

C. STEVENBANKS & JOSEPH QUINN.

Improvement in Adjustable Car-Seats.

No. 115,539.

Patented May 30, 1871.

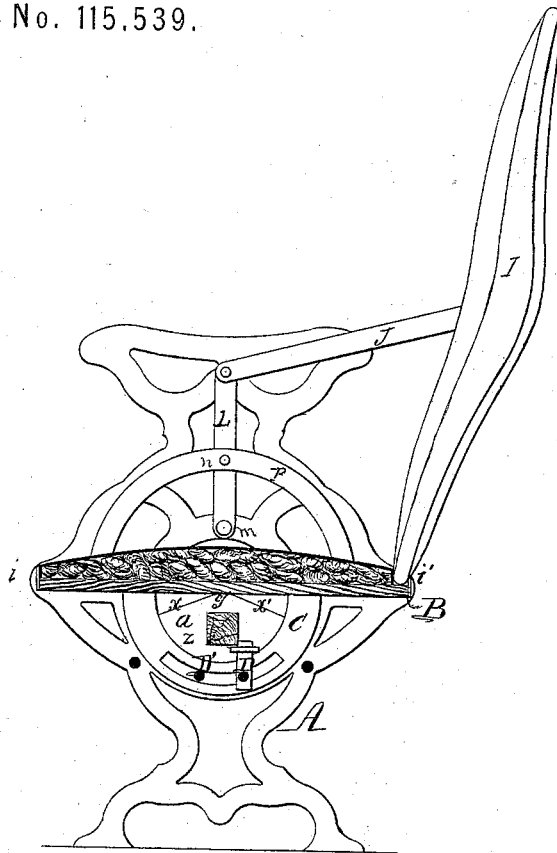


Fig. 1.

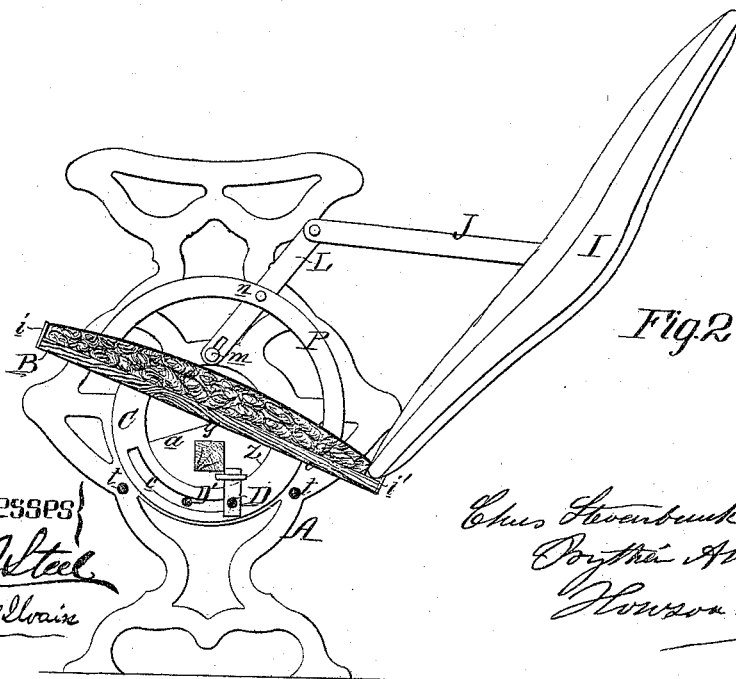


Fig. 2.

