May 15, 1951 J. WALTERS 2,553,023

AUTOMATIC DOOR OPENER

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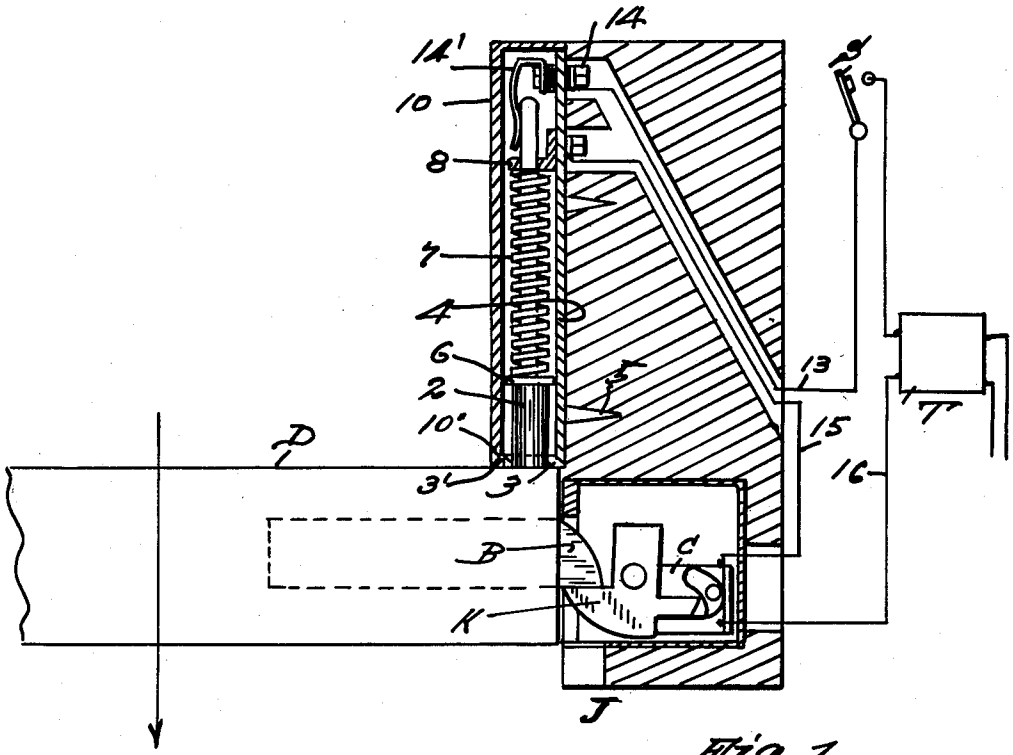


Fig. 1.

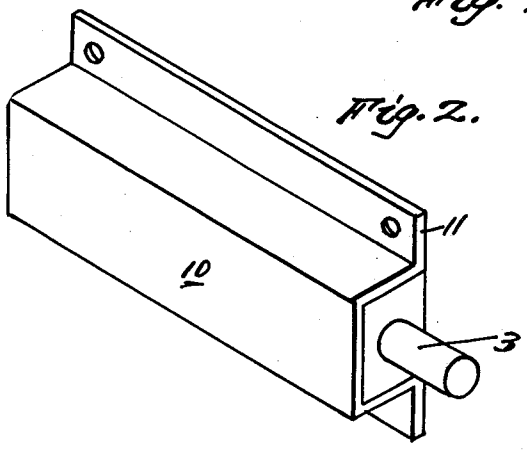


Fig. 2.

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AUTOMATIC DOOR OPENER

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1 Claim. (Cl. 268—71)

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In dwellings and other institutions swinging doors are provided with spring bolts which snap into keepers and in many cases electric buzzers control bolt releasing dogs. When the dog of such a lock is released by action of the buzzer the door and its usual bolt can be opened as to the relative door jamb; the noise of the buzzer indicating that the bolt has been released by the dog and that the door may be opened.

This invention is a means to automatically open the door to a considerable degree as soon as it is released by the electrical control; that is as soon as the dog can be repressed by the automatic means to allow the door bolt to clear the keeper.

