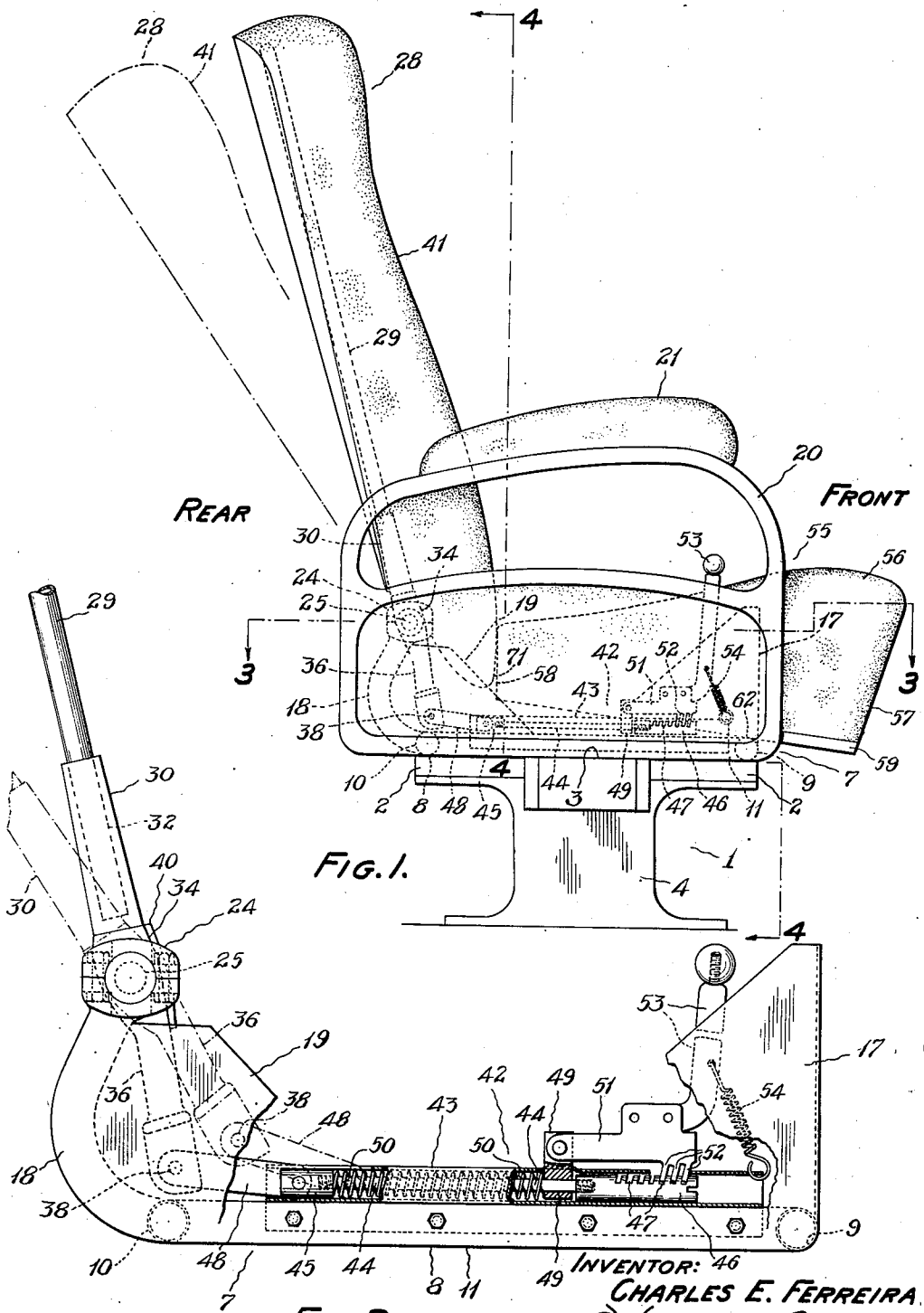
Nov. 3, 1942. C. E. FERREIRA 2,300,561

ADJUSTABLE SEAT CONSTRUCTION

Filed Aug. 10, 1940 4 Sheets-Sheet 1



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ADJUSTABLE SEAT CONSTRUCTION