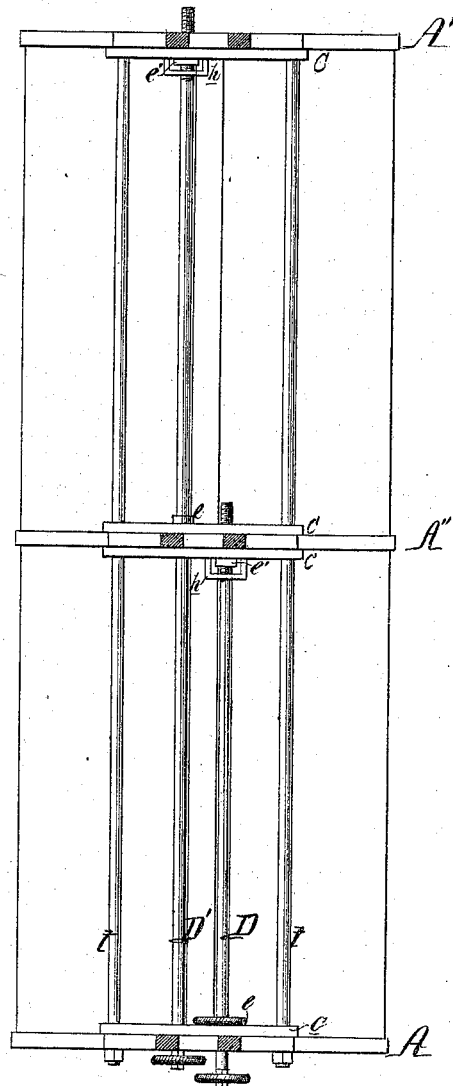
Witnesses  
*Wm. A. Steel*  
*John McElwain*

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*By their Atty*  
*Thos. & Lu*

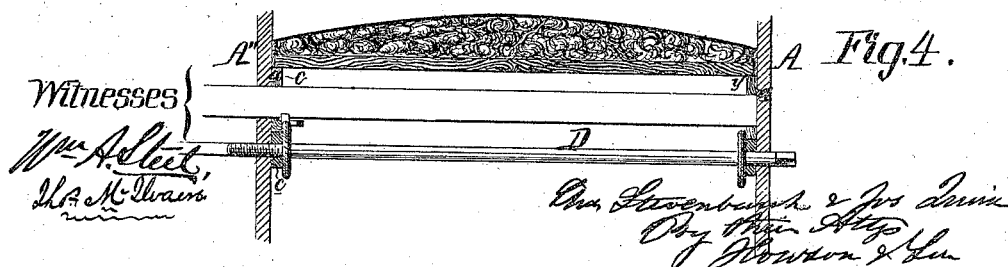
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*Fig. 5.*



# UNITED STATES PATENT OFFICE.

CHARLES STEVENBANKS AND JOSEPH QUINN, OF WILMINGTON, DELAWARE.

## IMPROVEMENT IN ADJUSTABLE CAR-SEATS.

Specification forming part of Letters Patent No. 115,539, dated May 30, 1871.

We, CHARLES STEVENBANKS and JOSEPH QUINN, both of Wilmington, county of New Castle, State of Delaware, have invented Adjustable Car-Seats, of which the following is a specification:

### *Nature and Object of the Invention.*

Our invention consists of car-seats constructed in the peculiar manner too fully described hereafter to need preliminary explanation; the object of our invention being the ready adjustment of the seats for passengers desiring to assume either a sitting or reclining position, and the ready securing of the seats after adjustment.

### *Description of the Accompanying Drawing.*

Figures 1 and 2 are vertical sections of our improved car-seat in different positions; Fig. 3, an inverted plan view of the same; and Fig. 4, a longitudinal vertical section of one of the seats.

### *General Description.*

A is the outer, A<sup>1</sup> the inner side frame of a car-seat, and A<sup>2</sup> the intermediate frame, all being arranged within and secured to the floor of a railway car, and connected together by the rods *t t*. At the inner end of each end frame, and on both sides of the intermediate frame, is a projecting plate, *a*, beveled at the upper edge to form two inclined planes, *x x'*, Fig. 1, the point *y* where these inclined edges meet being the center of a circle, the circumference of which coincides with the rounded portion of the edge of the plate *a*. There are two seats, one extending from the inner end frame to the intermediate frame A<sup>2</sup>, and the other from the latter frame to the outer end frame A, the seats resting on the upper edges of the plates *a*, and the rounded edge of each of the latter being adapted to the inner edge of a segmental plate, C, secured to the adjacent end of the seat and bearing against the inner side of the frame. In each segmental plate is a curved slot, *c*, for the free passage of threaded rods D D', the latter screwing into the frame A<sup>1</sup> and the former into the intermediate frame, and both rods extending through an opening in the outer frame A, and having square or other suitably-shaped heads

