No. 643,841. Patented Feb. 20, 1900.

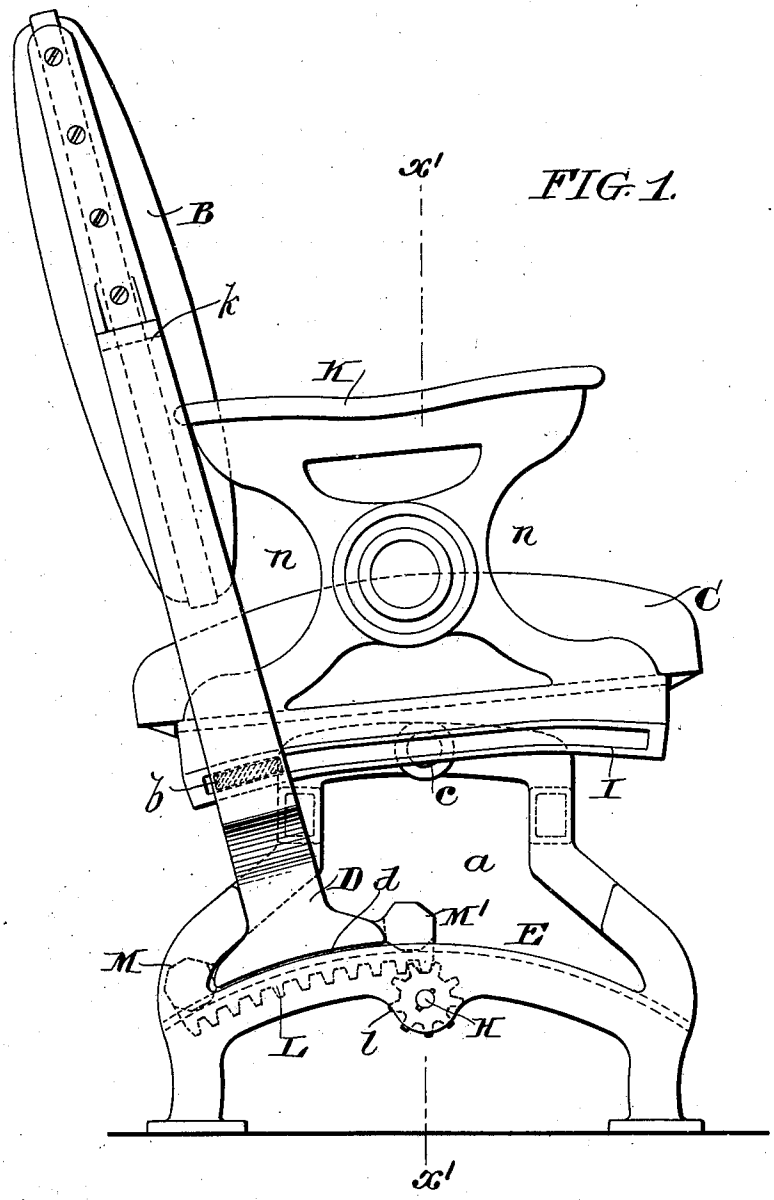
H. S. HALE.

CAR SEAT.

(Application filed June 23, 1899.)

(No Model.) 2 Sheets—Sheet 1.

FIG. 1.



Witnesses:
Henry Drury
R. M. Kelly.

