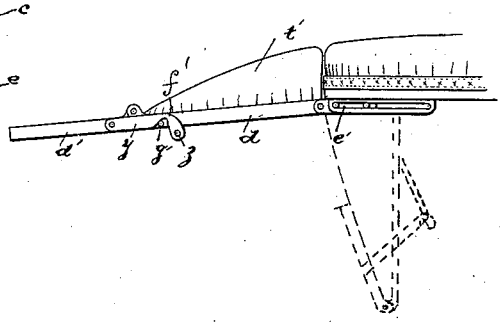


Fig. 3.

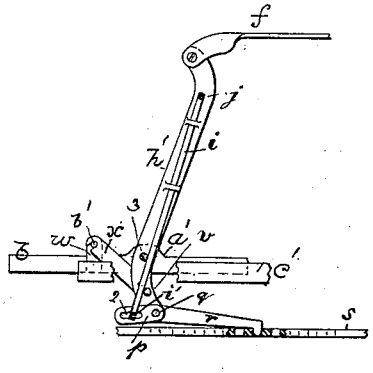
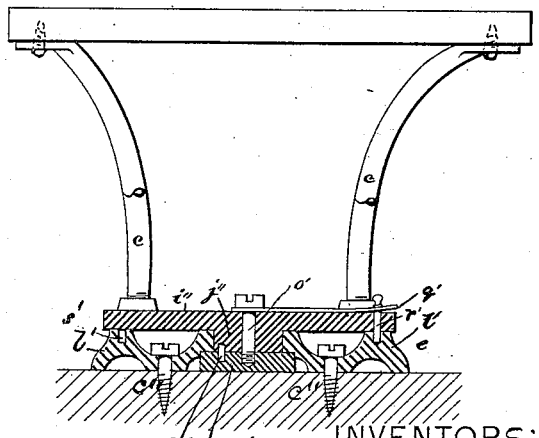


Fig. 4.



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UNITED STATES PATENT OFFICE.

JAMES POOLMAN AND FRANK R. MARKS, OF NEW YORK, N. Y.

RAILROAD-CHAIR.

SPECIFICATION forming part of Letters Patent No. 304,559, dated September 2, 1884.

Application filed August 8, 1883. (No model.)

To all whom it may concern:

Be it known that we, JAMES POOLMAN and FRANK R. MARKS, citizens of the United States, and both residing at New York, in the county and State of New York, have invented certain new and useful Improvements in Railroad-Chairs, of which the following is a specification.

Our invention relates to certain improvements in that class of chairs that are adapted for railway-car seats; and our improvements consist, first, in the combination and arrangement of devices for elevating and inclining the several sections of the chair simultaneously; second, in means whereby the chair can be revolved and be locked automatically in position; third, in means for holding the foot-rest in a certain relative position to the leg-rest; and, finally, in the combination and arrangement of certain devices for operating all the sections of the chair simultaneously, as will be hereinafter set forth.

In the accompanying drawings, Figure 1 is a perspective view of our improved railway-chair with the upholstery removed. Fig. 2 is a side view of the front part of the seat and the foot and leg rests with the upholstery applied thereto. Fig. 3 is a side view of the operating mechanism on a larger scale, showing one of the parts of the standard to which it is connected; and Fig. 4 is a sectional view of the base of the pedestal.

Referring to Fig. 1, *a* represents the back-frame, *b* the seat-frame, and *d d'* the leg and foot rests, of a railway-chair, which is mounted on a pedestal, *c*. The arms *f* are pivoted to the standards *h* at their front end, and their rear end is keyed on the rod *g*, which is journaled in the side rails of the back-frame *a*.

k is the head-rest, which is hinged to the top of the back-frame *a*, and its adjustment is effected by means of two upright levers, *l l*, secured thereto and to the rod *g*, which latter is operated, through the arms *f*, by the movement of the push-bar *i*. A rod, *m*, journaled in the side bars of the back-frame, is provided with a coil-spring, *n*, on each end. The proper tension of the springs being attained by rotating the rod, it is held in position by a pawl, *o*, which engages with suitably-arranged notches on said rod.

No more particular description of the foregoing devices need be entered into here, as the same are fully set forth in an application for patent already filed by us, Serial No. 98,726, July 20, 1883. The standards *h*, which support the arms *f*, are made in two parts, so as to permit of the push-bar *i* being secured within them. In Figs. 1 and 3 one of the parts or sides of the standard is removed. The outer plate of the standard is slotted, (shown at 1,) and a pin, *j*, on the upper end of the push-bar *i* projects through and works in said slot. A knob, *j'*, on the end of the pin serves as a grasping device in operating the push-bar.

The operating mechanism herein shown is as follows:

To the lower end of the push-bar *i* is connected, by the pin *i'* and slot 2, the short lever-arm *p*, the inner end of which is keyed on the rod *q*, which is journaled in the lower end of the inner plate, *h'*, of the standard *h*, this inner plate or portion being extended down below the side rail of the seat-frame for this purpose. The inner plate, *h'*, of the standard is pivoted to the side rail of the seat-frame *b* at 3, while the outer plate is made somewhat of a box shape, and is cut away to fit over the round projection *a'* on the side rail.

