

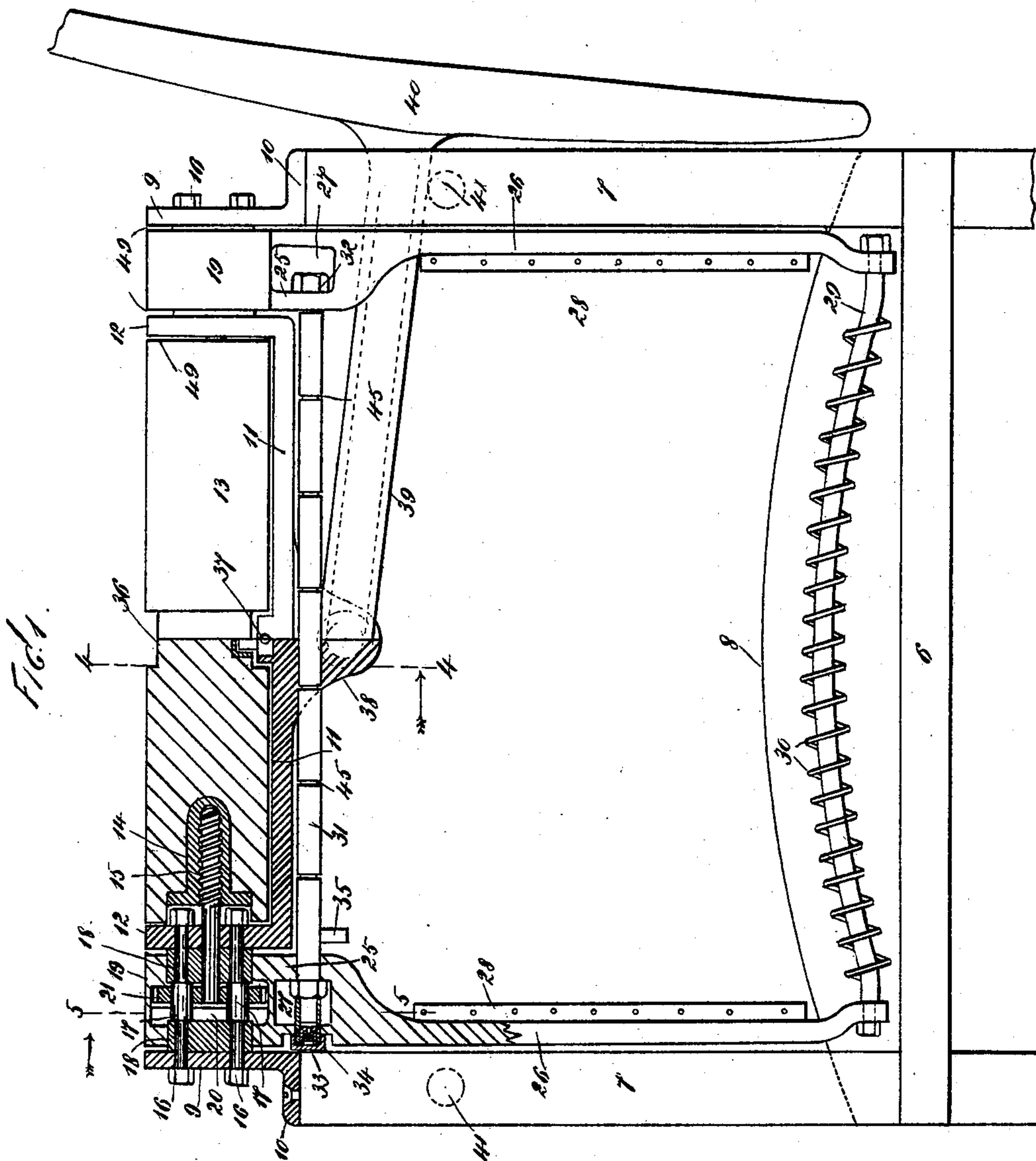
(No Model.)

4 Sheets—Sheet 1.

J. B. STRAUSS.  
HEAD REST FOR CAR SEATS.

No. 594,103.

Patented Nov. 23, 1897.



WITNESSES

*W. Danielson Jr.*  
*C. Grant*

INVENTOR

*Joseph B. Strauss*  
BY  
*Edgar Tateno*  
ATTORNEYS.

