

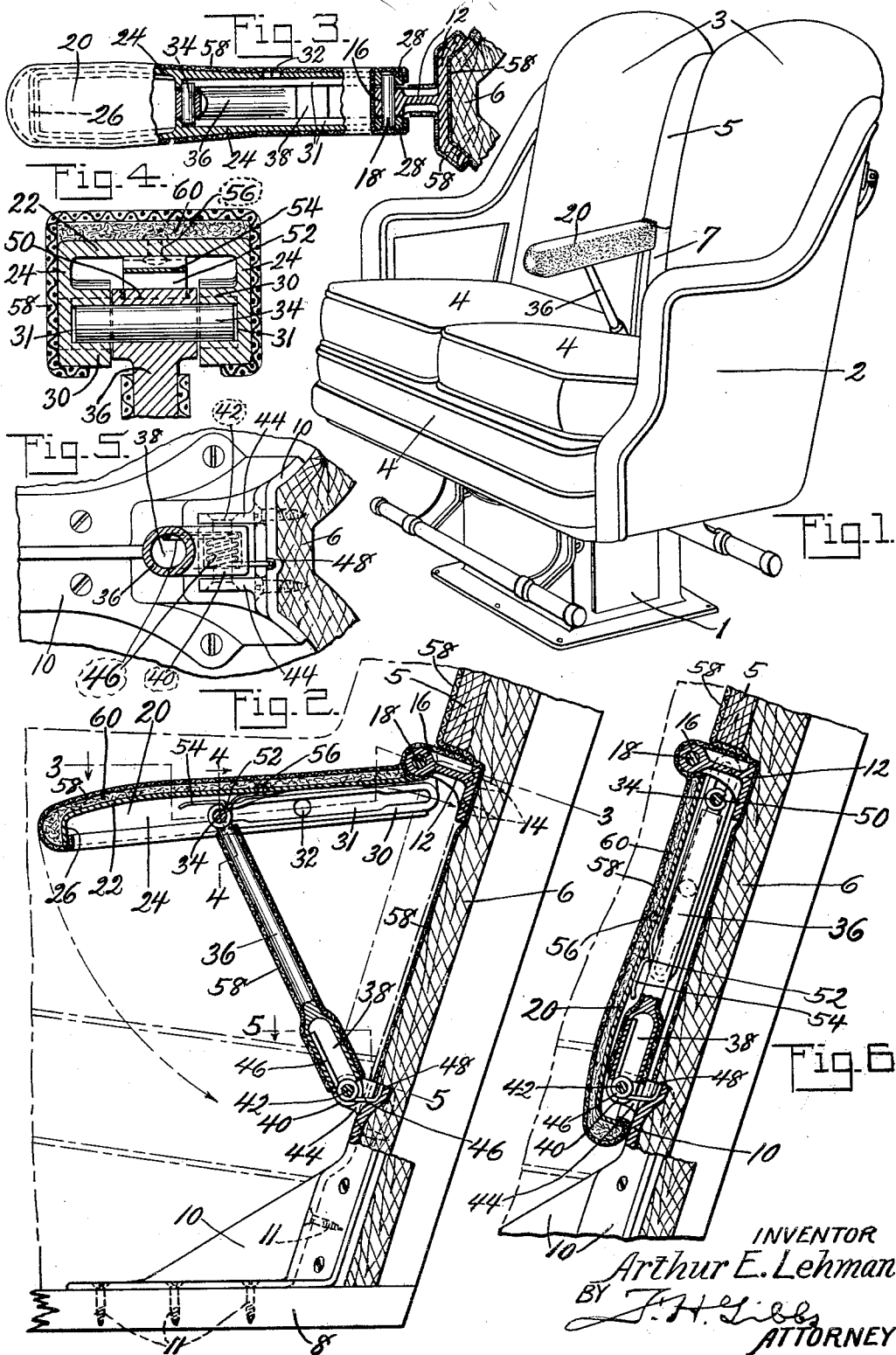
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FOLDING ARMREST FOR SEATS

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# UNITED STATES PATENT OFFICE

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## FOLDING ARMREST FOR SEATS

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This invention relates to a folding arm rest for seats, and more particularly to an arm rest for railway car seats, and it is an object of this invention to provide a folding arm rest which can be readily operated to a position in which it can be used as an arm rest and in which position it serves as a barrier or division between individual seats.

