

No. 641,634.

Patented Jan. 16, 1900.

F. BENNETT.
CAR SEAT.

(Application filed Apr. 10, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

Fig. 2.

WITNESSES :

C. W. Smith
H. L. Reynolds.

INVENTOR

BY *Murray*

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2 Sheets—Sheet 2

Fig. 3.

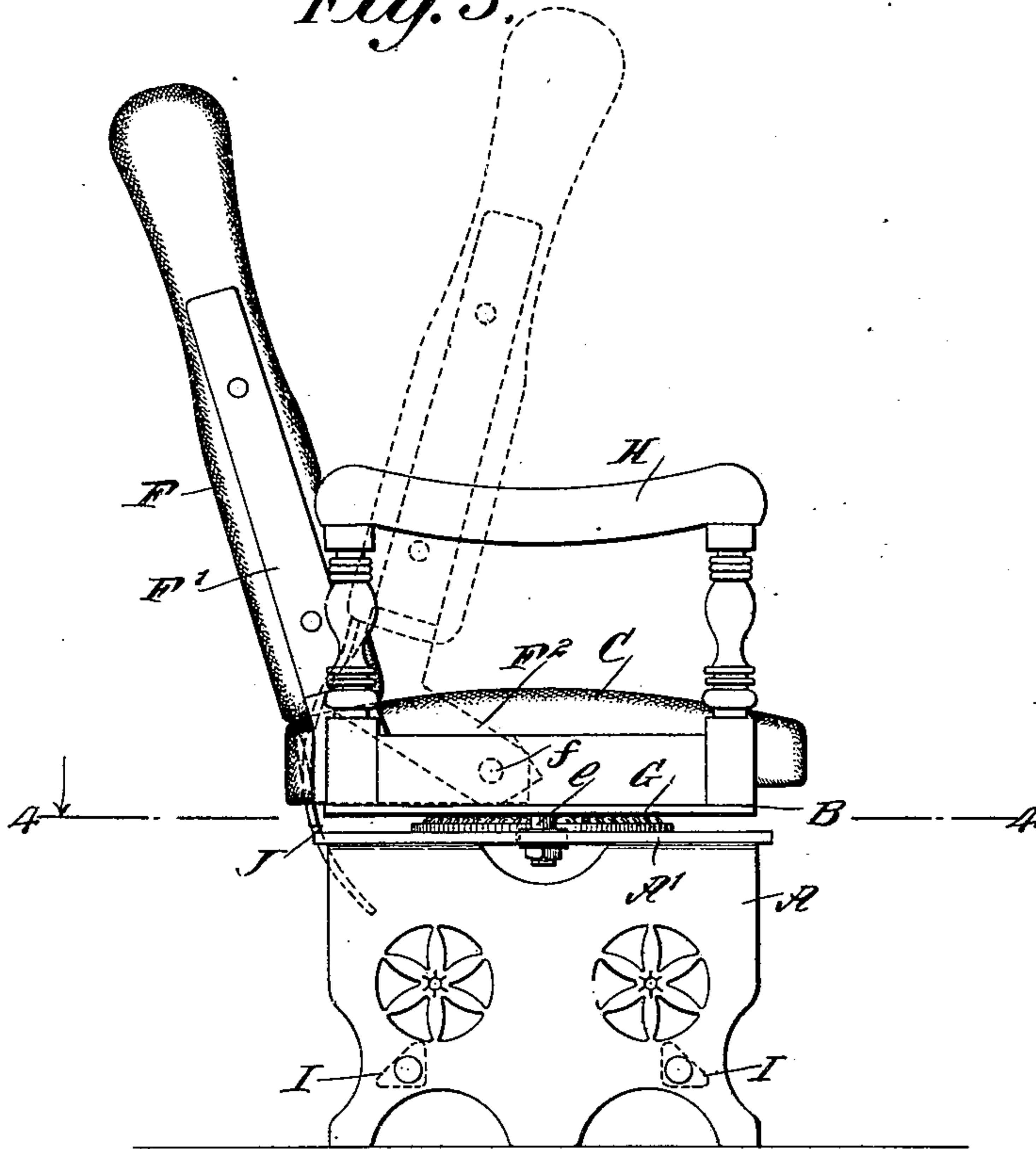
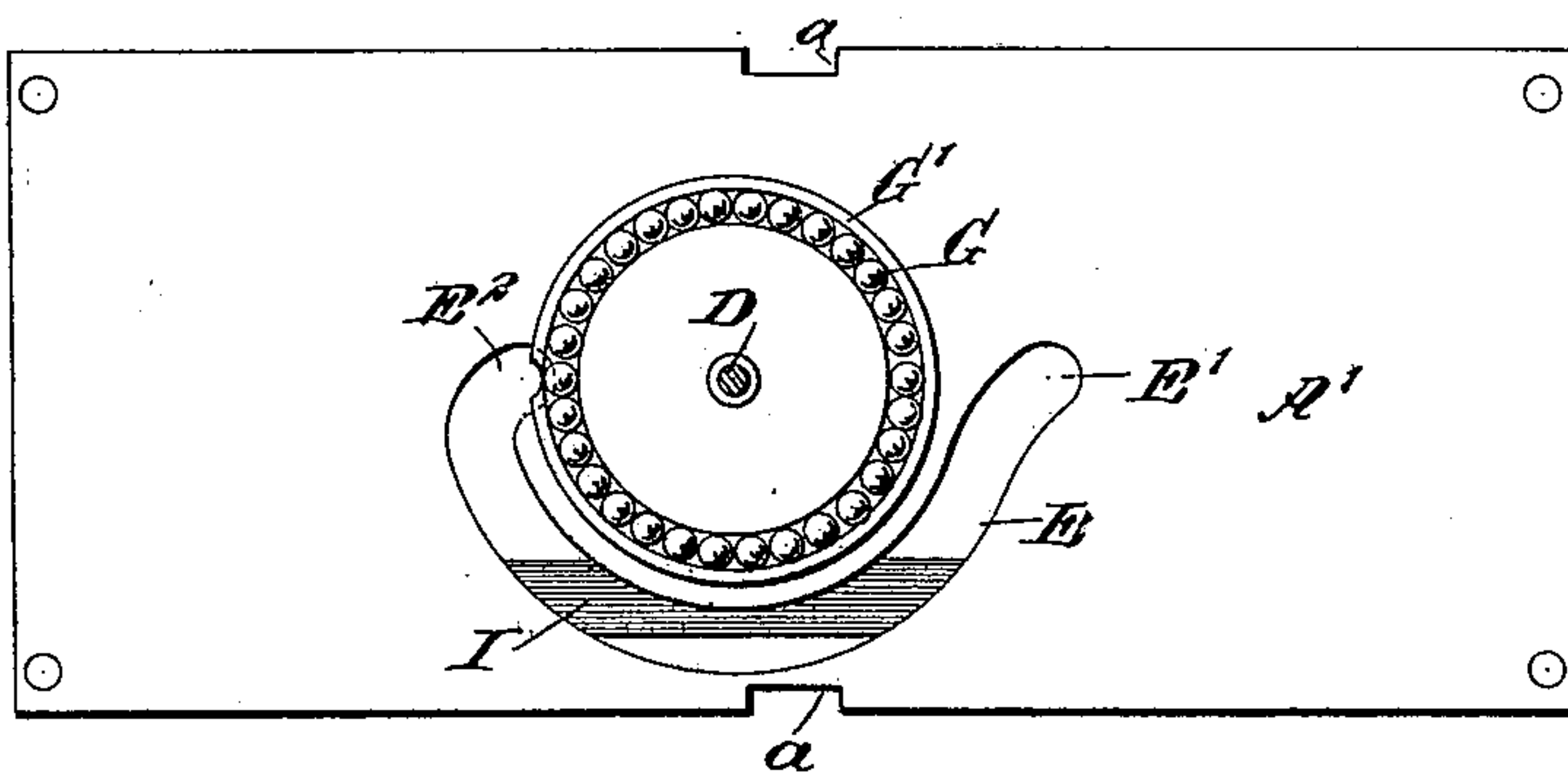