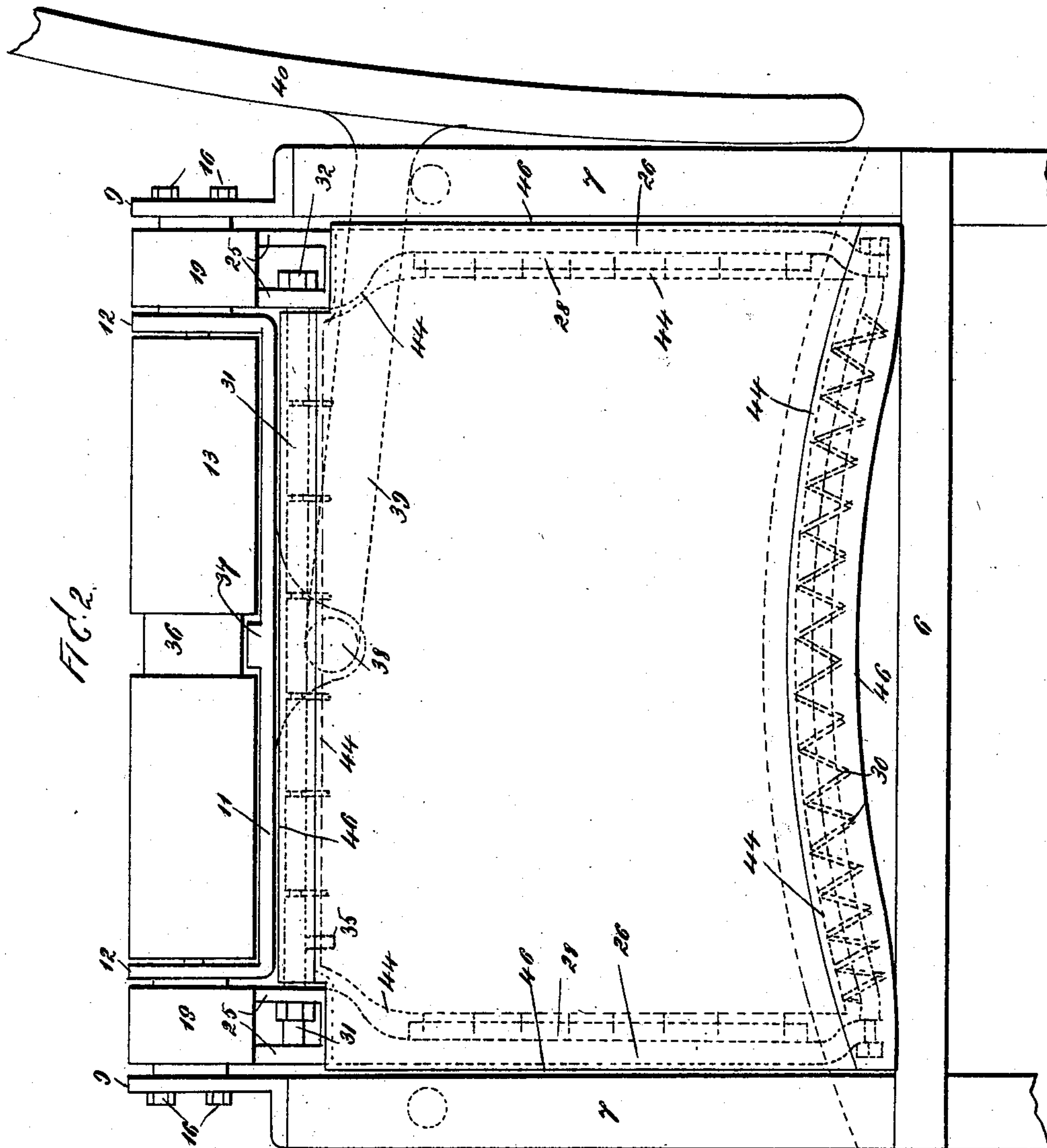
(No Model.)

4 Sheets—Sheet 2.

J. B. STRAUSS.  
HEAD REST FOR CAR SEATS.

No. 594,103.

Patented Nov. 23, 1897.



WITNESSES

John Buckler  
C. Gerch

INVENTOR

Joseph B. Strauss  
BY  
Edgar Tatlock  
ATTORNEYS.

