

Patented Nov. 21, 1871.

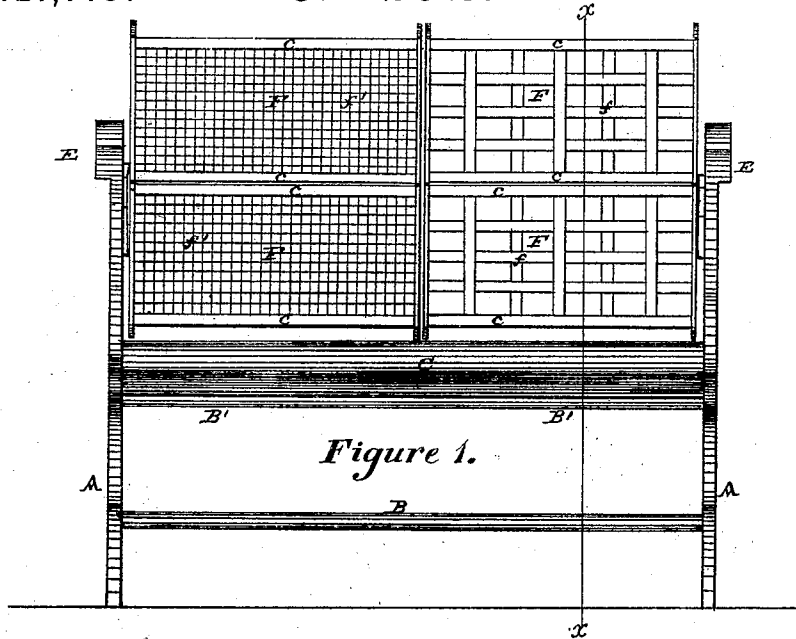


Figure 4.

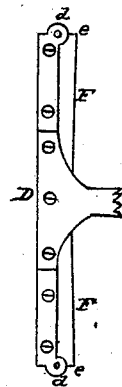
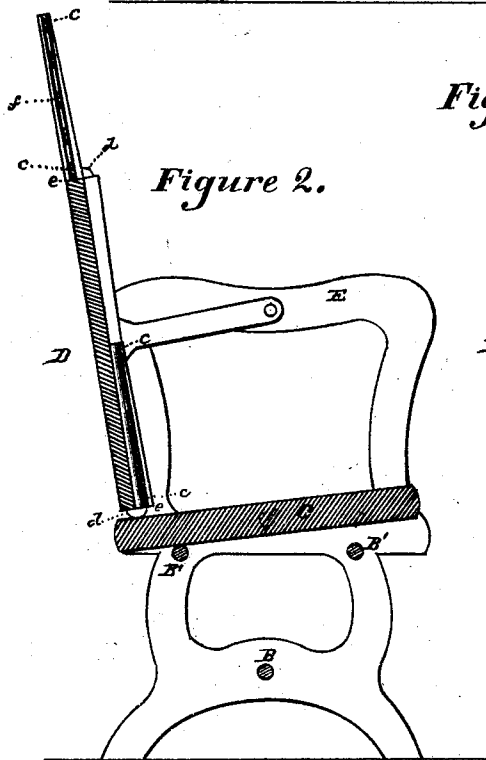
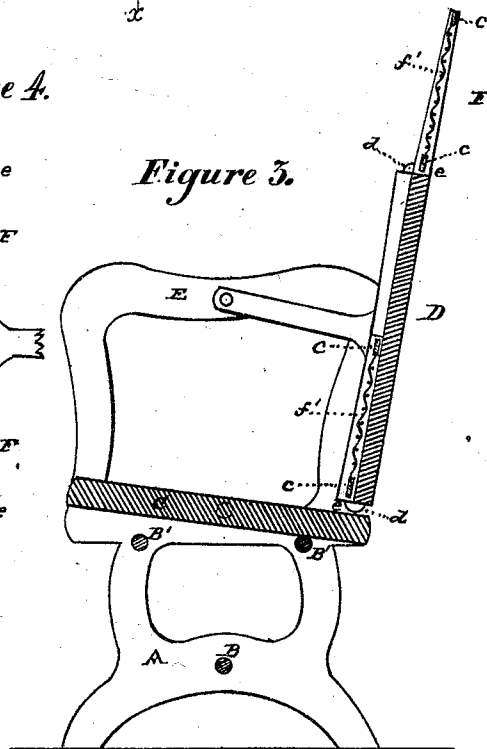


Figure 3.



Witnesses:

J. West Wagner.
Eugene C. Adams.

Inventor:

James M. Allen,
by *Johnson, Klauke & Co*
his attorneys.

UNITED STATES PATENT OFFICE.

