July 11, 1950 S. B. HENDRICKSON ET AL 2,514,447

CHAIR AND LEG REST COMBINATION

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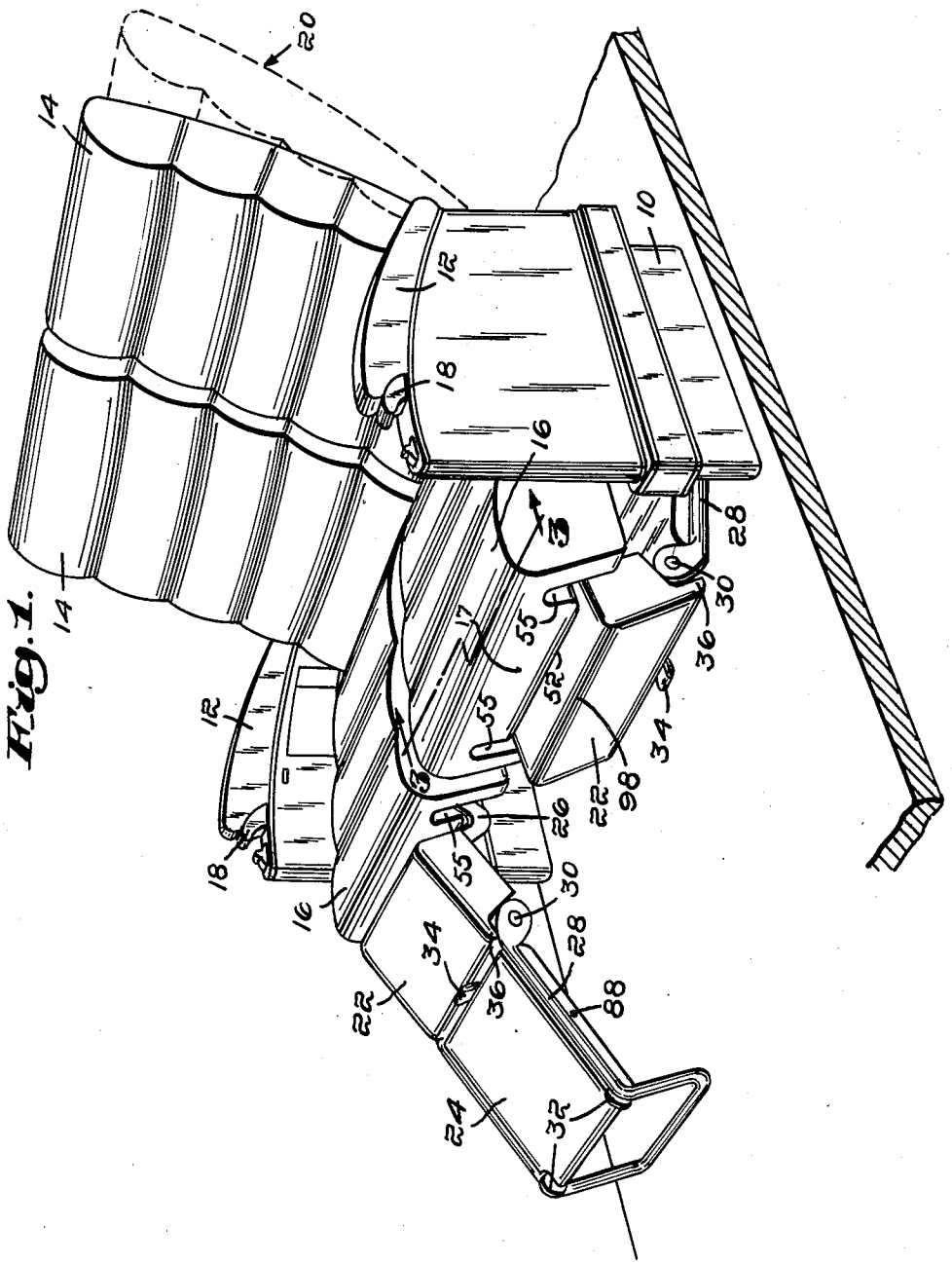


Fig. 1.

