No. 803,962.

PATENTED NOV. 7, 1905.

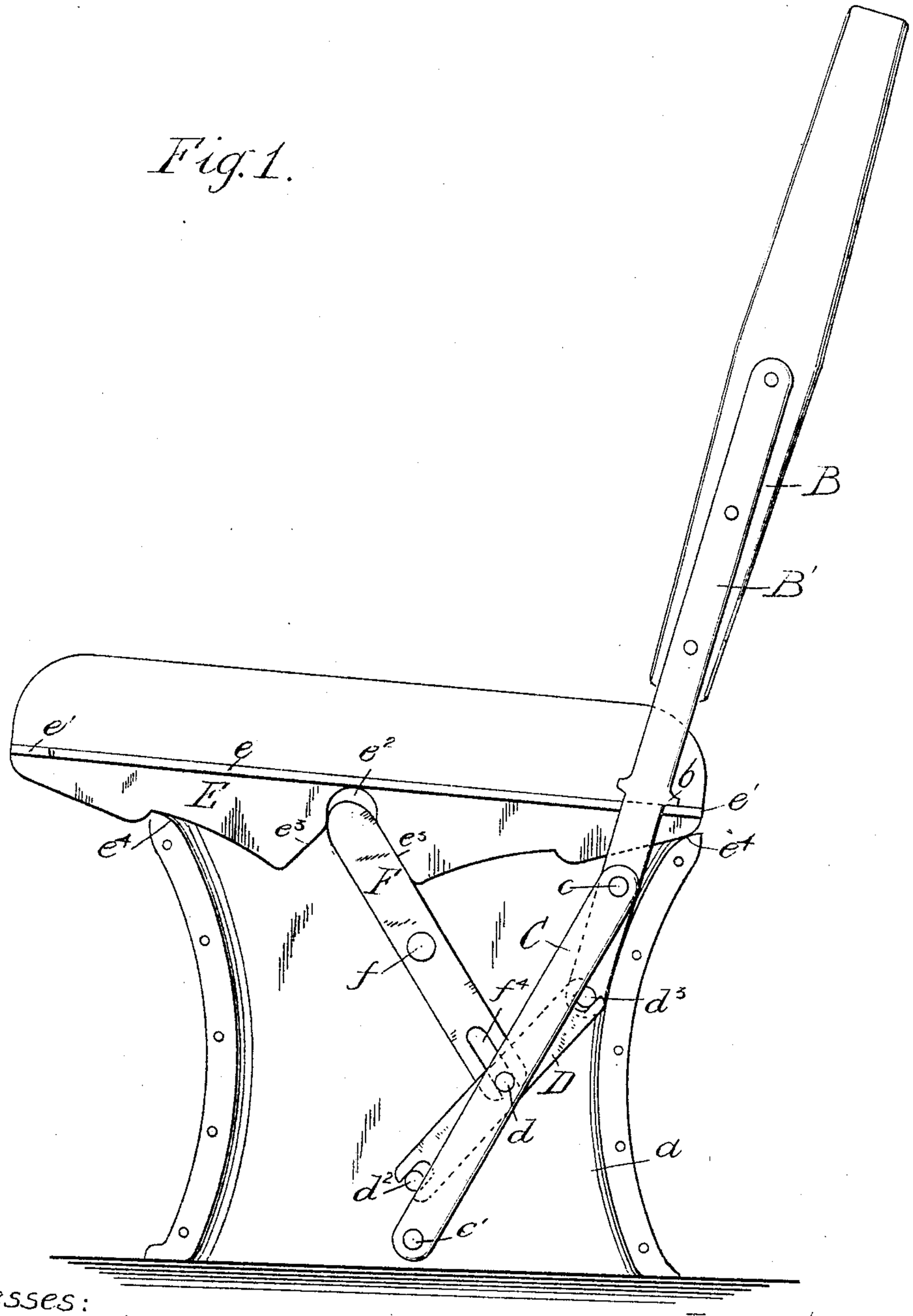
J. APPLIN.

CAR SEAT.

APPLICATION FILED SEPT. 20, 1904.

2 SHEETS—SHEET 1.

Fig. 1.



