

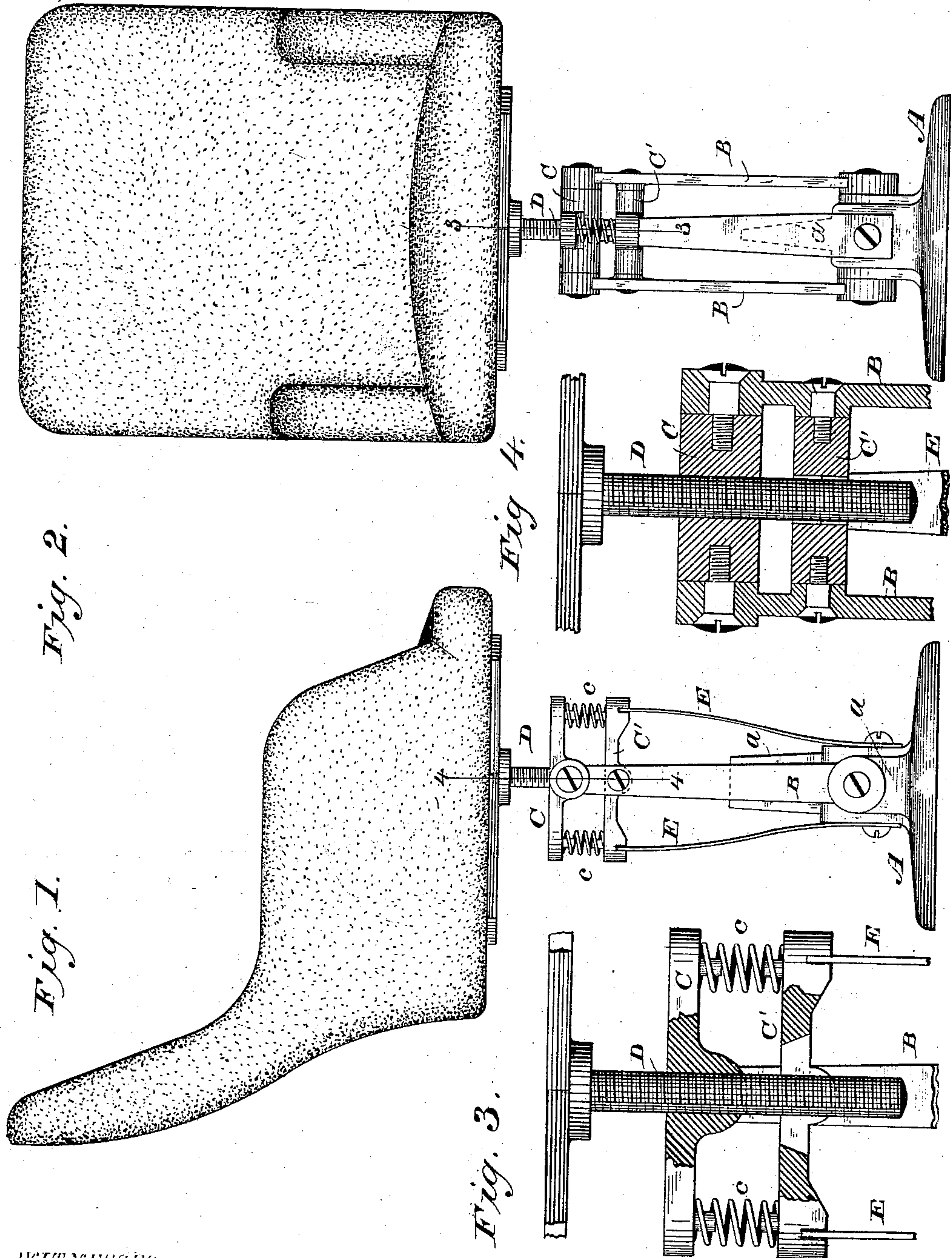
(No Model.)

E. T. STARR.

CAR SEAT.

No. 253,951.

Patented Feb. 21, 1882.



WITNESSES

Wm. A. Shinnick,
Geo. W. Buck.

By *his* Attorneys

Edw. T. Starr,
Baldwin, Hopkins & Peyton.

UNITED STATES PATENT OFFICE.

ELI T. STARR, OF PHILADELPHIA, PENNSYLVANIA.

CAR-SEAT.

SPECIFICATION forming part of Letters Patent No. 253,951, dated February 21, 1882.

Application filed July 30, 1880. (No model.)

To all whom it may concern:

Be it known that I, ELI T. STARR, of the city and county of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Railroad-Car Seats or Chairs, of which the following is a specification.

My invention relates more particularly to seats or chairs for use in railroad-cars, which are propelled by steam and subject to the jerks and sudden starts incident to the starting, stopping, and motions of trains. The unpleasant motions and disturbances created by the sudden jerky movements of cars have long been a serious objection to railroad travel, and in some cases interdict entirely the safe conveyance of sick and delicate persons long distances by rail.

