S. E. GILLENTINE.

DOOR OPENER.

APPLICATION FILED JUNE 22, 1915.

Patented Feb. 15, 1916.

1,172,205.

Fig 2

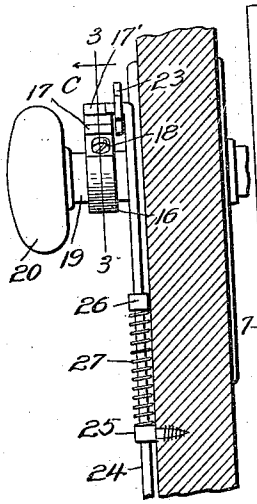


Fig 1

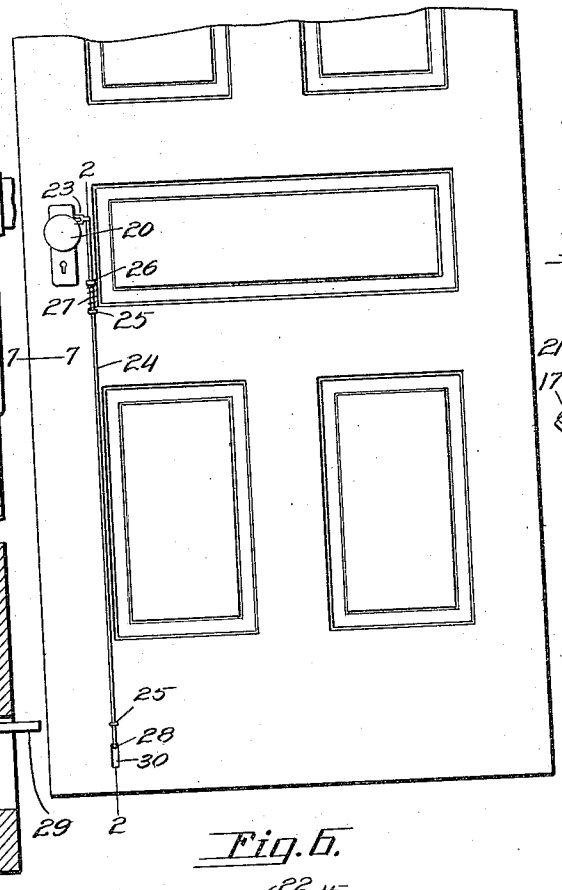


Fig. 3.

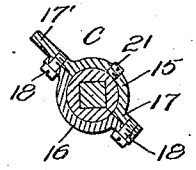


Fig. 4.

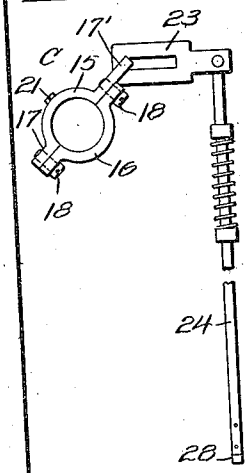


Fig. 5.

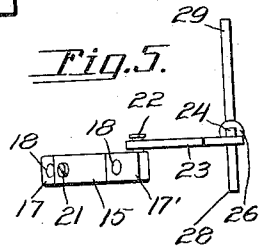


Fig. 6.

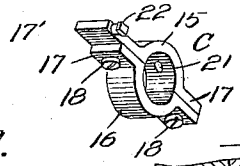


Fig. 7.

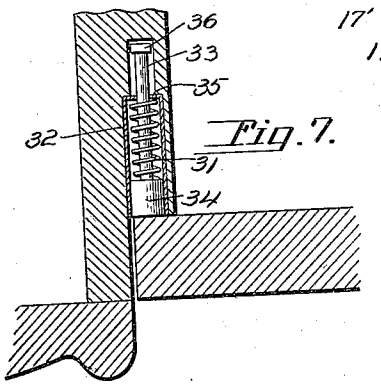
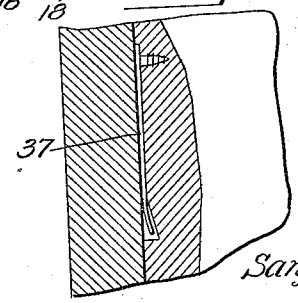


Fig. 8.



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UNITED STATES PATENT OFFICE.

SANFORD E. GILLENTINE, OF ANGUILLA, MISSISSIPPI.

DOOR-OPENER.

1,172,205. Specification of Letters Patent. Patented Feb. 15, 1916.

Application filed June 22, 1915. Serial No. 35,658.

