June 21, 1927. 1,633,427

P. WIESE

ARMREST

Filed Aug. 19, 1926 2 Sheets-Sheet 1

Fig. 1.

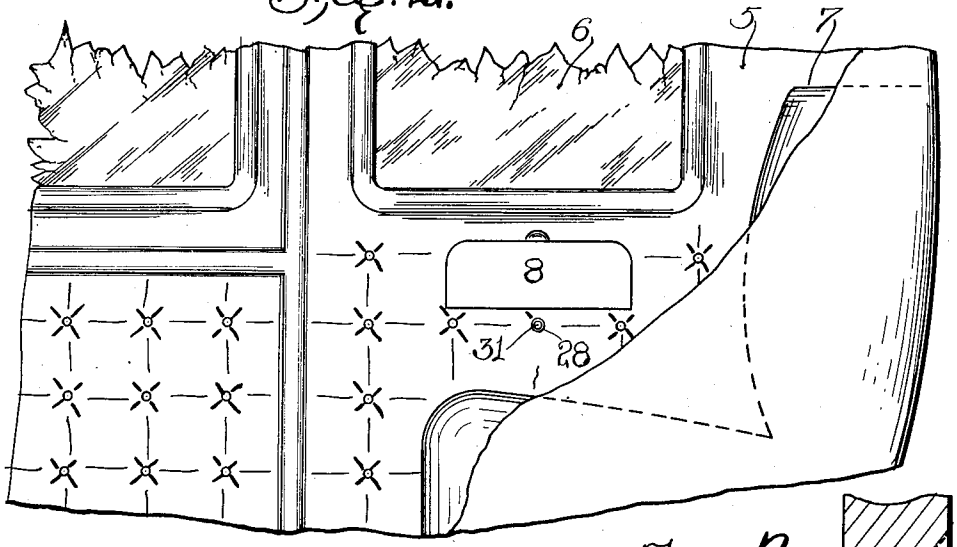


Fig. 3.

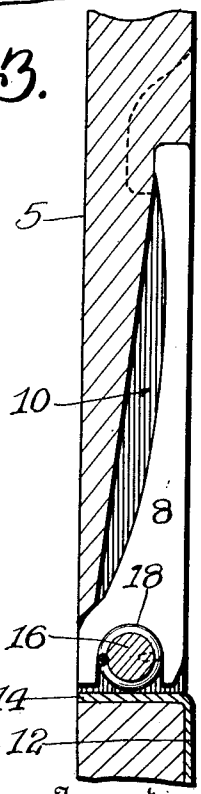
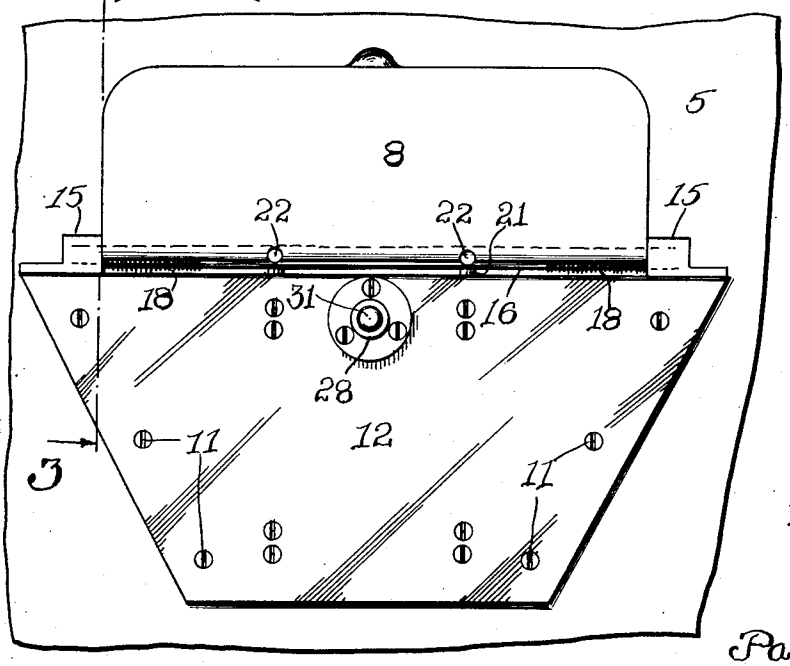


Fig. 2.



