(No Model.)

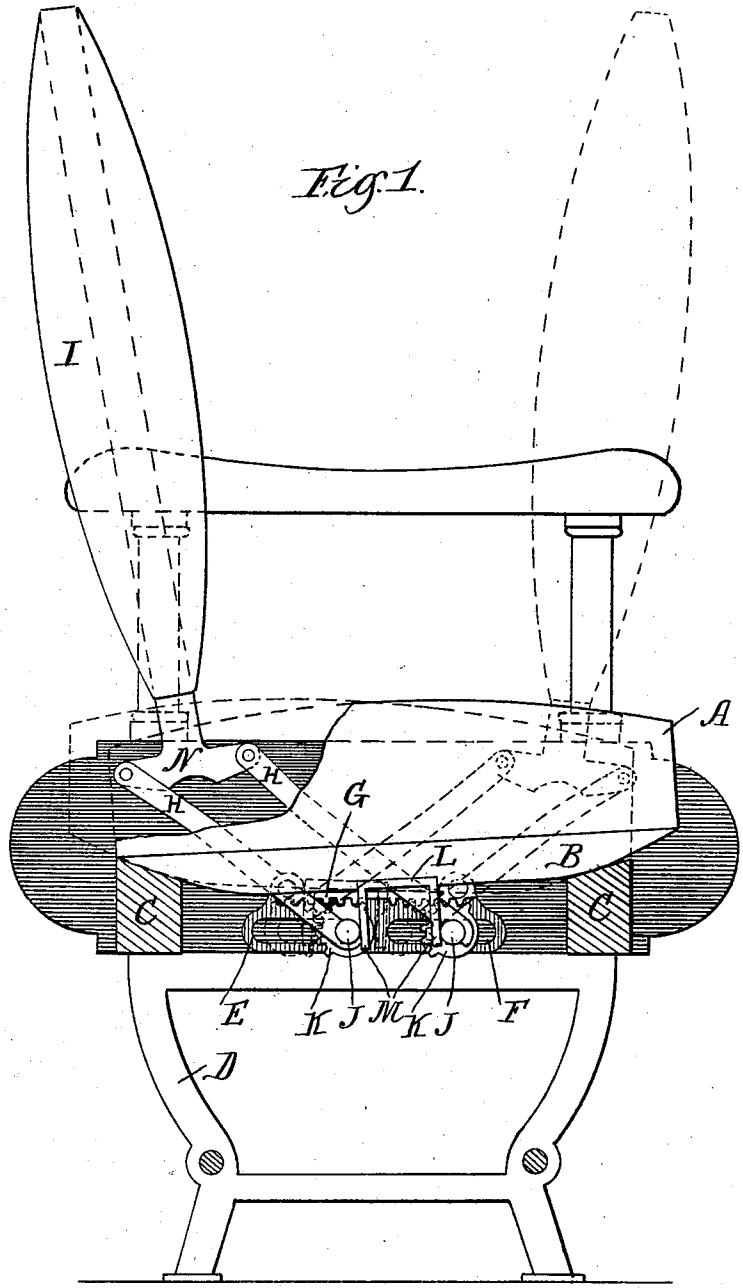
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E. N. GILFILLAN.

CAR SEAT.

No. 592,247. Patented Oct. 26, 1897.

Fig. 1.



Witnesses.
Wm. M. Rheem.
Wm. A. Belt.