It is also an object of this invention to provide a folding arm rest which can be readily operated to a position in which it forms substantially a part of the seat back and in no way interferes with the occupants of the seat.

It is also an object of this invention to provide a folding arm rest of simple construction, which can be readily manufactured, which can be easily operated and which will remain fixed in adjusted positions.

With these and other objects in view, as will appear more fully hereinafter, the invention consists substantially in the construction, combination, location and relative arrangement of the parts, all as will be more fully herein set forth, as shown in the accompanying drawing and finally pointed out in the appended claims.

In the drawing:

Fig. 1 is a perspective view of a railway car seat having a folding arm rest constructed in accordance with this invention;

Fig. 2 is a view in vertical section of the arm rest shown in Fig. 1, the arm rest being shown raised to its position for use;

Fig. 3 is a horizontal section taken as on line 3—3 of Fig. 2;

Figs. 4 and 5 are vertical and horizontal sections taken as on lines 4—4 and 5—5, respectively, of Fig. 2; and

Fig. 6 is a view similar to Fig. 2 showing the arm rest folded to its position when not in use.

In the drawing an arm rest constructed in accordance with this invention is shown applied to a railway car seat having a base or pedestal 1 and a seat body 2, the seat body comprising back cushions 3 and seat cushions 4. The back cushions are supported by a frame of usual or desired construction, the cushions being separated by a central frame

member 6 which extends to and is secured to the central member 8 of the seat cushion frame. The joint between the two members 6 and 8 is reinforced by a metal brace 10 secured to the frame members by screws 11. The frame member 6 is recessed adjacent its lower end, as shown in Figs. 2 and 6, and adjacent the upper end of this recess there is mounted a hinge bracket 12 secured to the frame member 6 by the screws 14.

The hinge bracket 12 projects from the body of the member 6 and at its outer end is provided with a perforated ear or lug 16 in which is received the hinge pin 18. To the bracket 12 there is pivoted the arm rest member 20 which is substantially channel-shape throughout its length having its web 22 horizontal and its flanges 24 projecting downwardly and are united at their outer ends by a transverse flange 26. To the inner end of the web 22 are attached spaced perforated ears or lugs 28 which project oppositely to the flanges 24 and receive the hinge pin 18, thus pivotally connecting the arm rest member 20 to the hinge bracket 12. The flanges 24 are provided with continuous inwardly projecting flanges 30 which form slots or grooves 31 on the inner sides of the flanges 24, these grooves being closed at their ends and of lesser width adjacent the ends than at the center. Through one of the flanges 24 there is provided an opening 32 leading to one of the slots 31 and through this opening is inserted the pin 34 which engages in an opening in the upper end of the strut 36 and pivotally connects the strut 36 to the arm rest member 20 while at the same time permitting sliding movement of the strut 36 with respect to the arm rest member 20.

The strut 36 is enlarged at its lower end to provide a recess 38, and at its lower end is formed with perforated ears or lugs 40 to receive a hinge pin 42 mounted in the ears or lugs 44 formed integral with the brace member 10. Coiled about the hinge pin 42 is a spring 46 having one end engaged in a notch 48 formed in the brace 10 while its other end is inserted in the recess 38 in the strut 36, the coiling of the spring and its mounting on the pin 44 being such that the spring 46 tends to

force the upper end of the strut 36 outwardly from the back frame member 6. While the spring 46 tends to hold the strut 36 in its outermost position, in order to prevent accidental dropping of the arm rest member 20 the upper end of the strut 36 is notched as at 50 so that when the strut is in its outermost position the notch 50 will be engaged by a shoulder 52 of a spring latch 54 attached by rivet 56 to the arm rest member 20. In order that the arm rest may present a pleasing appearance, the seat covering 58 is continued in the recess of the back member 6 and is also applied to the strut 36 and arm rest member 20, the arm rest member 20, however, being provided with suitable cushioning material 60 between the cover 58 and the arm rest member 20.