It is an object of the invention to provide a simple, practical, self-acting mechanism for instantly opening the released door to a desired degree from the keeper jamb.

A further object of the invention is to provide a reliable and inexpensive, readily installed door pusher.

Also, an object of the invention is to provide in combination with a door release buzzer and its circuit, a door opening device including a circuit breaking means to stop operation of the buzzer as the door is automatically opened.

Additionally, an object of the invention is to provide a self-acting door opener which is energized and held in ready position by the controlled door.

The invention resides in certain advancements in this art as set forth in the ensuing disclosure and having, with the above, additional objects and advantages as hereinafter developed, and whose constructions, combinations and details of means and the manner of operation will be made manifest in the following description of the herewith illustrative embodiment; it being understood that modifications, variations and adaptations may be resorted to within the scope, spirit and principles of the invention as it is claimed in conclusion hereof.

Figure 1 is horizontal, longitudinal section of the installed door pusher; in combination with a buzzer and its circuit.

Figure 2 is a perspective the assembled unit, per se.

A hinged door D is shown as having a common spring bolt B in door locking position with respect to a buzzer controlled, pivoted dog or keeper K; the coils of the buzzer being indicated at C. When the buzzer is energized the keeper is released and the door can be pulled open from its jamb.

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The instant invention includes a substantial rod 2 supported at its front end in a lateral bearing 3 forming a part of a bed plate 4 fastened by screws 5 to the near face of the door jamb J, in which the buzzer is mounted. The rod has a shoulder 6 seating one end of a substantial expansion spring 7 whose opposite end rests on a bearing lug 8, for the rod, fixed to the plate 4.

The push rod device is protected and concealed in an appropriate housing 10 having longitudinal flanges 11 to rest on the face of the jamb and be screwed thereto (inwardly from the closed door).

The dog or keeper K is constantly pressed to effective position (Fig. 1) and when the door is closed its bolt snaps past the keeper and represses the yieldable push rod 2 and therefore energizes the spring 7.

The circuit of the buzzer C includes a remote manual switch S and means are provided to break the buzzer circuit as the energized buzzer frees the keeper K at the instant the push rod 2 becomes effective by action of its impelling spring 7. Therefore, a conductor 13 runs from the switch to a binding post 14 of an insulated spring brush 14' fixed on the base plate 4. A wire 15 is grounded on the plate 4 and connects to the buzzer coil C from which extends a feeder wire 16 to the transformer T supplying current to the switch.

From the above it will be seen that the person waiting at the door will not have to initiate opening of the door when the buzzer sounds its signal and at the same time frees the dogging keeper K since this instant, automatic door pushing rod comes into action at the instant that the keeper K is free and forces the swinging edge of the door out from the jamb J. Conversely, when the door is pushed back to closed position its momentum or manually applied pressure will not only snap the door bolt past the keeper but will also compress the rod spring 7 in readiness for a later opening operation.

The housing 10 has a small socket 10' to receive a registering pin 3' projecting from the bearing 3.

The push rod may be located at any desired position in the jamb as to the height of the door; that is it does not have to be at the horizontal plane of the keeper K.

What is claimed is:

A unitary article of manufacture consisting of an automatic, electric door opener including a longitudinal bed plate applicable to a door jamb and having electric circuit terminals on its rear face and one of which is insulated, an integral

bearing lug bent up at a right angle on one end of the plate and inner bearing lug rigid with and on the plate and adjacent its rear end, a push rod slidably mounted in said lugs and having a stop shoulder for engaging the first named lug to stop outward stroke of said rod, a spring compressed between one of said lugs and said shoulder and operative to press the rod outward from a repressed position effected by a closed, relative door, a yieldable electrical contact finger rearward of the inner lug and fixed to the insulated terminal on said plate and electrically engageable by the repressed rod, and a housing having a front open end and wholly enclosing the operational parts rearward of the first named lug and in which housing said plate is sunk flush to close the back of the housing; said terminals being on the outer face of the plate to facilitate bodily installation of the unit and said front lug forming the closure for the front end opening of the housing.

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