JAMES M. ALLEN, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN RAILWAY CAR-SEATS.

Specification forming part of Letters Patent No. 121,145, dated November 21, 1871

To all whom it may concern:

Be it known that I, JAMES M. ALLEN, of the city of Washington, in the District of Columbia, have invented a new and useful Improvement in Seats for Railway Cars, of which the following is a specification:

My invention consists in hinging the head-rests so that they will form the inner face of the back and hold themselves closed, and allow either to be unfolded, while the other forms a portion of said back; also, in constructing the frame of the head-rest of thin elastic bars and wire filling, so as to allow them to be bent to conform to the curve of the seat-back, whether folded or unfolded.

In the drawing, Figure 1 represents a car-seat with the head-rests all folded inwardly. Fig. 2 is a vertical section in line *x x*, the back of the seat being at one end; and Fig. 3 is a similar view, the back being turned to the opposite end. Fig. 4 represents an end view of the seat-back and its hinged head-rests.

A A are the side pieces of a railroad-car seat, held together by suitable brace-rods or bars, B, two of which, B', are so arranged under the ends of the centrally-pivoted seat C as to support the same in an inclined position, in whatever direction the seat may face. D is the reversible back, pivoted, as usual, to the center of the arm-rests E and between them. To the upper and lower ends of this back are hinged head-rests F, the width of which is just one-half of that of the back, and which are arranged to fold inwardly to the center of the inner face of the back, which face they form when folded up, as shown in Fig. 1. These head-rests may be formed of a metal frame filled with springs *f* or net-work *f'*, and may be either merely covered with the same material as the seat, or may be stuffed and covered like the seat, as may be deemed most suitable. They are hinged by means of knuckle-joints *d*, so that when thrown up and back, as shown in Figs. 2 and 3, their shoulders *e* rest on the edge of the back, and they are thus held securely in place without further fastening, while they are held in position when not used and folded inwardly over the back by the frictional contact of their contiguous ends at the center line of the same. In order to adapt these head-rests F to curved backs of car-seats or chairs, their frames may be constructed with elastic horizontal bars or pieces *c* and elastic filling *f* or *f'*, so arranged that the head-rest may,

when folded down, be bulged inwardly to conform to the shape of the back, and when extended as a rest be bulged in the opposite direction, or outwardly, so as to continue the curved shape of the back.

It will be readily understood that these head-rests may be made in one piece at each end of the seat, or, as shown in the drawing, in two independent pieces, so that either of two persons occupying one seat together may use a head-rest independently of the other, and without disturbing the same. It is equally obvious that, no matter to what side the seat is made to face by the reversal of the back, there are always two head-rests which may be thrown upward for use.

It is common for men riding in cars to place their feet against the back of the seat in front of them, thereby soiling the same, and for this reason I fold the head-rests inwardly, so that part of the same against which the head is resting when they are in use shall always be covered out of sight when they are folded down, thus insuring cleanliness and preventing them from being worn and spoiled when not in use.

The upholstering of these head-rests must, of course, be done in such a manner that no sharp edges or ridges can hurt the persons occupying the seat, but they must be rounded and smooth. The seat C is pivoted centrally so as to move entirely free, and without being attached to the back in any way; in fact, being entirely independent of the same, although I use the weight of the back D to reverse it. The braces B' being placed parallel to each other, but below the horizontal center line of the seat, the latter will, when in contact with either brace, be in a somewhat inclined position, in such a manner as to throw back the body of the occupant and slightly elevating his knees.

It is well known how uncomfortable it is to be obliged to sit for any length of time on a perfectly level seat, and how grateful a backwardly-inclining position is. My pivoted seat being always held in an inclined position, is always firmly supported at the center and at one end—that is to say, at two points—while the weight of the back aids to keep it in place.

In reversing the back its weight, on coming in contact with the end of the seat, causes the latter to reverse also, and, as the seat and back are not connected or attached in any way to each

other, there is nothing to get out of order or to refuse to operate by reason of rusting, &c.

The great advantage of my improvements is, perfect simplicity and operation without the use of any springs, catches, or other mechanism which might get out of order and require constant attention, while the object aimed at is accomplished to perfection.

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

1. The head-rests F, of the described construction, hinged and arranged so that when folded they will form a supplementary front to the back

and allow either to be unfolded while the other lies flush with and forms a part of said back, as described.

2. A hinged head-rest frame, made of elastic bars *c* and wire filling *f f'*, to admit of being bent to conform to the curve of the back, or to be bulged out to either side, whether said head-rests be folded or unfolded upon their hinges, as described.

JAS. M. ALLEN.

Witnesses:

ALEXR. A. C. KLAUCKE,
A. E. H. JOHNSON.

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