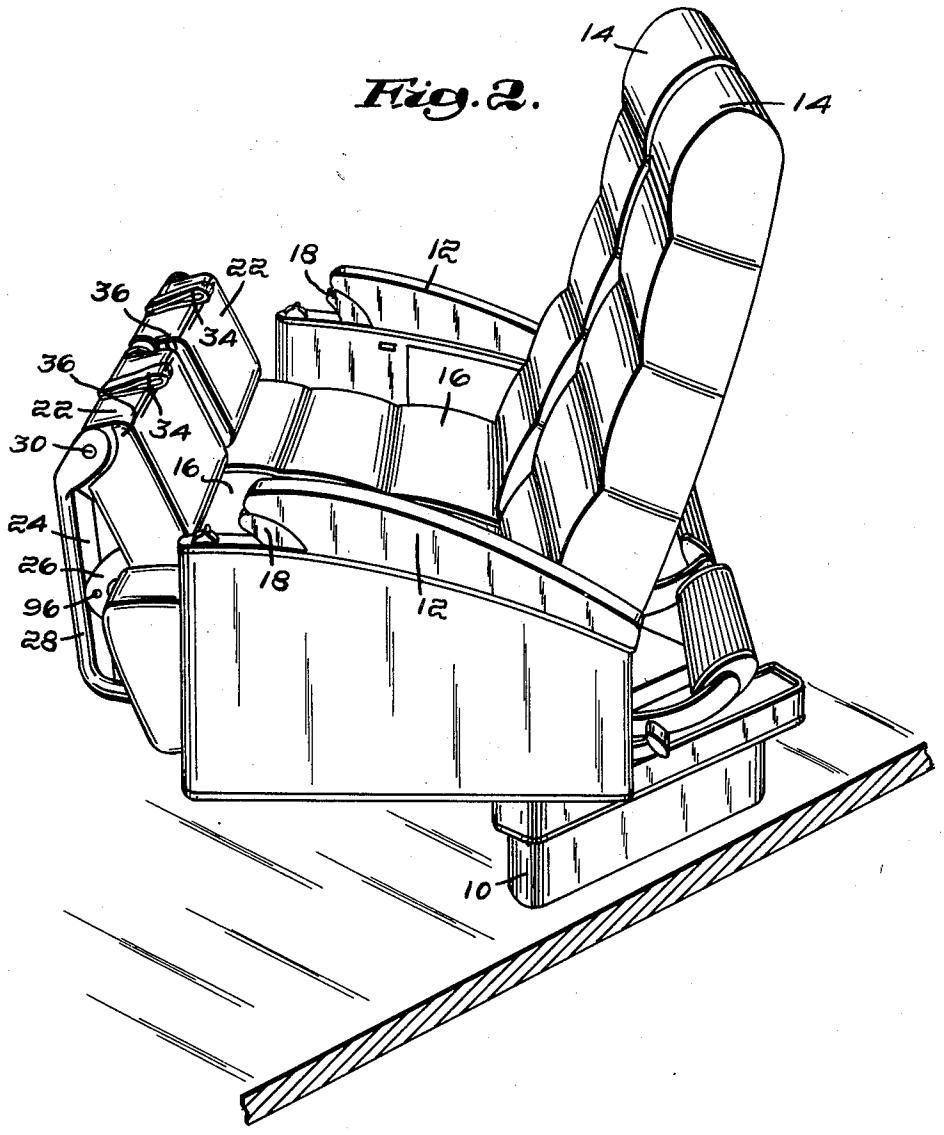
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Fig. 2.



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CHAIR AND LEG REST COMBINATION

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Fig. 3.

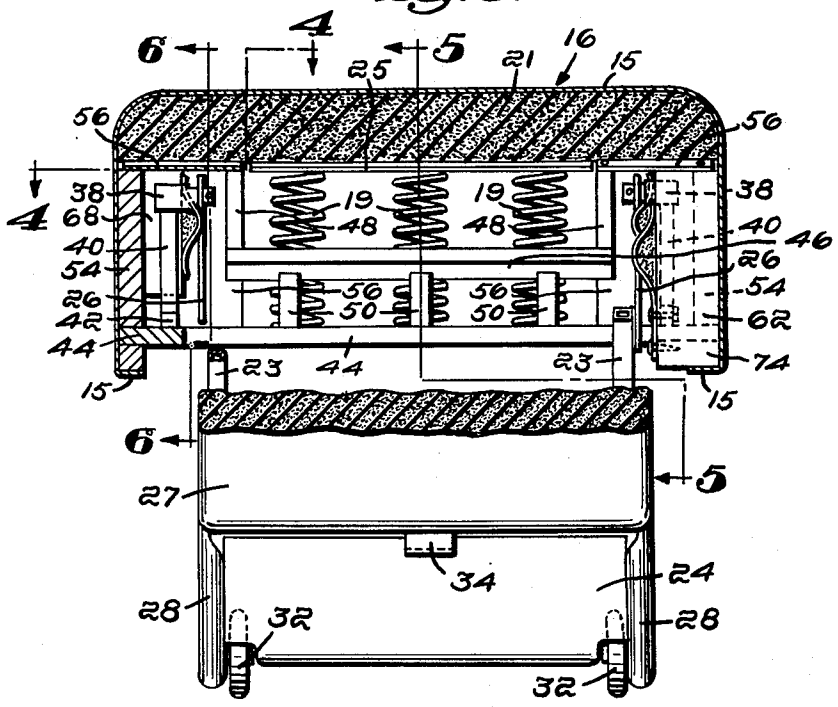
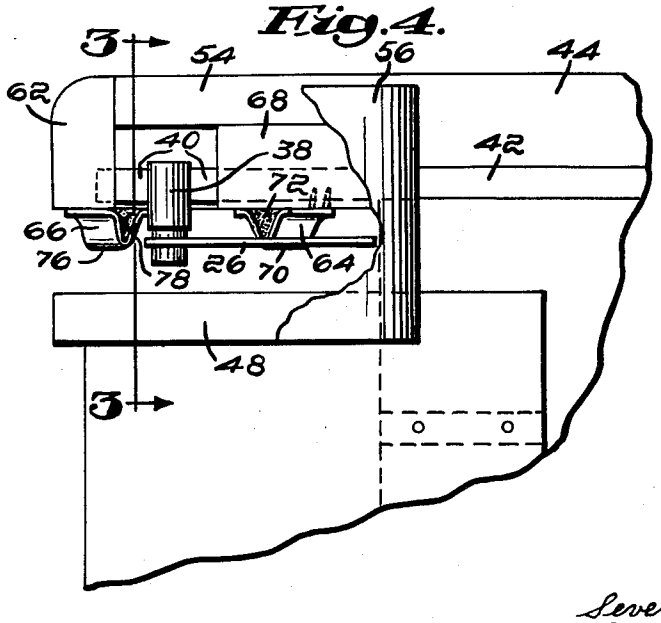


Fig. 4.