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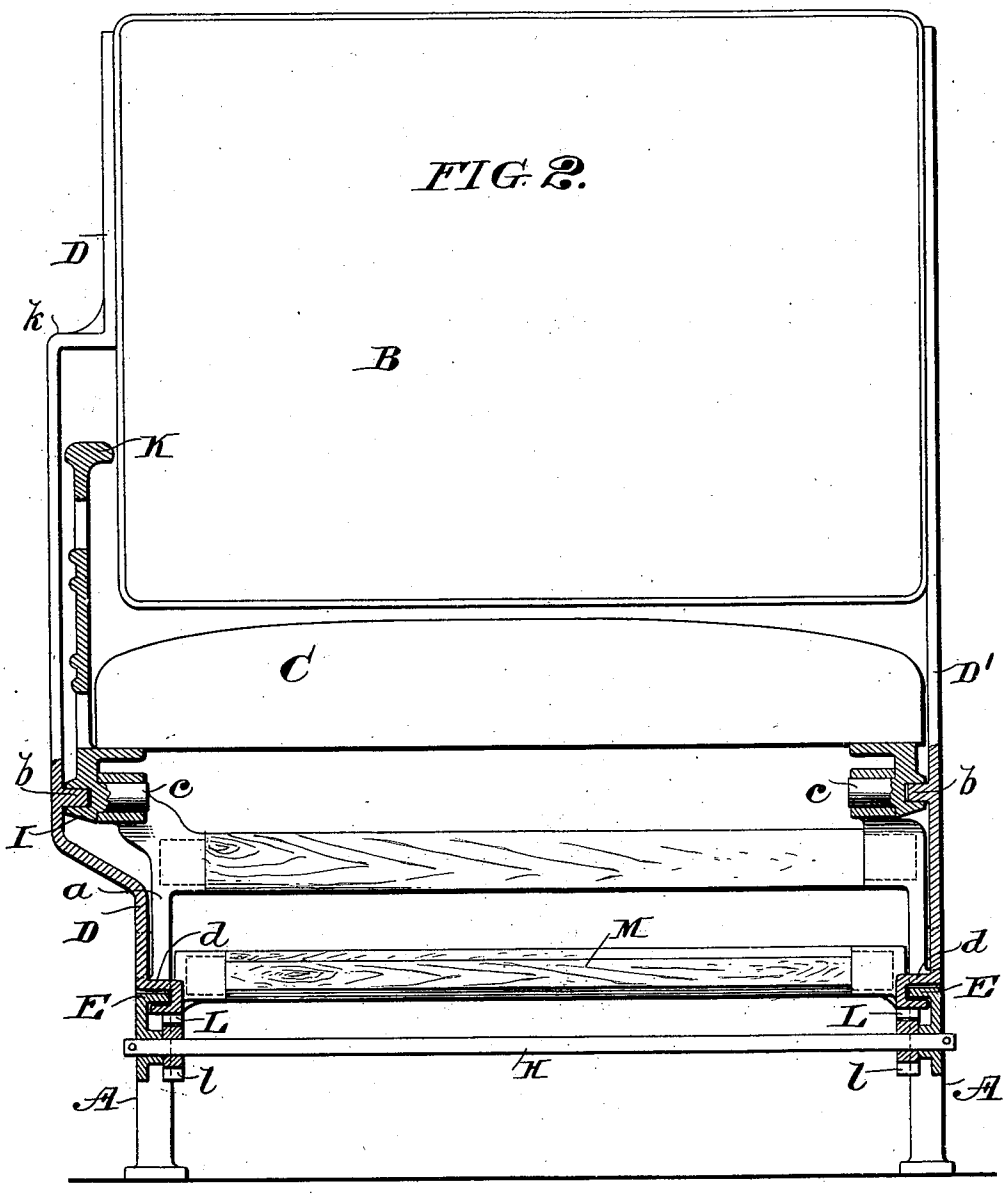
(No Model.) 2 Sheets—Sheet 2.

FIG. 2.



Witnesses:
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R. M. Kelly.

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UNITED STATES PATENT OFFICE.

HENRY S. HALE, OF PHILADELPHIA, PENNSYLVANIA.

CAR-SEAT.

SPECIFICATION forming part of Letters Patent No. 643,841, dated February 20, 1900.

Application filed June 23, 1899. Serial No. 721,559. (No model.)

To all whom it may concern:

Be it known that I, HENRY S. HALE, of the city and county of Philadelphia and State of Pennsylvania, have invented an Improvement in Car-Seats, of which the following is a specification.

My invention relates to car-seats; and it consists of certain improvements which are fully set forth in the following specification and are shown in the accompanying drawings.

In my Letters Patent No. 626,831, dated June 13, 1899, I have described a car-seat in which the side frame at one or both ends is inset from the end of the seat-cushion frame, and the shifting side arms, which are located on the outside of the ends of the seat-cushion frame, are bent inward at the corresponding end or ends under the seat-cushion frame and are guided at their lower ends by the inset side frame or frames. This construction is designed for the purpose of obtaining a seat of maximum length while utilizing a minimum floor-space. Such a seat is unprovided with an arm-rest, and while such seats are ordinarily satisfactory in street-cars arm-rests are especially desirable in railway-car seats, and a part of my invention relates to providing such a seat with an arm-rest at either or both ends without increasing thereby the floor-space occupied by the seat.

Another part of my invention relates to the construction of an arm-rest for a car-seat, whereby greater freedom of access is afforded to the inner end of the seat for passengers entering or leaving while the outer or aisle end of the seat is occupied.

Another part of my invention relates to the employment of a shifting foot-rest which is carried directly by shifting side arms and moves bodily therewith when the direction of the seat is reversed, whereby the foot-rest is caused to assume a position at the back of the seat and the front portion below the seat-cushion is left free and unobstructed for the storage of baggage.

In the drawings, Figure 1 is an end elevation of a car-seat embodying my invention; and Fig. 2 is a longitudinal vertical sectional view of the same on the line x' x', with the side arms and seat-back moved into an intermediate or substantially-vertical position.

A A are the stationary side frames, located below the seat-cushion C, the side frame at one end being shown inset to a substantial distance from the end of the seat-cushion.

