Jan. 12, 1932. H. THRUNE 1,840,753

AUTOMOBILE WINDOW SCREEN

Original Filed May 20, 1930 2 Sheets-Sheet 1

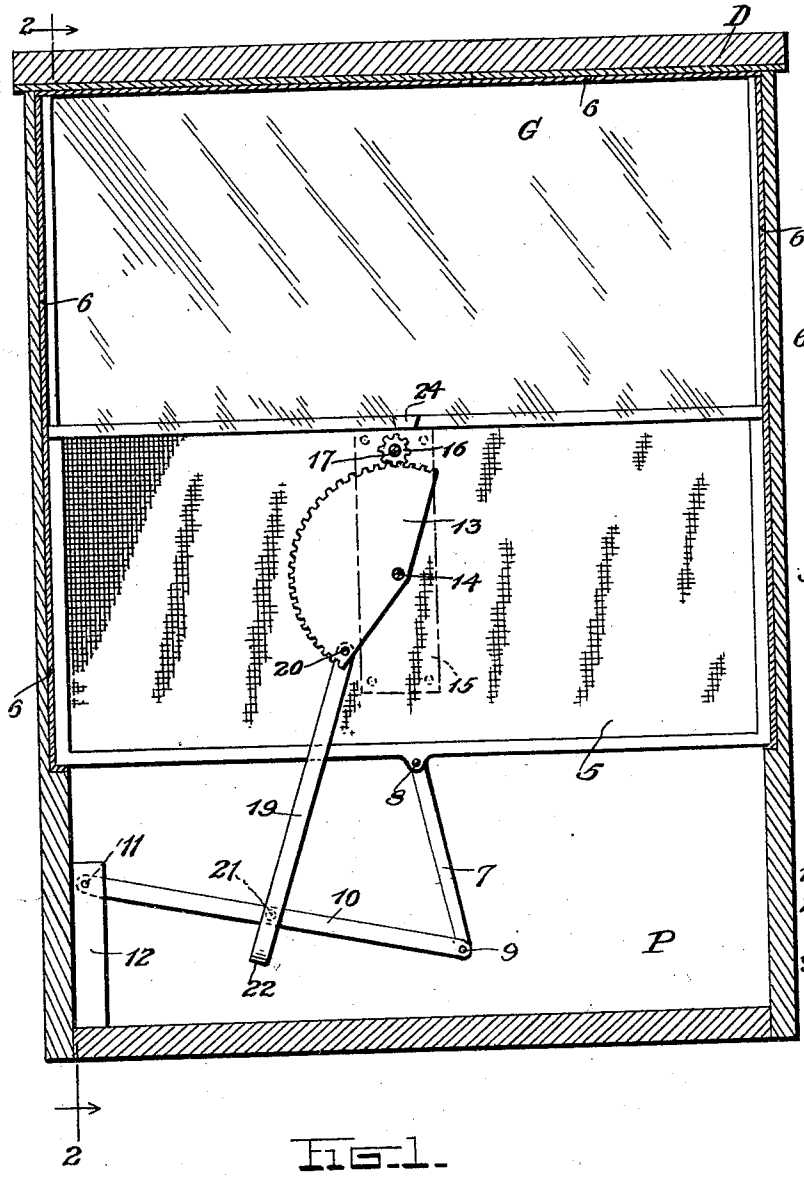


FIG. 1.

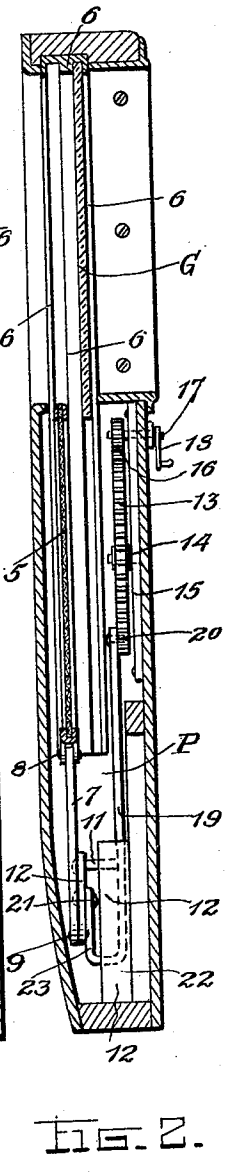


FIG. 2.