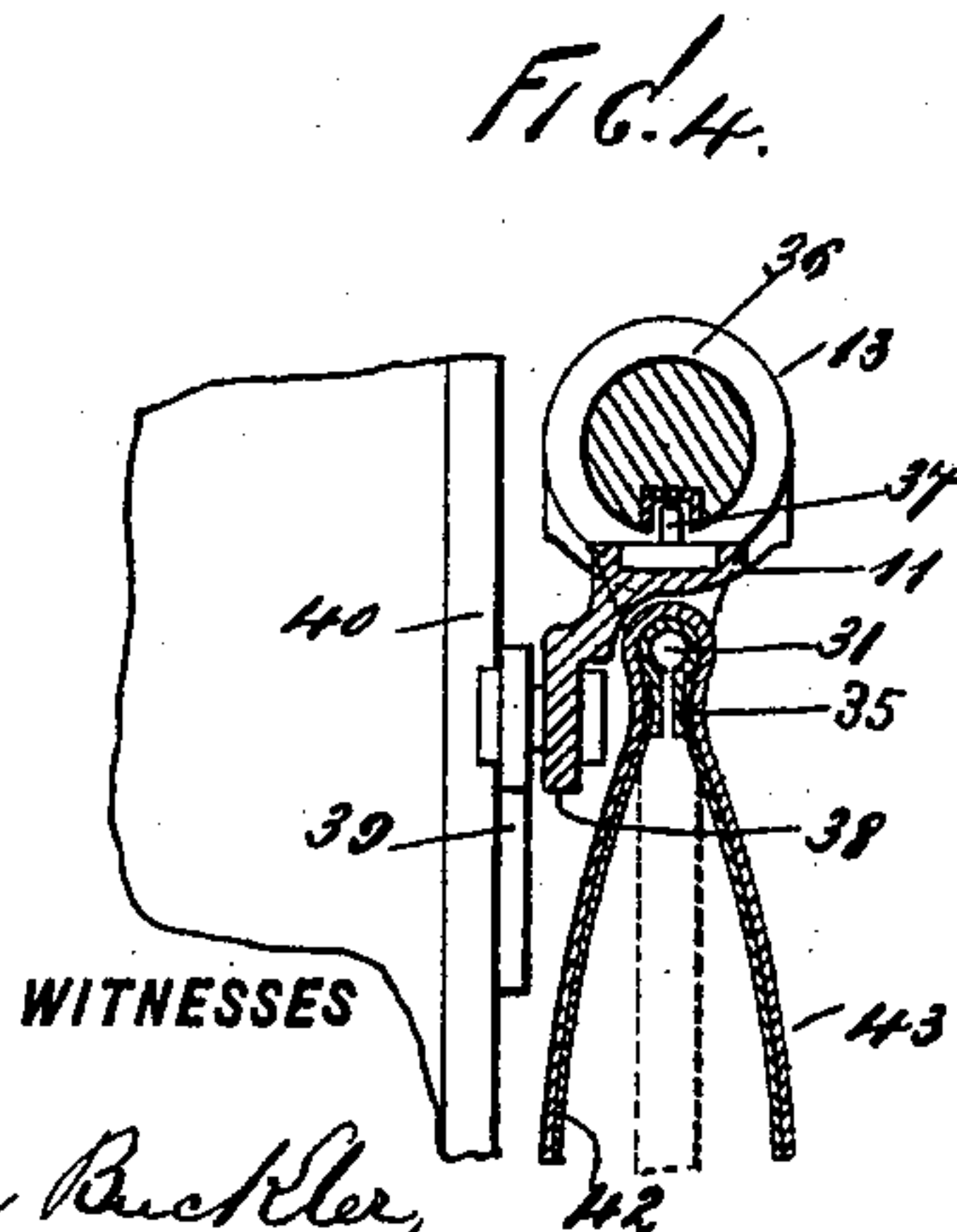
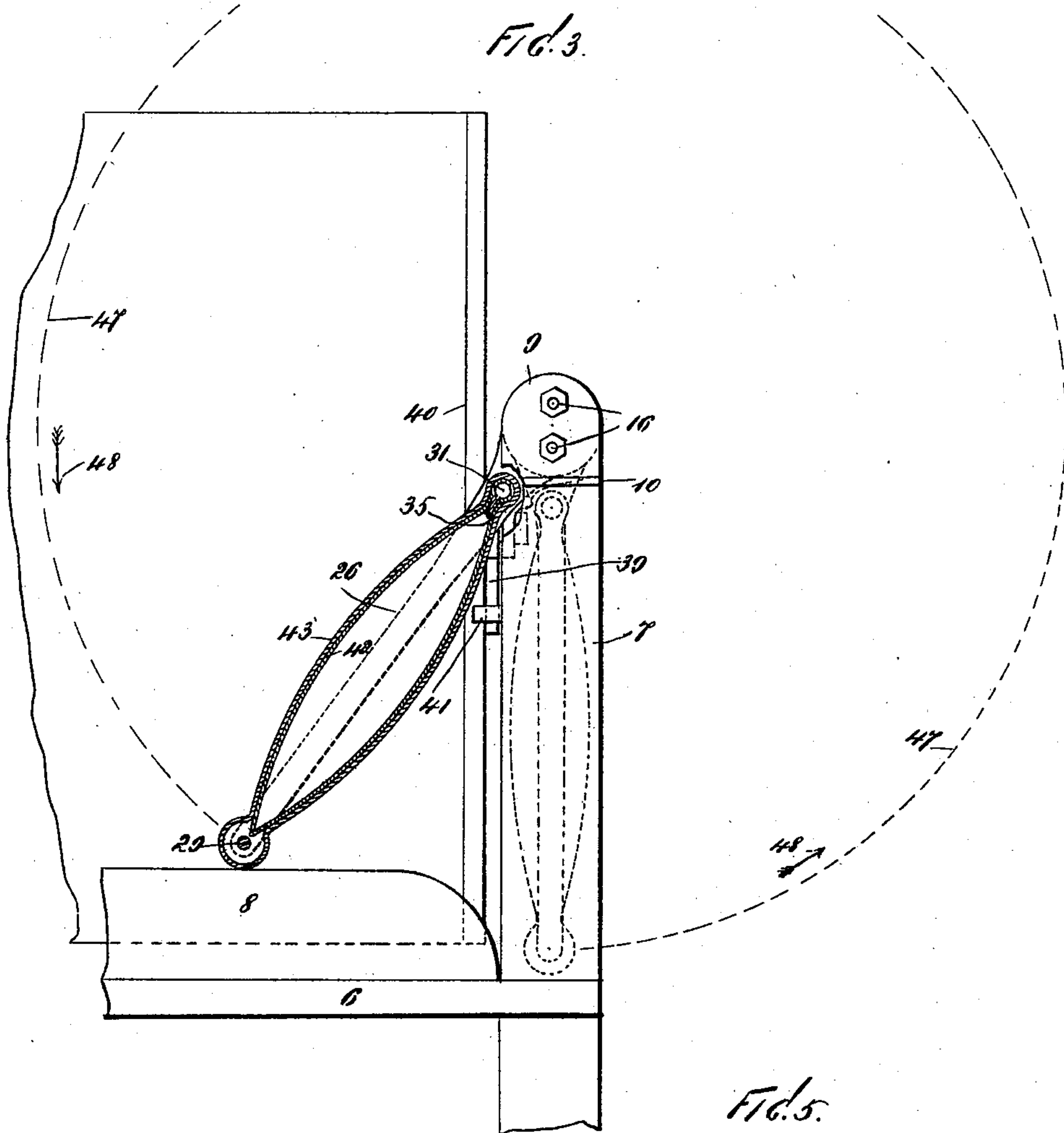
(No Model.)

