S. A. WALKER.

SHIFTING MECHANISM FOR CAR SEATS.

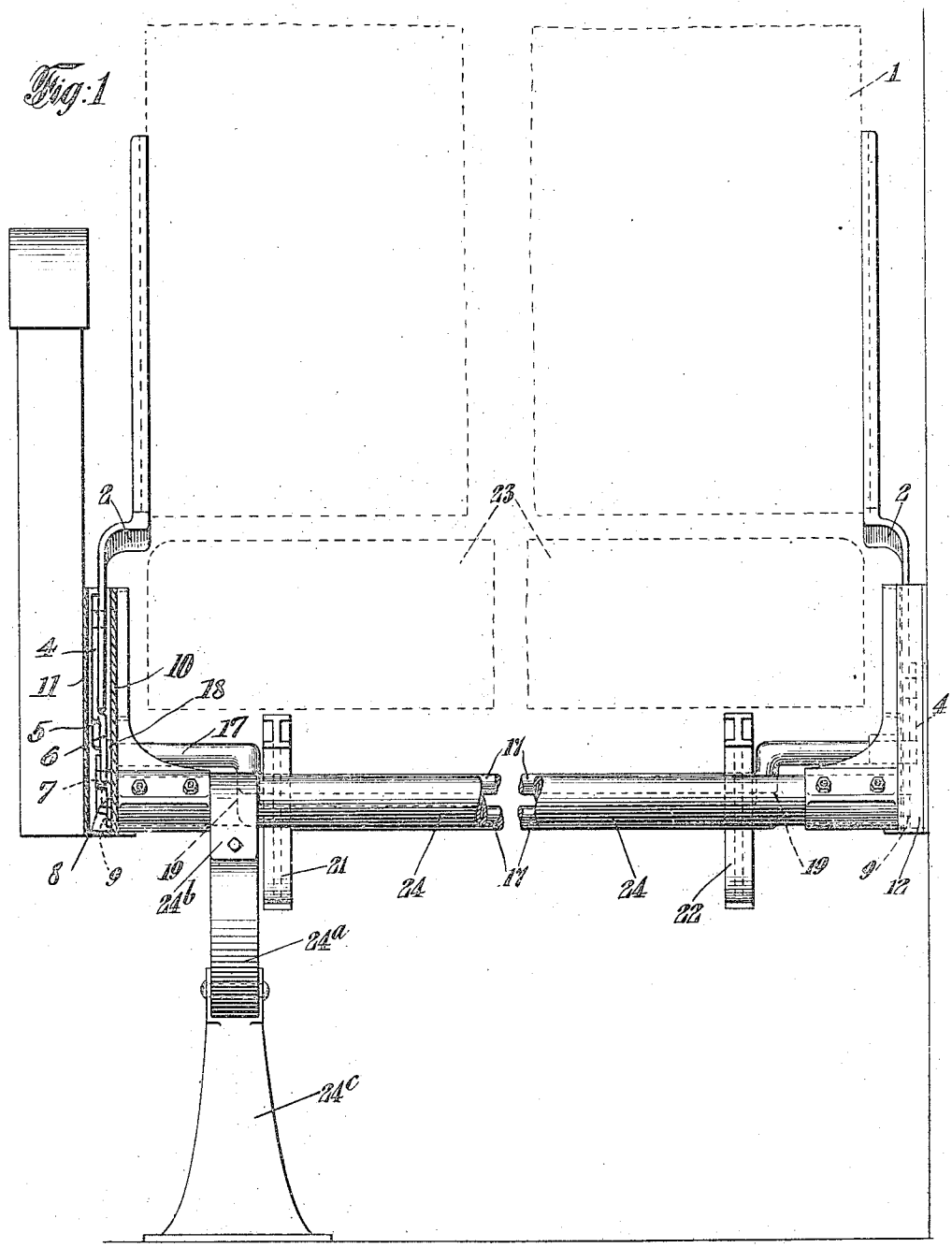
APPLICATION FILED OCT. 29, 1914. RENEWED JUNE 2, 1917.

1,252,748.

Patented Jan. 8, 1918.

3 SHEETS—SHEET 1.

Fig. 1



WITNESSES

J. Frendenwall

INVENTOR

Sheridan A. Walker.

