June 20, 1939. L. C. RUSKA 2,162,749

SYSTEM OF AUTOMOBILE DOOR CONTROL

Filed Nov. 25, 1936

FIG. 1.

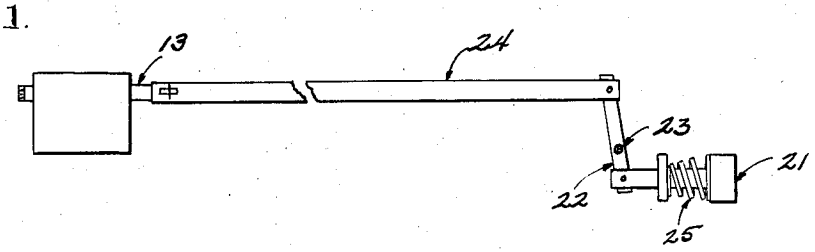



FIG. 2

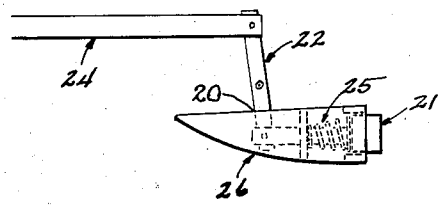



FIG. 3

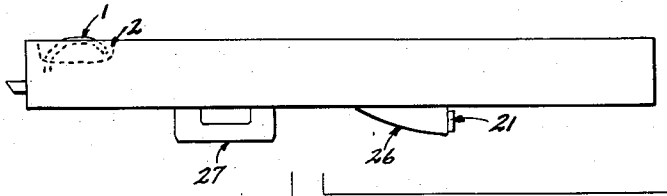
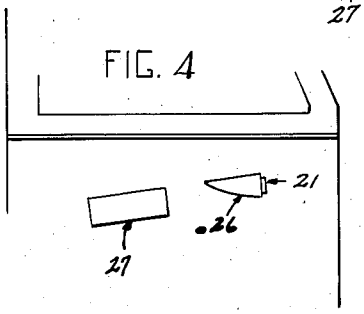



FIG. 4



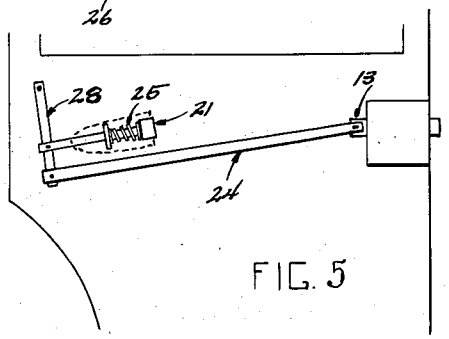




FIG. 5

INVENTOR

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Patented June 20, 1939 2,162,749

# UNITED STATES PATENT OFFICE

2,162,749

## SYSTEM OF AUTOMOBILE DOOR CONTROL

Leslie C. Ruska, Cicero, Ill.

Application November 25, 1936, Serial No. 112,697

4 Claims. (Cl. 296—44)

My system of automobile door control eliminates all the hazards and disadvantages of the common method of door control now in use.

The common door handle on the inside of the car has its serious disadvantages. They are generally placed where a person has to twist or reach to grasp it. Very often they were in a position where one would catch his clothing on them, especially the sleeves. With a car in motion this is a serious threat. We read many times of people being killed or seriously injured when they were thrown from a moving automobile when they accidentally fell against the door handle because of a sudden or unexpected brake application or when an accident occurred.

Housing my inside door control in a hand rest definitely prevents its accidental operation.

This is the simplest and decidedly the safest system of automobile door control I know of.

Fig. 1 illustrates the system of inside door control.

Fig. 2 shows how the plunger is housed in the hand rest.

Fig. 3 is a top plan view of a conventional automobile door illustrating the relative position of the arm or hand rest of my invention and the elbow rest.

Figs. 3 and 4 illustrate how the hand rest is placed on the door before and slightly above the elbow rest.

Fig. 5 shows the rear door hook-up. A similar hand rest is used.

As illustrated in Fig. 3, reference numeral 1 designates a conventional outside door handle for operating the door lock and which is retractable in the recess or well 2 of the door. The bevelled projecting end of the lock bolt is shown at the edge of the door in said figure.

