

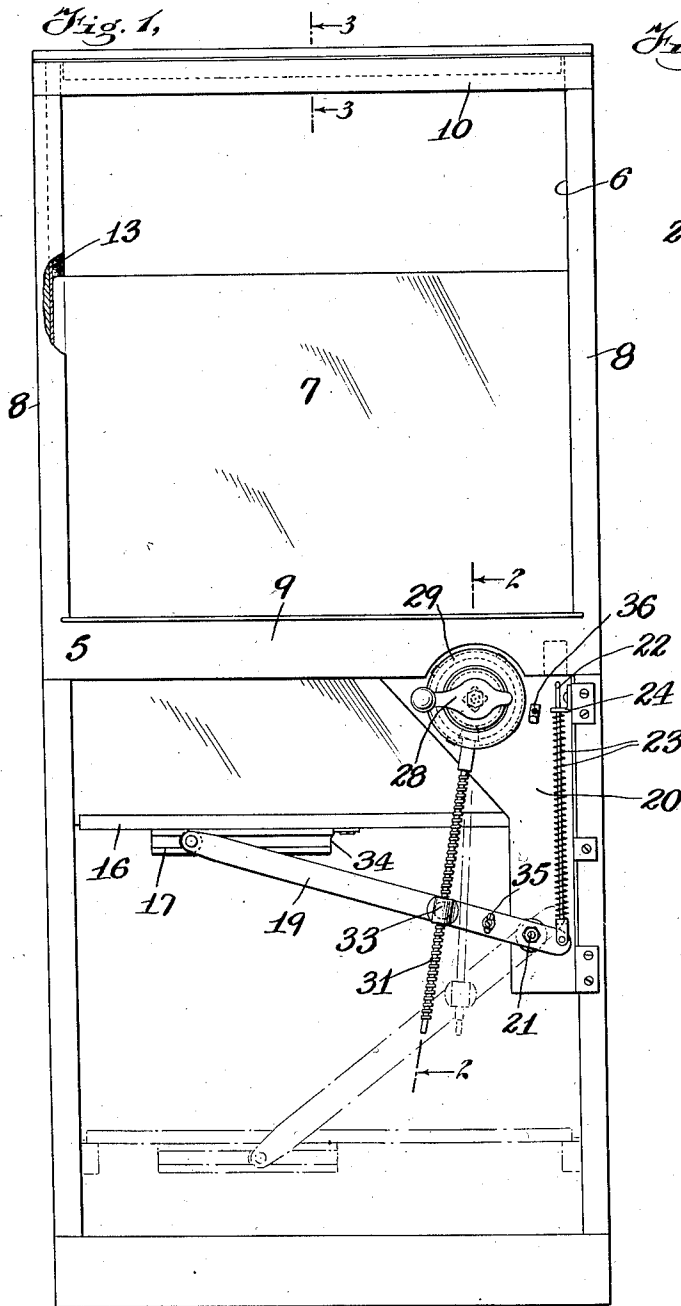
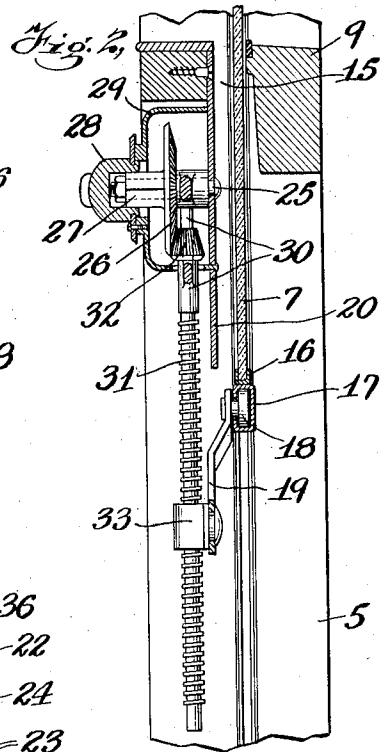
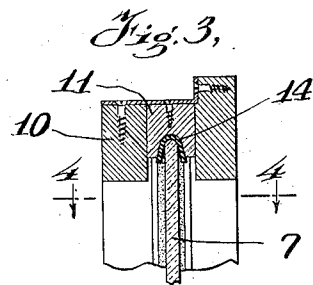
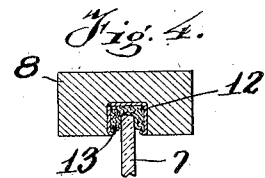
Nov. 24, 1925.

A. E. OLSEN

1,562,718

WINDOW MOUNTING AND OPERATING DEVICE FOR DOORS

Filed Aug. 12, 1922



Inventor

Anton E Olsen

By his Attorneys

Edgar Tate & Co.

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1,562,718

UNITED STATES PATENT OFFICE.

ANTON E. OLSEN, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO GEORGE M. REICHENBACH, OF NEW YORK, N. Y.

WINDOW MOUNTING AND OPERATING DEVICE FOR DOORS.

Application filed August 12, 1922. Serial No. 581,356.

To all whom it may concern:

Be it known that I, ANTON E. OLSEN, a citizen of the United States, and residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Window Mounting and Operating Devices for Doors, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to a window mounting and operating device for use in connection with the doors of motor vehicles, and the object of the invention is to provide a construction of the class described, which is designed to permit of the quick and easy insertion and removal of a window panel in the framework of a door; a further object being to provide improved means for operating said window panel, involving a pivoted lever cooperating with the window panel and provided with means for moving said lever in one direction against a compression spring; and with these and other objects in view, the invention consists in window mounting and operating means of the class and for the purpose specified, which is simple in construction, efficient in use, and which is constructed as hereinafter described and claimed.