BY

ATTORNEYS

S. A. WALKER.

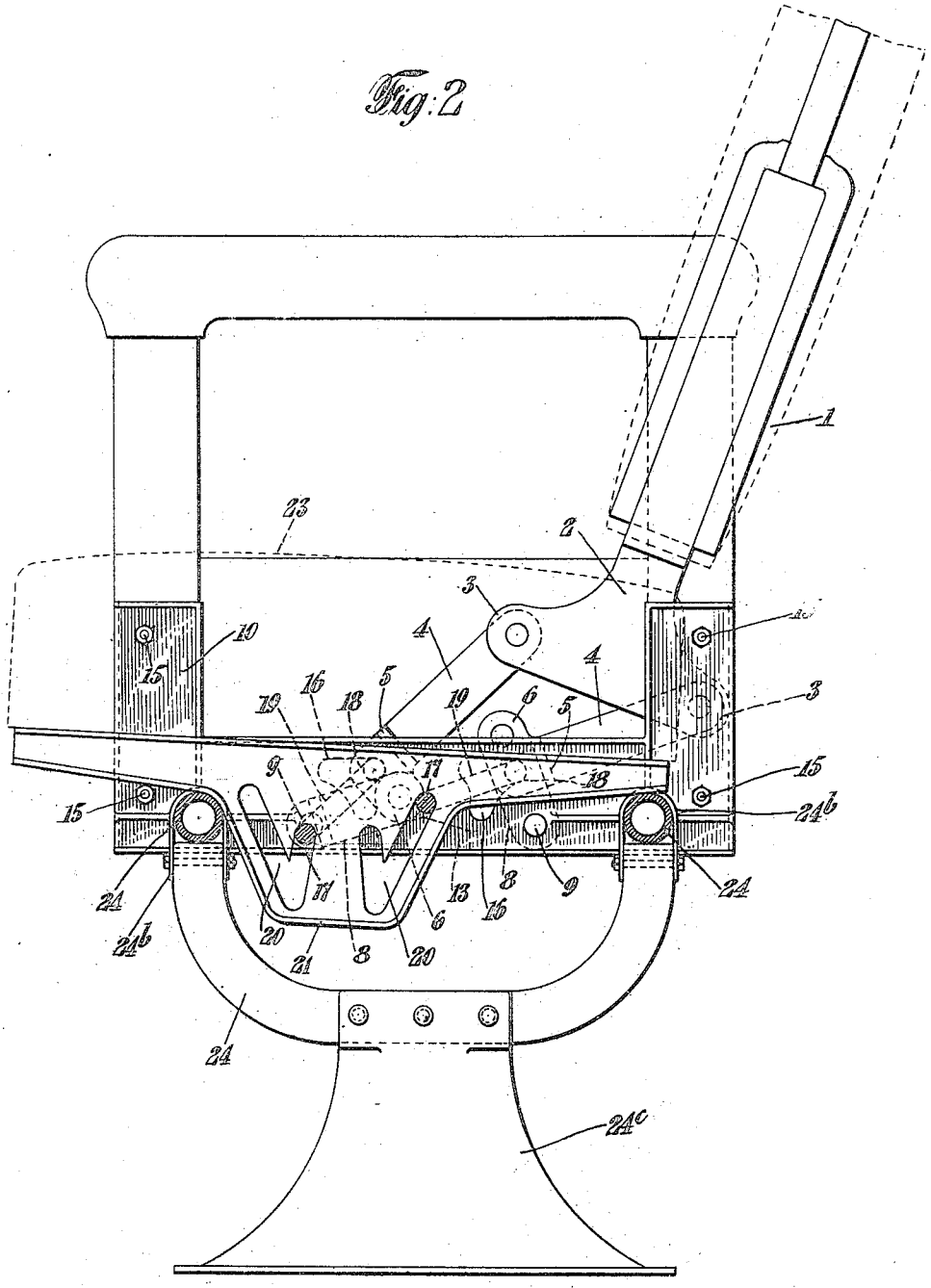
SHIFTING MECHANISM FOR CAR SEATS.

APPLICATION FILED OCT. 29, 1914. RENEWED JUNE 2, 1917.

1,252,748. Patented Jan. 8, 1918.

3 SHEETS—SHEET 2.

Fig. 2



WITNESSES

J. G. Lloyd

J. Freudenwall

INVENTOR

Sheridan A. Walker

BY

Brinsade, Wright & Swale

ATTORNEYS

S. A. WALKER.

SHIFTING MECHANISM FOR CAR SEATS.

