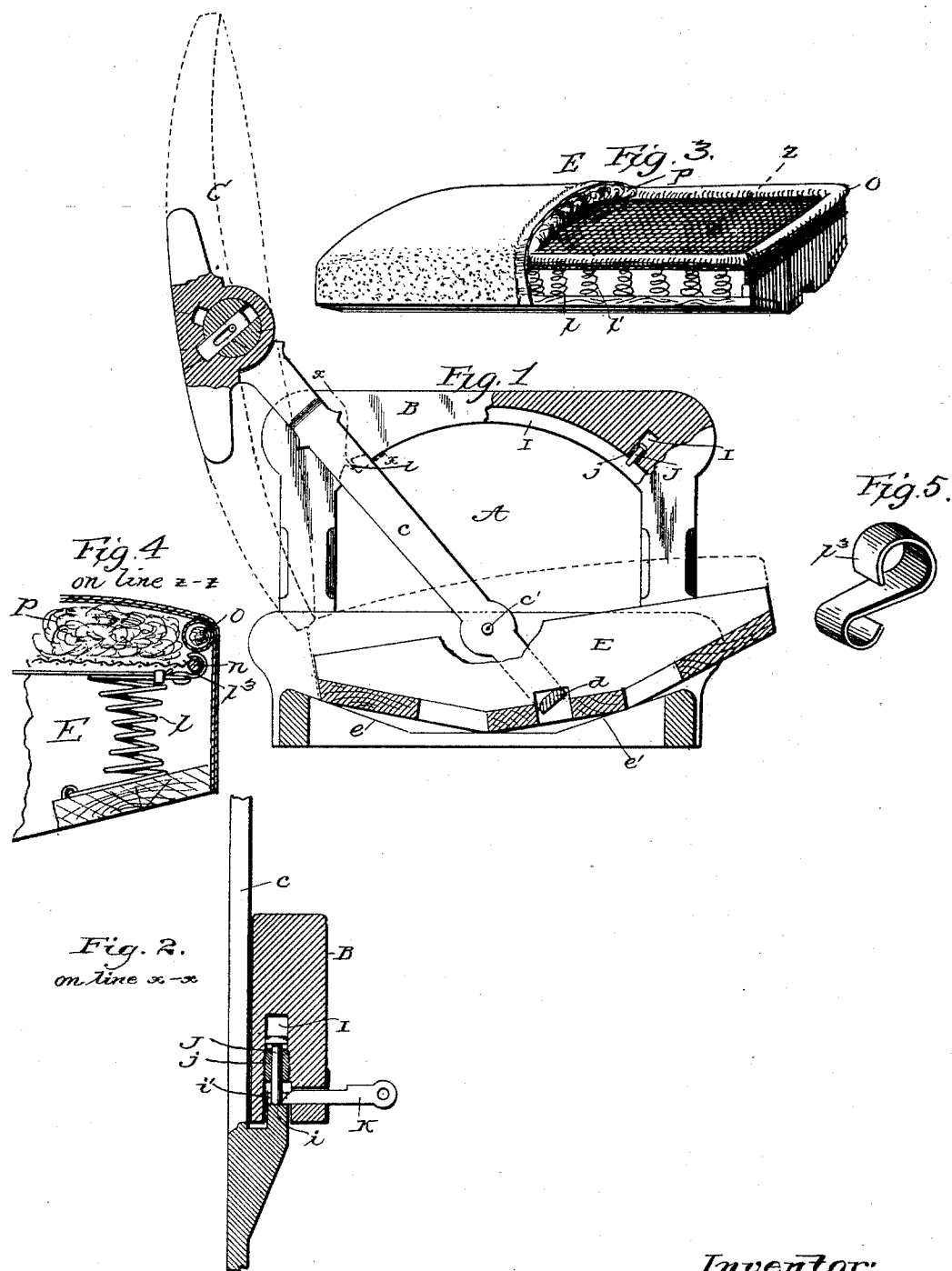


(No Model.)

E. L. BUSHNELL.
CAR SEAT.

No. 468,235.

Patented Feb. 2, 1892.



Witnesses:
m. m. m. m. m.
H. A. Kennedy.

Inventor:
E. L. Bushnell
By Phil. T. Dodge, atty.

UNITED STATES PATENT OFFICE.

EDWIN L. BUSHNELL, OF POUGHKEEPSIE, NEW YORK, ASSIGNOR TO THE
E. L. BUSHNELL SPRING COMPANY, LIMITED, OF SAME PLACE.

CAR-SEAT.

SPECIFICATION forming part of Letters Patent No. 468,235, dated February 2, 1892.

Application filed September 26, 1889. Serial No. 325,125. (No model.)

To all whom it may concern:

Be it known that I, EDWIN L. BUSHNELL, of Poughkeepsie, in the county of Dutchess and State of New York, have invented certain Improvements in Car-Seats, of which the following is a specification.

My invention relates to various improvements in car-seats which are provided with a reversible back.

My invention includes an improved locking device for the movable arms to automatically lock them as they are swung from side to side. It includes, also, an improved cushion and other features of novelty, which will be pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation, partly in section, of a car-seat having my improvements embodied therein. Fig. 2 is a vertical section on the line *x*. Fig. 3 is a perspective view of the cushion, portions of the same being removed to better show the construction. Fig. 4 is a cross-section of the same on the line *z z*. Fig. 5 is a perspective view of a detail.