The invention described and claimed herein is an improvement on that shown and described in a co-pending application, filed January 30, 1922, Ser. No. 532,603, and is fully disclosed in the following specification, of which the accompanying drawing forms a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which:—

Fig. 1 is an inside view of a motor vehicle door, showing a window panel mounted therein and the means for actuating said panel.

Fig. 2 is a partial section on the line 2—2 of Fig. 1 and on an enlarged scale.

Fig. 3 is a partial section on the line 3—3 of Fig. 1 and on an enlarged scale; and,

Fig. 4 is a partial section on the line 4—4 of Fig. 3.

In the drawing I have shown for the purpose of illustrating my invention, a motor vehicle door framework 5 provided at the top with a window opening 6 adapted to be

closed by a window panel 7 which is slidably mounted in the side rails 8 of the framework, and through a central rail 9 and the top of the rails 8 are joined by a rail 10, having a removable strip 11, and the inner faces of the rails 8 are of channel formation as shown at 12 and provided with suitable resilient packing material 13 while the inner face of the strip 11 is V-shaped in form and provided with a cushion facing 14. The central strip 9 is provided with an aperture 15 through which the panel 7 is movable and the bottom of the panel 7 or the lower edge thereof is provided with a metallic strip 16 carrying a track or runway 17, in which a roller bearing 18 on the free end of a lever 19 operates. The other end portion of the lever 19 is pivoted to an attaching plate 20 as shown at 21 and pivoted to the end of the lever is a rod 22, on which is mounted a spiral spring 23 which operates in connection with a seat 24 secured to the attaching plate 20.

The attaching plate 20 is mounted in connection with the door framework 5, and a pin or bolt 25 is mounted in connection with said plate, and on which is mounted a bevel gear 26 having a square extension 27 which enters a corresponding recess in a crank 28 rotatably mounted in connection with and held in engagement with a housing 29. A yoke 30 is mounted on the pin or bolt 25, and a screw shaft 31 is rotatably mounted in said yoke and is provided at its upper end with a bevel pinion 32, adapted to mesh with the gear 26 and said screw shaft passes through and is adapted to operate in an internally threaded block 33, pivotally mounted in connection with the lever 19.

One end portion of the track or runway is cut out as shown at 34 approximately centrally of the window panel to permit the disengagement of the bearing 18 from said track or runway when it is desired to remove the window panel 7.

In removing the window panel, the window is first raised to its uppermost position after which the strip 11 is removed from the top of the door framework, and the window is then pulled upwardly through the top of the door. The window may be replaced in the same manner by passing the window panel through the opening, which is closed by the strip 11 and it will be understood that the distinct advantage of this

construction will be in the manufacture and assemblage of the bodies of motor vehicles, it being apparent that the window panels thereof may be inserted at the last moment

5 when the car is ready for shipment, thus avoiding the breakage of such window panels, which is the present experience. It will also be understood that when the window panel is in its raised position and seated
10 against the facing 14 of the strip 11, that the metallic strip 16 is invisible or does not project above the central strip 9 of the framework.

In operating the window panel 7 to raise
15 and lower the same in the framework 5, it will be understood that when the window panel is in a raised position, the bearing 18 will be adjacent to the cut-away end 34 of the track or runway 17 and in lowering
20 the window to a fully open position, the roller bearing 18 moved outwardly in the track or runway 17, and then backwardly into substantially the same position assumed when the window is in a closed position, and
25 in the downward movement of the window panel, the spring 23 will operate to counterbalance the weight of the window to prevent the sudden dropping action of such window; while in the upward movement of
30 the window the compression of the spring will also operate to balance such window so that both movements of the window will be alike or substantially so. The lever 19 is also preferably provided with a hook-
35 shaped member 35, and the attaching plate 20 with a corresponding member 36, whereby another spring or springs may be employed in connection with the lever 19 if desired.

40 Another feature of my invention lies in the fact that the entire window operating mechanism, comprising the gear 26, pinion 32, shaft 31, lever 19, rod 22 and spring 23 is mounted in connection with and forms a
45 unit with the attaching plate 20, and this facilitates the mounting or assemblage of the operating device in connection with the door frame and while I have shown certain details of construction for carrying my in-
50 vention into effect, it will be understood that I am not necessarily limited to these details and various changes therein and

modifications thereof may be made within the scope of the appended claims, without departing from the spirit of my invention 55 or sacrificing its advantages.

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

1. A window operating device of the class 60 described, comprising an attaching plate, a lever pivoted to said plate, the free end of said lever being provided with an antifrictional device adapted to cooperate with the window panel to be operated, a block mov- 65 ably mounted in connection with said lever, a screw shaft in threaded engagement with said block, a bevel pinion at one end of said screw shaft, a bevel gear meshing with said pinion, a crank for rotating said bevel gear 70 to correspondingly rotate said screw shaft, a spring mounted in connection with said lever and said attaching plate for counterbalancing the window panel in the operation of raising and lowering the same, all 75 of said parts being mounted in connection with said attaching plate to form a unitary construction thereof.

2. A window operating device of the class described, comprising an attaching plate, a 80 lever pivoted to said plate, the free end of said lever being provided with an antifrictional device adapted to cooperate with the window panel to be operated, a block mov- 85 ably mounted in connection with said lever, a screw shaft in threaded engagement with said block, a bevel pinion at one end of said screw shaft, a bevel gear meshing with said pinion, a crank for rotating said bevel gear to correspondingly rotate said screw shaft, 90 a compression spring mounted in connection with said lever and said attaching plate for counterbalancing the window panel in the operation of raising and lowering the same, all of said parts being mounted in connec- 95 tion with said attaching plate to form a unitary construction thereof, and said gear and pinion being enclosed in a cup-shaped housing.

In testimony that I claim the foregoing 100 as my invention I have signed my name this 10th day of August, 1922.

ANTON E. OLSEN.