To all whom it may concern:

Be it known that I, SANFORD E. GILLENTINE, a citizen of the United States, residing at Anguilla, in the county of Sharkey and State of Mississippi, have invented new and useful Improvements in Door-Openers, of which the following is a specification.

This invention relates to door opening devices, and it has for its object to produce a simple and effective device which may be readily applied to an ordinary door for the purpose of releasing the door latch by foot pressure instead of by manipulation of the door knob, thus enabling a door to be conveniently opened by a person who is carrying a load or whose hands are otherwise engaged.

A further object of the invention is to produce a simple and effective device of the class described which will enable the door to be opened from either side.

A further object of the invention is to produce a device of the character described which may be conveniently applied to any ordinary door without disfiguring the same.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claim.

In the accompanying drawing has been illustrated a simple and preferred form of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the claim may be resorted to when desired.

In the drawing,—Figure 1 is a front view showing a door to which the invention has been applied, parts having been broken away. Fig. 2 is a vertical sectional view, enlarged, taken on the line 2—2 in Fig. 1. Fig. 3 is a vertical sectional view taken on the line 3—3 in Fig. 2. Fig. 4 is a detail view showing the clamping collar and the operating rod detached, in front elevation. Fig. 5 is a top plan view of the parts seen in Fig. 4. Fig. 6 is a perspective rear view of the clamp. Fig. 7 is a sectional detail view taken on the line 7—7 in Fig. 1 to illustrate the door actuating spring. Fig. 8 is a sectional detail view illustrating a modified form of the spring.

Corresponding parts in the several figures are denoted by like characters of reference.

The improved device comprises a clamping collar C composed of two approximately semi-circular members 15, 16 each having laterally extending terminal lugs 17 for the passage of connecting members, such as screws 18, whereby the collar may be clamped on the shank 19 of an ordinary door knob 20. One of the members of the collar is provided with a set screw 21 which may be tightened upon the shank 19 for the purpose of positively preventing rotation of the clamp after the same has been properly adjusted.

One of the lugs of the member 15, which is especially designated by 17′, is somewhat elongated and is provided on its rear face with a headed stud 22 engaged by a fork 23 which is carried at the upper end of a rod 24 mounted slidably on the door, said rod being supported by screw eyes 25. The rod 24 is provided with a flange 26 between which and one of the screw eyes 25 is placed a spring 27, whereby the rod is normally pressed in an upward direction. The lower end of the rod has a toe piece 28 extending forwardly with respect to the door. A second toe piece 29 is adapted to be detachably connected with the rod adjacent to the lower end of the latter, said last mentioned toe piece being adapted to extend through a slot 30 in the door in order that the rod may be depressed against the tension of its actuating spring by a person approaching the door from either side.

For the purpose of forcing the door open when unlatched a spring 31 is provided, said spring being coiled in a tubular housing 32 about the stem 33 of a follower 34, which latter under the tension of the spring is adapted to project beyond one end of the housing, the other end of the housing being provided with a closure 35 perforated for the passage of the stem 33, and the latter being provided with a terminal bottom 36 to prevent disassemblage of the parts. The housing 32 may be fitted in a suitable recess in the door frame, as best seen in Fig. 7, in such position that the follower will press against the door when the latter is closed, so that when the door is unlatched the spring pressed follower will have a tendency to swing the door open.

A more simple form of the door actuating spring is illustrated in Fig. 8, where a leaf

spring 37 of suitable construction is fitted in the door jamb to press against the rear edge of the door, tending to swing the same open when unlatched. The form of the door opening spring or spring device may be varied indefinitely within the scope of the invention.

From the foregoing description taken in connection with the drawing hereto annexed, the operation and advantages of this invention will be readily understood. It will be seen that the door opening appliance may be very easily installed on any ordinary door that is provided with a lock having a spring actuated latch and a knob for actuating the same. When thus applied a simple pressure by the foot of the operator on the toe piece of the rod 24 will rotate the knob shank about the axis, thus actuating the latch in the customary manner, and as soon as the door has been unlatched, the spring device will serve to swing it open. The spring device also constitutes a buffer or anti-slam device to take up the shock when the door is forcibly shut.

Having thus described the invention, what is claimed as new, is:—

The combination with a door having a latch actuating knob provided with a shank, of a clamp mounted on said shank, said clamp being provided on the rear face thereof with a headed stud, a vertically movable spring actuated rod slidably supported on the door and having a fork engaging the headed stud, and a toe piece at the lower end of said rod.

In testimony whereof I affix my signature in presence of two witnesses.

SANFORD E. GILLENTINE.

Witnesses:

J. T. FARRAR,

P. Y. SANFORD.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."