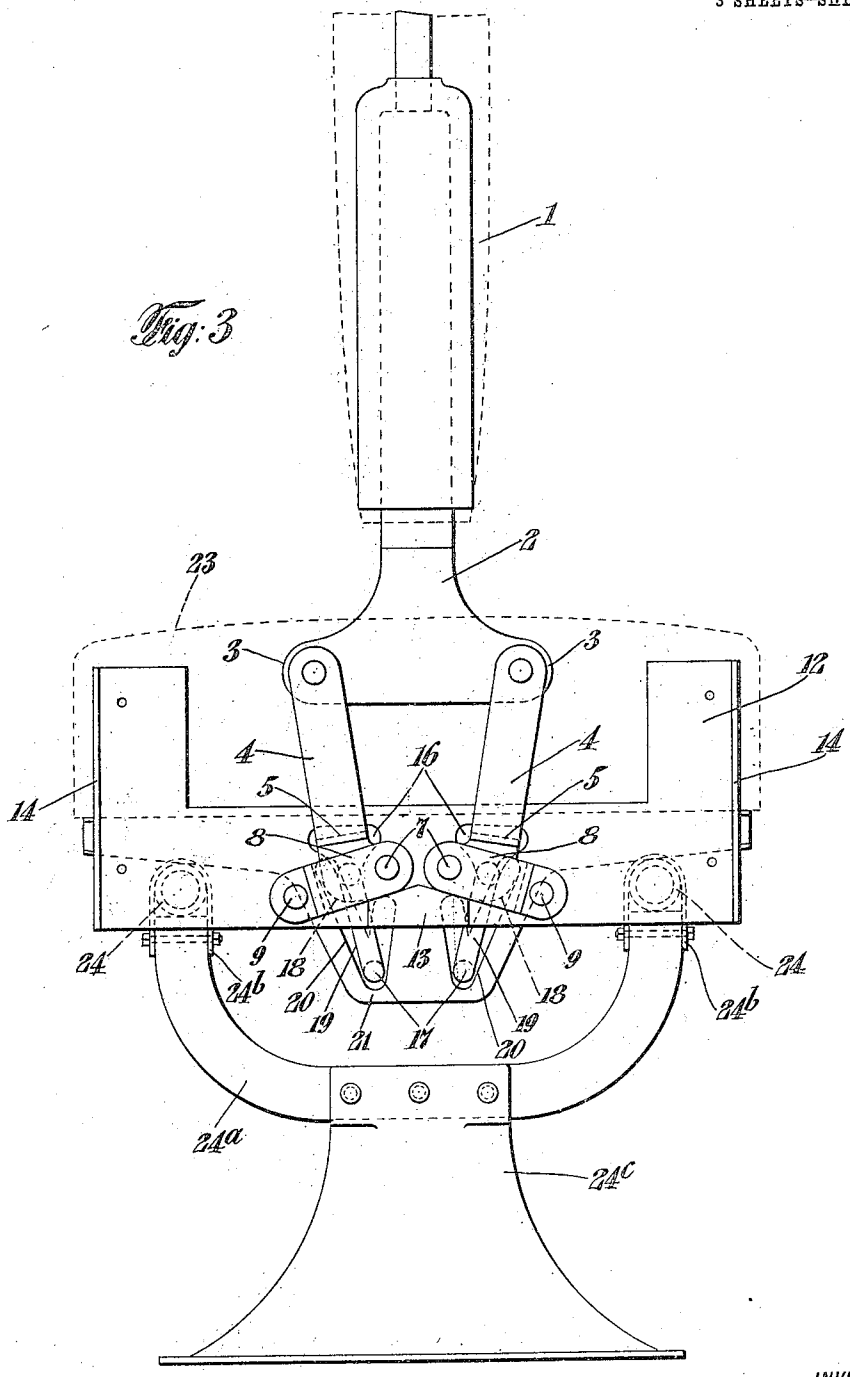
APPLICATION FILED OCT. 29, 1914. RENEWED JUNE 2, 1917.

1,252,748.

Patented Jan. 8, 1918.

3 SHEETS—SHEET 3.

Fig. 3



WITNESSES

W. G. Lloyd

J. Freudenrich

INVENTOR

Sheridan A. Walker.

BY

Pinkle, Wright & Russell

ATTORNEYS

UNITED STATES PATENT OFFICE.

SHERIDAN A. WALKER, OF ELMHURST, NEW YORK, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE WALKER COMPANY, OF WILMINGTON, DELAWARE, A CORPORATION OF DELAWARE.

SHIFTING MECHANISM FOR CAR-SEATS.

1,252,748. Specification of Letters Patent. Patented Jan. 8, 1918.

Application filed October 29, 1914, Serial No 869,165. Renewed June 2, 1917. Serial No. 172,526.

