

B. J. LA MOTHE.
Railway Car Seats.

No. 138,899.

Patented May 13, 1873.

Fig. 2.

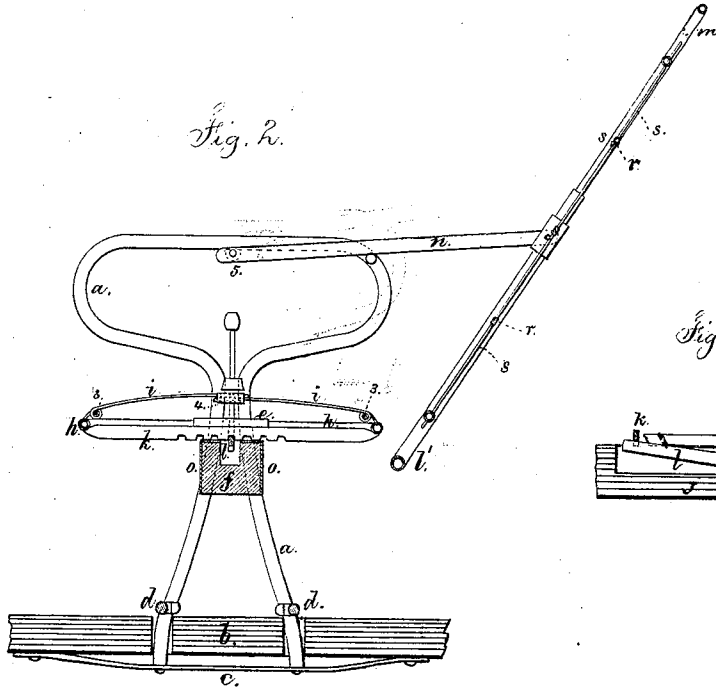


Fig. 3.

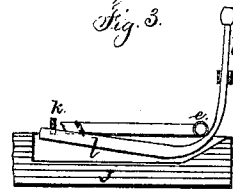
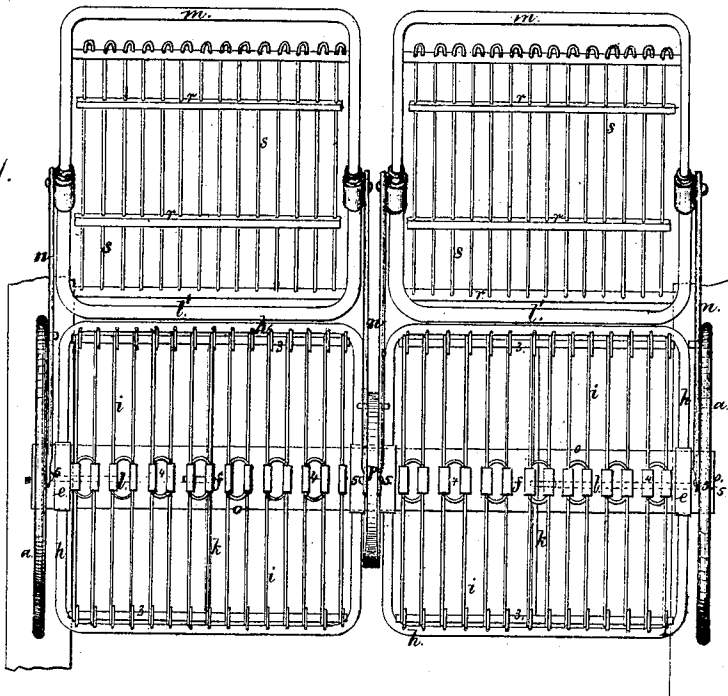


Fig. 1.



Witnesses

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UNITED STATES PATENT OFFICE.

BERNARD J. LA MOTHE, OF DETROIT, MICHIGAN.

IMPROVEMENT IN RAILWAY-CAR SEATS.

Specification forming part of Letters Patent No. **138,899**, dated May 13, 1873; application filed September 17, 1872.