Inventor.
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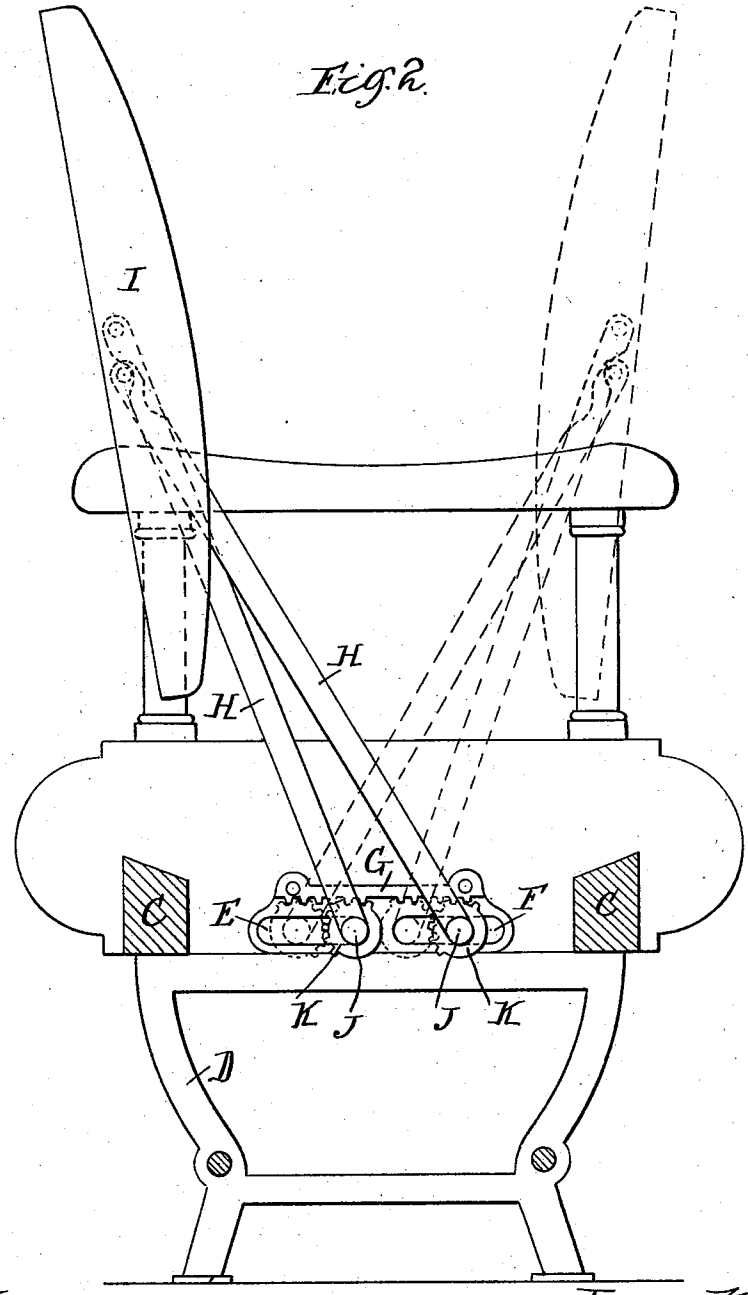
(No Model.) 2 Sheets—Sheet 2.

E. N. GILFILLAN.

CAR SEAT.

No. 592,247. Patented Oct. 26, 1897.

Fig. 2.



Witnesses.
Wm. N. Rheem.
Wm. O. Belt.

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UNITED STATES PATENT OFFICE.

ESSINGTON N. GILFILLAN, OF CHICAGO, ILLINOIS, ASSIGNOR TO HARRIS A. WHEELER, OF SAME PLACE.

CAR-SEAT.

SPECIFICATION forming part of Letters Patent No. 592,247, dated October 26, 1897.

Application filed January 28, 1896. Renewed August 20, 1897. Serial No. 648,959. (No model.)

To all whom it may concern:

Be it known that I, ESSINGTON N. GILFILLAN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Car-Seats, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My present invention relates to improvements on that class of seats in which the back is reversed with relation to the bottom, or reversed and turned, and the bottom is shifted back and forth by the movement of the back in changing the facing direction of the car-seat. An example of a reversible car-seat may be found in Letters Patent No. 491,761, granted to E. Aze and myself on February 14, 1893.

The primary object of the invention is to construct a seat in such a manner that the back may be readily and easily shifted with as little friction as possible and with perfect accuracy of movement.

Another object of the invention is to provide movable pivots for the parts supporting the back, whereby the latter may be quickly shifted without the shifting devices binding.

A further object is to adapt my shifting devices to seats provided with backs which do or do not turn completely over, and a further object is to provide means for simultaneously shifting the seat and back or shifting the seat and shifting and turning the back.

With these and other ends in view the invention comprises at each end of the seat a frame and arms or links pivotally supporting the back and provided with movable pivots in said frames, said arms or links being adapted to simultaneously adjust the seat as the back is shifted.

My invention consists also of the details of construction and arrangement of parts which will be fully pointed out and claimed hereinafter.

In the accompanying drawings, Figure 1 is a view, partly in section, showing my invention embodied in a reversible car-seat, the opposite position of the back and other movable parts being shown in dotted lines. Fig. 2 shows my invention applied to a car-seat in which the back is turned as well as reversed.

Referring to the drawings, in which like letters of reference denote corresponding parts in both the figures, the seat is of the usual construction, in which the cushion A is supported upon rockers or runners B, loosely arranged on the sills C. The ends of the rockers or runners project over the sills and are preferably beveled on their lower sides to facilitate their movement on the inwardly inclined or beveled sills. The sills are supported on a frame D in a suitable manner.

On the side of the car or at the end of the seat I provide a frame E, which has a slot or slots F therein and a rack-bar G on the upper side thereof. One of these frames is arranged in a suitable manner at each end of the seat, and I will hereinafter describe the construction at one end only of the seat.