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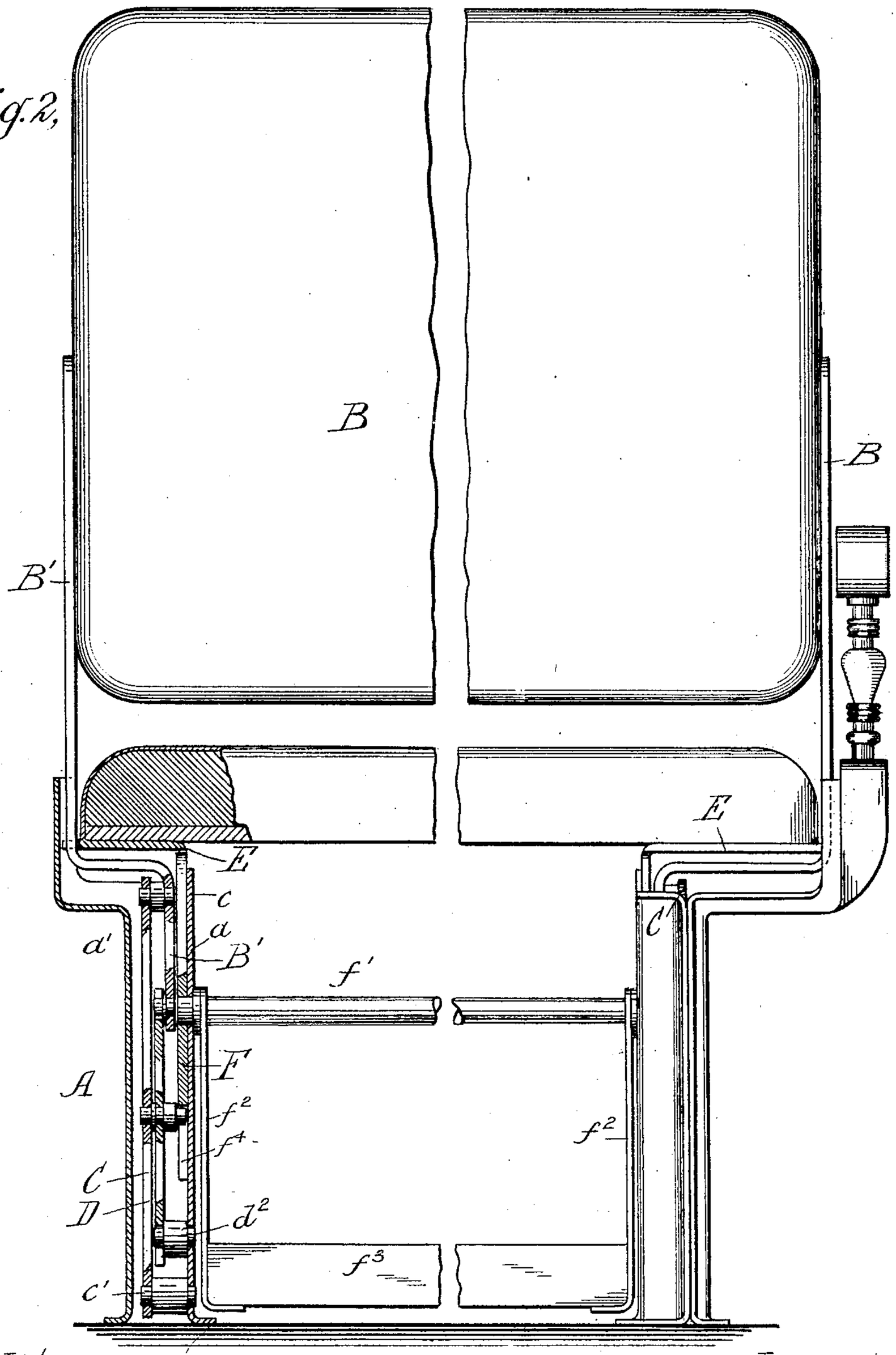
2 SHEETS—SHEET 2.

Fig. 2,



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UNITED STATES PATENT OFFICE.

JOSEPH APPLIN, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE HALE & KILBURN MANUFACTURING COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

CAR-SEAT.

No. 803,962. Specification of Letters Patent. Patented Nov. 7, 1905.

Application filed September 20, 1904. Serial No. 225,189.

To all whom it may concern:

Be it known that I, JOSEPH APPLIN, a citizen of the United States, and a resident of Philadelphia, in the county of Philadelphia, in the State of Pennsylvania, have invented new and useful Improvements in Car-Seats, (Case A,) of which the following is a specification.

The object of the present invention is to provide a simple, durable, and efficient car-seat mechanism of the "walk-over" type wherein the reversing movement of the back will transmit corresponding movement to a shifting and canting seat-cushion and at the same time correspondingly reverse the position of a swinging foot-rest, so as to adapt the same when the seat is in one facing direction for the use of the occupant of the next seat in the rear. This object has been heretofore sought and as a result mechanism suggested, in the use of which, however, various objections have been found, due to the fact that too much power is required to effect the reversing movement. One of the objects, therefore, of the present invention is to accomplish the result stated in such manner as to minimize the power required to reverse the seat-back, and thereby correspondingly move the seat-cushion and foot-rest.