Inventor

Herbert Thrune

Witness

C. E. Hunt.

By A. B. Williamson & Co

Attorneys

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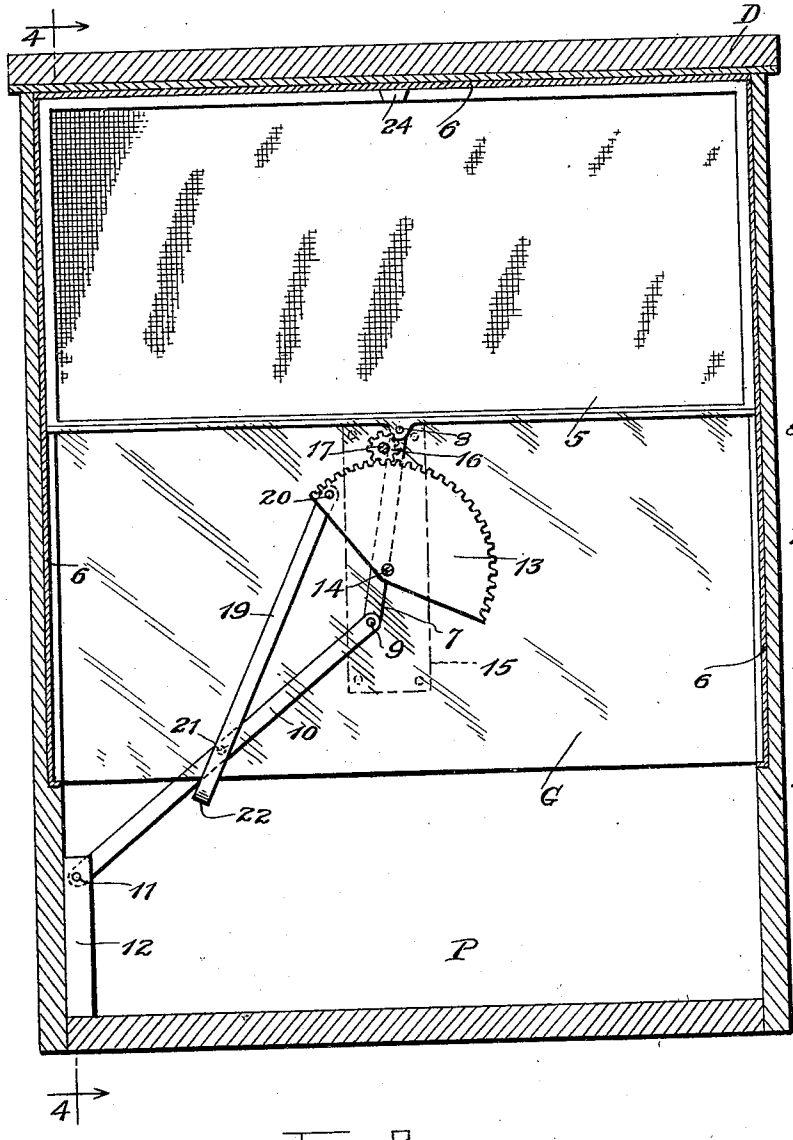


FIG. 3.

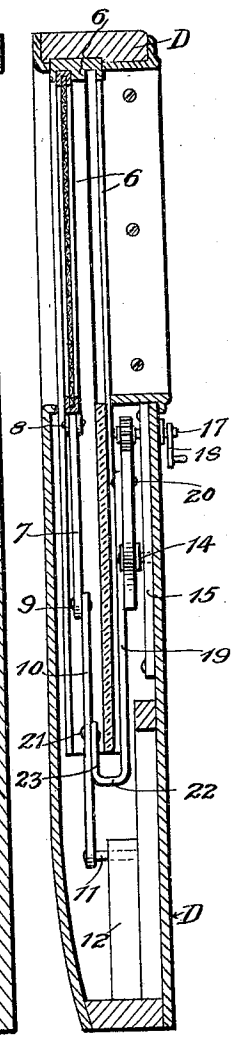


FIG. 4.

Inventor
Herbert Thrune

Witness
C. E. Hunt.

By H. B. Williamson & Co
Attorneys

Patented Jan. 12, 1932 1,840,753

UNITED STATES PATENT OFFICE

HERBERT THRUNE, OF WINONA, MINNESOTA

AUTOMOBILE WINDOW SCREEN

Application filed May 20, 1930, Serial No. 454,048. Renewed October 20, 1931.

The invention aims to provide an exceptionally simple and inexpensive, yet an efficient and desirable screen and operating means therefor, constituting either a built-in portion of or an accessory to an automobile door, for the purpose of excluding insects and preventing any foreign matter from entering the machine when any window glass is lowered.

With the foregoing in view, the invention resides in the novel subject matter hereinafter described and claimed, description being accomplished by reference to the accompanying drawings.