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Fig. 5.

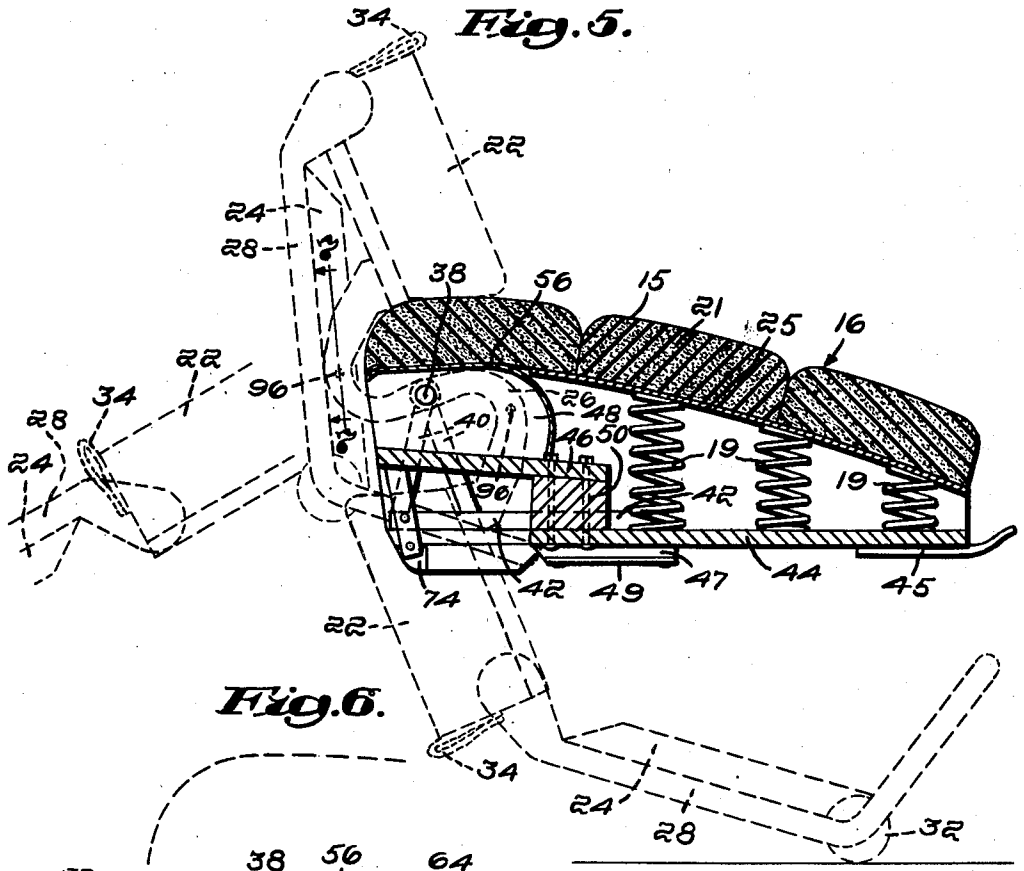


Fig. 6.

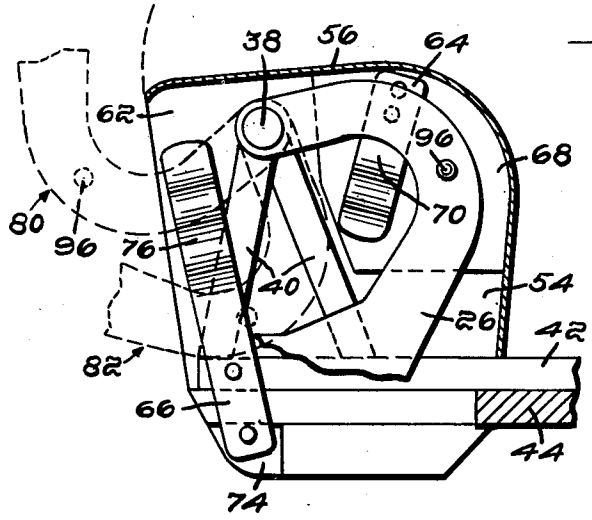
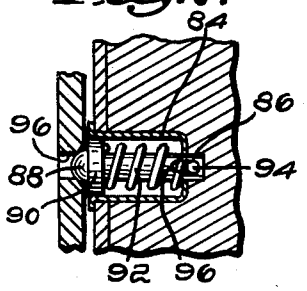


Fig. 7.