Referring to the drawings, A represents the frame of the chair, provided, as usual, with rigid arms B.

C represents a reversible back pivoted at its ends to arms *c*, which are in turn pivoted near their lower ends to the frame at *c'*. At their lower ends the arms *c* are connected by a rod *d*, which extends beneath and engages in a groove formed in the under side of a seat proper E. The under side of this seat slopes downward at the center and moves on correspondingly-formed guides *e e'*, located at each end of the chair-frame, so that as the arms are moved to one or the other side to reverse the back the seat will be moved in the opposite direction and will be caused to assume an inclined position, that most desirable for the comfort of the occupant. In order that the arms may be securely locked in place when adjusted in either position to give the proper inclination to the back, I provide the under side of each arm B of the chair-frame with a groove I, which is arranged to receive an upwardly-extending tongue or finger *i*, projecting from the side of each movable arm. The tongue is curved on its upper end, where it is provided with a notch *i'*, adapted to receive a

gravitating bolt J. This bolt is headed and is mounted in a tubular casing *j*, threaded on its outer surface and screwed into the arm B above the groove. One of these bolts is provided on each side of the arm, so that the arm *c* can be locked in either position. From the foregoing it will be seen that when the arms are moved to one side the curved upper ends of the tongues will pass beneath the bolts and push them upward until the notches arrive beneath them, when the bolts will fall by gravity therein and will hold the arms securely in place. The arms are unlocked when it is desired to place the back in the opposite position by means of a flat plate or key K, which is inserted into an opening in the arm communicating with the groove at the side of the bolt. By engaging the key with the side of the bolt and slightly elevating the former the bolt will be raised out of engagement with the tongue and the release of the arms effected. It is to be noted that under this construction the movable arms are guided by the tongue on each moving in the groove, thus avoiding the contact of the side of the arms with the chair-frame and any mutilation or defacing of the parts.

Referring now to Figs. 3 and 4, E represents the seat proper before referred to, consisting of the rectangular frame having the series of slats on its under side with spaces between them and arranged to support springs *l l'*, &c., arranged as shown. Over these springs is placed a perforated covering, preferably of wire fabric, which is connected at its four edges to a binding-rod *n*, extending therearound. This binding-rod, with the fabric secured thereto, is attached at intervals to the springs, as shown, by metallic clips or hooks *o*. The hooks, as shown in Fig. 5, are formed with the two eyes, one of which encircles the wire forming the spring, while the other embraces the binding-rod and the wire fabric secured thereto. This construction forms a straight rigid edge and a strong and durable covering for the springs and prevents the accumulation of dust or dirt in the cushion, the former passing entirely through the seat onto the floor. Around the edge of the wire covering a roll *o*, preferably of hair felt, is stitched and projects slightly above the surface of the

covering. A layer *p* of hair or other suitable material is then spread over the wire covering and stitched to the roll, after which a covering of muslin and velvet or other appropriate material is applied over the hair and fastened to the sides of the seat in any suitable manner.

It is to be noted that the absence of a material of a close texture between the hair and springs permits dust or other foreign material to pass entirely through to the bottom of the seat, where it may escape between the slats. The felt roll serves to prevent the escape or displacement of the hair and to form a soft and yielding binding for the edges of the seat, thus greatly reducing the wear to which the covering would be otherwise subjected.

Having thus described my invention, what I claim is—

1. The combination, with the chair-frame provided with the groove, of the swinging arms carrying the back and confined on the frame and having the tongue to engage in the groove, the said tongue being located at a point removed from the point of confinement of the arms.

2. The combination, with the chair-frame provided with the vertical groove, of the pivoted arms carrying the back, the tongue on the arms, located at a distance from the pivot of the said arms and arranged to engage in the groove, and the locking device on one of the parts, adapted to engage the other part and hold the arm.

3. The combination, with the chair-frame provided in the under side of its rigid arms

with the vertical grooves, of the pivoted arms carrying the back and having the upwardly-extending tongues to engage in the grooves, and the locking-bolts mounted in the chair-frame above the groove and arranged to engage the tongues and hold the arms.

4. In a car-seat, the combination of the seat-frame, the springs therein, the wire fabric supported by said springs, the relatively stiff binding-rod having the edge of the wire fabric wrapped thereon; and the independent hooks having one of their ends connected to the springs and the opposite end tightly clamping the wire fabric and the inclosed binding-rod, whereby a comparatively rigid and compact edge is formed at the junction of the parts.

5. The combination, with the chair-frame provided with a vertical groove and a lateral passage, of a vertically-moving bolt having its end arranged to extend into the groove and over the end of the passage, and the pivoted arms carrying the back and provided with the tongues, the said tongues arranged to extend in the groove and to be engaged by the bolt.

6. The stationary seat-arm *B* and the two upright locking-bolts *J* therein, in combination with the pivoted back-sustaining arm having a lateral side projection *i* underreaching the seat-arm to engage the bolts, as shown.

In testimony whereof I hereunto set my hand this 31st day of August, 1889, in the presence of two attesting witnesses.

EDWIN L. BUSHNELL.

Witnesses:

FRED E. ACKERMAN,
CHAS. F. COSSUM.