To the center of the rod *q*, which, as before stated, connects the lever-arms *p*, is rigidly secured a pawl-arm, *r*, adapted to engage with a slotted bar, *s*, connected to the front and rear rails of the seat-frame *b*. On each end of this rod *q* is arranged a coil-spring, *t*, one end of which is held by the pin *i'* on the push-bar *i*, and the other end is passed up and around the rod *v*. The ends of the rod *v* are secured above the rod *q* in the lower part of the plate *h'* of the standard.

To the side rails of the seat-frame *b* are secured the upright arms *w*, on the upper end of which are pins *b'*, which pins engage with the hooked end of the bars *x*, secured to the rod *v*. A pressure downward of one or both of the push-bars *i* will cause the rod *q* to rotate sufficiently to raise the pawl end of the arm *r* out of engagement with the bar *s*, when the back may be easily thrown down by the occupant of the chair until a desired inclination is reached. By releasing the push-bar the back is locked in position by the pawl-arm

r entering one of the slots in the bar s. As the back is moved in either direction, the head-rest k is likewise operated, being thrown forward or backward by the levers l l as the rod g is moved by the arms f. At the same time, if the bars or hooks x on the rod v are in engagement with arms w, connected to the seat-frame, the movement of the standards h will cause the inner seat, c', which is hinged to the back rail of the seat-frame b, to be elevated in front.

d represents the leg-rest, which is hung to the seat-frame by means of a slotted bar and pin, as shown at e'; but this connection, having been fully described in a previous application, needs no further mention here.

To the leg-rest d is pivoted the foot-rest d'. To the side rails of the latter are pivoted bars y, the upper ends of which are connected by a cross-rod, z. A notch, f', is provided in the upper end of said bars or links to receive a pin, g', on the side rails of the leg-rest d. By disengaging the bars y the foot-rest can be folded up against the leg-rest. The side rails of both parts are bent abruptly inwardly, and pivoted so as to form a joint inside of the plane of the side rails, as seen in Fig. 2.

The next part of our invention relates to the pedestal e. c c are the pillars or supporting-columns, which may be of the number of two, three, or more, if desired. These screw into the plate i'' at their lower end, and are made curved, so as to flare out at the top part, producing a spreading support for the chair to rest upon considerably larger than the base portion resting on the floor. These columns c are bolted at their upper ends to the seat-frame rails. The plate i'' is provided with an annular neck portion, j'', which fits into a hole or aperture in a second plate or base-ring, l', and is held therein by the block m', which block has a pin or stud, n', that takes into a recess in the neck j''. A bolt, o', secures the upper plate and block together. The plate i'' rests upon and turns freely on the base e, so that the chair and pedestal revolve together.

q' is a flat spring secured at its inner end to the plate i'' by the bolt o'. On the outer end is a stud or pin, r', which enters holes s' in the top of the base-ring l'. By pressing up the outer end of the spring the top plate is released, and the chair may be turned until the desired position is attained, when the spring is dropped, and the pin, entering one of the holes, will lock the plates together. Any number of holes or recesses to receive the pin may be formed in the base ring or plate l'. The base-plate is secured to the floor of the car by means of screw-bolts c'.

Fig. 2 represents the front part of the seat and the foot and leg rests, the latter in an extended position, with the cushions or upholstery applied thereto. The upholstery of the seat is of the usual style. That of the leg-rest, however, forms one of the novel features of our chair. The cushion of the leg-rest has a sloping top surface, as shown in Fig. 2, the top part being of a height to conform to the height of the cushion of the seat, and from this point it slopes gradually down to the foot-rest. The effect of this is to form (when the leg-rest is raised in a horizontal position, as shown in Fig. 2) an unbroken sloping line from the front of the seat to the foot-rest, adapted to fit under and support the lower limbs of the occupant of the chair in a natural and easy manner. When the leg-rest is pushed beneath the seat, as shown in dotted lines, the sloping away of the cushioned portion prevents the heels from striking against it—an evil that cannot be prevented where the cushion is of the usual form. When the front of the seat is rounded, the top edge of the cushion is made correspondingly concave to fit up to it.

We claim—

1. The combination, with the seat-frame and arm-supporting standards, of the bars i, arms p, pivoted thereto, connecting-rod q, carrying pawl-arm r, slotted bar s, and spring t, as and for the purpose set forth.

2. The combination, with the seat-frame and arm-supporting standards formed of two parts, of a bar secured within said standards and projecting therefrom at the lower end, carrying a short arm having a pin-and-slot connection, a cross-rod journaled in the lower end of the inner part of said standards and keyed to said arm, a slotted bar connected to the seat-frame, a rigid pawl attached to said cross-rod to engage with said bar, and a spring or springs, as and for the purpose set forth.

3. The combination, with the seat-frame, of the pedestal e, consisting of the base-plate i'' and columns c, screwed at their lower ends into said plate, and having their upper ends flared outwardly and bolted to the bars of the seat-frame, stationary ring l', having a central aperture to receive a projection on the plate i'', with block m', and bolt o', for securing the parts together, as and for the purpose set forth.

4. The base-plate i'', provided with flaring columns c, and having an annular neck, j'', ring l', provided with a recess to receive said neck, block m', having pin n', and bolt o', all arranged and operating as set forth.

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