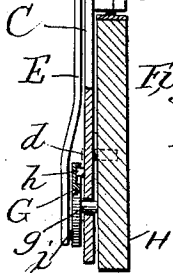
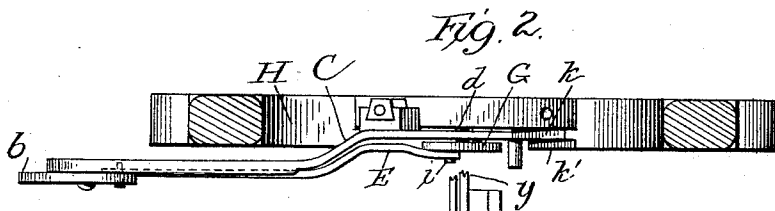
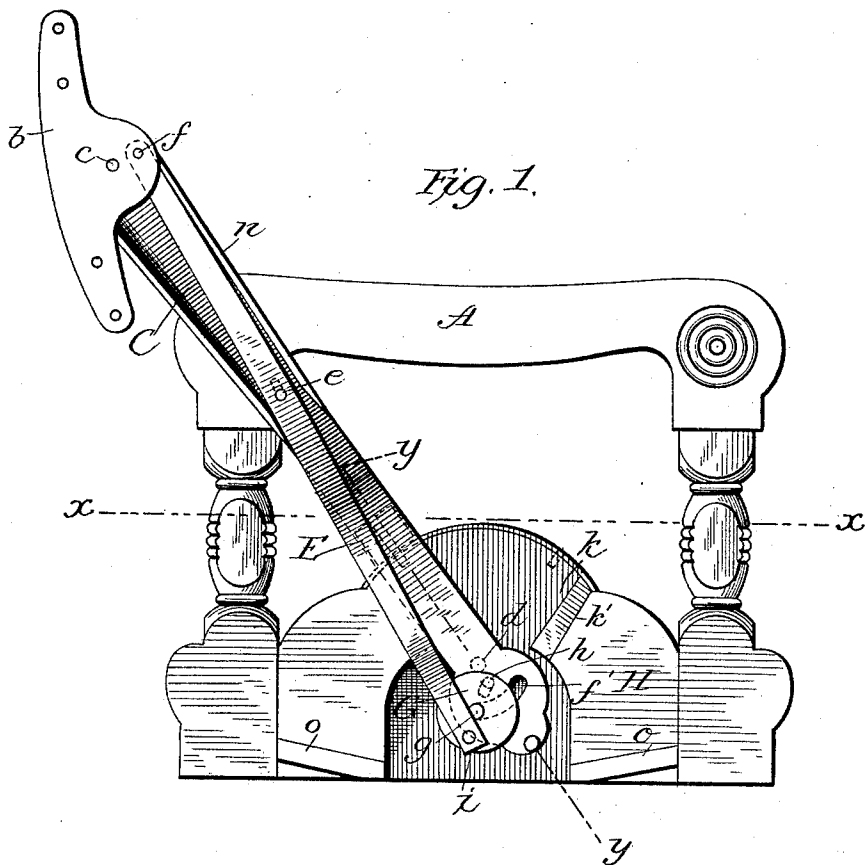


(No Model.)

E. L. BUSHNELL & G. W. DRYER.
CAR SEAT.

No. 476,728.

Patented June 7, 1892.



Attest
William Donaldson,
William Hall.

Fig. 3.

Inventors

Edwin L. Bushnell

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by Ellis Spear
Atty.

UNITED STATES PATENT OFFICE.

EDWIN L. BUSHNELL AND GEORGE W. DRYER, OF POUGHKEEPSIE, NEW YORK, ASSIGNORS TO THE E. L. BUSHNELL SPRING COMPANY, LIMITED, OF SAME PLACE.

CAR-SEAT.

SPECIFICATION forming part of Letters Patent No. 476,728, dated June 7, 1892.

Application filed December 15, 1891. Serial No. 415,131. (No model.)

To all whom it may concern:

Be it known that we, EDWIN L. BUSHNELL and GEORGE W. DRYER, citizens of the United States of America, residing at Poughkeepsie, in the county of Dutchess and State of New York, have invented certain new and useful Improvements in Car-Seats, of which the following is a specification.

Our invention relates to reversible car-seats of that class in which the back is supported upon a striker-arm, and is thereon shifted from side to side and at the same time reversed and held in the proper position by means of a supplemental arm.

Our invention is an improvement in the construction and combination of the supplemental arm, with other parts hereinafter described, whereby it is adapted to the long striker-arm, and whereby, also, the mechanism is better fitted to car-seats.

Our invention is illustrated in the accompanying drawings, in which—

Figure 1 shows a side elevation of the inner face of the end frame of a seat with the striker-arm and supplemental arm. Fig. 2 shows a section on line *xx* of Fig. 1. Fig. 3 is a section on line *yy* of Fig. 1.