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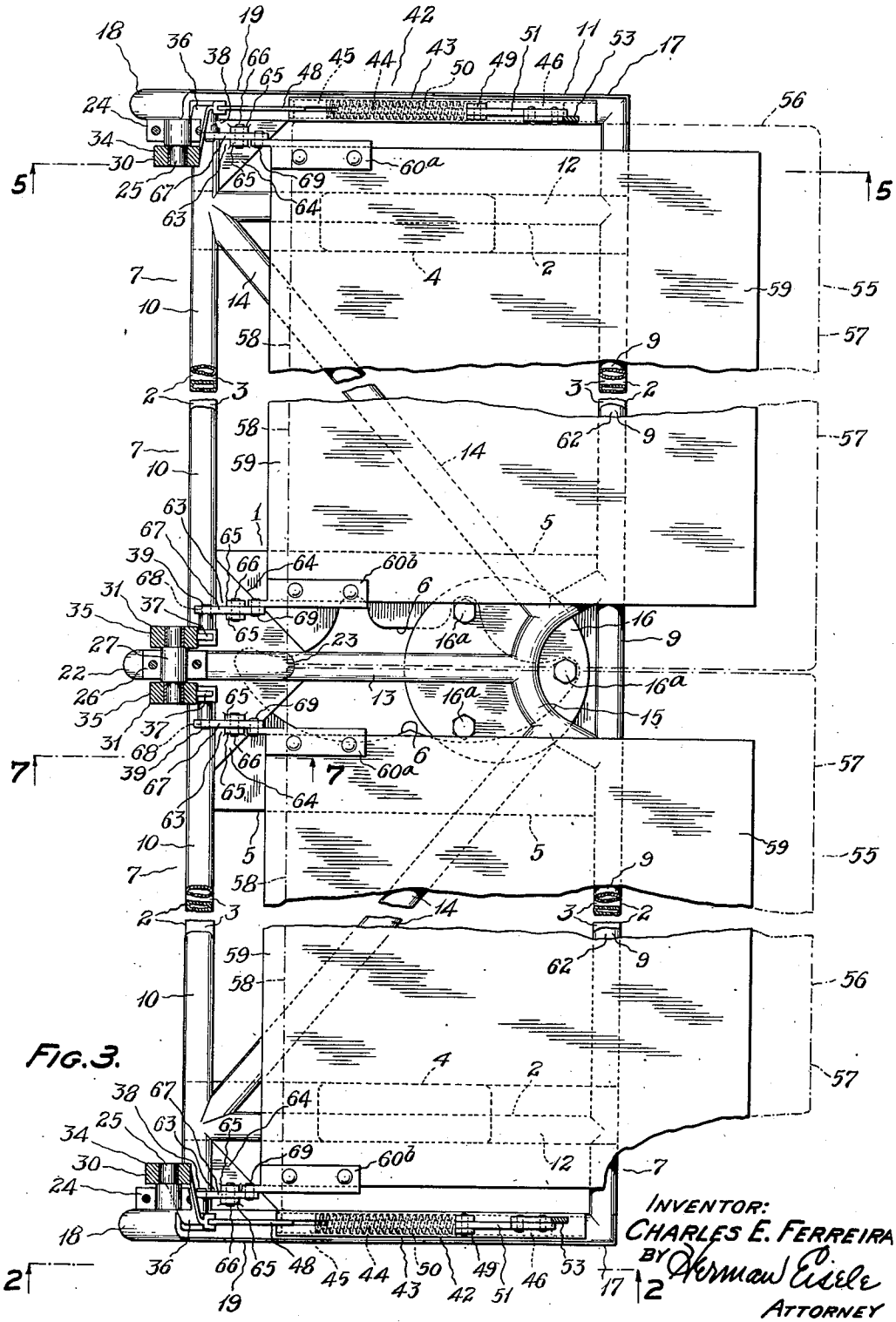


FIG. 3.

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ADJUSTABLE SEAT CONSTRUCTION

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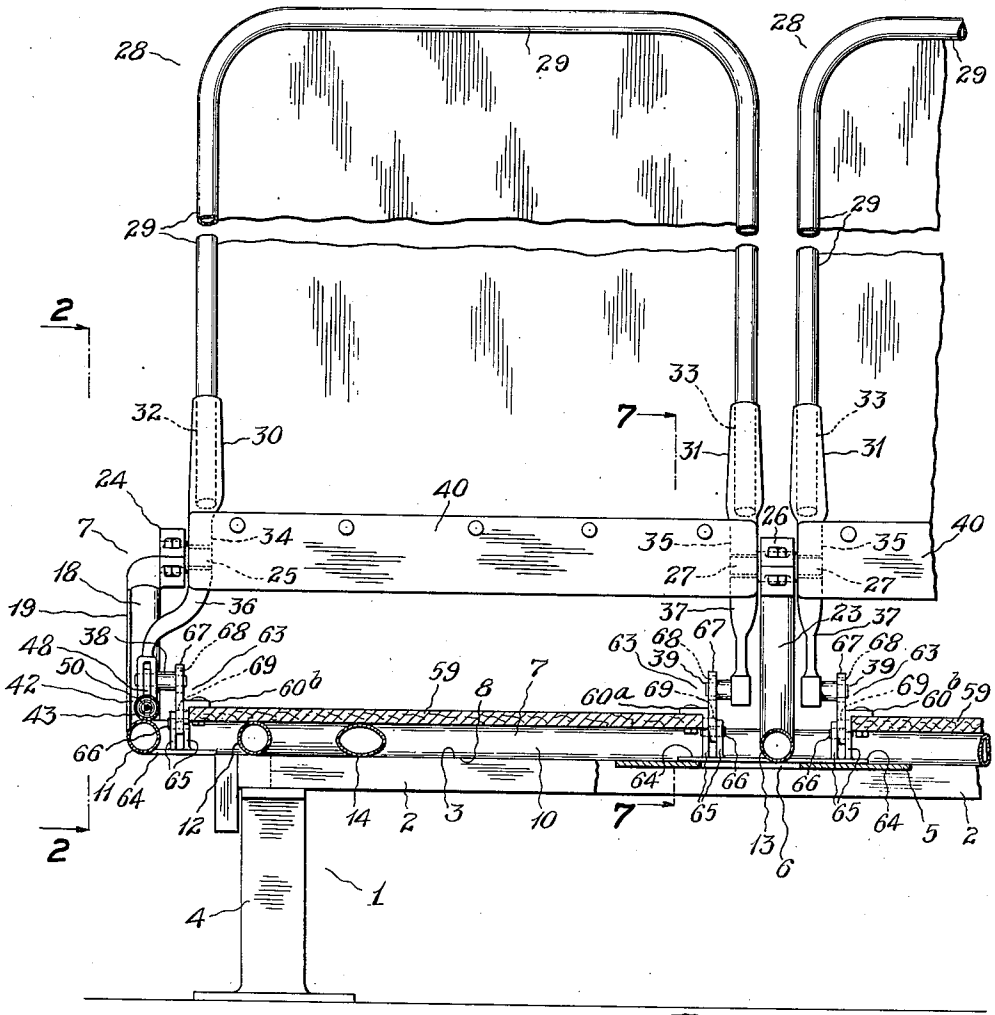


FIG. 4.