Fig. 4.



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UNITED STATES PATENT OFFICE.

FREDERICK BENNETT, OF NEW YORK, N. Y., ASSIGNOR TO THE HALE & KILBURN MANUFACTURING COMPANY, OF PHILADELPHIA, PENNSYLVANIA.

CAR-SEAT.

SPECIFICATION forming part of Letters Patent No. 641,634, dated January 16, 1900.

Application filed April 10, 1899. Serial No. 712,420. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK BENNETT, of the city of New York, borough of Manhattan, in the county of New York and State of New York, have invented a new and Improved Car-Seat, of which the following is a full, clear, and exact description.

My invention relates to an improvement in reversible car-seats; and it comprises novel features which will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the seat, the cushion of the seat being removed. Fig. 2 is a rear elevation of the seat. Fig. 3 is an end elevation of the seat, showing in dotted lines the position the back occupies while being reversed; and Fig. 4 is a plan view of the base upon which the seat is mounted.

The object of my invention is to construct a car-seat which carries arms at each end thereof and which revolves upon a vertical pivot in order to reverse the position of the seat and to make such a seat so that it may be held when in use close against the side of the wall.

The seat is mounted upon any convenient form of fixed base, the form shown herein consisting of end frames A and a top plate A', supported upon said end frames and near the center thereof supporting the bearing for the reversible seat. This bearing is located a little to one side of the central position of the seat, being at a little greater distance from the wall than the center of the seat.

I have herein shown the revolving seat as supported upon ball-bearings consisting of a ring of balls G, which are placed within shallow grooves in a plate G', which is supported upon the plate A', and in the bottom of the plate B, which forms the bottom of the reversible seat. These balls and their raceways are placed concentric with the pivot D, which projects from the plate A'.

The plate B, which forms the bottom of the reversible seat, is provided with a longitudinally-extending slot D', adapted to receive

the pivot D to permit the seat to have a slight longitudinal movement upon the supporting-base. This plate B has the seat-arms H and H' supported from the ends thereof and the seat-back F hinged thereto by means of bars F', which are secured to the ends of the seat-back and are provided with forwardly-extending arms F² at their lower ends, resting their lower edges upon the ends of the plate B and pivoted to an upward extension or lug of said plate by pivots f. These arms are pivoted forward of the edge of the seat in order that the back when swung upward and forward may fall entirely within the outline of the seat and so that the back will not interfere with the adjacent seats while the seat is revolving upon its pivot, as it might do if kept in the normal position shown by the full lines in Fig. 4. In this normal position the seat-back extends beyond the outline of the seat, and to reverse the seat by swinging upon a vertical pivot would require that the seats be kept at considerably greater distances from each other than is necessary when the back swings forward. Trouble would also arise from a similar cause by the seat-arms H and H' engaging the side of the car unless special provision is made to prevent it, as the distance from the center of the seat to the ends of the arms is greater than the distance from the same point to the center of the seat-arms, the distance to the ends of the arms being the hypotenuse of a right-angled triangle. To enable the seat-arms to be placed close against the side of the car and at the same time permit the seat to be revolved for reversing, the seat is provided with mechanism by which it is given a slight longitudinal movement at the beginning and ending of the turning movement. This is sufficient to cause the corners of the seat to clear the wall. This, as herein shown, is caused by a groove or cam-slot E, which is formed in the plate A' of the supporting-base. This slot is concentric with the pivot D, except at its ends, where it is provided with portions E' and E², which trend toward one end of the base or to that end which is next to the wall.

The plate B, forming the bottom of the seat, is provided with a pin or cam-roller e, which enters said slot and by which the seat is given

a longitudinal movement at the beginning and end of its turning movement. This movement is permitted by reason of the seat being secured upon the base by having the pivot-pin D entering the slot D'. This device permits the seat-arms to lie close against the side of the car and yet not interfere with the side of the car when the seat is reversed. The seat is locked in position by means of a bar J, which is secured to the lower rear edge of the seat F, and engages notches *b* and *a* in the plates B and A', respectively. The notch *b* is not strictly essential to the locking of the seat, but is advisable, as it makes a more secure lock and less strain upon the arm J than if the arm were supported only from the seat-back. The arm J is of spring metal and is curved so that it bears against the plate B, within the notch *b*, with a constant pressure sufficient to create enough friction so that the fall of the back will be eased and it will drop to its normal position without excessive jar. The lower end of the bar J also rests upon the top of the plate A' of the base, supporting the back in its forward position while being reversed.

The plate A' of the base is provided with its locking-notches *a*, located one upon each side, so as to lock the seat in either position. When the seat-back is swung forward, as shown by the dotted lines in Fig. 3, the arm J is swung out of the notches and the seat is then free to turn. When it reaches its proper position, the arm J will drop into the notch *a* and the seat is then securely locked in place.