To all whom it may concern:

Be it known that I, SHERIDAN A. WALKER, of Elmhurst, in the county of Queens, and in the State of New York, have invented a certain new and useful Improvement in Shifting Mechanism for Car-Seats, and do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates particularly to a mechanism designed for shifting seats in railway coaches of all descriptions, although it is generally applicable to shiftable car seats in vehicles of any type.

The object of my invention is to provide a mechanism of this character in which the car seat, and more particularly the back of the seat, may be shifted from side to side without the necessity of elevating the back to an undue degree. In previous constructions, where the shifting parts have required elevation to a considerable extent to shift the same, there has been danger of breakage of the parts due to the sudden jar produced at the end of the shifting movement. Furthermore, in such constructions the shifting of the car seat requires an unnecessary amount of effort to accomplish the same.

A further object of my invention is to provide an apparatus of this character in which the shifting mechanism operates on the basis of fixed pivots so that the parts are all permanently connected together in such a manner as to avoid any possibility of displacement in the shifting operation.

While my invention is capable of embodiment in many different forms, for the purpose of illustration I have shown only one form thereof in the accompanying drawings, in which—

Figure 1 is a front elevation of a car seat made in accordance with my invention;

Fig. 2 is a vertical section of the same; and,

Fig. 3 is an end elevation of the same showing the back in middle position.

In the drawings I have shown a back 1 of a car seat, the same being carried by two upwardly directed arms 2. Each of the arms 2 has at its lower end a pair of lateral extensions 3, to each of which extensions 3 there is pivoted a link 4. Each of the links 4 has near its lower end a lateral offset 5 and beyond the same a right angle extension 6. Each of the right angle extensions 6 is pivoted by means of a bolt 7 to a lever 8 carried by a fixed pivot 9. One pair of these pivots 9 are located on a guide plate 10 which is covered by an arm rest. The other pair of said pivots 9 are supported on a guide plate 12, located at the other end of the car seat against the wall of the car. The guide plates 10 and 12 are secured to the end plate 11 and to the wall, respectively, by means of off-set flanges 14 having screws 15 passing through the same. The guide plates 10 and 12 are provided with centrally located stops 13 to support the levers 8. The guide plates 10 and 12 are each, furthermore, provided with a pair of heart-shaped slots 16 through which pass a pair of movable connecting rods 17 rigidly attached at their ends to shoulders 18 located at the lower ends of the links 4. Said connecting rods 17 are provided intermediate their ends with bends or levers 19 which extend downwardly and which engage with slots 20 located in a rocker 21. There is also a further rocker 22. The rockers 21 and 22 are located the same distance from the two ends of the car seat, and support a car seat 23 so as to give the car seat 23 the proper angle according to the position of the back 1. The rockers are supported upon two stationary connecting rods 24 which are attached to and connect together the two guide plates 10. These two connecting rods 24 are, furthermore, connected to a U-shaped bracket 24^a by straps 24^b, said bracket being connected in turn to a pedestal 24^c.

In the operation of my invention, the car seat may be shifted in the following manner, as, for example, by movement from the position shown in Fig. 2. In shifting the car seat, it is merely necessary to push the back 1 toward the other side of the car seat, thereby lowering the movable connecting rods 17 below the central downward projections in the slots 16 until they are in a position permitting the elevation of the connecting rods 17 toward the remaining upward branches of the slots 16. The further movement of the back 1 in the same direction will finally move the connecting rods 17 into these remaining upward branches of the slots 16, and when this movement has been completed the back 1 will have been entirely shifted to the other side of the car seat. When the parts are in this position, one of the links 4 will rest, by

means of its offset portion 5, upon the attached lever 8, while the other link 4 will be moved above and away from the lever 8 to the extreme outer limit of its movement. In this movement, furthermore, the connecting rods 17, by means of the levers 19 and the tracks 20 coöperating therewith, will move the seat 23 to the other side of the car seat in the opposite direction to the movement of the back 1. At the end of the shifting movement the levers 8 farthest removed from the back 1 are supported on the stops 13. It will thus be seen that by this movement of the back 1 the entire car seat is shifted as a whole into its proper position. At the same time, during the shifting movement of the car seat, it will be seen that the back is not elevated to any considerable degree, and, in fact, is not elevated any farther than is merely necessary to retain the shifted parts in their desired positions at the end of the path of movement. Consequently, the parts, although effectively retained in position at the extreme limits of their movement from one side to the other of the car seat, may, nevertheless, be shifted without unnecessary effort, owing to the small degree of elevation necessary in moving the back 1 from one side of the car seat to the other. Furthermore, at all times the shifting mechanism operates in connection with the fixed pivots 9 and all parts of the shifting mechanism are connected together so that in the shifting movement there is no possibility of the parts being displaced.