Shown in Figs. 1 and 2, reference numeral 13 designates one end of a retractable latch bolt which forms part of a conventional automobile door lock which is shown only in outline form in Fig. 1. Reference numeral 26 designates a housing, preferably made of metal. Said housing 26 is illustrated as of substantially conical construction in the preferred form, but it is understood that it may assume any convenient shape, form or design other than that of the preferred form. Housing 26 has one open end and it is so mounted that said open end is toward the front of the door and of the vehicle of which the door is a part, and has a second intermediate slotted aperture in its inner wall portion to which one end of the lever or arm 22 is adapted to move. An apertured cross bar 20, extends across said housing in a substantially vertical direction and provides means for mounting slidable plunger 21, the reduced end of plunger 21 being slidable through the aperture of said cross bar 20. Said cross bar also provides means whereby a coil spring 25 is mounted about the reduced end of plunger 21, said cross bar holding one end of the spring 25 from longitudinal movement and in proper position. The opposite end of said spring engages a suitable angular shoulder formed at the juncture of the reduced portion of plunger 21 and the larger end thereof.

Reference numeral 22 designates an arm or lever fulcrumed at 23 on the vehicle door and intermediate its ends and having its lower end pivoted to the reduced end of the plunger 21. The opposite end of lever 22 is pivoted to one end of arm or connecting link 24 which connects said lever to the end of the retractable latch bolt, as clearly shown in Fig. 1.

Fig. 5 illustrates my method of inside door control. When plunger 21 is pushed in, it will push arm 22 which is pivoted at point 23, causing a pull on arm 24 that will pull back latch bar 13 and unlatch the door. Tension exerted by spring 25 returns plunger 21 to its normal position.

Figs. 2, 3 and 4 illustrate how the inside door control assembly is housed. The hand rest 26 is padded and upholstered to match the car interior and is placed in a comfortable position ahead of the elbow rest 27. The relative and spaced apart position of the elbow rest and the said hand rest is such as to permit convenient resting of the occupant's hand and elbow simultaneously and further permits operation of my door control while the arm is resting in usual position on the arm rest. The occupant's hand, normally resting on the hand rest, need not be twisted or substantially moved forward in order to actuate the control. Simply press plunger 21 in hand rest 26 and the door opens. Elbow rest 27 is also used to pull the door closed.

Fig. 5 illustrates the method of rear door control. The same hook-up is used with a slight difference in control arm assembly. When plunger 21 is pressed in, it pushes back arm 28 which is pivoted at its upper end to the door. This action carries back with it arm or connecting link 24, as before, to pull and retract back latch bar 13 to unlatch the door. Spring 25 returns plunger 21 to its original position as before. A padded hand rest, shown in dotted lines, covers the unit as in the front door. It is faced to the front of the car to prevent its accidental operation. Owing to its handy position there is no necessity of reaching or leaning forward in the rear seat to reach the door

handle. I believe this is a decided convenience and an additional safety factor.

This is decidedly a more streamlined, safer and more modern system of automobile door control than any now in use.

I claim:

1. An automobile door control device for operating a retractable door latch comprising a hollow hand rest of substantially conical cross section opening horizontally; a depressible plunger slidable longitudinally in said hand rest and normally projecting from one end thereof; a spring for normally returning said plunger, when depressed, to projected position; a lever fulcrumed adjacent said hand rest and having one end pivoted to said slidable plunger; a slidable door latch adapted to be secured to a door; a link pivotally connecting said latch and the other end of said lever, the depression of said plunger being adapted to retract said door latch.

2. In an automobile door control device, a retractable latch bolt, a housing of substantially conical shape and forming a hand rest attachable to a vehicle door, said housing opening forwardly; a depressible plunger slidably and longitudinally mounted in said hand rest; a spring in said hand rest for normally resisting the depressing movement of said plunger and to return said plunger to projected normal position; a lever fulcrumed adjacent said hand rest and having one end pivoted to said plunger; and a link connecting the other end of said lever and said retractable latch bolt, the depression of said plunger being adapted to retract said latch bolt.

3. An automobile door controlling device comprising a retractable and depressible latch bolt whereby said door may be opened and closed; a housing forming a hand rest having one open end and adapted to be attached on a vehicle door at a point remote from the lock thereof; a depressible plunger slidably mounted in said hand rest adapted to normally project therefrom; a spring in said hand rest for returning said plunger to normal and outermost position; means for mounting said slidable plunger and said spring in said hand rest; a lever adjacent said hand rest, having one end pivotally connected to said plunger and a connecting arm connecting the other end of said lever and said latch bolt, movement of said plunger being adapted to retract said latch bolt.

4. In a device of the described class for operating door latches, a metal housing having one end tapering to a reduced portion and having its other end open, said housing being adapted to be mounted on a door surface to form a hand rest; and a latch operator comprising a depressible plunger slidably mounted in said housing, a spring for normally projecting said plunger, and a lever arm fulcrumed intermediate its ends exteriorly of said housing and having one end pivoted to said plunger, and a link arm for connecting said lever arm to a retractable latch.

LESLIE C. RUSKA.