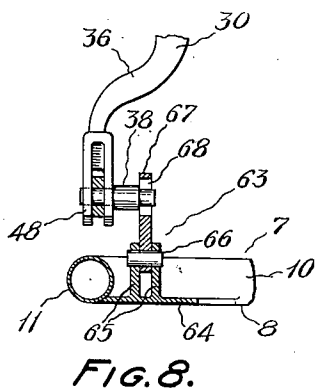


FIG. 8.

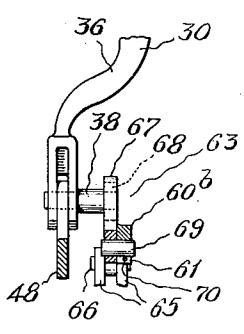


FIG. 9.

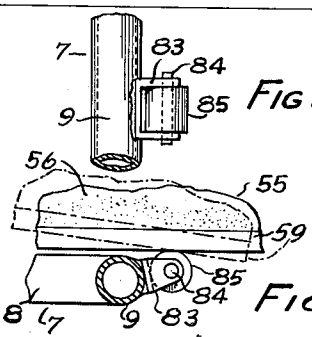


FIG. 11.

FIG. 10.

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ADJUSTABLE SEAT CONSTRUCTION

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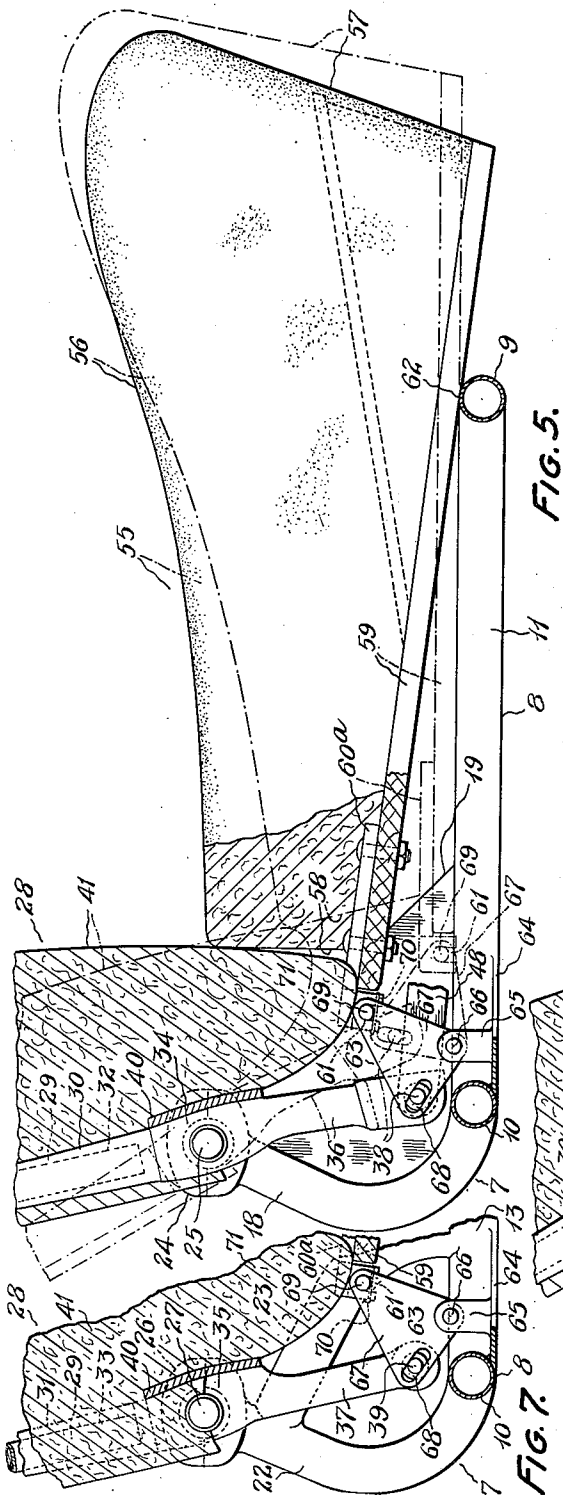


FIG. 5.