To all whom it may concern:

Be it known that I, BERNARD J. LA MOTHE, of Detroit, in the State of Michigan, have invented an Improvement in Railway-Car Seats, of which the following is a specification:

This invention relates to a wrought-metal frame and springs for a railway-car seat, and is a modification of and improvement upon the car-seat patented by me July 14, 1857. I employ double bow-springs in the seat-frame, and a yielding frame of spring-wires in the back. The seat-frame is made to slide in bearings upon a cross-beam and held in position by a lever and catch. The metallic end frames are supported upon springs.

In the drawing, Figure 1 is a plan of said chair or seat, and Fig. 2 is a vertical section of the same.

The end frames or arms *a a* are made of metal bars or tubes bent up into the required form for receiving the other parts of the seat. The lower ends of these bars or tubes, forming the legs, are, by preference, passed through the floor *b*, or through cleats, and rest upon springs *c c*, and are secured by rivets or bolts to said springs, so that the connection is durable, but the springs will yield sufficiently to relieve the seat of a portion of the concussion and tremor usual in railway cars. The springs *c* sustain the weight by tension, but will yield sufficiently for the desired object. The bars *d*, extending from one leg to the other, form foot-rests. Between the end frames *a a* is the bearing-beam *f*, that is preferably of wood, and is connected to the end frames by metallic plates *o*, passing around such end frames and attached to the sides of the beam *f*. Upon the beam *f* are the bearings *e e*, in which the seat-frames are supported, and said seat-frames are each made of a metal pipe or bar, *h*, bent to shape and passing at the sides through the respective bearings *e*, so that the seat can be moved backward or forward, the frame *h* sliding in the bearings *e*. There is a center-bar, *k*, to the seat-frame, that is notched upon the under side to receive a stop-lever, *l*, shown detached in Fig. 3. One end of this stop-lever is in a guide in the end frame or guard so as to be in a convenient position for

being operated, and by this means the seat can be held in whatever position it may be moved to. The seat itself is made with a spring-bottom, composed of wires *i*, each bent in a bow or double, and coiled around the bearing-rod *3* and the ends secured to the front or back edge of the seat. These springs are in pairs, extending toward the middle from the front and back edges, and the bends or loops lap upon each other and are connected by metal clasps or clips *4 4* that cause the springs to move together under a weight, but allow of the wires of the springs sliding as the springs bend. By this construction a very durable and elastic seat is obtained, and I remark that the same may be covered with plush and padding, or otherwise upholstered. The frames that form the backs are made with a lower pipe or tube, *v*, into which passes the smaller rod or tube *m* that forms the upper part of the frame. These are permanently connected together, and are hinged to the supporting-bars *n n*, that are jointed at *5* to the center portions of the arms *a a*, and also to the middle dividing-arm *p*, that is supported by the beam *f*. The back is made with a yielding frame, composed of the cross-bars *r r*, that are attached to the surrounding frame *v m* and the vertical wires or springs *s s* that pass through these bars *r r*, and thereby form a yielding or spring back or foundation for the padding and plush or upholstering.

The backs are reversed by lifting them from one side to the other of the seat as the bars or links *n n* swing upon their joints; for this reason it is necessary for the two sides of the back to be alike.

The elastic foundation, composed of the spring-bars *r* and wires *s*, render the back yielding under pressure and comfortable to the person occupying the seat; and said back can be inclined more or less as the seat is slipped forward or back, and thereby the seat can be made to recline for sleeping when desired.

I claim as my invention—

1. The metal frame *h* of the seat sliding in and supported by the bearings *e*, and containing the spring-wires *i* bent double and con-

nected in pairs, substantially as and for the purposes set forth.

2. The center-bar *k* and stop-lever *l*, in combination with the sliding metallic seat-frame *h* and springs *i*, substantially as set forth.

3. The end frames *a a*, passing through the floor or cleats and attached to the springs *c*, as and for the purposes set forth.

4. The reversible car-seat back, made of a surrounding tubular frame with cross-bars *r*,

and vertical springs *s* passing through the bars *r*, substantially as set forth.

Signed by me this 5th day of September,
A. D. 1872.

BERNARD J. LA MOTHE.

Witnesses:

C. F. ALLEN,
A. DUNN.