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UNITED STATES PATENT OFFICE

2,514,447

CHAIR AND LEG REST COMBINATION

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Application February 4, 1949, Serial No. 74,556

12 Claims. (Cl. 155—171)

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This invention relates to chair and leg rest combinations and more particularly to upholstered chairs having leg rests which stow beneath the chair seats. In one aspect, this invention relates to novel suspension mechanism and stowage arrangements for leg rests by means of which the leg rest may be elevated from a stowed position under an upholstered chair to the level of the chair seat without being inconveniently near the floor to reach in the stowed position and without sacrificing critical cushioning space within the chair seat. In another aspect, this invention relates to novel suspension mechanism for leg rests used with railroad car chairs or the like by means of which the leg rest may be elevated to a position free and clear of the chair frame for purposes of rotating the said chairs.

One of the principal difficulties in designing leg rests for railroad car chairs or the like is the provision of adequate space for the leg rests. Generally speaking, the spacing between railroad car chairs is sufficient to provide knee and leg room, but not to accommodate leg rest mechanism as well.

Various attempts have been made in the past to devise satisfactory leg rests for this purpose, but hitherto none have met with any appreciable success. One attempt involved stowing a leg rest in a recess in the back of each chair for use by the person sitting next behind. Such a leg rest, however, takes up vital knee room when in the stowed position, and to raise or lower it, inevitably shakes the chair ahead, disturbing the occupant. This design has the additional disadvantage of consuming space in the chair back which might otherwise be used for back cushioning.

Another type of leg rest developed in the past slides directly into the cushion box of the chair seat and may be pulled forward for use. The principal disadvantage of this latter type of leg rest is that it takes up space within the seat cushion which would otherwise be available for springs, and therefore the cushion does not have the depth or resiliency desired.

Leg rests which drop down and fold under the chair seat have also been used in the past, but in the case of upholstered furniture having any substantial seat depth, it is difficult to construct leg rests which can be conveniently pulled up to the level of the chair seat and still be stowed under the chair without taking up vital spring room. In the past such leg rests have had to be so near the floor that reaching for them has been inconvenient or else it has been necessary to tip the chair seat up to pull them out. This latter

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type is obviously inconvenient as well as being impossible to use in railroad cars or other public seating arrangements.

Another disadvantage in leg rests which fold underneath the seat, particularly applicable to railroad car seats, is that they interfere with rotating the chair for the purpose of facing in the opposite direction.

In general, hitherto known leg rests for car seats and the like have also been expensive to manufacture. In order to provide mechanism for elevating them to the chair seat level they have generally employed numerous moving parts also rendering them difficult to keep clean and maintain in proper working condition.

It is an object of our invention to provide a leg rest for a chair which will be connected to the chair and fold to a stowed position beneath the chair seat without taking up cushion space within the chair seat and at one and the same time be easy to reach by the occupant.

It is another object of our invention to provide a leg rest for a chair which will be permanently connected to the chair and which will utilize a minimum of working parts, be simple in operation, easy to maintain in working order and state of cleanliness, and which may be depressed to a stowed position beneath the chair seat without tilting the chair upward.

An additional object of our invention is to provide a leg rest for the railroad car chair or the like which may be stowed beneath the chair seat, elevated to a leg rest position convenient for use by the chair occupant and which may be further elevated to a position above the chair seat where it will not interfere with the rotating of the chair. It is a further object of our invention to provide means for securing such a leg rest in the said position above the chair seat so that the chair may be rotated without danger of the leg rest dropping during the rotating operation.

It is an additional object of our invention to provide means for preventing the leg rest from dropping sharply from its uppermost position to the stowed position beneath the seat, and to provide other means for holding the leg rest in the stowed position under the seat.

In the accomplishment of these objects, we employ an upholstered chair cushioned in the seat area by inner springs and a thick top layer of foam rubber. Near the front of the cushioned seat, we provide a pair of pivot bearings, one at each side within the seat frame near the top. The leg rest is pivotally mounted on these bearings for rotation in front of the chair seat from

a position substantially above the seat to a stowed position partly within a recess in the lower forward part of the seat and partly under the seat. The leg rest comprises an upper, calf rest section pivotally connected to a lower, heel rest section, and when set up as a leg rest, slopes forward from the chair seat. To stow the leg rest merely requires lifting the calf rest section high enough to allow the heel rest to pivot backward, pivoting it backward, and then depressing the calf rest until both sections of the leg rest have reached the stowed position under the chair.

It is a feature of our invention that the lower forward corner of the seat cushion box is recessed to receive the upper part of the calf rest in the stowed position, and that an intermediate spring supporting structure is provided between the two leg rest bearings. Thus, the calf rest is not too low to be conveniently reached by the chair occupant while at the same time vital cushioning across the front of the seat has not been lost.

It is an additional feature of our invention that, although the leg rest is partially housed in the lower forward part of the seat cushion box, the full depth of the central part of the cushion box is available for inner springs and cushioning.

A further feature of our invention is a simple locking means for maintaining the leg rest in a position above the seat cushion for purposes of rotating the chair and clearing underneath the chair. The lock serves to secure the lower, heel rest portion of the leg rest to the upper, calf rest portion when the latter is in the fully elevated position above the seat, such that the bottom of the heel rest portion abuts against the bottom of the seat preventing the leg rest from pivoting to a lower position.

An additional feature of our invention lies in the use of two spring retarders disposed to intercept the path of each of the pivot links which connect the leg rest to the pivot bearings. One retarder prevents the leg rest from dropping sharply from the chair pivot position, and the other retains the leg rest in the stowed position.