4 Sheets—Sheet 3.

J. B. STRAUSS.  
HEAD REST FOR CAR SEATS.

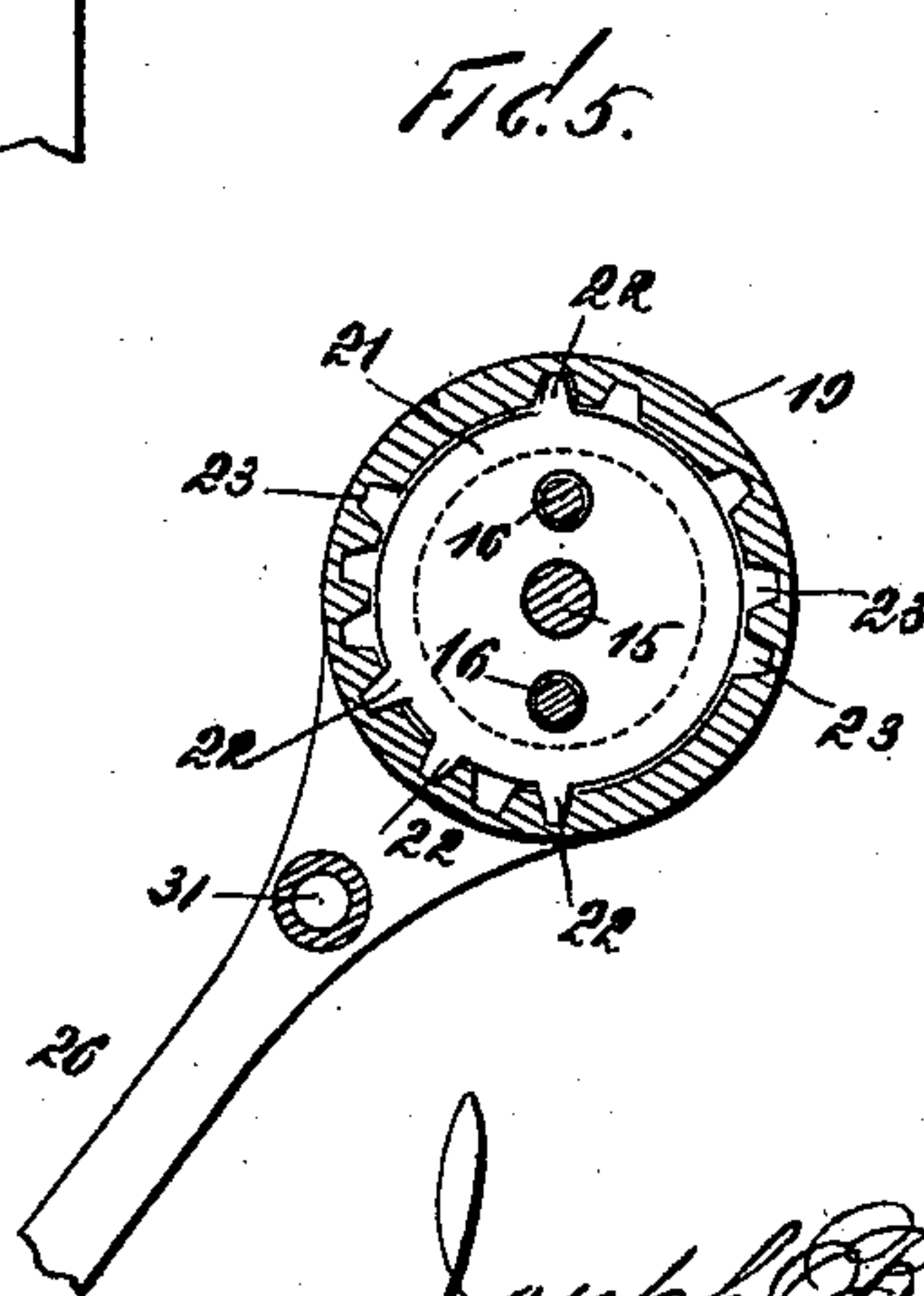
No. 594,103.

Patented Nov. 23, 1897.



WITNESSES

John Buckler,  
C. Gerst.



INVENTOR

Joseph B. Strauss  
BY  
Edgar Tate & Co.  
ATTORNEYS.



(No Model.)

4 Sheets—Sheet 4.

J. B. STRAUSS.  
HEAD REST FOR CAR SEATS.

No. 594,103.

Patented Nov. 23, 1897.

