Nov. 29, 1932. C. R. HULTGREN 1,889,478

ADJUSTABLE BACK CHAIR

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Fig. 1.

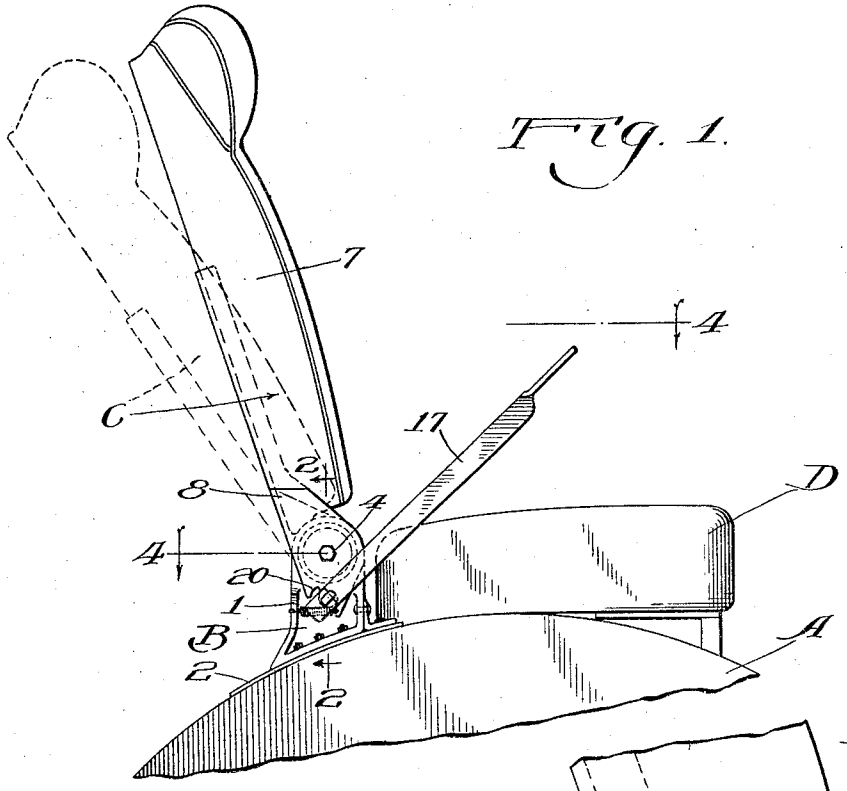


Fig. 2.

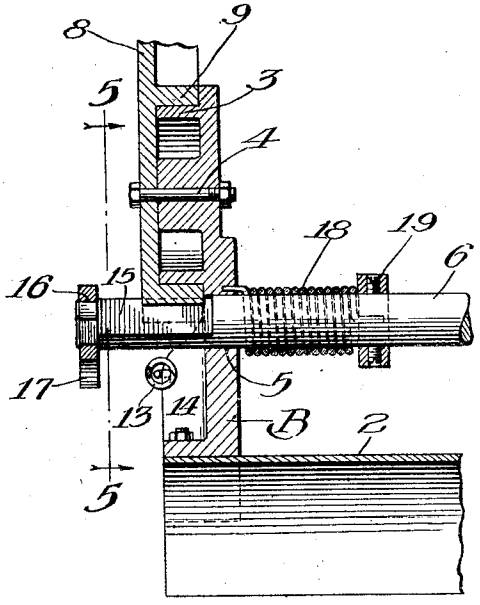
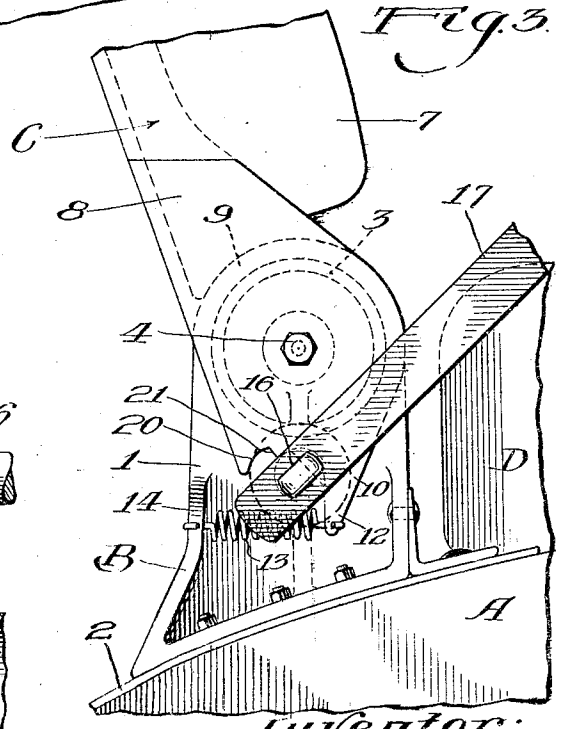


Fig. 3.