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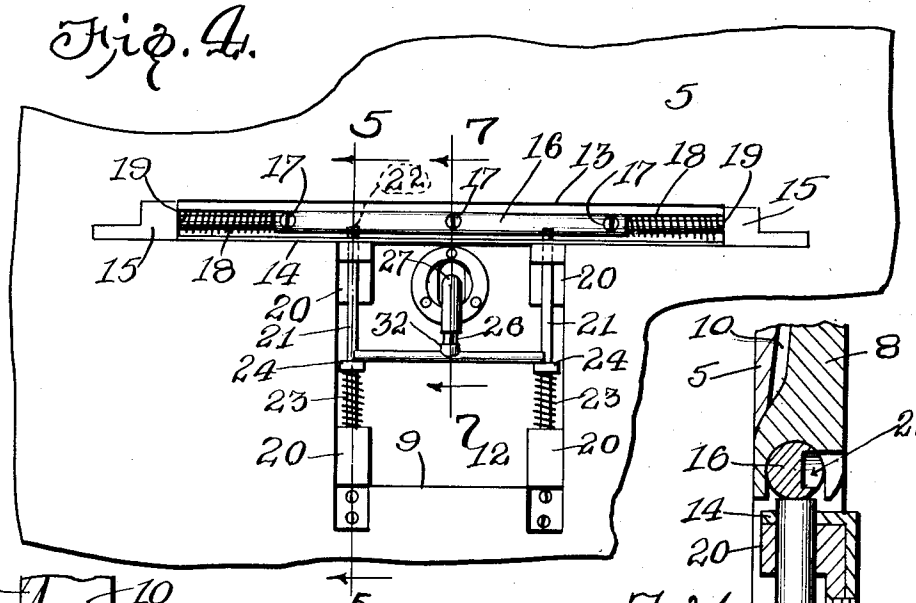
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Fig. 4.



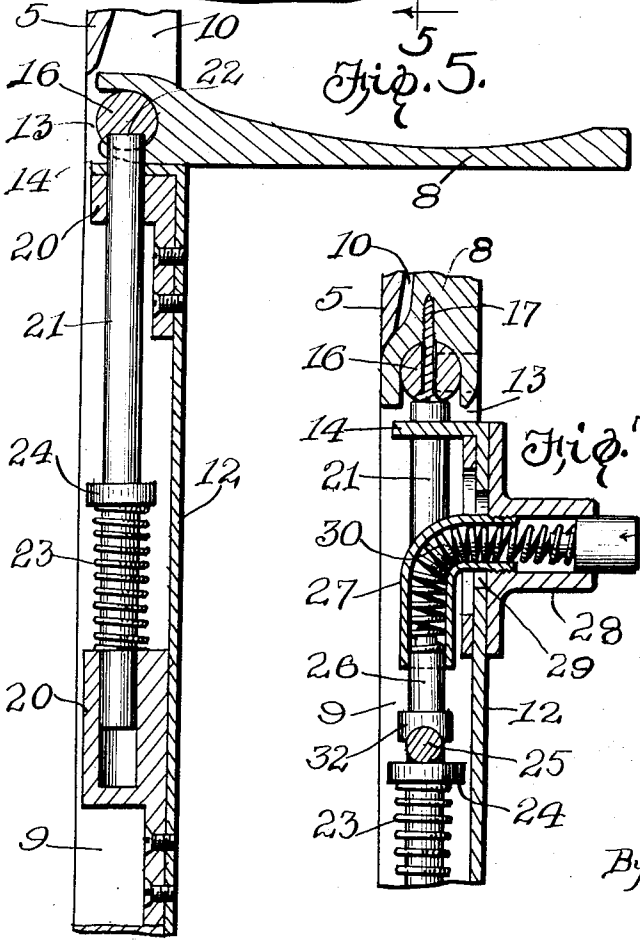


Fig. 5.

Fig. 7.