D D′ are the shifting side arms, which carry the seat-back B at their upper ends and are supported and guided at their lower ends by the side frames A A, as by the guides E *d*. The shifting side arm D at the outer end where the side frame A is inset is bent under the projecting end of the seat-cushion and extends up to the inset side frame, preferably through an aperture *a*, with the guides E *d* located on the inner side of the side frame. The side arms move bodily on the guides E from one side of the side frame to the other, and for the purpose of transmitting motion from one side arm to the other I provide the lower ends of the side arms with racks L, which engage pinions *l* on a shaft H, journaled longitudinally between the side frames A A below the seat-cushion.

K is an arm-rest carried by the end of the seat-cushion frame and located immediately inside of and close to the corresponding shifting side arm. The seat-back B is made sufficiently narrow to clear the arm-rest in its movements, and the upper portion of the side arm is bent or arched over the arm-rest, as at *k*, and is fastened to the seat-back. If desired, an arm-rest K may be located at each end of the seat, in which case the other shifting side arm D′ will be correspondingly bent or arched. To afford greater freedom of access to the inner end of the seat, I employ an arm-rest cut out or open at the sides, as at *n n*, so that a passenger in the outer end of the seat may turn with his legs extending through into the opening *n* and over the end of the seat. The shifting side arm extends across this opening *n* at the back of the seat, as shown in Fig. 1, thus closing it and preventing packages or baggage falling out into the aisle.

Carried directly by the ends of the shifting side arms D D′ is a foot-rest which moves bodily with the side arms when they are shifted in the act of changing the direction of the seat. The foot-rest is thus caused to assume a position at the rear of the seat, leaving the front portion free and unobstructed for the storage of baggage. In the particular construction shown the foot-rest consists of two

bars M M′, extending longitudinally between the ends of the shifting side arms D D′, the bar M acting as the rest at one side and the bar M′ at the other. A single bar of sufficient width may, however, be employed, as indicated by dotted lines in Fig. 1.

For the purpose of tilting the seat-cushion when the seat-back is shifted the seat-cushion frame is provided with guides I, which engage lugs *b* on the shifting side arms.

The details of construction shown may be varied without departing from the invention.

What I claim as new, and desire to secure by Letters Patent, is as follows:

1. In a car-seat, the combination of the seat-cushion frame, the stationary side frames located below the seat-cushion and inset at either end to a substantial extent beyond the end of the seat-cushion frame, an arm-rest carried by the seat-cushion frame, a shifting seat-back, and shifting side arms carrying said seat-back, and having their lower ends extended close to the side frames and movable bodily with reference thereto, the shifting side arm adjacent to the arm-rest and inset side frame extending downwardly outside of the arm-rest and inwardly at its lower end to the inset side frame, and the upper portion of said side arm extending inwardly over the arm-rest to the seat-back.

2. In a car-seat the combination of stationary side frames, a seat-cushion frame carried thereby, an arm-rest carried by said seat-cushion frame at either end, a shifting seat-back, and shifting side arms carrying said seat-back and extending on the outside of said arm-rest, the side arm adjacent to the arm-rest being bent or extended inwardly over the arm-rest to the seat-back.

3. In a car-seat the combination of stationary side frames, a seat-cushion frame carried thereby, an arm-rest carried by said seat-cushion frame at either end, a shifting seat-back, and shifting side arms carrying said seat-back and extending on the outside of said arm-rest and downward to the side frames below the seat-cushion frame and movable bodily thereon from one side to the other in shifting the seat-back, the side arm adjacent to the arm-rest being bent or extended inwardly over the arm-rest to the seat-back.

4. In a car-seat, the combination of stationary side arms, a tilting seat-cushion frame carried thereby, an arm-rest carried by said tilting seat-cushion frame, a shifting seat-back, and shifting side arms carrying the seat-back and arranged outside of the arm-rest.

5. In a car-seat the combination of side frames, a seat-cushion frame carried thereby, shifting side arms extending below the seat-cushion frame and movable bodily from one side to the other with reference to the side frames, and a foot-rest carried directly by the lower movable ends of the shifting side arms and moving therewith, whereby said foot-rest is caused to assume a position at the rear of the seat leaving the front portion unobstructed.

6. In a car-seat the combination of side frames, a seat-cushion frame carried thereby, shifting side arms extending below the seat-cushion frame and movable bodily from one side to the other with reference to the side frames, and a foot-rest consisting of two longitudinal bars M, M′, carried directly by the lower movable ends of the shifting side arms and moving therewith, whereby said foot-rest is caused to assume a position at the rear of the seat leaving the front portion unobstructed.

7. In a car-seat the combination of side frames, a seat-cushion frame carried thereby, shifting side arms extending below the seat-cushion frame and projecting through the side frames upon the inner side thereof, and movable bodily from one side to the other with reference to said side frames, and a foot-rest carried by the lower ends of said shifting side arms inside of the side frames.

In testimony of which invention I have hereunto set my hand.

HENRY S. HALE.

Witnesses:
GEO. H. RAPSON,
H. C. SEELY.