While I have described my invention above in detail, I wish it to be understood that many changes may be made therein without departing from the spirit thereof.

I claim:

1. A shiftable car seat having a back, a pair of levers with fixed pivots, and a pair of links connecting the levers to the back, said links having offset portions adapted to rest on the levers.

2. A shiftable car seat having a back, a pair of levers with fixed pivots, a pair of links connecting the levers to the back, and means for limiting the rotation of the links by supporting the same against the levers.

3. A shiftable car seat having a back, a pair of levers with fixed pivots, a pair of links connecting the levers to the back, said links having offset portions adapted to rest on the levers, and means for limiting the rotation of the links.

4. A shiftable car seat having a back, a pair of levers with fixed pivots, a pair of links connecting the levers to the back, and means for limiting the rotation of the links by supporting the same against the levers, comprising guide plates with slots and rods connected to the links, and passing through the slots in the guide plates.

5. A shiftable car seat having a back, a pair of levers with fixed pivots, a pair of links connecting the levers to the back, said links having offset portions adapted to rest on the levers, and means for limiting the rotation of the links, comprising guide plates with slots and rods connected to the links and passing through the slots in the guide plates.

6. A shiftable car seat having a back, a pair of levers with fixed pivots, a pair of links connecting the levers to the back, and means for limiting the rotation of the links, comprising guide plates with heart-shaped slots and rods connected to the links, and passing through the slots in the guide plates in such a manner that the three corners of the heart-shape limit their movement.

7. A shiftable car seat having a back, a pair of levers with fixed pivots, a pair of links connecting the levers to the back, said links having offset portions adapted to rest on the levers, and means for limiting the rotation of the links, comprising guide plates with heart-shaped slots and rods connected to the links and passing through the slots in the guide plates.

8. A shiftable car seat having a back, a pair of levers with fixed pivots, a pair of links connecting the levers to the back, means for limiting the rotation of the links, comprising guide plates with slots and rods connected to the links, and passing through the slots in the guide plates, and a fixed rod connecting the guide plates together.

9. A shiftable car seat having a back, a pair of levers with fixed pivots, a pair of links connecting the levers to the back, said links having offset portions adapted to rest on the levers, means for limiting the rotation of the links, comprising guide plates with slots and rods connected to the links and passing through the slots in the guide plates, and a fixed rod connecting the guide plates together.

10. A shiftable car seat having a back, a pair of levers with fixed pivots, a pair of links connecting the levers to the back, means for limiting the rotation of the links, comprising guide plates with heart-shaped slots and rods connected to the links, and passing through the slots in the guide plates, and a fixed rod connecting the guide plates together.

11. A shiftable car seat having a back, a pair of levers with fixed pivots, a pair of links connecting the levers to the back, said links having offset portions adapted to rest on the levers, means for limiting the rotation of the links, comprising guide plates with heart-shaped slots and rods connected to the links and passing through the slots in the guide plates, and a fixed rod connecting the guide plates together.

12. A shiftable car seat having a back, a pair of levers with fixed pivots, a pair of

links connecting the levers to the back, means for limiting the rotation of the links, comprising guide plates with slots and rods connected to the links, and passing through the slots in the guide plates, a fixed rod connecting the guide plates together, and an end plate and pedestal connected to one of the guide plates.

13. A shiftable car seat having a back, a pair of levers with fixed pivots, a pair of links connecting the levers to the back, said links having offset portions adapted to rest on the levers, means for limiting the rotation of the links, comprising guide plates with slots and rods connected to the links and passing through the slots in the guide plates, a fixed rod connecting the guide plates together, and an end plate and pedestal connected to one of the guide plates.

14. A shiftable car seat having a back, a pair of levers with fixed pivots, a pair of links connecting the levers to the back, means for limiting the rotation of the links, comprising guide plates with heart-shaped slots and rods connected to the links, and passing through the slots in the guide plates, a fixed rod connecting the guide plates together, and an end plate and pedestal connected to one of the guide plates.

15. A shiftable car seat having a back, a pair of levers with fixed pivots, a pair of links connecting the levers to the back, said links having offset portions adapted to rest on the levers, means for limiting the rotation of the links, comprising guide plates with heart-shaped slots and rods connected to the links and passing through the slots in the guide plates, a fixed rod connecting the guide plates together, and an end plate and pedestal connected to one of the guide plates.

In testimony that I claim the foregoing I have hereunto set my hand.

SHERIDAN A. WALKER.

Witnesses:
ARTHUR WRIGHT,
ELLA F. BRAMAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."