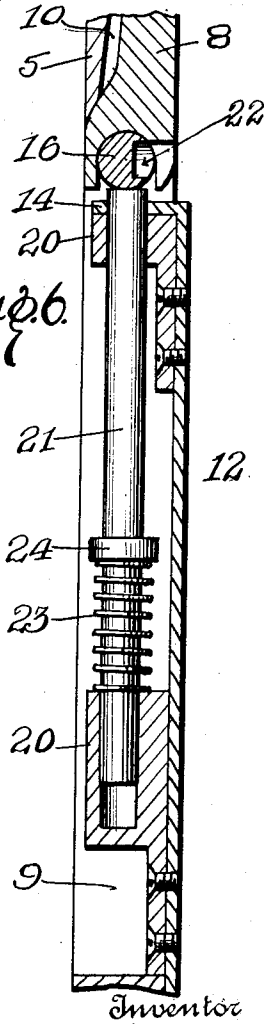


Fig. 6.

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Patented June 21, 1927. 1,633,427

UNITED STATES PATENT OFFICE.

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ARMREST.

Application filed August 19, 1926. Serial No. 130,271.

This invention relates to an arm rest, and although it can be used in connection with different kinds of seats, it is designed primarily for use beside the seat of a motor vehicle.

Heretofore it has been the practice of the occupant of a motor vehicle to place the elbow of the arm on the sill of the adjacent window, but this posture has been uncomfortable because of the height of the sill. In an effort to overcome this objection, narrow fixed arm rests have been provided below the window sills, but these have been objectionable because they crowd the occupants of the seat when it is desired to use the arm rest, as for example, when two or more persons are occupying the seat.

It is an object of the present invention to provide an arm rest which will constitute a comfortable support for the arm, but which, when not in use, can be easily caused to fold or swing out of the way so as not to crowd the occupants of the seat or cause discomfort.

Another object is to provide an arm rest which located below the sill of the window at the proper height to hold the arm comfortable and which is so mounted as to present a neat appearance at all times.

A more specific object is to provide an arm rest of the above kind with means to automatically yieldingly swing the same to a vertical out of the way position, and simple, durable and efficient means of a manually releasable nature to latch the arm rest in a horizontal operative position.

Still another object is to provide an arm rest of the above kind which is so mounted as to swing out of the way to an inoperative position within a recess in the side wall of the vehicle body, whereby the arm rest will be flush with the inner surface of said side wall of the body when not in use.

Other objects will become apparent as the nature of the invention is better understood and the same consists in the novel form, combination and arrangement of parts hereinafter more fully described, shown in the accompanying drawings, and claimed.

In the drawings, wherein like reference characters indicate corresponding parts throughout the several views,

Fig. 1 is a fragmentary inside elevational view of a motor vehicle body having a side wall of the same equipped with an arm rest in accordance with the present invention,

Fig. 2 is a fragmentary inside elevational view showing a portion of the device illustrated in Fig. 1 upon an enlarged scale and with the inner lining of the side wall of the vehicle body removed to reveal the manner of mounting the arm rest,

Fig. 3 is a fragmentary vertical section taken substantially upon line 3—3 of Fig. 2,

Fig. 4 is a fragmentary outside elevational view of the device shown in Fig. 2 with the outer metal covering of the vehicle body removed to reveal details of construction of the present invention,

Fig. 5 is an enlarged vertical section taken substantially upon line 5—5 of Fig. 4, the arm rest being disposed in its horizontal operative position,

Fig. 6 is a view similar to Fig. 5 with the arm rest in its vertical inoperative position, and

Fig. 7 is a fragmentary vertical section taken substantially upon line 7—7 of Fig. 4, but the arm rest in its inoperative position.

Referring more in detail to the drawings, 5 indicates the side wall of a motor vehicle body having a window 6 therein at a side of the usual seat 7. The side wall 5 of a motor vehicle is usually formed of wood and provided with an outer covering of sheet metal, not shown, and an inner lining of fabric as indicated in Fig. 1. The present arm rest embodies an elongated arm supporting board or plate mounted along one of its longitudinal edges on the side wall 5 of the vehicle body beneath the window 6 at the proper height for comfortably supporting the arm of an occupant of the seat 7. The arm rest board or plate 8 may be suitably covered or upholstered or both if desired.