In carrying out the invention in improved form the back is supported by long arms whose lower ends are carried and guided at points substantially below the seat-cushion by two levers at each side, one of said levers having fixed pivotal relations with the said supporting-frame and with said back-arms and the other being pivoted to the lever first named intermediate of its ends and having sliding relation with a pin carried by said supporting-frame and a pin carried by said back-arm. In this manner so much leverage is obtained as that the reversal of the back may be effected upon the exercise of a minimum of power. A shifting and canting cushion is employed, this being mounted upon rockers carried by the main frame and actuated by a lever pivoted to such frame, the lower end coacting with the pivot connecting the back-supporting levers and the upper end coacting with such rockers to effect the reversal of the seat-cushion. Said rocker-actuating levers are mounted upon a rock-shaft, which carries between the said members of such frame a shifting foot-rest, which is reversed simultaneously with the reversal of the said back and cushion.

In the drawings, Figure 1 is an end view of a car-seat embodying my invention; and Fig. 2 is a front view, partly in section and partly in elevation.

Referring to the drawings, in which similar letters denote corresponding parts, I shall describe in detail the mechanism at one end only of the seat, as that at the other end may be a mere duplication thereof. Each side member of the supporting-frame A is here shown as formed in two parts a a', the office of the latter member being merely to cover and conceal the working parts hereinafter described. B denotes the reversible back. This is carried by the back-arms B′, supported and guided at its lower end by the levers C D. The lever C is pivoted at c to the back-arm B′ and at its other end at c' to the inner member a of the supporting-frame A. The lever D is pivoted at d to the lever C and is provided with slotted ends, the slot at the lower end coacting with the pin d^2, carried by the frame member a, while the slot at the upper end coacts with the pin d^3, carried by the lower end of the back-supporting arm B′. It will thus be seen that power directed against the back B at any point will result not only in the reversal of the back from one edge of the seat to the other, but also that, due to the coaction of the levers C and D, the back will during this movement be given the proper inclination.

The seat-cushion is supported upon rockers E, here shown as having flanges e, provided with stops e', with which ears b on the back-supporting arms B′ coact. Said rockers are also provided with a central recess e^2 and with inclines e^3 leading therefrom. Said rockers are supported by the portions e^4 of the supporting-frame. With the recess e^2 and inclines e^3 of each rocker E coacts the upper end of a lever F, pivoted at f upon a rock-shaft f', to which is secured hangers f^2, carrying foot-rests f^3. The lower end of said lever F is provided with a slot f^4, coacting with the pivot-pin d', connecting the levers C and D. The construction of the recesses e^2 and the inclines e^3 leading therefrom is such that in their operative position of the seat the one edge of each rocker-shifting lever F will coact with said recess to prevent movement of

the rocker in one direction and with one of the inclines e^3 to prevent movement of the rocker in the opposite direction, thereby assuring the retention of the parts rigidly in either useful and operative position to which the cushion is moved by the mechanism described. It will therefore be seen that the movement of the back B transmits motion not only to the seat-cushion, but also to the shifting foot-rest mounted between the side members of the frame. It will also be seen that, due to the arrangement of the levers C and D a substantial distance below the seat-cushion, whereby maximum leverage of the back-arms B′ is attained, and the locating of the lever F at such point as well, comparatively little power is required to effect the reversal of all these parts, the movement being uniform and continuous and without jar or undue wrenching of the parts.

What I claim, and desire to secure by Letters Patent, is—

1. In a seat, the combination with a supporting-frame and a shifting cushion carried thereby, of a back-supporting arm extending a substantial distance below such cushion and supported and guided by two levers, also located a substantial distance below said cushion, one of said levers being pivoted to said frame and to said back-arm and the other being pivoted to the lever first named and having slot-and-pin connections with said frame and with said back-arm, and a cushion-operating lever, pivoted to said frame, its upper end coacting with the cushion-carrying rocker and its lower end having slot-and-pin connection with the pivot connecting said back supporting and guiding arms, substantially as described.

2. In a seat, the combination with a frame, of a reversible back and means for supporting and guiding the same, of a seat-cushion and rockers for detachably supporting the same, a lever pivoted to said frame and actuated by the movement of said back, the upper end of said lever coacting with a recess in one of said rockers and, in either operative position of the mechanism, with inclines formed on said rockers in planes parallel with the coöperating portions of said lever to firmly lock the parts in position, substantially as described.

3. In a seat, the combination with a frame, of a cushion supported upon rockers having central recesses and inclined surfaces extending therefrom, back-supporting arms carried by levers pivoted together and operating a substantial distance below said cushion, cushion-supporting levers, whose lower ends coact with the pivots between said back-supporting levers and whose upper ends coact with said recesses and with said inclines, substantially as described.

This specification signed and witnessed this 31st day of August, 1904.

JOSEPH APPLIN. [L. S.]

Witnesses:
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