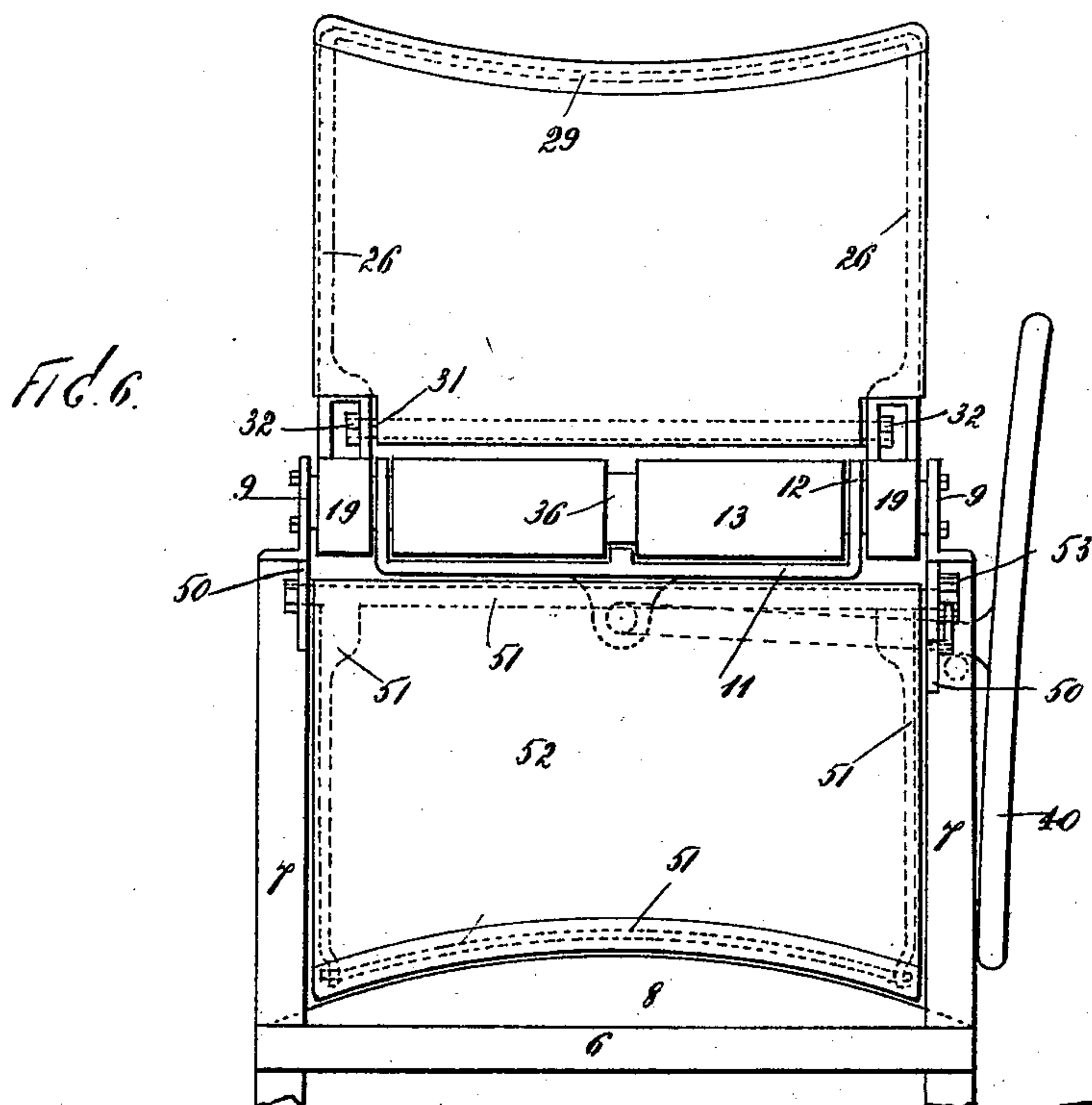
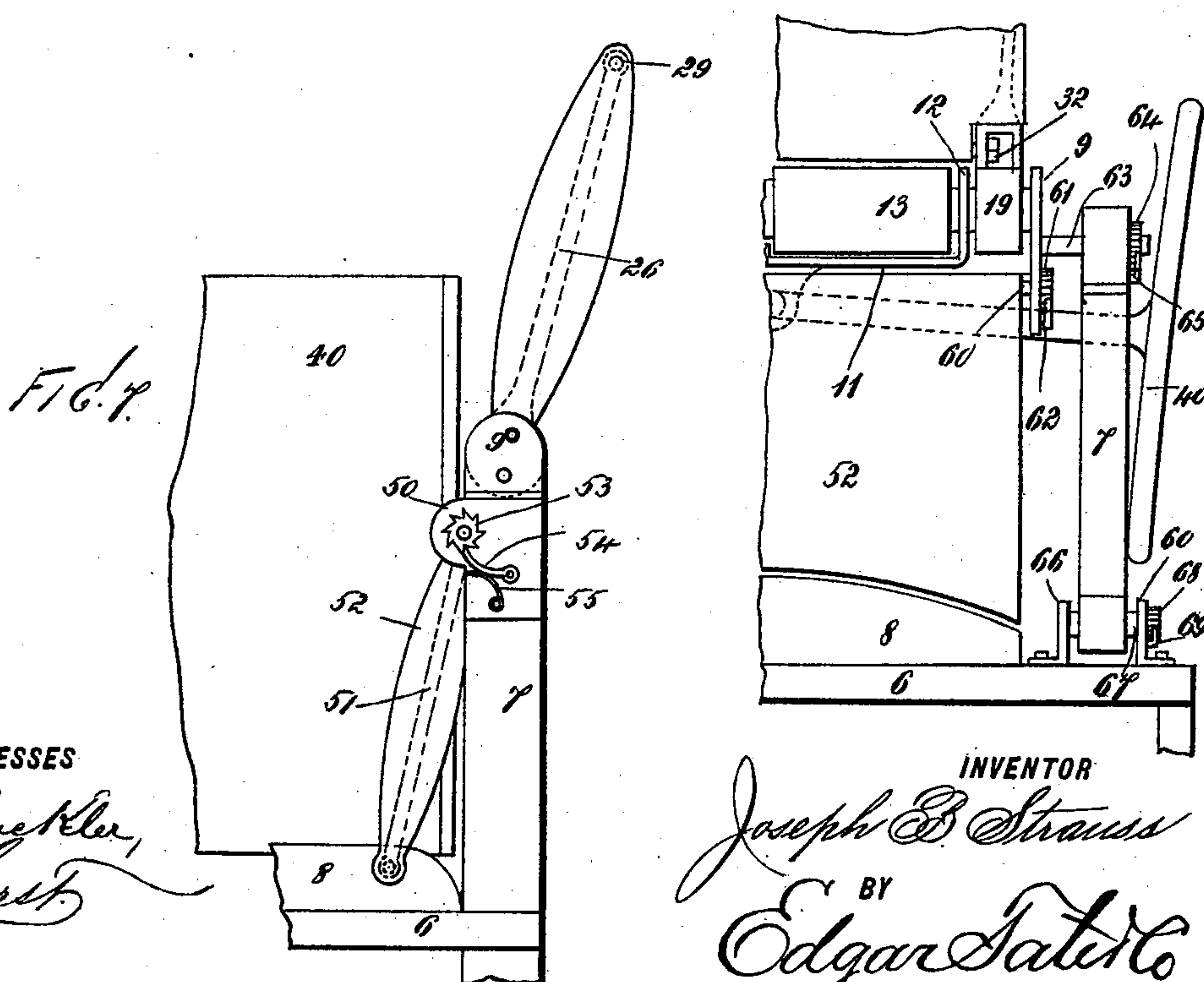


Fig. 8.



**WITNESSES**

John Buckler,  
C. Gerst.

***INVENTOR***

INVENTOR  
Joseph B. Strauss  
BY  
Edgar Tate & Co.  
ATTORNEYS.

**ATTORNEYS.**



# UNITED STATES PATENT OFFICE.

JOSEPH BAERMAN STRAUSS, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF  
TO EDWIN BAERMAN TUTEUR, OF CHICAGO, ILLINOIS.

## HEAD-REST FOR CAR-SEATS.

SPECIFICATION forming part of Letters Patent No. 594,103, dated November 23, 1897.

Application filed March 6, 1897. Serial No. 626,265. (No model.) Patented in Canada April 6, 1897, No. 55,529.

*To all whom it may concern:*

Be it known that I, JOSEPH BAERMAN STRAUSS, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Head-Rests for Car-Seats, (patented in Canada April 6, 1897, No. 55,529,) of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to new and useful improvements in railway-car seats by which they are made to serve as a couch or sofa by combining with one or both ends thereof a head rest or support which when not in use occupies the space within the frame of the seat at the end or ends thereof or between the side posts and the arm-rest, which are usually connected with the end, a further object being to provide an improved seat of the kind mentioned by connection with the end or ends thereof of an adjustable head-rest composed either of one or two parts, one of which may be stationary, if desired.

My invention is particularly applicable to car-seats of all kinds or classes now in use and may be used, and preferably so, in connection with the seats of cars in which the aisle is arranged at the side of the car and the seats lengthened out to form sofa-seats; but the invention is applicable to and may be connected with the end of any possible seat, whether in a day-coach, sleeping or parlor car, or the like.