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Fig. 4.

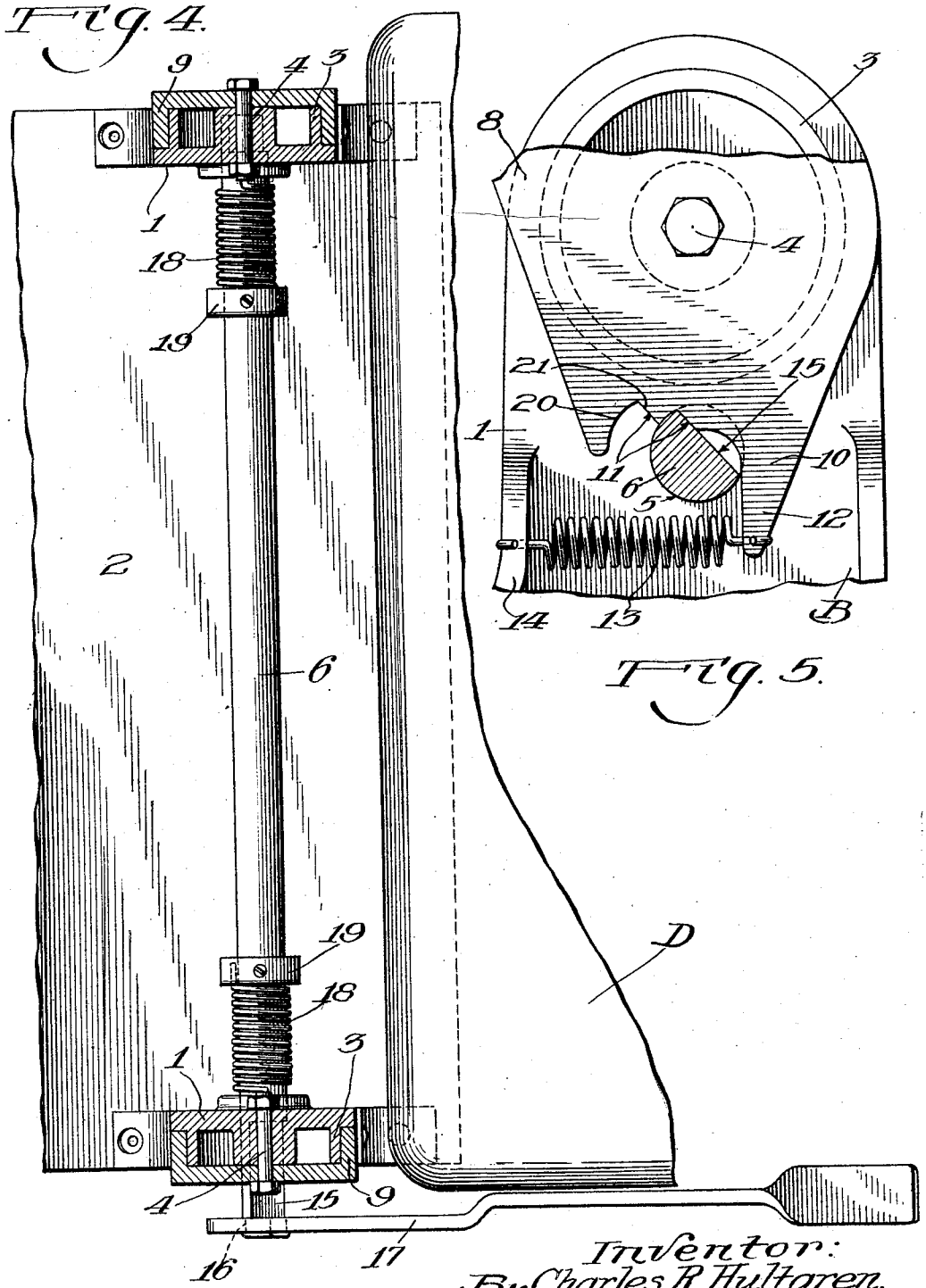


Fig. 5.

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UNITED STATES PATENT OFFICE

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ADJUSTABLE-BACK-CHAIR

Application filed July 24, 1930. Serial No. 470,516.

This invention relates to adjustable-back chairs, or the like, and more particularly to a type of adjustable-back chair which may be secured to the wheel-housing, etc. of a bus or the like.

One of the objects of the invention is to provide an article of this character with means for ready and secure attachment to the wheel housing of automobiles, busses, etc. and with improved adjusting means for the back. Other objects and advantages will appear as the specification proceeds.

The invention is illustrated in the accompanying drawings as embodied in a seat, or chair, adapted to be used in automobiles, motor busses, etc. in connection with a wheel housing. It is to be understood, however, that the invention is applicable, generally, to chairs, or seats, provided with adjustable backs.