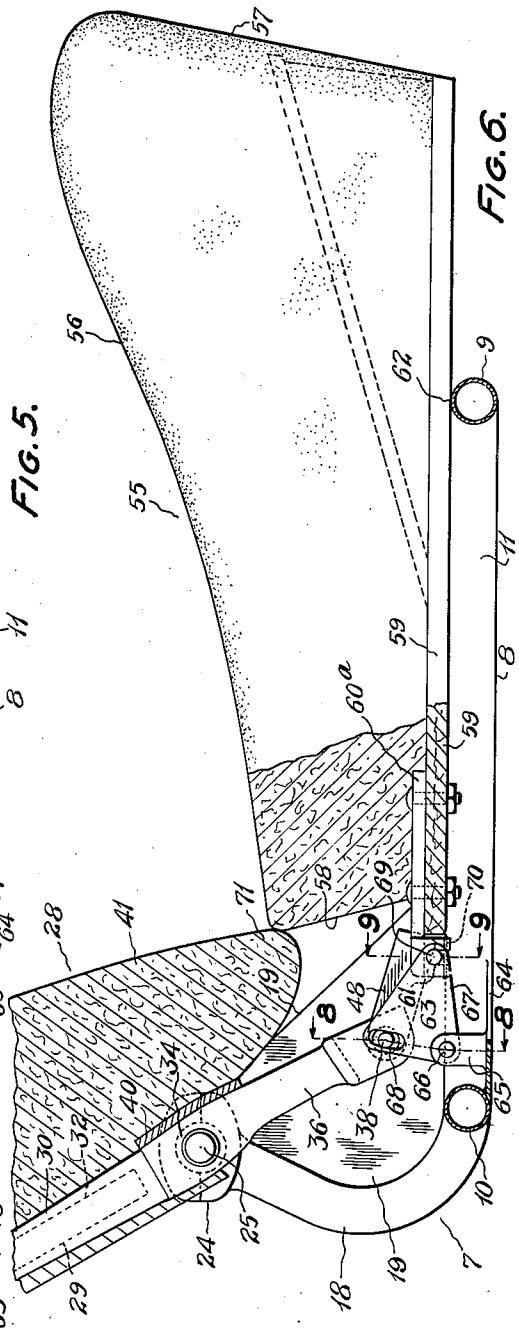


FIG. 6.

FIG. 7.

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2,300,561

UNITED STATES PATENT OFFICE

2,300,561

ADJUSTABLE SEAT CONSTRUCTION

Charles E. Ferreira, Oakland, Calif., assignor to Transportation Seat Company, Mansfield, Ohio, a corporation of Ohio

Application August 10, 1940, Serial No. 352,127

3 Claims. (Cl. 155—116)

This invention relates to adjustable seats and particularly to that type of adjustable seat in which the angle of the back cushion may be varied to suit the convenience and comfort of the occupant. More particularly this invention relates to a seat of this type in which the seat cushion is also adjustable.

In the present disclosure, this invention is illustrated and described in its application to seats for railway coaches, airplanes, auto busses or other similar vehicles, for which this invention is especially well suited.

In travelling on vehicles, the passenger normally occupies the same seat for long periods of time and the provision of maximum seating comfort is accordingly of prime importance. As one of the features intended to contribute to the comfort of the passengers, vehicle seats are frequently provided with a back cushion which is inclinable, that is angularly adjustable with reference to the seat frame, from a normal substantially upright position to a semi-reclining position. In many cases in which an adjustable back is provided, no provision is made for the altering of the position of the seat cushion, either simultaneously with or independently of the adjustment of the back.

It has been found that such rearward inclining of the back without a corresponding angular change in the position of the seat cushion causes the occupant to progressively slide downwardly and forwardly in the seat, especially in the presence of vibration which necessarily occurs in travelling coaches or busses. As a result of this unfavorable condition, the seat occupant has had to make use of foot rests and other devices to brace himself against this tendency to slide downwardly and forwardly.

In an attempt to overcome this deficiency in the construction of this type of seat, provision has been made in a few cases for moving the seat cushion forwardly independently of, or simultaneously with the rearward tilting of the back. While this expedient has provided a more advanced support for the occupant it has not prevented the objectionable downwardly and forwardly sliding, due to the fact that such a forward shifting of the seat cushion produced no angular change in the position of the seat cushion.

A somewhat more effective effort has also been made to prevent the downward and forward sliding of the seat occupant by raising the front of the seat cushion simultaneously with the rearward inclining of the back cushion. While this expedient, to some extent, counteracts the tendency of the occupant to slide forwardy, it introduces another disadvantage which seriously inconveniences the occupant. This disadvantage arises from the increase of the distance of the front end of the seat cushion above the floor, which accompanies the raising of the cushion thus holding the feet of the occupant off the floor, to his discomfort.

Having these deficiencies of the prior seat construction in mind, it is a general object of this invention to produce an improved adjustable vehicle seat of the reclining back type, which provides the maximum of comfort in all positions into which the seat is capable of being adjusted.

It is consonantly an important further general object of this invention to produce an improved adjustable seat of the reclining back type in which there is no tendency of the occupant to slide downwardly and forwardly in any adjusted position of the seat, even in the presence of considerable vehicle vibration.

It is a further prime object of this invention to produce an adjustable vehicle seat of this type in which the front upper surface of the seat cushion is maintained at a substantially constant height above the vehicle floor for all positions of adjustment of the seat.

It is a further object of this invention to produce an adjustable vehicle seat of this type in which the rear end of the seat cushion is lowered simultaneously with the rearward inclining of the seat back.

It is a further object of this invention to produce such an adjustable seat in which the upper surface at the front of the seat cushion is maintained substantially at the same level while the rear of the seat cushion is lowered.

It is another object of this invention to so position the seat cushion with respect to its support that the presence of the occupant on the seat will not seriously interfere with the raising and lowering or tilting of the rear of the seat cushion.

It is a further and more specific object of this invention to produce improved mechanism for supporting the seat cushion and improved mechanism associated with the seat back for tilting the seat cushion simultaneously with the back.

It is a further object of this invention to produce combined back and seat adjusting mechanism of this type which is simple and rigid in construction, which is formed of a minimum of parts and which is not easily damaged or disarranged in repeated adjustments, and which

will continue to function satisfactorily for long periods of time without attention.