Fig. 1 is a vertical sectional view looking from the inner toward the outer side of a door equipped with my invention, the screen being shown in lowered position and the window glass raised.

Fig. 2 is a vertical sectional view on line 2—2 of Fig. 1.

Fig. 3 is a view similar to Fig. 1 but illustrating the glass lowered and the screen raised.

Fig. 4 is a vertical sectional view on line 4—4 of Fig. 3.

A conventional automobile door D is illustrated having the usual hollow lower portion P into which the window glass G is slidable and from which it is projectable. This glass is of course provided with any of the well known operating mechanisms forming no part of the present invention, and not therefore shown.

Mounted at the outer side of the glass G for movement vertically into and from the door portion P, is a window screen 5, the edges of the screen and the edges of the glass G being engaged either with dual guides 6 of felt or the like, or with separate guides. A substantially vertical link 7 is pivoted at its upper end to the central portion of the screen 5, at the lower edge of the latter, the pivot being denoted at 8. The lower end of link 7 is pivoted at 9 to one end of a vertically swingable lever 10, the other end of this lever being fulcrumed at 11 to a wooden post 12 or to other desired support within the lower portion P of the door. The screen 5, link 7 and lever 10 are all outwardly spaced from the plane in which the glass G is movable, and actuating means for said parts, is disposed primarily in inwardly spaced relation with said plane.

A gear segment 13 is pivotally mounted at 14 upon a supporting plate or the like 15 which is suitably secured to the door. An operating pinion 16 meshes with the gear segment 13 and is carried by the outer end of a short shaft 17 which is rotatably mounted in an opening through the plate 15, the inner end of said shaft being provided with a hand crank 18. A second substantially vertical link 19 is pivoted at its upper end to the segment 13, as shown at 20. While the major portion of this link is inwardly spaced from the plane in which the glass G is movable, the lower end of said link is outwardly offset below the zone in which said glass is movable, the offset link end being pivoted at 21 to the lever 10, at a point between the ends of the latter. In the construction herein illustrated, the lower end of link 19 is bent laterally outward at 22 and is then bent upwardly at 23, the terminal 23 being pivoted (at 21) to the lever 10.

When the glass G is lowered, the screen 5 may be raised to prevent the entrance of insects, pebbles or other foreign matter and to prevent small children from possibly falling from the machine. By simply operating the crank 18, the screen may be quickly and easily raised or lowered as required. The upper edge of the screen may be provided with an appropriate bumper 24 which serves the function of preventing it from rattling. This bumper is preferably of such shape as to become wedged when the screen is lowered.

It will be seen from the foregoing that exceptionally simple and inexpensive provision has been made for carrying out the objects of the invention. While the details herein disclosed are preferably followed, on account of the existing advantages, it is nevertheless to be understood that within the scope of the invention as claimed, minor variations may be made.

I claim:—

1. In an automobile door having a window glass slidable into and from the lower por-

tion of the door, a screen at the outer side of said glass mounted to slide into and from said lower portion of the door, a link directly pivoted to and extending downwardly from said screen, a vertically swingable lever having one of its ends directly pivoted to the lower end of said link, means fulcruming the other end of said lever within the door, said fulcrum means being stationary with respect to said screen both link and lever being outwardly spaced from the plane in which said glass is movable, a gear segment mounted within the door, a crank-equipped operating pinion mounted in mesh with said segment, and a second link directly pivoted to and extending downwardly from said segment, the latter, the pinion and the major portion of said second link being all spaced inwardly from the plane in which said glass is movable, the lower end of said second link being offset outwardly below the zone of movement of said glass and directly pivoted to said lever at a point between the ends of the latter.

2. In an automobile body having a window glass slidable into and from a pocket, a screen at the outer side of said glass mounted to slide into and from said pocket, a link directly pivoted to and extending downwardly from said screen, a vertically swingable lever having one of its ends directly pivoted to the lower end of said link, means fulcruming the other end of said lever within said pocket, said fulcrum means being stationary with respect to said screen both link and lever being outwardly spaced from the plane in which said glass is movable, a gear segment mounted within the door, a crank-equipped operating pinion mounted in mesh with said segment, and a second link directly pivoted to and extending downwardly from said segment, the latter, the pinion and the major portion of said second link being all spaced inwardly from the zone in which said glass is movable, the lower end of said second link being bent laterally outward below the plane of movement of said glass and being then bent upwardly and directly pivoted to said lever at a point between the ends of the latter.

In testimony whereof I affix my signature.

HERBERT THRUNE.