In the drawings, A represents the arm of an ordinary end frame of a car-seat, having the ordinary plate *b* for attachment to the end of the back, to the ear of which plate the free end of the striker-arm is pivoted at *c*. The striker-arm C is of the class known as "long" striker-arms, the lower end of it being pivoted in a fixed support at or near the plane of the seat, the pivot being indicated at *d*, this pivot being at a point in the central vertical line of the said frame. Upon the arm C is pivoted a supplemental arm E, the pivot being shown at *e*. One end of the pivot *e* works in a slot, so as to permit slight longitudinal as well as rotary movement of the supplemental arm on its pivot. The upper end of the supplemental arm is pivoted to the ear of the plate *b* at the point *f*, within or inside the pivot *c*, in the normal position of the back and below the pivot *c*, when the back is being turned, where the main arm C is pivoted to the ear, these two points being substantially in a line at right angles to the general plane

of the back. The lower end of the striker-arm C has a curved slot *f'*, struck from the pivot *d* as a center, the arm being enlarged to give space for the slot. In this slot is seated the pivot *g* of the link G, the pivot *g* being in the same vertical line as the pivot *d* of the the arm C and below the pivot *d*. This pivot-pin *g* projects from the frame and is a rigid part thereof, the link G moving thereon. The link G is pivoted to the striker-arm C at the point *h*, being substantially in a line drawn through the pivots *c d* and a little below the pivot *d*. The link G is recessed on its under face to allow play of the pin *h* during reversal of the back. The lower end of the supplemental arm E is pivoted to the link at a point *i*, which is on the line drawn through the centers of the pivots *g h* when the arm is in vertical position. The construction is such that the supplemental arm may move freely over the face of the striker-arm, the link G being interposed between their lower ends. When the striker-arm is moved on its pivot, as in the act of shifting the back from one side to the other of the seat, the slotted portion of the striker-arm below its pivot moves in an opposite direction upon the pivot *g* of the link. The first effect or the effect of the first part of this movement (supposing the striker-arm to be at the limit upon one side) is to move the supplemental arm longitudinally upon the striker-arm, and at the same time to give it slight pivotal movement, which increases as the central or pivotal lines of the two arms approach coincidence with each other. At this point of coincidence the two arms are vertical and the pivots are all in the same line, so that the back is a horizontal midway position. The arms continuing their movement to their opposite limit, the position of the arm and the back is reversed to that which they occupied at the beginning of the movement. The position at the end of the movement, as described, is of course the same relatively as at the beginning of the movement, the position only being reversed.

In addition to the construction of the arms above described, we have devised a block or casting upon which are pivoted these arms, this being shown at H. This block is preferred

erably made of cast metal, and can be cast in proper shape in one piece. It is capable of being placed, as shown, between the posts of the end frame, and may be added to the seat-frames now in use. The block is made with a cut-away portion having inclined shoulders k' , against which the supplemental arm E bears at the end of its movement, and within these shoulders are other shoulders k , against which the edges of the main striker-arm C bears similarly at the end of the movement. The block is also formed with a cavity below to receive the lower ends of the arms with the links and to permit them to move. Upon the lower end of the striker-arm is the ordinary pin m for shifting the seat. The link is shown in the form of a disk; but this particular form is not material. The upper part of the striker-arm has marginal diverging flanges n , between which the supplemental arm moves and against which its edges rest at the limit of movement.

The block H may be cast with the supporting flanges $o o$ for the seat.

Upon the outer face of the striker-arm is a lock, the bolt of which bears upon the curved face of the block and engages with holes at the ends. The arm being released, the back is moved and turns simultaneously on its pivot with the arms, and is locked thereon when the striker-arm is locked at the end of the movement. As the arms are all supported on the block, the whole back-support can be made and fitted together and applied to ordinary car-seats, old or new, and by simply extending the arms a very high back may be used and still be reversed within a space of thirty (30) inches.

The illustration shows the arms and blocks

at one end only; but it will be understood that the same are duplicated at the other end of the seat, the lock excepted.

We claim as our invention—

1. In combination, striker-arms pivoted on a suitable support, a seat-back pivoted on the striker-arms, a supplemental arm pivoted on one of said striker-arms and to the back, and a pivoted-link connection interposed between the lower end of the supplemental arm and the striker-arm, substantially as described.

2. In combination, striker-arms pivoted on a suitable support, a seat-back pivoted on the striker-arms, a supplemental arm pivoted on one of said striker-arms and to the back, a curved slot in the lower end of said striker-arm, a link turning upon a pivot passing through said slot, said link being pivoted to the supplemental arm, and a loose connection between said link and the striker-arm, substantially as described.

3. In combination with the end frames of a car-seat, blocks forming a part thereof, striker-arms pivoted to said blocks, a seat-back, a supplemental arm carried by one of the striker-arms, both the striker and supplemental arms being also pivoted to the seat-back, a link turning upon a pivot in the block, a link turning on said pivot and connected to the supplemental arm, and a loose connection between the link and striker-arm, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

EDWIN L. BUSHNELL.
GEORGE W. DRYER.

Witnesses:

FRED E. ACKERMAN,
GAINS C. BOLIN.