Further objects and advantages of this invention will appear from the following description and from reference to the accompanying drawings. This description and the annexed drawings set forth in detail certain means embodying this invention, such disclosed means constituting, however, but two of the forms in which the principles of this invention may be applied.

In said annexed drawings:

Fig. 1 is a side elevation of a double vehicle seat embodying this invention, the seat back and the cushion being shown in full lines in an upright position and being shown in dot and dash lines in a reclining position, certain locking mechanism being shown in dotted lines.

Fig. 2 is a somewhat enlarged view of the locking mechanism provided for fixing the seat parts in the desired adjusted position, this view showing the mechanism on the near side of the seat illustrated in Fig. 1, the arm rest frame and certain other elements being removed, and certain portions of the mechanism being shown in section for the sake of clearness, this view being taken from the plane indicated by line 2, 2 in Figures 3 and 4.

Fig. 3 is a plan section of the seat frame taken generally on the plane indicated by line 3, 3, in Fig. 1 showing the locking mechanism and the seat cushion adjusting mechanism for each of the adjacent seats, the arm rest frames being omitted for the sake of clearness and the cushions being shown in dot and dash lines.

Fig. 4 is a fragmentary vertical section taken on the planes indicated by line 4, 4, 4 in Fig. 1, the cushions being omitted for the sake of clearness and the base being shown in front elevation.

Fig. 5 is an enlarged view showing the seat cushion support and adjusting mechanism adjacent the arm rest frame, this view being taken on the plane indicated by line 5, 5 in Fig. 3, the seat cushion being shown principally in elevation, and the full line showing illustrating the parts in the position which they assume when the seat back is in an upright position and the broken line showing illustrating the position of parts when the seat back is in a reclined position.

Fig. 6 is a view similar to Fig. 5 the parts being shown in the position assumed when the seat back is reclined, the position of the parts in Fig. 6 corresponding with the dot and dash position shown in Fig. 5.

Fig. 7 is a fragmentary sectional view similar to a portion of Fig. 5, showing, however, the construction of the corresponding parts at the center of the seat frame, this view being taken on the plane indicated by line 7, 7 in Figures 3 and 4.

Fig. 8 is a fragmentary view showing certain details of construction, this view being taken on the plane indicated by line 8, 8, in Fig. 6, but showing the mechanism on the near side of the seat.

Fig. 9 is another fragmentary view showing certain details of this construction, this view being taken on the plane indicated by line 9, 9, in Fig. 6, also showing the mechanism on the near side of the seat.

Fig. 10 is a fragmentary view similar to a portion of Fig. 6 illustrating one of a series of anti-friction roller supports which may optionally be used for supporting the seat cushion.

Fig. 11 is a fragmentary plan view of the anti-friction roller and mounting illustrated in Fig. 10.

In this description the terms "front" or "forwardly" when used with reference to the seat structure or to the parts of the seat structure, are intended to indicate a position or direction toward the front of the seat, which position is clearly indicated by the legend "Front" in Fig. 1. Conversely, the terms "back," "rear" or "rearwardly" are intended to indicate a position or direction toward the rear of the seat, which position is also clearly indicated by the legend "Rear" in Fig. 1.

In this description, further, the term "longitudinally" when used with reference to the seat structure or to portions of the seat structure, is intended to indicate a direction from front to rear of the seat, that is in a direction lengthwise of the car or vehicle in which the seat is normally mounted; and the term "transversely" is intended to indicate a direction from side to side of the seat, that is in a direction which would be transversely of the length of the car or vehicle in which the seat would be normally positioned.

The type of seat with which this improved construction is shown, for purposes of illustration, is a double railway coach seat of the revolving type having separate adjacent seat and back cushions for each passenger, these cushions being mounted on a single seat supporting frame, which is in turn mounted on a base fixed to the vehicle floor.

This improved adjustable seat construction will first be described with reference to Figures 1 to 9 inclusive.

The base for supporting this improved adjustable seat structure is indicated at 1 and consists of a generally rectangular base frame 2 preferably formed of square tubular members and having an upper surface 3 and being supported on a pair of spaced base pedestals 4 secured to the floor of the vehicle. Adjacent the upper surface 3, the base is provided with a substantially centrally positioned and preferably horizontally disposed plate indicated at 5 formed with an opening 6 as will best appear in Fig. 3.

Superimposed upon and rotatably and shiftably supported on the upper surface 3 of the base frame 2 is a seat frame indicated generally at 7, having a lower surface 8 adapted to rest on the upper surface 3 of the base frame 2.

This seat frame 7 supports the seat cushions and the improved adjusting mechanism associated with the cushions. This seat frame is preferably formed of round tubular members including a front transverse tube 9, a rear transverse tube 10, a pair of outer longitudinal tubes 11 and a pair of intermediate longitudinal tubes 12, slightly spaced from the outer tubes 11 as best appears in Figures 3 and 4. Reference to these figures will further disclose a central longitudinal tube 13 and diagonal tubes 14 framing into a curved tube section 15.

In a seat of the rotating or revolving type, such as that shown, certain mechanism is provided for the purpose of guiding and shifting the seat frame with reference to the base frame. This mechanism may be of any one of a number of well known types for instance, that disclosed in United States Patent No. 2,201,839.

A portion of this mechanism for rotatably guiding and shifting the seat frame is a pin plate 16, Fig. 3, preferably fixed to the lower faces of the tubes 13, 14 and 15 by welding or other suitable means. This plate 16 supports three downwardly projecting pins 16a, adapted to successively engage certain arcuate guide surfaces and sockets in the opening 6 during the rotation of

the seat from one terminal position to another. Due to the fact that this apparatus forms no part of this invention it is not here further illustrated or described.