for the reception of a key or other instrument, by which they may be turned. On the rod D adjacent to the inner side of the outer plate C of the frame A, and on the rod D' adjacent to the inner side of the plate of the intermediate frame, is a fixed collar, *e*, and on the threaded portion of each rod adjacent to the plate C, through which it passes, is a nut, *e'*, which is prevented from turning by a staple, *h*, on the adjacent frame.

The cushion of each seat is secured to a frame which is somewhat narrower than the seat, and can slide on the same between edge-ribs *i i*, Fig. 2, so that when the cushion-frame is in contact with one rib there will be a space between the opposite rib and the edge of the frame for the reception of the lower edge of the back I. Each back is reversible, and is hung to the outer ends of rods J J, each of which is connected to the upper end of an arm, L, slotted for the reception of a pin, *m*, on the frame, a short distance above the point *y*. Each arm, L, is hung to a pin, *n*, at the center of a segmental plate, P, secured to the adjacent end of the seat B, so that when the back is inclined to either side it will carry with it the arm L and turn the seat B on the point *y* as an axis, the movement of the seat, however, being less than that of the back in proportion to the distance between the points *y* and *m*. By properly regulating this distance, therefore, the proper relative angle of the seat and back may be maintained, whatever may be their positions.

During the day the seats are generally in a horizontal position; but at night, or when a passenger desires to resume a reclining position, he notifies an attendant, who is provided with a key adapted to the heads of the screw-rods D D', and who turns one or other of said rods so as to remove the collar *e* and nut *e'* of the same from contact with the plates C C of the seat to be adjusted. The back I is then brought to an inclined position, when, through the medium of the arms J L and segmental plate P, the seat will be tilted until it bears against the inclined edges *x* or *x'* of the plates *a a* on which it rests. The attendant now, by turning the screw-rod, brings the collar *e* and nut *e'* firmly against the adjacent plates C C, clamping the latter against the frames and

securing the seat firmly in its position. It will be seen that the points *y* of the plates *a a* serve as fulcrums on which the seat vibrates; that the inclined edges *x x'* limit the movements of the seat; and that both the edges and points afford firm supports for the seat whatever may be its position, the usual fulcrum-pins, which afford but an unsteady support and are liable to wear and break, being thus dispensed with.

When the back is to be reversed a recess for the reception of the edge of the back is formed at the edge of the seat on which the back is to bear by sliding the cushion-frame away from the adjacent rib *i*. It will be apparent that the arms *L* may be slotted at the point where the pins *n* pass through the same instead of at their lower ends.

When it is not desired to divide the seat the central frame *A*<sup>2</sup> may be dispensed with, in which case only one screw-rod will be used, and suitable hand-wheels may be permanently secured to the rods to enable the passengers to operate the same. It will be seen, however,

that, by constructing the rods so as to be operated only by keys, all danger of injury to the mechanism of the seats by the tampering of irresponsible parties will be avoided.

*Claims.*

1. The seat *B*, its slotted segmental plate *C* adapted to the plates *a*, in combination with tightening-rods, arranged substantially as described.

2. The combination of the seat *B*, its segments *P*, slotted arms *L L*, rods *J*, and back *I*.

3. A seat, *B*, having edges *i i* and a sliding cushion, so arranged as to afford a recess within the edges for the reception of the lower edge of the back.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

CHAS. STEVENBANKS.  
JOSEPH QUINN.

Witnesses:

MICHAEL MCGLINCHIEY,  
PETER HAUGHEY.