When in use, the parts will have the position shown in Fig. 2 in which the strut 36 will be at the outer end of the slot 31 with the latch 54 in engagement with the notch 50. In this position the arm rest member is supported by its hinge connection to the back member 6 and by its connection with the strut 36. When it is desired to place the arm rest out of use, the spring latch 54 is lifted by the operator and the strut 36 pushed inwardly, the arm rest member 20 being raised slightly by the strut 36 due to its rotation about the pin 42, until the strut passes beyond the tangential point midway of its path of travel, after which the arm rest 20 is pressed downwardly causing same to rotate about the pin 18. During this final movement of the arm 20 the strut 36 is forced inwardly by reason of the upper surface of slot 31 contacting with the pin 34 until the strut 36 and arm rest member 20 assume the parallel positions shown in Fig. 6, in which the strut 36 is received into the recess of the arm rest member 20 and the arm rest member 20 fits in the recess 7 formed in the back by cushions 3 and separating bead 5, there being little, if any, projection of the arm rest member above the face of the back cushions 3. To place the arm rest in position for use, the arm rest member 20 is raised from the position shown in Fig. 6 permitting the spring 46 to rotate the strut 36 away from the back member 6, the strut 36 being grasped by the operator and moved outwardly at the last to insure engagement of the latch 54 in the notch 50.

While the arm rest has been shown as applied to a railway car seat designed for two occupants, it will be understood that it may be applied to seats of other kinds and that more than one arm rest may be applied to seats of greater length and therefore a larger number of occupants; and it is to be understood that the invention is not limited to the exact details of construction shown and described, as it is obvious that various modifi-

cations thereof within the scope of the claims will occur to persons skilled in the art.

What is claimed is:

1. In a folding arm rest, a supporting member, an arm rest member hinged to said supporting member, a strut hinged to said supporting member and so arranged as to support the free end of said arm rest member, a spring arranged to force said strut into supporting position for the arm rest member, and resilient means carried by the arm rest member and arranged to cooperate with said strut when the latter is in arm rest supporting position to retain the latter in said position.

2. In a folding arm rest, a supporting member, an arm rest member hinged to said supporting member, a strut for supporting the free end of said arm rest member hinged to said supporting member and slidably connected to said arm rest member, and resilient means carried by the arm rest member and so arranged as to cooperate with the strut to retain the latter in supporting position.

3. In a folding arm rest, a supporting member, an arm rest member hinged to said supporting member and having spaced parallel grooves, a strut hinged to said supporting member and slidably mounted in said grooves, a spring arranged to force said strut toward the outer ends of said grooves, and a latch having provision for retaining said strut at the outer ends of said grooves.

4. In a folding arm rest, a supporting member, a flanged arm rest member hinged to said supporting member and having inwardly opening grooves on said flanges, a strut hinged to said supporting member and slidably mounted in said grooves, a spring in cooperative relation with said strut and so arranged as to urge the latter toward the outer ends of said grooves, and a latch carried by the arm rest member adapted to retain said strut at the outer ends of said grooves.

5. A car seat comprising a pedestal, a seat member supported thereby, an upstanding seat back, a metal brace having an upstanding portion forming part of the back and secured thereto and another portion secured to the seat member, a strut pivotally mounted on the upstanding portion of the brace having an upper end movable toward and from the seat back, an arm rest member hinged to the seat back above the path of movement of the strut, and means having provision for detachably securing the upper end of the strut to an under-part of the arm rest member to hold the latter in arm supporting position.

6. A car seat comprising a pedestal, a seat member supported thereby, an upstanding seat back, a metal brace having an upstanding portion forming part of the back and secured thereto and another portion secured to the seat member, a strut pivotally mounted

on the upstanding portion of the brace having an upper end movable toward and from the seat back, a spring normally urging the upper end of the strut away from the seat back, an arm rest member hinged to the seat back above the path of movement of the strut, and means having provision for detachably securing the upper end of the strut to an under-part of the arm rest member to hold the latter in arm supporting position.

7. A car seat comprising a pedestal, a seat member supported thereby, an upstanding seat back, a metal brace having an upstanding portion forming part of the back and secured thereto and another portion secured to the seat member, a strut pivotally mounted on the upstanding portion of the brace having an upper end movable toward and from the seat back, an arm rest member hinged to the seat back above the path of movement of the strut, and a spring latch having provision for detachably securing the upper end of the strut to an under-part of the arm rest member to hold the latter in arm supporting position.

In witness whereof I have hereunto set my hand.

ARTHUR E. LEHMAN.

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