The base may be provided with foot-rests I, consisting of bars extending between the end frames A, at a convenient distance from the floor.

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

1. A car-seat comprising a fixed base having a pivot projecting upwardly therefrom, a seat having a longitudinal slot receiving said pivot, one of said elements having a cam-slot and the other a pin entering said slot, whereby the seat is moved longitudinally and returned at the beginning and end of the turning movement, a back hinged to the seat inward from its edge and having a downwardly-projecting arm having constant frictional contact with the seat, and acting as a check or brake to prevent the back from dropping with a jar, and the base having notches engageable by said arm to lock the seat in opposite positions, the base engaging the end of the locking-arm to support the seat in its forward position while turning.

2. A car-seat, comprising a fixed base or support having a seat-pivot and locking-notches, a seat mounted to turn upon said pivot, means actuated by the turning of the seat for giving the seat an outward or longitudinal movement during the first of the turning movement, and a return longitudinal movement during the last of the turning

movement, a back pivoted upon the seat to swing forward, an arm depending from the back and having a constant frictional engagement with the rear edge of the seat, said arm being adapted to enter the locking-notches on the base to lock the seat when the back is in its normal position, substantially as described.

3. A seat, comprising a base or fixed support having a seat-pivot and locking-notches a seat mounted to turn upon said pivot and having a complementary locking-notch, means actuated by the turning of the seat for giving the seat an outward or longitudinal movement during the first of the turning movement, and a return longitudinal movement during the last of the turning movement, a back pivoted upon the seat to swing forward, a locking-arm depending from the back and having a constant frictional contact with the notch in the seat, said arm being adapted to enter the locking-notches in the said base or support when the back is swung backward and to rest with its end upon said base to support the back in its forward position during turning, substantially as described.

4. A car-seat, comprising a fixed base having a fixed pivot projecting upwardly therefrom, a seat having a longitudinal slot receiving said pivot, one of said elements having a substantially semicircular slot one end of which turns inward toward the center and the other turns outward away from the center, and the other a pin entering said slot, whereby the seat is moved longitudinally and returned at the beginning and end of the turning movement, substantially as described.

5. A car-seat, comprising a fixed base having a fixed pivot outside of the normal center of the seat, a seat having a centrally-located longitudinal slot receiving said pivot, the base having a half-circle slot concentric with said pivot except at its ends which curve toward the longer end of the base, and a pin or cam-roller carried by the seat and entering said curved slot, substantially as described.

6. A car-seat, comprising a fixed support or base, a seat, a vertical pivotal connection between seat and support adapted to permit the seat to have a limited movement in the direction of its length, the base and seat having one a semicircular slot one end of which turns toward the center and the other away from the center, and the other having a pin fitting said slot whereby the seat is given a movement longitudinal of its normal position at the beginning of the turning movement, and a return longitudinal movement at the end of said turning movement, and means for locking the seat in either position, substantially as described.

7. A car-seat mounted to turn upon a vertical pivot, means actuated by the turning of the seat for giving the seat an outward or longitudinal movement during the first of the turning movement, and a return longitudinal

movement during the last of the turning movement, a back hinged to the base to swing forward, a seat and base locking device freed by swinging the back forward, and a friction device between the back and seat checking its backward drop, substantially as described.

8. A car-seat, comprising a fixed base having a pivot projecting upwardly therefrom, a seat having a longitudinal slot receiving said pivot, one of said elements containing a semi-circular cam-slot having one end turned inward and the other outward and the other a pin entering said slot, whereby the seat is moved longitudinally and returned at the beginning and end of the turning movement, a back hinged to the seat inward from its edge and having a downwardly-projecting arm, and the base having notches engageable by said arm to lock the seat, said arm being

freed from the base when the back is swung forward, substantially as described. 20

9. A car-seat mounted to turn upon a base having a vertical pivot, means for giving it a movement longitudinal of its normal position at the beginning of the turning movement and for giving it a return longitudinal movement at the end of said turning movement, a back hinged to the seat by pivots which are offset forwardly and an arm carried by the back and adapted to engage the base to lock the two together when the back is in its normal position and to be freed therefrom when the back is swung forward, substantially as described. 25 30

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Witnesses:

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JNO. M. RITTER.