In accordance with the present invention the side wall 5 of the vehicle body is formed with an opening 9 at the side of the seat 7 and beneath the window 6 as indicated in Figs. 4 and 7 inclusive, while formed in the inner surface of the wall 5 above the opening 9 is a recess 10 of a size to snugly accommodate the arm rest board or plate 8 when the latter is swung upwardly to a vertical inoperative position as shown in Fig. 3. It is apparent that the arm rest board, when so folded, will lie flush with the inner surface of the wall 5 so as to present a neat appearance and be entirely out of the way.

It will be noticed that the opening 9 is relatively narrow and provided intermediate

the ends of the recess 10, and rigidly fastened by screws 11 to the inner surface of the wall 5 so as to span and cover the opening 9 is a mounting plate 12 adapted to be covered by the lining of the wall as shown in Fig. 1. The wall 5 is further provided with a horizontal elongated slot 13 along the lower edge of the recess 10 and with its intermediate portion communicating with the opening 9 as clearly seen in Figs. 4 and 5, and provided upon the upper edge of the mounting plate 12 is a horizontal outwardly directed flange 14 which rests upon the lower wall of the slot 13. Rigidly carried by the ends of the flange 14 within the end of the slot 13 are a pair of bearing brackets 15, and disposed within the slot 13 is a horizontal shaft or hinge pintle 16, the ends of which are journaled in the brackets 15. The intermediate portion of the shaft or pintle 16 is snugly received in a groove formed in the outer or lower longitudinal edge of the arm rest board or plate 8, and the latter is secured to the shaft or pintle 16 by means of fastening screws 17 which pass through the shaft 16 and are screwed into the adjacent edge of the arm rest board 8 as shown in Figs. 4 and 7.

The ends of the shaft 16 are reduced in diameter and are encircled by helical torsion springs 18 whose outer ends are anchored in the bearing brackets 15 as at 19 and whose inner ends are suitably anchored to the shaft 16. Thus, the springs 18 tend to rotate shaft 16 for automatically swinging the arm rest board or plate 8 upwardly to a normal vertical inoperative position within the recess 10.

Rigidly attached to the outer surface of the mounting plate 12 so as to be disposed in the wall opening 9 are two pairs of vertically alined slide bearing brackets 20 in which are mounted vertical sliding latch bolts 21 which project upwardly through openings in the flange 14 of the mounting plate 12 and are arranged to enter keeper sockets 22 in the hinged pintle or shaft 16 when the latter is rotated to a position wherein the arm rest plate or board 8 is horizontally or operatively disposed. The latch bolts 21 are normally yieldingly projected upwardly to enter the sockets 22 by means of helical compression springs 23 encircling the bolts 21 between abutments 24 on the latter and the lower ones of the pairs of brackets 20. It is thus apparent that upon swinging the arm rest board 8 downwardly to a horizontal operative position wherein the same rests upon the flange 14 of the mounting plate 12 as shown in Fig. 5, the the bolts 21 will be automatically projected to retain the arm rest board in its lowered position against the action of the springs 18. It will also be apparent that upon depression or downwardly retracting movements of the bolts 21, the latter may be disengaged from the sockets 22, whereupon the arm rest board 8 will be immediately automatically swung upwardly to its inoperative position through the action of the springs 18.

Means is provided for effecting retraction of the latch bolts 21 from a point within the vehicle body, and such means preferably consists in a cross bar 25 engaging the latch bolt abutments 24 at its ends and having a rigid upwardly projecting plunger 26 intermediate its ends slidably engaged in the adjacent depending end of an elbow 27 fixed to the outer side of a flanged tubular guide 28 fastened to the inner side of the upper portion of mounting plate 12 between the bolts 21. The elbow 27 passes through an opening 29 in the mounting plate 12 and has a flexible sliding push element 30 mounted therein, such element preferably comprising a helical spring as shown in Fig. 7 having one end operatively engaged with the plunger 26 and its other end engaged with a stem of a push button 31 slidably mounted in the outer end of the tubular guide 28. In this way the push button 31 and the guide 28 are the only parts exposed at the interior of the vehicle body beneath the arm rest board 8, and by forcing the normally projected push button 31 into the guide 28 the push element 30 will be moved longitudinally to force the plunger 26 downwardly and thereby cause the cross bar 25 to depress and release the latch bolts 21. If desired the ends of the cross bar 25 may be suitably attached to the abutments 24 of the latch bolts and the plunger 26 may be separate from the cross bar 25 and provided with a shoe 32, shaped to partially fit and bear upon the cross bar 25 as indicated in Fig. 7.