The invention is the same as that for which Letters Patent were granted in Canada April 6, 1897, No. 55,529, and is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of my improvement are designated by the same numerals of reference in each of the views, and in which—

Figure 1 is an end view of a common type of car-seat provided with one form of my improvement, part of the construction being shown in section and the frame of the head-rest only being shown; Fig. 2, a similar view showing the seat and head-rest complete in full lines, the frame of the head-rest being shown in dotted lines and being inclosed by

a casing which constitutes the pillow or cushion of the head-rest; Fig. 3, a front view of a portion of the seat, showing the head-rest or the pillow or cushion thereof in section and showing the head-rest projecting as when in use in full lines and the normal position thereof when not in use in dotted lines; Fig. 4, a section on the line 4 4 of Fig. 1; Fig. 5, a section on the line 5 5 of Fig. 1; Fig. 6, a view similar to Fig. 2, but showing the head-rest turned on its supports and held in an upwardly and outwardly directed position and showing also a supplemental head-rest which is pivoted below the same and which is also adapted to be adjusted; Fig. 7, a front view thereof; and Fig. 8, a view similar to Fig. 6, but showing another modification in which the supplemental head-rest is secured to the frame of the main head-rest, being adjustable therewith or independently thereof, the end posts of the seat with which the head-rests are connected being also adjustable.

In the drawings forming part of this specification, reference being made to Figs 1, 2, and 3, I have shown an ordinary car-seat or a portion thereof, said seat being composed of a supporting-frame 6, end posts 7, a seat-cushion 8, and a reversible seat-back 40, all these parts being of the usual form and construction, and in the practice of my invention I secure to the end posts 7 upright plates 9, said plates 9 being each provided with an angular extension 10, which is bolted or secured to the end posts. I also provide a top plate 11, which is shorter than the space between the plates 9 and which is provided at each end with upwardly-directed flanges or heads 12, which are similar in form to the plates 9, and the plates 9 and the flanges or heads 12 of the plate 11 are connected by bolts 16, which are enlarged at the center, as shown at 17, and mounted between the plates 9 and the flanges or heads 12 are disks 18, said disks 18 being separated by the enlarged central portion 17 of the bolts 16, and it will be understood that the disks 18 are held rigidly in position by the bolts 16 and that the flanges or heads 12 and the plate 11 are also similarly held rigidly in position.

Mounted between the flanges or heads 12 of the plate 11 is an arm 13, which is pro-



vided at each end with a countersunk tubular housing 14, which is oppositely screw-threaded at each end and in which is mounted a screw-threaded shaft 15. Said arm 13 constitutes the arm-rest of my improved seat and is preferably upholstered and cylindrical in form, though it may be of any desired shape in cross-section.

Mounted on the disks 18 at each end is a cylindrical head 19, which is provided with an enlarged central circular chamber 20 and with circular openings in the sides for the disks 18, which serve thus as trunnions on which said cylindrical heads 19 bear and on which they are free to turn, and mounted in the enlarged central chamber 20 of each of said circular heads is a locking-disk 21, which is best shown in Fig. 5 and which is free to move longitudinally only on the enlarged portions 17 of the bolts 16, which act as guides therefor, and said disk is also provided at suitable intervals with teeth 22, adapted to engage with corresponding notches or recesses 23, formed in the cylindrical head or in the walls of the central chamber 20.

The shafts 15 at each end project through the adjacent flange or head 12 and through the disk 18 adjacent thereto and are rigidly attached to the locking-disks 21, and said shafts may be forced simultaneously outward or simultaneously inward by turning the arm 13, which is free to revolve, and in this operation the locking-disks 21 will also be forced simultaneously outward or simultaneously inward, according to the direction in which the arm 13 is turned, and when said locking-disks are at their outermost position or adjacent to the inner disk 18, as shown in Fig. 1, the teeth thereon will not engage with the corresponding notches or recesses in the heads 19, and said heads are therefore free to turn on the disks 18; but when said locking-disks are in their innermost position said teeth thereon will engage with the notches or recesses in the heads 19 and said heads cannot be turned on the disk 18.

The cylindrical heads 19 are provided at their lower sides with downwardly-directed extensions 25, which are brought together at each side to form an arm 26, and by means of this construction an open space 27 is formed between the extensions 25.

The arms 26 are provided on their inner sides with inwardly-directed flanges 28, and said arms are connected at their lower ends by an upwardly-curved rod 29, on which is mounted a spiral spring 30, and passing transversely beneath the plate 11 is a tube 31, one end of which passes through one of the extensions 25 of one head 19 and is closed and provided with a nut 32 by which it is held in place, and the other end passes through both of the extensions 25 of the other head 19 and is also held in place by a nut, but is open and provided with a cap 33 and an air-valve 34 of any preferred construction, and adjacent to the last-named end of the tube 31 is a down-

wardly-directed nozzle 35, the function of which will be hereinafter described.

The arm 13 is provided centrally thereof with an annular groove 36 and with a suitable socket adapted to receive the bolt of the lock 37, which is supported by the plate 11. The relative position of the lock 37 and the socket in said arm is such as will prevent the rotation of said arm when the head-rest 7 is locked in any position, thus preventing the unlocking and the miscellaneous use of and tampering with the same.

The plate 11 is provided centrally of the bottom thereof with an inwardly and downwardly directed arm 38, to which is pivoted the side arm 39 of the back 40 of the seat.

The lock 37 is intended simply, as above stated, to lock the arm 13 to the plate 11 and may be of any desired form or construction, and is therefore not shown and described in detail. It will also be understood that the lock 37 is operated by a key in the usual manner, and the back 40 of the seat and the side arms 39 are of the usual construction, and said back is adapted to be turned on its pivotal connection at 38 in the usual manner, and the end posts 7 are provided with the usual lugs or projections 41 on which the arms 39 rest.