Upwardly projecting from and securely fixed to the front end of each outer longitudinal tube 11 is a front bracket 17, Figures 1 and 2. Each outer longitudinal tube 11 is formed rearwardly of the rear transverse tube 10 with an upwardly curved extension 18. Securely welded to this extension and the rear portion of the tube 11 is a gusset plate 19. Fixedly supported on each longitudinal tube 11 and to the associated front bracket 17 and gusset plate 19 is an arm rest frame 20 which may be of any acceptable design, and upon the upper bar of which is an upholstered arm rest 21, this arm rest frame and arm rest being shown in Figure 1 and being omitted from the other figures for the sake of clarity as it forms no part of this invention.

Transversely alined with the upwardly curved extensions 18 and centrally positioned on the seat frame in longitudinal alinement with the tube 13, is an upwardly curved extension 22 which is suitably braced from the base frame by a diagonal member 23 (Figures 3 and 7).

The upwardly curved extensions 18 are provided at their upper ends with split clamp bearings 24 adapted to firmly but removably support stub shafts or pivot pins as shown at 25 in Figures 2 to 6. The upwardly curved extension 22 is likewise formed at its upper end with a split clamp bearing 26 supporting a double stub shaft or pivot pin 27, Figures 3, 4, and 7. The pivot pins 25 and 27 are axially alined in a direction transversely of the seat frame. The pivots 25 and 27 as will appear from Figure 5, are positioned above the lower portion of the seat frame and are substantially alined with the upper surface of the seat cushion, when the seat parts are in the upright position, Figures 1 and 5.

Pivotally mounted on the stub shafts 25 and 27 are reclining seat backs indicated generally at 28. These seat backs each preferably include a tubular frame 29 of inverted U shape mounted in and supported on a pair of brackets, the outer brackets being indicated at 30 and the central brackets being indicated at 31. The brackets 30 and 31 are each formed with sockets 32 and 33 respectively, to receive the lower legs of the U shaped frame 29. Each bracket 30 is formed with a bearing 34 pivotally mounted on the stub shaft 25 and each bracket 31 is formed with a bearing 35 pivotally mounted on one end of the stub shaft 27. Suitable antifriction members such as needle bearings, bushings, or the like, may be interposed between the stub shafts 25 and 27 and the bearings 34 and 35 respectively.

Each of the outer seat back brackets 30 is formed with a downwardly extending projection or arm 36, this arm being outwardly offset from the upper or socket portion of this bracket as best appears in Figures 4 and 8, and the seat back bracket 31 is formed with a downwardly extending projection or arm 37, this arm being generally alined with the socket portion of the bracket 31. The lower end of the arm 36 is fashioned with a pair of spaced ears forming a clevis and is provided with a preferably shouldered pin 38. The downwardly projecting arm 37 is formed at its lower end with a boss in which is fixedly mounted a shouldered pin 39. As will appear from Figures 3 and 4, the pins 38 and 39 pass thru the lower ends of the arms 36 and 37 and project outwardly from the arms in a direction toward each other, these pins being axially alined in each pair of brackets 30 and 31, in a direction transversely of the seat.

Suitable transverse braces such as those indicated at 40 in Fig. 4 may be provided to properly space the brackets 30 and 31 and to stiffen the back frame 29. A suitable back cushion 41 may be mounted in any desired manner upon the U frame 29, brackets 30 and 31 and brace 40.

Associated with the downwardly extending arm 36 is suitable mechanism 42 for selectively locking the seat back and seat cushion in any one of a series of desired positions. This mechanism 42 is most clearly shown in Figures 1 and 2, and consists of a tubular member or cylinder 43 secured in any suitable manner to the outer tube 11 in which is mounted a spring actuated plunger including a slotted head 45 fixed to one end of a tie rod 44 and a cylindrical portion 46 fixed to the other end of the tie rod, this portion 46 being formed with a plurality of equally spaced recesses 47. The slotted head 45 is connected by means of a link 48 to the shoulder pin 38 mounted in the downwardly extending projection 36. Fixedly mounted intermediate the ends of the cylinder 43 is a block 49 thru which the tie rod 44 is adapted to slide. Interposed between the block 49 and the slotted head 45 is a spring 50. Pivotally mounted on the block 49 is a detent 51 preferably formed with a plurality of teeth 52 adapted to selectively engage the recesses 47. The detent 51 is provided with an upwardly projecting hand piece 53 and the detent is resiliently forced downwardly by means of a coil tension spring 54.

In practice the coil spring 50 is so tensioned as to force the depending arm 36 to move in a clockwise direction thus constraining the upper portion of the seat back 28 to move to the forward or upright position about the stub shafts or pivots 25 and 27, and also tending to lift the rear end of the seat cushion by means of suitable mechanism, to be described. A rearward inclination of the seat back causes the arm 36 to move forwardly and increases the tension on the spring in response to the greater counterbalancing effect which the spring is required to exert when the seat back is tilted rearwardly. The resilience of the spring 50 is so selected that the spring will, in the absence of any restraint, automatically move the seat back from any inclined position to the upright position, when the locking mechanism 42 is released to permit the spring to function, that is, when the detent 51 is raised.