The arms or links H, which support the back I, are movably pivoted at their lower ends in said frame. Two of these arms are employed at each end of the seat, and the lower ends of said arms are rigidly secured to the horizontally-movable shafts J, which project into and have bearings in the slot F in said frame. Adjacent to the lower ends of said arms segments K are rigidly secured on the shafts J and provided with teeth adapted to engage the rack-bar G. It is obvious that instead of these two segments I may employ pinions or devices of a similar nature which are designed to accomplish the same results. A downward projection is arranged at or about the middle of each sill B, and in Fig. 1 of the drawings I have illustrated one form of this projection, which comprises a plate L with two downward extensions M, which are arranged between and in contact with the shafts J. Instead of this plate L many other forms may be employed for this projection, and I have found a single projection of sufficient size to contact with each of the shafts J to be also a desirable form. It will thus be observed that the seat is simultaneously shifted with the movement of the back. As the movable pivots on the lower ends of the arms H constituted by the shafts J move in the other direction from that in which they rest the downward projection on the sill is

also moved by said shafts. In this way the seat is shifted to the desirable extent and at the same time as the back.

In Fig. 2 of the drawings I have shown my invention applied to a seat in which the back thereof is adapted to be turned as well as shifted. In this application of my invention the arms H are pivoted directly to the back, at or about the middle thereof, instead of to plates N on the back. The other parts are constructed in substantially the same manner, the only changes necessary being those within the knowledge and skill of a person familiar with the art.

I am aware that changes in the form and proportion of parts and details in the construction of my invention may be made without departing from the spirit or sacrificing the advantages thereof, and I therefore reserve the right to make all such changes which fall within the scope and spirit of the invention.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a reversible car-seat, the combination with a back, of the arms pivoted to and supporting said back frames at the ends of the seat and movable pivots on the lower ends of said arms adapted to be shifted laterally as the back is reversed, substantially as described.

2. In a reversible car-seat, the combination with a back, of the arms pivotally supporting said back frames at the ends of the seat and the horizontally-movable shafts mounted on the lower ends of said arms, and constituting movable pivots therefor substantially as described.

3. In a reversible car-seat, the combination with a back, of supporting-arms pivotally secured to said back, movable pivots on the lower ends of said arms adapted to be shifted as the back is reversed, a seat arranged to be shifted simultaneously with the back by the lateral movement of said pivots, and frames at the ends of the seat substantially as described.

4. In a reversible car-seat, the combination with a back, of supporting-arms pivotally secured to said back, movable pivots on the lower ends of said arms adapted to be shifted as the back is reversed, a seat adapted to be shifted simultaneously with the back, frames at the ends of the seat and downward projections on said seat arranged between the said movable pivots, and controlled thereby, substantially as and for the purpose described.

5. In a reversible car-seat, the combination with a back, of supporting-arms pivotally secured to said back, movable pivots for the lower ends of said arms adapted to be shifted as the back is reversed, a seat, frames at the ends of the seat, the rockers supporting said seat, and downward projections on said rockers arranged between and in contact with the movable pivots, whereby said seat is shifted simultaneously with the reversal of the back, substantially as described.

6. In a reversible car-seat, the combination with a back, of frames secured at each end of the seat, the movable pivots operating in said frames, and the parallel arms supporting said back and secured to said movable pivots, substantially as described.

7. In a reversible car-seat, the combination with a back, of frames secured at each end of the seat, shafts operating in slots in said frames, and the parallel arms pivotally supporting the back and rigidly secured at their lower ends to the shafts, substantially as described.

8. In a reversible car-seat, the combination with a back, of frames secured at each end of the seat, shafts operating in slots in said frames, the arms supporting the back and rigidly secured to said shafts, a rack-bar on each frame, and the toothed segments rigid with the shafts and engaging said rack-bars, substantially as described.

9. In a reversible car-seat, the combination with a back, of frames secured at each end of the seat, shafts operating in slots in said frames, the arms supporting the back and rigidly secured to said shafts, a rack-bar on each frame, the toothed segments rigid with the shaft and engaging said rack-bars, a seat, and downward projections on said seat arranged between and in contact with said shafts, substantially as described.

10. In a reversible car-seat, the combination with a back, of frames secured at each end of the seat and provided with slots therein, shafts extending through and having bearings in said slots, a rack-bar on each frame, the supporting-arms pivoted to the back and rigid with said shafts, the toothed segments on said shafts adjacent to the arms and engaging with said rack, a seat and downward projections on said seat arranged between and in contact with the shafts, whereby said seat is shifted simultaneously with the reversal of the back, substantially as described.

ESSINGTON N. GILFILLAN.

Witnesses:
WM. O. BELT,
M. E. SHIELDS.