The body portion of the head-rest consists, preferably, of a rubber bag 42, reference being made to Figs. 3 and 4, and said bag is provided with an outer covering 43 of leather or any preferred material. The rubber bag 42 is substantially of the form of the frame of the head-rest, and the position thereof is shown in Fig. 2 by the dotted line 44, and said rubber bag is secured to the flanges 28 of the arms 26 of the frame of the head-rest and to the tube 31 and the bottom rod 29 by threads or cords or in any desired manner, and the tube 31 is provided with annular grooves 45 for this purpose. The leather, canvas, or other casing 43 of the rubber bag incloses said bag and also the entire depending portion of the frame of the head-rest, and the position thereof when secured in place is indicated by the full line 46 in Fig. 2, and when the casing or covering of the rubber bag is thus secured in place the downwardly-directed extensions 25 of the cylindrical heads 19 are preferably left uncovered, as is clearly shown in said figure. The tubular nozzle 35, which is connected with the pipe 31, passes into the rubber bag 42, which constitutes mainly the pillow or cushion of the head-rest, as shown in Fig. 3, and in practice said pillow or cushion is inflated by removing the cap 33 from said pipe and applying thereto an air-pump of any desired form or construction.

The inner bag or portion 42 of the pillow or cushion may be made of rubber, rubber and canvas, or any preferred material suitable to form an air-tight wall for said bag, and the same may be connected with the frame of the head-rest in any desired manner, as may also the casing 43 thereof; but said



rubber bag is not absolutely essential to my invention, and in place thereof I may substitute springs, hair filling, or any suitable material, or I may upholster the head-rest to harmonize with the finish of the seat and provide an auxiliary and renewable cover with attachments therefore, or I may make the whole pillow or body portion of the head-rest detachable, and the details of this construction may be varied as may be desired.

The normal position of the head-rest is that shown in dotted lines in Fig. 3, and whenever it is desired to use the same the arm 13 is unlocked from the plate 11 and turned, preferably from right to left, causing the locking-disks 21, hereinbefore described, to move outwardly, by which operation their teeth are disengaged from the notches of the cylindrical heads 19, thus leaving the head-rest free to be turned, as shown by the dotted line 47 and in the direction of the arrow 48, and it will be understood that the head-rest may be held either in the position shown in full lines in Fig. 3 or at any desired angle with reference to the cushion 8 of the seat or to the end of the seat by turning the arm 13 in the reverse direction or from the left to right, thus forcing the locking-disks 21 inwardly, so that their teeth will reengage with the notches of the cylindrical heads 19 and hold said heads rigid.

In the modification shown in Figs. 6 and 7 I provide the plates 9, which are secured to the end posts of the seat-frame, with extensions 50, and pivoted therein is a supplemental head-rest consisting of a frame 51, which is shown in dotted lines in said figures, and this frame is covered, as shown at 52, with any suitable material—such as leather, canvas, or any other preferred material—and said covering is filled with any desired material, so as to form a pillow or cushion, and the upper rod of the frame 51 projects through the plates 50 at each end, and on one or both of said ends is mounted a ratchet-pinion 53, and secured below said pinion is a pawl 54, which is operated by a spring 55. In the normal position of this supplemental head-rest it is suspended between the end posts 7 of the seat, and whenever desired the lower end thereof may be swung inwardly, as indicated in Fig. 7, and said supplemental head-rest may be held at any inclination by means of the ratchet-pinion 53 and the spring-operated pawl 54.

In Fig. 8 I have shown another modification, in which the plates 9 are projected downwardly and the supplemental head-rest, which consists of the frame 51 and the covering or cushion 52, is pivoted between the lower ends thereof, the upper rod of the frame 51 being projected at each end, as shown at 60, and mounted on one or both of the ends of said rod is a ratchet-wheel 61, which is provided with a spring-operated pawl 62, which is pivotally connected with the plate 9, and by means of this construction the said supple-

mental head-rest may be adjusted independently of the main head-rest, as will be readily understood, and said main head-rest may be operated as hereinbefore described, and the plates 9 are provided centrally with shafts 63, which project through the upper ends of the posts 7 and are provided with ratchet-wheels 64 and spring-operated pawls 65, and by means of this construction the main and supplemental head-rests may be simultaneously adjusted, as will be readily understood, all that is necessary to accomplish this result being to turn the plates 9, to which are secured the shafts 63, and in this form of construction the end posts 7 of the seat are also adjustable, being pivotally supported at the lower ends thereof between the standards 66 by means of a shaft 67, on one end of which is mounted a ratchet-wheel 68, which is provided with a pawl 69. This construction admits, as hereinbefore stated, of the simultaneous adjustment of the main and supplemental head-rests and also of the separate adjustments of each of the head-rests and of the adjustment of the end posts 7 of the seat, and it will be understood that both ends of the head-rests and both of the end posts 7 are in practice similarly constructed, only one of each, however, being shown in Fig. 8. The use of this supplemental head-rest does not in any way interfere with the construction and operation of that hereinbefore described, and the object thereof is to provide a more extended head rest or support which may also serve to support the entire body in an inclined position and in practice when it is desired to use both of the head-rests for the purposes above specified the main head-rest is adjusted, as hereinbefore described, to the required position, in which it will project outwardly and upwardly, as shown in Figs. 6, 7, and 8, and the supplemental head-rest is then adjusted to correspond therewith.

It will be understood that where the side arms of the seat-back are attached to the seat-frame instead of the arm-rest the body portion of the head-rest or head-rests may be continued up to inclose the arm or arms 13, said arm or arms, supporting-plates, and attached pieces being modified to suit. These constructions, however, are obviously of minor importance and are therefore not shown and described.

When not in use, both of the head-rests in the construction shown in Figs. 6, 7, and 8 will be suspended between the end posts 7 of the seat and, if desired, the supplemental head-rest may be permanently fixed in the desired position in which it is intended for use, and said supplemental head-rest may be made detachable, if desired, and may be removed when not required.

The posts 7 are not made movable or adjustable except in those forms of seats in which the side arms 39 are attached to the seat-frame 6 instead of to the cross-arm, and when the side arms are so attached the posts



7 are not connected with the back 40 of the seat and can therefore be swung outward without trouble.

It will thus be seen that I accomplish the  
5 object of my invention by means of devices which are simple in construction and operation, and it will be apparent that many changes in and modifications of the construction herein described may be made without  
10 departing from the spirit of my invention or sacrificing its advantages.

Having fully described my invention, I claim as new and desire to secure by Letters Patent—

15 1. The combination with a car-seat, of a head-rest permanently connected with the seat-frame, and movably mounted thereon, whereby it may be positioned to act as a pillow for the head and be retracted when not in  
20 use.