The invention is fully described in the following specification and shown in the accompanying drawings, in which—

Fig. 1 is a side elevational view of a chair constructed in accordance with the invention; Fig. 2 is a sectional view, the section being taken as indicated at line 2 of Fig. 1; Fig. 3 is an enlarged broken side view of the pivot and locking portion of the chair; Fig. 4 is a broken sectional view, the section being taken as indicated at line 4 of Fig. 1; and Fig. 5 is a part sectional view on an enlarged scale, the section being taken as indicated at line 5 of Fig. 2.

In the illustration given A designates a metal wheel housing for the wheel of a bus, etc., the housing extending as usual into the passenger compartment of the bus. B designates a frame member which is secured to the housing A. C designates an adjustable back which is pivotally secured to the frame member B, and D designates a cushion seat.

The frame member B comprises a pair of metal standards 1 which may be secured to a curved plate or flange 2 with bolts or other suitable means. The metal plate 2 is preferably curved to conform to the surface of the housing A and is provided with suitable openings by which it may be bolted to the housing. The standards 1 are each provided near the top with a trunnion or pivot member 3 adapted to provide a cylindrical pivot surface for the adjustable back C. The pivot member 3 is apertured centrally to receive a bolt 4. Below the pivot member 7, there is an opening 5 in each of the standards 1 adapted to receive a rotatable shaft 6.

The swinging back C comprises a cushion back 7 which may be of any suitable construction and a pair of metal back posts 8 which are secured to the sides of the back 7. Each of the posts 8 is provided near its lower end with a hollow drum 9 adapted to receive and to provide a bearing for the pivot member 3. The post 8 is apertured to receive one end of the bolt 4 which serves to secure the drum or bearing 9 about the pivot member 3.

Each of the back posts 8 is also provided with a short arm 10 which extends below the pivot member 3 and provides a sector having locking notches or indentations 11. An extension 12 of the sector arm 10 is perforated to receive one end of a spring 13 which is secured at its other end to a flange 14 on the standard 1. The spring 13 draws the extension 12 toward the flange 14 and thus serves to urge the swinging back C toward a forward position.

The shaft 6 is preferably cut away near its ends to provide a flat surface 15, an edge of which is adapted to engage the notches 11 of sector arm 11. At one end the shaft 6 is squared off so as to enter an elongated opening 16 in an actuating lever 17. The flat surface or edge 15 of shaft 6 is urged toward the notches 11 of the sector arm 10 by means of coil springs 18. The springs 18 preferably enclose shaft 6 and have one end secured to standard 1 and the other end secured to the

collar 19 which may be fixed to the shaft by screws or other suitable means.

The cushion seat D may be secured directly to the wheel housing A and may be of any suitable construction.

In the operation of the apparatus, the lever 17 may be raised against the force of spring 18 so that the cut away or straight surface 15 will lie out of engagement with the notches 11 of the sector arm 10. With the lever in raised position, the back C is free to move to a forward or rearward position, the spring 13, however, tending to urge the back in a forward direction. Upon the release of lever 17, the shaft 6 will rotate in a forward direction bringing the straight surface or edge 15 into engagement with one of the notches 11. While, in the illustration given only two notches have been shown, the sector arm 10 may be provided with any number of notches to afford the number of angular back positions desired. After the straight edge of the shaft is in engagement with a notch of the shape illustrated, the back is locked firmly against forward or rearward movement. Pressure tending to force the back in a rearward direction causes the curved portion 20 of the notch 11 to bear upon the adjacent curved surface of the shaft and is thereby ordinarily held against movement. Forward movement of the seat is prevented by contact of the straight surface 21 of the notch 11 with the straight surface or edge 15 of shaft 6.

The frame B occupies very little space and may be readily and firmly secured to the housing A. The operating and locking parts are compactly arranged and permit adjustment of the back C with little effort. The springs 13 and 18, counterbalance each other and serve to hold the locking elements in firm contact.

The foregoing detailed description has been given for clearness of understanding only, and no unnecessary limitations should be understood therefrom, but the appended claims should be construed as broadly as permissible in view of the prior art.

I claim:

1. In combination with a frame adapted to support a seat, a swinging back pivotally supported in said frame, said back being provided with a sector arm having locking indentations therein, and a lock shaft supported by said frame and having a portion cut away to provide an edge adapted to engage said indentations.

2. In combination with a frame adapted to support a seat, a swinging back pivotally supported in said frame, said back being provided with a sector arm having locking indentations therein, a lock shaft supported by said frame and having a portion cut away to provide an edge adapted to engage said indentations and a spring secured to said shaft and frame and urging said shaft edge towards said indentations.

3. In combination with a frame adapted to support a seat, said frame being provided with a pivot member, a swinging back equipped with a cylindrical bearing engaging said pivot member, said back having a sector arm extending below said pivot member and provided with locking notches, and a shaft rotatably mounted in said frame and having a portion cut away to provide an edge adapted to engage said notches.

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