It is an additional feature of our invention that we provide a pair of wheels, one on each side of the lower corners of the heel rest for the purpose of allowing smooth movement of the heel rest along the floor into the stowed position, and to prevent marring the floor.

Further objects and features of our invention will best be understood and appreciated from a detailed description of a preferred embodiment thereof, selected for purposes of illustration and shown in the accompanying drawings, in which:

Fig. 1 is a view in perspective of the leg rest of our invention as used with a railroad recliner chair and showing the leg rest both set up for use and in the stowed position,

Fig. 2 is a view in perspective in side elevation showing the leg rest in the elevated, chair-rotating position and showing the railroad car chair partially rotated,

Fig. 3 is a sectional view in front elevation along the lines 3—3 of Figs. 1 and 4, showing the inner construction of the seat cushion box, and with the leg rest in the stowed position,

Fig. 4 is a plan view along the lines 4—4 of Fig. 3.

Fig. 5 is a sectional view in side elevation along the lines 5—5 of Fig. 3, with the inner springs removed from the forward part of the seat for purposes of clarity, and showing in phantom the

leg rest in the chair-rotating position, the leg rest position, and the stowed position,

Fig. 6 is a view in side elevation along the lines 6—6 of Fig. 3, showing the pivot link and retarders, and

Fig. 7 is a sectional view in rear elevation of the bullet lock along the lines 7—7 of Fig. 5.

In the preferred embodiment of our invention herein shown, we employ a conventional double seat railroad recliner chair, shown in Fig. 1, and having a base frame 10, side arms 12, cushion backs 14, and cushion seats 16. The backs 14 may be released by operation of a hand lever 18 connected to suitable linkage (not shown), and reclined to a position indicated in phantom at 20. The seats 16 are covered with fabric 15 in the conventional manner and are cushioned internally by means of inner springs 19 separated from a foam rubber top layer 21 by a wire frame 25.

The leg rest includes a calf cushion 22 and a heel rest 24 and is pivotally connected to the forward part of each seat 16 as will be explained below. The calf cushion 22 includes a foam rubber top layer and a fabric covering similar to the seats 16 and is supported by a frame 23 which may preferably be of rectangular hollow metal construction. The heel rest 24 is mounted within tubular frame 28 pivotally connected to the calf cushion frame 23 by bearings 30 and is provided at the lower end of the heel rest 24 with two wheels 32, one on each side, for the purpose of allowing the heel rest 24 to move smoothly along the floor into the stowed position as will be explained more in detail below. The tubular frame 28 of the heel rest 24 extends along the sides of the said heel rest 24 parallel to it and then bends sharply downward below the end of the heel rest 24 for the purpose of elevating the said heel rest 24 a convenient distance from the floor when in the leg rest position. A hand strap 34 is secured to the lower front corner of the calf cushion 22 and is made of suitably stiff material to maintain it in a forward position where it may be conveniently reached for elevating the leg rest. In order to rotate the car chair, as illustrated in Fig. 2, the composite leg rest may be elevated to a position substantially above the seat 16 and locked in that position as will be further explained below.

When the leg rest is set up for use the calf cushion 22 and the heel rest 24 come into alignment with their top surfaces in the same plane sloping forward at approximately 30° below the horizontal. In this position, the frame 28 of the heel rest 24 comes up against stops 36 secured to the calf cushion frame 23 which hold the leg rest rigidly against further downward movement.

The chair seat 16 is provided with a horizontal base plate 44 upon which the inner springs 19 are mounted in the central and rear areas of the seat and to which the lower margin of the fabric 15 is secured. Tubular hook members 45 and support blocks 47 having fiber caps 49 are secured to the bottom of the seat base plate 44 for the purpose of supporting the seat 16 upon the chair frame 10.

The calf cushion 22 is connected by means of links 26 to pivot bearings 38 mounted at each side within the upper forward portion of the seat 16. The bearings 38 are each supported by a rigid frame made of hollow rectangular metal tubes suitably connected to each other by welding or brazing and bolted to the seat base plate 44. The

said rigid frames include struts 40 and horizontal bases 42.

The links 26 which connect the calf cushion 22 to the bearings 38 are made of metal plate and are welded or brazed one to each side of the frame 23 of the calf cushion 22. It will therefore, be seen that the calf cushion 22 may be rotated forward and upward with respect to the seat 16. However, it will likewise be evident that such upward rotation will carry the links 26 up through a forward wall 17 (see Fig. 1) of the seat 16. Space must therefore be allowed for the links 26 to pass upward which naturally reduces the availability of cushioning space in the forward wall 17. In order to provide as much cushioning as possible above the bearings 38 and at the same time allow the calf cushions 22 to be elevated above the seat 16 the links 26 are formed in an exaggerated hook shape such that when the calf cushion 22 is in the fully elevated position, the links 26 extend forward from the bearings 38, outward through the forward wall 17 and then upward and over the foam rubber 21.

Furthermore, it is important to keep the gap between the calf cushion 22 and the seat 16 at a minimum when the leg rest is set up for use, and to this end the calf cushion 22 is given a decided rearward slope from the point where it connects to the links 26. Thus, when in position for use the calf cushion rear wall slopes toward the seat and no substantial gap exists between the leg rest and the seat.