The object of my present invention is to thoroughly overcome all objections to railroad travel from the sources mentioned, and to provide a seat or chair which affords the passenger comfortable rest, and which substitutes for the unpleasant motions heretofore experienced an easy, smooth, and steady motion at the sudden starting and stopping of the car and during the travel of the car from station to station.

The subject-matter claimed is particularly pointed out at the close of the specification.

In the accompanying drawings, Figure 1 represents a side elevation of a complete railroad-chair embodying my improvements. Fig. 2 is a front elevation thereof. Fig. 3 is a vertical sectional view through the upper portion of the yielding supports or connections on the line 3 3 of Fig. 2, and Fig. 4 is a similar vertical sectional view on the line 4 4 of Fig. 1.

A base-plate, A, preferably circular in form, is fastened rigidly to the floor of the car, so as to constitute a fixture thereof, as usual. A standard, *a*, preferably cast with the base, rises centrally therefrom for a short distance, and to the lower end of said fixed standard, at opposite sides thereof, are pivoted the lower ends of two normally upright arms or supports, B B. To the upper ends of said supports B B is connected a frame or spider, C, pivoted or journaled so as to rock freely backward and forward upon the supports and independently of any rocking or yielding motion thereof.

A central screw-spindle, D, is connected with the bottom of the chair-body or seat-frame in any of the well-known ways, and works in a

central screw-threaded opening in the frame or spider C, so as to permit said chair-body or seat-frame to be raised and lowered to vary the elevation thereof, as well as to be revolved or turned by the occupant while seated or resting therein, or to be turned for the purpose of reversing the seat or chair, as must be the case in order to prevent the chair facing always in the same direction.

In order to limit and govern the rocking movement of the frame or spider C (and consequently of the chair body or seat) relatively to the supports B B, and to render said rocking movements easy and elastic, I interpose between the outer ends of the front and rear arms of said frame or spider C and the corresponding arms of a second spider, C', (pivoted between the supports B B a short distance below the spider C,) suitable coiled springs, *c c*, which normally maintain the rocking spider or frame C in a horizontal position, while permitting it and the seat carried by it to be rocked freely relatively to the pivoted supports B B.

Plate-springs E E, fastened at their lower ends to the lower end of the fixed standard *a* (or to the base) are connected with or act upon the spider-frame C' at their upper ends, and the tendency of said springs is to maintain the supports B B in a normally upright position, while allowing them to be moved or swayed out of the perpendicular against the force or power of the springs, thus allowing the said supports to rock upon their pivots with a yielding springy motion, and to be returned to their normally upright position when the disturbing influences are at rest. The movement of the supports B B is backward and forward in the direction of the length of the car, and the range of movement is limited by the upper end of the standard *a*, against which the springs E E will come.

It will be obvious from what has been said that, owing to the capacity of the chair or seat to sway or move from a point near the car-floor against a yielding or elastic medium, sudden jerks and starts of the car will only cause the rigid base and standard to partake of those motions, while the supports will sway or move with an easy motion backward and forward, thus overcoming one of the most serious objections existing to railroad travel. The motion of the

seat or chair will be easy, smooth, and delightful, while the occupant may rock or tilt the chair upon the supports and turn it horizontally, so as to face in different directions, at pleasure. The occupant may also raise or lower the seat so as to suit his ease and convenience in this direction.

It will of course be understood that spiral or other springs may be substituted for the flat springs shown as acting upon the yielding supports B B, and said springs may be connected with the yielding supports in any of the various well-known and suitable ways without the interposition of the second spider, C'.

I may here state that I am aware that chairs having the base and body connected by a yielding support or supports to permit the body or seat to yield or to rock or be moved relatively to the base are old, and such structure, broadly, is not claimed by me.

I am also aware that it is common to mount chair seats and bodies upon a support by means of a rocking frame, connection, or spider, which may be either entirely free to rock within certain limits or be acted upon by a spring or springs, so that the rocking motion is against the force of the springs, which thus serve to control the rocking action of the chair seat or body.

I claim as my invention—

1. The combination, substantially as hereinbefore set forth, of a base, a rocking or yielding support connected with said base, a chair body or seat carried by said rocking support, and an independent rocking connection between said rocking support and said chair body or seat.

2. The combination, substantially as hereinbefore set forth, of a base, a rocking or yielding support connected with said base, a chair body or seat carried by said rocking support, and a rocking and turning connection between said support and said chair body or seat.

3. The combination, substantially as hereinbefore set forth, of a base, a rocking or yielding support connected with said base, the chair body or seat carried by said rocking support, and the rocking, turning, and elevating and lowering connection between said support and said chair body or seat.

In testimony whereof I have hereunto subscribed my name this 26th day of July, A. D. 1880.

ELI T. STARR.

Witnesses:

WM. J. PEYTON,
JAMES YOUNG.