2. The combination with a car-seat provided with an end frame, of a head-rest permanently connected with said end frame and adapted to be locked in position at any de-  
25 sired angle with said end frame.

3. The combination with a car-seat, provided with end posts of a head-rest permanently attached to said posts, said head-rest consisting of a suitable rest or pillow pivotally supported from the tops of said posts, and  
30 adapted to be turned about between them into any desired position and fixed therein to afford support for the head.

4. The combination with the end of the  
35 frame of a car-seat of a head-rest pivotally supported therein, and adapted to be turned so as to act as a support for the head, said head-rest consisting of a pillowed frame, which is mounted between the end posts of the seat-  
40 frame, which is adapted to be turned upon its supports, and devices connected with the end posts of the seat-frame, and with the head-rest frame for holding the latter in any de-  
sired position.

45 5. The combination with the frame of the end of a car-seat of a head-rest comprising a frame pivoted between the end posts of said seat-frame, a pillow or cushion attached there-  
50 to, means whereby said pillow or cushion may be inflated and means whereby said head-rest may be maintained in any desired position, substantially as described.

6. The combination with the frame of the end of a car-seat provided with the usual up-  
55 right posts, of two upright plates attached thereto, a cross-plate having vertical extensions thereon, bolts rigidly connecting said upright and said cross-plates, trunnions situated between said plates and said extensions  
60 and supported by said bolts, and a revoluble, cushion-supporting frame mounted upon said trunnions, substantially as described.

7. The combination with the frame of the end of a car-seat provided with the usual up-  
65 right posts of upright plates secured to the tops of said posts, a cross-plate having vertical extensions on each end thereof, bolts rig-

idly connecting said plates and said extensions trunnions supported by said bolts, a  
70 revoluble, cushion-supporting frame mounted upon said trunnions and means whereby said frame may be locked in any desired position, substantially as described.

8. The combination with the frame of the end of a car-seat, provided with the usual up-  
75 right posts, of upright plates secured to the tops of said posts, a cross-plate mounted between said plates, and provided at each end with an upwardly-directed flange or head, said flanges or heads being bolted to the upright  
80 plates on the posts, and a revoluble arm mounted between said upright flanges or heads, a head-rest frame mounted between the end posts of the seat, on trunnions supported by bolts which connect the end plates on the posts  
85 with said upright flanges or heads of the cross-plate, and said head-rest frame being adapted to be turned on its supports, and said arm being in operative connection with toothed locking-disks, adapted to engage with corre-  
90 sponding teeth in said head-rest frame and to lock it in any desired position with reference to the car-seat, and said head-rest frame being provided with a pillow or cushion, which is connected therewith, and said pillow or  
95 cushion being adapted to be inflated, substantially as shown and described.

9. The combination with the frame of a car-seat, of a head-rest consisting of suitable side  
100 posts, trunnions or supports connected with said posts, a cross-piece in operative connection with said trunnions or supports and sustaining them in position, a head-rest frame pivotally supported by said trunnions or sup-  
105 ports and adapted to be turned about them, and means for locking said head-rest frame in any desired position relative to said trunnions or supports, substantially as shown and described.

10. The combination with the frame of a  
110 car-seat, of a head-rest consisting of adjustable side posts, means for locking said posts in one or more positions, trunnions or supports connected with said posts, a cross-piece in operative connection with said trunnions  
115 or supports and sustaining them in position, a head-rest frame pivotally supported by said trunnions or supports, and adapted to be turned about them, means for locking said head-rest frame in any desired position rela-  
120 tive to said trunnions or supports, said head-rest frame being provided with a suitable pillow or cushion, and said pillow or cushion being provided with an auxiliary renewable covering, substantially as shown and described.  
125

11. The combination with the end of the frame of a car-seat, of an adjustable head-rest supported therein, and a supplemental head-rest which is also supported within said frame, substantially as shown and described.  
130

12. The combination with the frame of a car-seat provided with uprights or posts at the ends thereof, of a head-rest adjustably supported between said posts, and a supple-



mental head-rest which is also adjustably supported between said posts.

13. The combination with the end of the frame of a car-seat of main and supplemental 5 head-rests, said head-rests being both separately and jointly adjustable and adapted to be locked in positions making any angle with each other and the seat.

14. The combination with the end of the 10 frame of a car-seat, of a head-rest consisting of movable side posts, movable supporting-pieces connected therewith, movable head-rest frames attached to said supporting-pieces, pillows detachably connected with 15 said head-rest frames, and means for locking any and all of the parts in position, independently or coincidently, substantially as shown and described.

15. The combination with a car-seat of a 20 head-rest fitted between suitable side posts or uprights, and extending downwardly whereby it substantially forms when out of use, the arm-rest and seat-siding; said head-rest being adapted to lock in this position and to be 25 moved therefrom and lock in any other position at a suitable angle with the seat-cushion for the purpose specified.

16. The combination with a car-seat of main and supplemental head-rests, fitted between 30 suitable side posts or uprights, and extending downwardly, whereby they form when out of use, the arm-rest and seat-siding; said

head-rests being adapted to lock in these positions and to be moved therefrom and caused to lock in other positions in proper alinement 35 with each other and at a suitable angle with the seat-cushion for the purpose specified.

17. The combination with the frame of a car-seat, of a head-rest fitted within said frame between the uprights or posts thereof, 40 and extending from the arm-rests downwardly, whereby it is substantially inclosed within the said frame when out of use; said head-rest being adapted to be moved from such position and caused to extend inwardly 45 from the said frame in the direction of the seat-cushion for the purposes specified.

18. The combination with the frame of a car-seat, of a head-rest pivotally connected with the uprights of said frame, said head- 50 rest being adapted to be turned or adjusted into any desired position or angle with reference to said uprights, and being also adapted to be locked in the desired position, substantially as shown and described. 55

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 20th day of February, 1897.

JOSEPH BAERMAN STRAUSS.

Witnesses:

E. B. TUTEUR,  
H. H. BROWN.