Turning attention now to the stowed position of the calf cushion 22, it must be borne in mind that the hand strap 34 of the cushion 22 must not be so near the floor that it is inconvenient to reach. And on the other hand the calf cushion 22 must be stowed without sacrificing too much cushion depth. In order to meet these two competing factors, the calf rest is lodged in a recess 52 (see Fig. 1) in the lower forward portion of the seat 16. The bottom plate 44 of the seat 16 is recessed accordingly to receive the cushion 22, and the bearings 38 and their struts 40 flank the recess 52. However, since the calf cushion 22 enters the recess 52 at a point well below the bearings 38, an intermediate spring supporting frame is placed between the said bearings to augment the cushioning of the forward wall 17 of the seat 16 between the bearings 38. The said intermediate frame includes a base plate 46 spaced at a level above the seat bottom plate 44 and mounted thereon over the recess 52 by means of supports 50 connected to the bottom plate 44 to the rear of the said recess 52.

With reference to Fig. 3 it will be seen that the inner springs 19 in the forward part of the seat 16 rest upon the intermediate frame base 46 and accordingly provide spring cushioning in the area between the bearings 38.

In order to isolate the bearings 38 from the foam rubber 21 and the inner springs 19, inner walls 48 and outer walls 54 are provided flanking each side of the bearings 38 and their struts 40. The inner walls 48 are mounted on each side of the intermediate frame base 46, and the outer walls 54 are mounted outward from the struts 40 on the seat base plate 44. The outer side walls 54 extend forward and join with a forward corner member 62 while the inner side walls 48 extend up to the forward wall 17. Each of the said side walls extend upward to the level of the foam rubber and backward far enough to accommodate the links 26 in the stowed position. Sheet metal coverings 56 are secured to the sidewalls 48 and 52, spanning the gap across their tops and to the rear. However, the opening between the inner side walls 48 and the corner members 62 to the front are left uncovered either by metal or the fabric 15 and form recesses 55 (see Fig. 1) to allow passage of the links 26 to the fully elevated position. Thus it will be evident that the areas of the seat 16 above the bearings 38 will be cushioned by the full thickness of the foam rubber 21, while, in the area between the bearings 38, the cushioning of the foam rubber layer 21 will be augmented by the inner springs 19. Furthermore, in the areas of the seat 16 to the rear of the intermediate frame, the inner springs 19 may be extended to the full depth of the seat. With this arrangement, cushioning in the central and most important part of the seat is not impaired while the cushioning in the forward part of the seat is amply sufficient.

The leg rest herein described pivots freely about the bearings 38, and when in the stowed position would normally rock forward and backward with the motion of the train. In order to prevent this and to provide means for holding the leg rest in the stowed position, we provide retarders made of spring metal strips 64 mounted upon support blocks 68 which in turn are secured on the inside of the outer side walls 54. The strips 64 are each bent to form laterally extending humps indicated at 70 and are held by the support blocks 68 with the said humps intercepting the path of the links 26 when the calf cushion 22 is in the stowed position. The strips 64 are each reinforced beneath their humped portions by rubber fillers 72. One end of each strip 64 is secured to the supports 68 with the other ends free to slide when the links 26 depress the humps 70. It will be noted that the strips 64 are aligned roughly tangent to the path of the part of each link 26 which engages the said strips, thus promoting a free sliding movement of the links 26 over the humps 70.

In addition to providing retarding means for holding the leg rest in the stowed position, additional spring metal strips 66 are provided for the purpose of retarding the fall of the leg rest from the elevated position. The strips 66 are located to intercept the links 26 in their forward arc. They are supported by lower extensions 74 of the corner members 62, and extend upward along the surface of the corner members 62 adjacent to the recess 55. Similarly to the strips 64, the strips 66 are bent to form humps 76 having rubber fillers 78. They are likewise disposed roughly tangent to the path of the links 26, have one end free to slide, and depress when in contact with the links 26.

With reference to Fig. 6, it will be evident that the links 26, when in the stowed position of the leg rest (indicated in full lines), extend immediately beyond the apex of the hump 70 of the strips 64 and serve to hold the leg rest in the said stowed position. When the leg rest is in a position roughly between the fully elevated position and the leg rest position, the links 26 will be located substantially as indicated at 80 in Fig. 6, and will come in contact with the hump 76 of the strips 66. It is further to be noted that, in the leg rest position indicated in phantom at 82 in Fig. 6, the links 26 will have passed beyond the humps 76 of the strips 66.

In order to facilitate rotating the chair, mechanism is provided for locking the leg rest in the fully elevated position, and includes a metal

socket 84, located in each side wall of the heel rest 24, a plunger 86 having a rounded head 88 and a flange 90 at its outer end adapted to fit into the socket. The plunger 86 extends into the socket 84 and passes through its base. A helical compression spring 92 surrounds the plunger 86 within the socket 84, the said spring 92 abuts against the bottom of the socket 84, and bearing at its other end against the flange 90, urges the plunger 86 outwardly. The plunger 86, however, is retained within the socket 84 by a retaining pin 94 fitting into a slot 96 in the inner end of the plunger 86 thus the outward motion of the plunger 86 is stopped while at the same time the said plunger may be moved inward against the force of the spring 92.