It will also be apparent that the spring pressed detent 51 will effectively hold the plunger comprised of the parts 45, 44, 46, and hence the pin 38 and associated parts in a fixed or locked position when the detent is in engagement with the cylindrical portion 46. It will also be evident that a raising of the detent to free the engagement of the teeth 52 with the recesses 47 will permit a movement of the plunger 45, 44, 46 in the cylinder 43 and will accordingly permit a corresponding movement of the link 48, pin 38 and associated parts, either by the occupant of the seat or in response to the spring tension.

The seat cushion and the mechanism for tilting the seat cushion simultaneously with the inclining of the seat back will now be described with particular reference to Figures 3 to 9 inclusive.

In the embodiment of this invention illustrated, two seat cushions each indicated in their

entirety at 55 are provided, one seat cushion associated with each of the seat backs 28. Each seat cushion 55 consists of a cushion member 56 having a front end 57 and a rear end 58. Each cushion member 56 is preferably supported on a cushion board 59. Each cushion board is provided at each rear corner with a corner bracket, one indicated at 60a and the other indicated at 60b, Figure 3, these corner brackets 60a and 60b being opposite hand but being otherwise identical as will clearly appear from an inspection of this figure. Each corner bracket, as will appear from Figures 5, 6, and 9, is fashioned with a rearwardly projecting portion formed with a downwardly opening vertical slot 61 closed at the top.

As will best appear from an inspection of Figures 1, 5, and 6, the seat cushion 56 is supported in part on the relatively stationary front transverse tube 9 at the point indicated at 62. It will be evident that the point of support of the cushion on the tube 9 is interposed between the front and rear ends of the cushion. It will also appear that the cushion at the point 62 simply rests upon the tube 9 and is capable of pivoting about said tube 9 and in the embodiment illustrated in the above figures, is capable of sliding forwardly and rearwardly on this tube 9.

As shown in Figures 1, 5, and 6, the cushion 55 is likewise supported in part on mechanism indicated generally at 63 disposed adjacent the rear edge of the seat cushions 55 and mounted on the seat frame 7 likewise adjacent its rear edge.

As will appear from reference to Figures 3 and 4, four sets of this mechanism 63 are provided, one set located at each rear corner of the cushion boards 59, 59. As all of these mechanisms are identical, a description of one mechanism will suffice.

As best appears in the plan view, Figure 3, a horizontal corner plate or gusset plate 64 is provided in each rear corner of the frame formed by the intersection of the outer longitudinal tubes 11 and the central longitudinal tube 13, with the rear transverse tube 10. Suitably welded or otherwise fixed to each of these gusset plates is a pair of upwardly projecting spaced ears 65, 65 each pair of ears being provided with a pin 66 adjacent the upper end.

Pivotally mounted on this pin 66 as a fulcrum and preferably between the ears 65, 65, is a lever element 67 illustrated as a triangular plate. The ears 65 are suitably spaced apart on the seat frame so that the inner surfaces of the lever elements 67 will be substantially alined with the outer side faces of the corner brackets 60a, 60b on the cushion board. The lever element 67 embodies provisions for two connections spaced from the fulcrum and spaced from each other. One of the connections, the rearmost connection as illustrated in Figures 5 and 6, consists of a slot 68 formed in the lever element 67, adapted to slidably encompass the pins 38 or 39. The other connection consists of a pin 69 projecting laterally from the lever element 67, in a direction toward the cushion board and is, in fact, seated in the vertical slot 61 formed in the corner brackets 60a and 60b. As will appear from Figures 5, 6, and 9, a lock pin 70 is placed in the corner brackets 60a and 60b, passing thru the vertical slot 61 at a point below the pin 61. These spaced connections 68 and 69 may be assumed to be positioned on lines radiating outwardly from the fulcrum and forming an included angle of substantially but preferably slightly less than 90 degrees; in other words, this lever element 67 comprises in effect a bell crank lever with angularly diverging arms.

Figures 5 and 6 illustrate one of the downwardly projecting arms 36 and the associated mechanism 63 at the outer sides of the seat frame and Figure 7 illustrates one of the downwardly projecting arms 37 and its associated mechanism 63 at the center of the seat frame. The only difference between the center and the outer construction insofar as the seat adjusting mechanism is concerned, being in the conformation of the arms 36 and 37 and in the pins 38 and 39, as will appear from an inspection of Figures 3, 4, 6 and 7.

It will be clear from an inspection of Figure 5 that a counterclockwise rotation of the downwardly projecting arms 36 and 37 caused by a rearward tilting of the upper portion of the seat back 28 about the pivots 25 and 27 causes the lever element 67 to rotate in a clockwise direction about the pivot 66.

It will further be evident that such a clockwise rotation, between the limits indicated, will produce a very substantial dropping of the rear portion of the cushion 55 due to the location of the connections 68 and 69 with reference to the fulcrum 66. It will also be evident that due to the presence of the downwardly extending portion of the back cushion 41, indicated at 71, no opening is developed between the seat cushion 55 and the back cushion in the lowermost position of the seat cushion.

Attention is also called to the fact that the pins 38 serve to connect the downwardly projecting arm 36 to the locking means 42 and that these pins are also connected to the adjacent seat cushion adjusting mechanism 63. It will therefor be evident that, when the locking means 42 has been adjusted to hold the seat back 28 in the desired position it will also simultaneously hold the seat cushion 55 in the corresponding comfortably adjusted position. While Figures 5 and 6 show two terminal positions, for purposes of illustration, which the seat cushions may occupy as determined by the limiting positions of the lock mechanism 42, it is to be noted that the seat cushion may be maintained in a number of progressively advanced intervening positions, limited only by the number of and arrangement of teeth in the locking mechanism 42.