Assuming that the arm rest board 8 is in its folded normal position as shown in Figures 1 to 3 inclusive, it is simply necessary to engage the upper free edge of the arm rest board and thereby cause the latter to swing downwardly to the horizontal position of Fig. 5 against the action of springs 18. As soon as the arm rest board reaches this horizontal position the latch bolts 21 will be automatically projected to enter the sockets 22 and hold the arm rest board lowered. When the arm rest is no longer required for use the same is caused to fold to its out-of-the-way inoperative position by simply pushing the push button 31 to effect release of the latch bolts 21 from the sockets 20, whereupon the springs 18 will swing the arm rest board 8 upwardly to the vertical position within the recess 10. It is thus apparent that the arm rest will be held out of the way by the springs 18 within the recess 10, and it is noted that the movement of the arm rest board to either an operative or inoperative position may be accomplished with ease and facility.

From the foregoing description it is believed that the construction and operation as well as the advantages of the present invention will be readily understood and appreciated by those skilled in the art.

While the present invention has been particularly illustrated and described in connection with its primary use as an arm rest for motor vehicles, it is nevertheless to be understood that the same is equally as well adaptable for other purposes, such as wall tables, shelves, and the like, such additional adaptations simply requiring a change in the form of the supporting element or rest member 8.

Minor changes may be made without departing from the spirit and scope of the invention as claimed.

What I claim as new is:—

1. An arm rest or the like including a vertical mounting plate, a supporting plate hinged on the top of said mounting plate for vertical swinging movement, yieldable means to normally swing said supporting plate upwardly to a vertical inoperative position, and a vertical upwardly spring-projected latch bolt mounted on the mounting plate and adapted to retain the supporting plate in a downwardly swung operative horizontal position, a tubular guide at the inner side of the mounting plate having a push button slidable therein, an elbow fixed to said tubular guide and extending through the mounting plate and terminating in a downwardly directed end, a flexible push element slidable in the elbow and engaged at one end by the push button, and means operatively connecting the other end of the push element with the latch bolt whereby the latter may be depressed for release upon pressing said push button.

2. In an arm rest or the like adapted for attachment to a wall having a recess therein, a vertically swinging arm rest mounted on the wall so as to swing into and out of the recess, means to support the arm rest in a horizontal operative position when swung out of the recess, yieldable means to normally swing the arm rest into said recess, a push button mounted on the inner side of said wall beneath the recess, and means releasable by the push button to retain the arm rest in its said operative position.

3. In an arm rest or the like adapted for attachment to a wall having a recess therein, a vertically swinging arm rest mounted on the wall so as to swing into and out of the recess, means to support the arm rest in a horizontal operative position when swung out of the recess, yieldable means to normally swing the arm rest into said recess, a push button mounted on the inner side of said wall beneath the recess, and means releasable by the push button to retain the arm rest in its said operative position, said wall having an opening beneath the recess, a mounting plate secured to the wall to cover the opening and having the arm rest hinged thereon, said arm rest retaining means embodying a spring projected latch bolt mounted on the mounting plate within said wall opening.

4. In an arm rest or the like adapted for attachment to a wall having a recess therein, a vertically swinging arm rest mounted on the wall so as to swing into and out of the recess, and means to support the arm rest in a horizontal operative position when swung out of the recess, yieldable means to normally swing the arm rest into said recess, a push button mounted on the inner side of said wall beneath the recess, means releasable by the push button to retain the arm rest in its said operative position, said wall having an opening beneath the recess, a mounting plate secured to the wall to cover the opening and having the arm rest hinged thereon, said arm rest retaining means embodying a spring projected latch bolt mounted on the mounting plate within said wall opening, said push button having a guide mounted on the mounting plate, a curved guide fixed to the push button guide, and a flexible push element in the curved guide operable by the push button and operatively associated with the latch bolt.

In testimony whereof I affix my signature.

PAUL WIESE.