When the heel rest 24 is folded toward the calf cushion 22, the rounded heads 88 of the plungers 86 are depressed by the links 26 and slide into suitably counterbored holes 96 in the links 26. Thus it will be seen (in Fig. 5) that, when the calf cushion 22 is in the fully elevated position, the heel rest 24 may be jackknifed towards the calf cushion 22 and locked in such position. It will further be noted that the bottom end of the heel rest 24 will then abut against the bottom plate 44 of the seat 16 preventing downward rotation of the composite leg rest.

The operation of the leg rest of our invention is as follows. Starting in the stowed position as indicated to the right in Fig. 1 and in the bottom phantom view of Fig. 5, the wheels 32 rest upon the floor and the calf cushion 22 is held in the stowed position by the links 26 which at that time engage the hump 70 of the retarder strip 64. In order to set up the leg rest, the occupant of the seat reaches down, grasps the hand strap 34, and pulls it forward and upward. The link 26 depresses the hump 70 of the strip 64 causing the free end of the strip 64 to shift downward slightly and allow the said link 26 to slide past it. The next steps are to elevate the cushion 22 to an intermediate roughly horizontal position, allow the heel rest 24 to swing forward, and then drop the calf cushion 22 into the assembled position where the stops 36 come into contact with the tubular frame 28 of the heel rest 24, preventing the calf cushion 22 from dropping further. It will be seen that during this operation the link 26 will come into contact with the hump 76 of the strip 66 on the way up and thereby retard the movement of the cushion 22. Dropping the calf cushion 22 thereafter into the fully assembled position will be retarded lessening the chances of a sharp and possibly damaging fall. In the assembled position, however, the link 26 actually does not contact the hump 76 of the retarder strip 66; and therefore, initially lifting the cushion 22 for the purpose of re-stowing the leg rest or otherwise, is not met with immediate resistance other than the weight of the leg rest. Further lifting the calf cushion 22 to the fully elevated position enables one to engage the bullet lock and hold the leg rest in the fully elevated position as was explained above.

It will be noted that the relative lengths of the calf cushion 22 and the heel rest 24 are important. In the first place the calf cushion 22 must not be so long that the hand strap 34 is inconveniently near the floor and in the second place, the calf cushion 22 must not be so short that it must be almost fully elevated in order to allow the heel rest 24 to pivot forward from the stowed position. Furthermore the composite leg rest must be sufficiently long to provide a reasonably horizontal position for the legs. We have combined these considerations in this preferred embodiment of our invention by constructing the leg rest to accommodate approximately a 30° sloping angle for the legs with the calf cushion being approximately eight inches long and the heel rest approximately a foot long. Furthermore, with this construction, the calf cushion 22 need not be elevated beyond the horizontal position to enable the occupant to swing the heel rest forward. It is to be further noted that the leg rest of our invention does not extend fully to the side of the seat 16, but room is provided on either side of the leg rest for the occupant's legs while he is assembling the leg rest.

This preferred embodiment of our invention may be adapted for use in conjunction with other types of cushion furniture including household furniture, as well as chairs, benches, and the like. Also certain structural variations will be evident to those skilled in the art. For instance, the recess 55 may be given a cylindrical contour with the upper rear wall of the calf cushion 22 correspondingly cylindrical. Furthermore, the bearings 38 may be provided with helical springs for the purpose of facilitating the upward rotation of the leg rest. Therefore it is not intended to confine the invention to the preferred embodiment herein shown but rather to measure it in terms of the appended claims.

Having thus disclosed and described an illustrative embodiment of our invention, what we claim as new and desire to secure by Letters Patent of the United States is:

1. In an upholstered chair having a seat and a leg rest pivotally connected thereto, the combination with a frame providing space for stowing the leg rest beneath the chair seat, of suspension means within the chair seat upholstery for supporting the leg rest for free pivotal movement of the leg rest above the floor level without the necessity of raising the chair seat, and means isolating the said suspension means from the chair seat upholstery.

2. In an upholstered chair seat having a leg rest pivotally connected thereto, the combination with means for suspending the leg rest from a point within the upholstery of the chair seat for free pivotal movement of the leg rest above the floor level without the necessity of raising the chair, of a frame providing space for stowing the leg rest beneath the chair seat, walls in the lower forward portion of the chair seat forming a recess to receive the upper part of the leg rest in the stowed position, and means isolating the suspension means from the chair upholstery.

3. A chair having in combination an upholstered chair seat, a two piece folding leg rest including a calf rest section and a heel rest section, the chair seat being recessed horizontally in its lower forward portion to receive the upper part of the calf rest section of the leg rest, bearings within the upholstery of the said chair seat, inclined struts supporting the said bearings above the level of the said recess, links secured to the said calf rest section and connected to the said bearings to carry the said upper part of the calf rest in pivotal movement, the links and bearings being constructed and arranged to carry the said calf rest section in an arcuate path wherein the upper end of the said calf rest section will be located substantially adjacent to the upper forward portion of the said chair seat when in the horizontal position and substantially within the said recess when in the depending position.

4. A chair having in combination an upholstered seat including a base with a substantial depth of cushioning supported thereon, a two piece folding leg rest including a calf rest section and a heel rest section, an intermediate frame within the said chair seat supported upon the said chair seat base and adapted to provide for a horizontal recess in the lower forward portion of the said chair seat, a substantial depth of cushioning supported in the upper forward portion of the seat by the intermediate frame, means isolated from the said cushioning above the level of the intermediate frame supporting the said calf rest section for pivotal movement from a horizontal position in the plane of the cushioned surface of the seat to a vertical position with the upper end of the calf rest section in the said recess, whereby substantial cushioning will be available in the forward portion of the chair above the intermediate frame and the full depth of the chair cushioning will be available in the central and rear portions of the chair seat.