It will also be evident that the entire seat adjusting mechanism is actuated by a variation in the angular position of the seat back 28. It is likewise clear that the lever element 67 is movable in an arcuate path about the fulcrum 66, in a vertical plane in unison with the movement of the seat back. It will also be evident from an inspection of Figure 5 that a movement of one of the connections 68 or 69 produces a simultaneous movement of the other connection and that the movement of one connection is in a direction substantially at right angles to the direction of movement of the other connection.

It will be evident that the hereinbefore described adjustable seat construction provides a maximum of comfort in all positions of the seat and eliminates any tendency on the part of the occupant to slide downwardly and forwardly when the seat back is in a semi reclining position.

It will further be clear that this seat construction provides for the progressive lowering of the rear of the seat cushion simultaneously with the rearward inclining of the seat back.

It will also be evident that the upper front portion of the seat cushion is maintained at sub-

stantially the same height above the vehicle floor while the rear end of the cushion is progressively lowered.

It is further to be noted that the seat cushion is so balanced on the front transverse tube 9 of the seat frame that a slight forward bending or forward shifting of the weight of the seat occupant will remove any unbalanced weight from the rear end of the seat cushion and the presence of the occupant will therefor not interfere with the adjusting of the seat parts and will particularly not interfere with the automatic forward movement of the seat back and the accompanying upward movement of the rear of the seat cushion, in response to the expansion of the spring 50 in the locking mechanism 42.

It will further be evident that this improved adjustable seat construction comprises novel mechanism for supporting and adjusting the seat cushion and that this construction otherwise fulfills the objects set forth at the beginning of this description.

Figures 10 and 11 illustrate a modified form of support for the seat cushion, this modification comprising an anti-friction mounting for the front end of the cushion for optional use in a construction of the type illustrated in Figures 1 to 9. This modification is utilized when a minimum of frictional resistance is desired in the shifting of the cushions from one position to another.

This anti friction unit comprises a U shaped clevis or yoke 83 suitably fixed in any desired manner, as for instance by welding, to the front transverse tube 9. This yoke is provided with a pin 84 upon which is mounted a roller 85 upon which is supported the board 59 of the cushion 55.

As will be understood, any number of such units may be provided transversely on the tube 9 to antifrictionally support the seat cushion, and it will be clear that this antifriction unit will permit the shifting of the cushions with a minimum of frictional resistance.

It should be noted that various changes can be made in the location, spacing and arrangement of the elements and connections of the mechanisms 63 to produce adjustments varying in detail or degree from those shown.

It will also appear that the seat frame need not be of tubular construction but may be of any other desired type of construction, and it will likewise be evident that the support of the seat cushion on the frame may be variously located with respect to the cushion and with respect to the seat frame.

It will also be understood that this invention may also be readily applied to a single seat as well as to the double seat described, and that also this invention is not limited to vehicle seats, but may be applied with equal advantage to seats for home and office use.

Many other modifications may be made in the construction shown and many equivalents may be substituted for the devices shown, which will come within the spirit and scope of this invention, and many such modifications in addition to those shown or suggested will naturally occur to those skilled in this art and the present disclosures should therefor be considered as typical only and applicant desires not to be limited to the exact construction shown and described.

What I claim is:

1. In an adjustable seat construction in combination, a seat frame, a fulcrum on the seat frame adjacent the rear of the seat frame, a bell crank lever mounted on the fulcrum and formed with a pair of angularly diverging arms, a pivot provided on the seat frame adjacent the rear of the frame and above said fulcrum, a seat back mounted on the pivot and extending above the pivot for supporting a back cushion and formed with a portion extending below the pivot having pin and slot connection with one arm of the bell crank lever, a seat cushion board adapted to support a seat cushion, said cushion board being pivotally engaged with the other arm of the bell crank lever and being movably supported on the frame at a point spaced from the lever, the bell crank lever being adapted to lower the adjacent portion of the seat cushion when the seat back is tilted rearwardly and adapted to raise the adjacent portion of the seat cushion when the seat back is moved forwardly.

2. In an adjustable seat construction in combination, a stationary seat frame, a fulcrum provided on the frame adjacent the rear edge thereof, a bell crank lever element mounted on the fulcrum and formed with two angularly diverging lever arms having an effective included angle of substantially 90 degrees, a pivot formed on the seat frame above the fulcrum, a seat back mounted on the pivot and formed with an arm extending below the pivot, said arm being pivotally and slidably connected with one of said lever arms, a seat cushion slidably supported intermediate its front and rear ends on the frame and hinged at its rear end to the other of said lever arms.

3. In an adjustable seat construction in combination a stationary seat frame, a fulcrum provided on the frame adjacent the rear edge thereof, a rocker element mounted on the fulcrum arcuately movable about the fulcrum, a pivot formed on the seat frame above the fulcrum, a seat back mounted on the pivot for rearward and forward inclination relatively to the frame, said back including a back cushion extending above and below the pivot, an arm extending below the pivot positioned rearwardly of the back cushion, and a seat cushion slidably supported intermediate its front and rear ends on the frame and hinged adjacent its rear end to the rocker element at a point above said fulcrum, the rear end of the seat cushion being positioned substantially in contact with the back cushion and below a horizontal plane passing thru the said pivot, and the downwardly extending arm being operatively connected to the rocker element, whereby, when the seat back is inclined rearwardly, the rocker advances the seat cushion forwardly to accommodate the forwardly advancing face of that portion of the back cushion extending below the pivot.

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