5. A chair having in combination a cushion seat having substantial depth, a two piece leg rest including a calf rest section and a heel rest section pivotally interconnected, walls forming a recess in the lower forward portion of the said seat, bearings, means pivotally connecting the said calf rest section of the leg rest to the bearings, the bearings being located within the chair to carry the said calf rest section from a vertical position with its upper end in the said recess to a horizontal position in front of the said chair seat, means between the bearings and above the said recess providing cushioning in the upper forward portion of the seat, the calf rest section of the leg rest hanging only part way to the floor in the vertical position, and the length of the heel rest section of the leg rest being no greater than the height of the chair seat above the floor whereby the said heel rest section may swing clear of the floor when the calf rest section is in the horizontal position, and the calf rest section may be reached in the vertical position without reaching the whole way to the floor.

6. A leg rest pivotally connected to the forward part of a chair seat for movement from a stowed position under the chair through an arcuate path in front of the chair to a fully elevated position substantially above the chair, including a calf rest section pivotally connected to the chair and a heel rest section pivotally connected to the said calf rest section, and locking mechanism adapted to secure the heel rest to the calf rest when the calf rest is in the fully elevated position and the heel rest is jackknifed against it, whereby downward pivotal movement of the leg rest is prevented by the bottom of the heel rest pivoting against the chair.

7. A leg rest pivotally connected to the forward part of a chair seat for movement from a stowed position under the chair through an arcuate path in front of the chair to a fully elevated position substantially above the chair, including a calf rest section pivotally connected to the chair and a heel rest section pivotally connected to the said calf rest section, locking mechanism adapted to secure the heel rest to the calf rest when the calf rest is in the fully elevated position and the heel rest is jackknifed against it, and the said chair seat adapted to lie in the path of the said heel rest while locked to the calf rest preventing downward pivotal movement of the leg rest.

8. A chair having in combination; a deep cushioned seat including a base plate, and cushioning mounted thereon; a two piece folding leg rest including an upper section and a lower section; walls forming a transverse recess adapted to house the upper section of the said leg rest in the lower forward corner of the seat; means pivotally connecting the said upper section of the leg rest to the seat including bearings adjacent to each side of the seat located to provide a transverse pivot axis substantially above the level of the said recess; means isolating the said bearings from the cushioning comprising walls forming vertical recesses in the forward portion of the seat adjacent to and above the said transverse recess but not extending through the said cushioning on the seat level.

9. A chair as described in claim 8 further characterized by curved links connecting the leg rest to the said bearings whereby the said leg rest may be pivoted to a position substantially above the seat with the links extending forward from the bearings, out of the said vertical recesses and upward to the said leg rest.

10. A chair having in combination an upholstered chair seat, a two piece folding leg rest including a calf rest section and a heel rest section, the chair seat being recessed horizontally in its lower forward portion to receive the upper part of the calf rest section of the leg rest, bearings within the upholstery of the said chair seat, inclined struts supporting the said bearings above the level of the said recess, links secured to the said calf rest section and connected to the said bearings to carry the said upper part of the calf rest in pivotal movement, the links and bearings being constructed and arranged to carry the said calf rest section in an arcuate path wherein the upper end of the said calf rest sestion will be located substantially adjacent to the upper forward portion of the said chair seat when in the horizontal position and substantially within the said recess when in the depending position, and spring metal strips bent to form resilient humps and located with respect to the said links to lie with their said humps in the path of the said links when the calf rest is in the vicinity of the horizontal position and in the depending position.

11. A chair having in combination an upholstered seat including a base with a substantial depth of cushioning supported thereon, a two piece folding leg rest including a calf rest section and a heel rest section, an intermediate frame within the said chair seat supported upon the said chair seat base and adapted to provide walls for a horizontal recess in the lower forward portion of the said chair seat, a substantial depth of cushioning supported in the upper forward portion of the seat by the intermediate frame, means isolated from the said cushioning above the level of the intermediate frame supporting the said calf rest section for pivotal movement from a horizontal position in the plane of the cushioned surface of the seat to a vertical position with the upper end of the calf rest section in the said recess, whereby substantial cushioning will be available in the forward portion of the chair above the intermediate frame and the full depth of the chair cushioning will be available in the central and rear portions of the chair seat and walls forming vertical recesses housing the said calf rest supporting means.

12. A leg rest pivotally connected to the forward part of a chair seat for movement from a stowed position under the chair through an arcuate path in front of the chair to a fully elevated

position substantially above the chair, including a calf rest section pivotally connected to the chair and a heel rest section pivotally connected to the said calf rest section, and links connecting the calf rest section to the chair seat being formed in an exaggerated curve whereby, when the calf rest is in the said fully elevated position, the links will extend horizontally from the point of connection to the seat forward past the front of the seat, then upward to the said calf rest, the said leg rest further characterized by being pivotally connected to an upholstered chair seat with the point of connection being substantially above the bottom of the said chair seat, and walls forming recesses in the lower forward part of the chair seat to receive the said links.

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