D. W. SMITH.

DOOR OPENER.

APPLICATION FILED APR. 10, 1917.

1,244,910.

Patented Oct. 30, 1917

Fig. 1

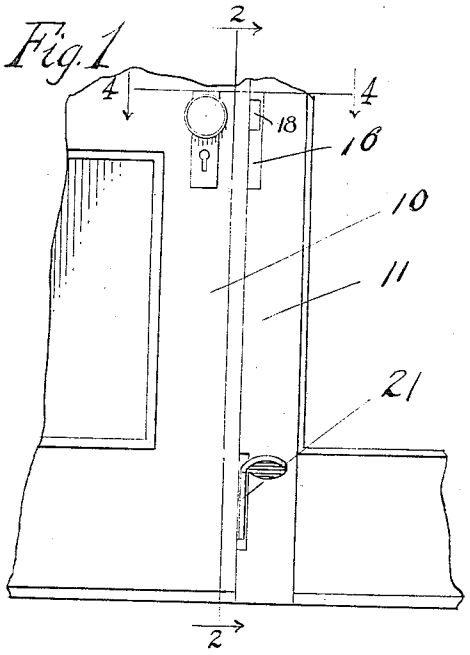


Fig. 2

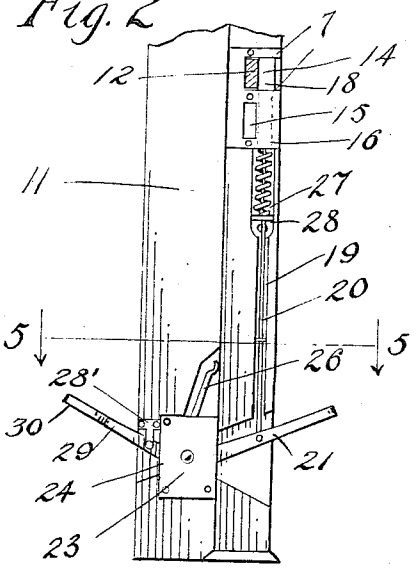


Fig. 3.

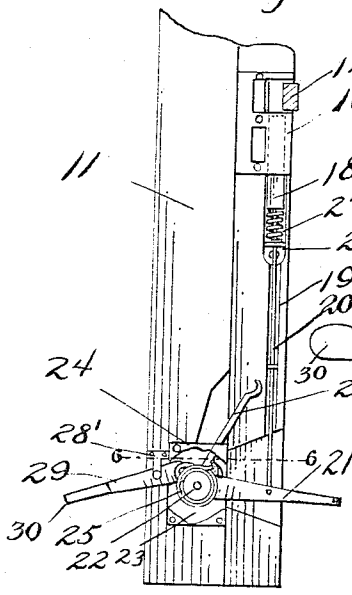


Fig. 4.

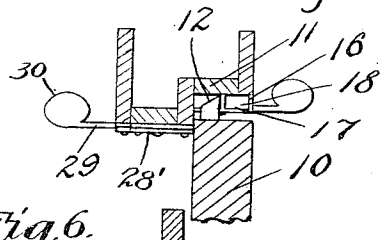


Fig. 6.

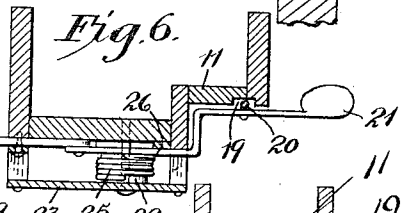
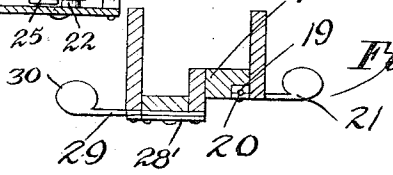


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

DUNCAN W. SMITH, OF IMPERIAL, SASKATCHEWAN, CANADA.

DOOR-OPENER.

1,244,910. Specification of Letters Patent. Patented Oct. 30, 1917.

Application filed April 10, 1917. Serial No. 161,088.

To all whom it may concern:

Be it known that I, DUNCAN W. SMITH, a citizen of Canada, residing at Imperial, in the Province of Saskatchewan, Dominion of Canada, have invented certain new and useful Improvements in Door-Openers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in devices for opening doors without the use of the hands.

One object is to provide a novel and efficient device of this character whereby a person can depress a pedal with the foot and simultaneously release the latch bolt of the door and cause the door to swing into open position.

Another object is to provide a device of this character which can be easily applied to any of the ordinary doors now in use.

Another object is to provide a device of this character whereby the same operation as referred to above can be applied from either side of the door for the purpose of opening the same.

Other objects and advantages will be apparent from the following description when taken in connection with the accompanying drawing.

In the drawing:

Figure 1 is a front elevation of a portion of a door and frame showing my invention applied thereto.

Fig. 2 is a vertical sectional view taken on the line 2—2 of Fig. 1, showing the parts in normal position and the door closed.

Fig. 3 is a similar sectional view showing the parts in the position assumed when the foot lever or pedal has been depressed, the casing being partly broken away.

Fig. 4 is a horizontal sectional view taken on the line 4—4 of Fig. 1.

Fig. 5 is a sectional view taken on the line 5—5 of Fig. 2.

Fig. 6 is a horizontal sectional view taken on the line 6—6 of Fig. 3.

Referring particularly to the accompanying drawing 10 represents a portion of the free edge of a door and 11 the portion of the frame with which the said door edge engages, when in closed position. The door is provided with the usual latch bolt 12 and lock bolt (not shown) which are arranged to engage in the openings 14 and 15, respectively of the strike plate 16, which is secured to the frame 11. This strike plate has its outer portion formed into a vertical tube 17, in which slides a member 18. It will be noticed that the opening in the strike plate which receives the latch bolt is open through the forward or outer edge of the plate, whereby when the said member 18 is drawn downwardly below this opening the said latch bolt will be free to pass through this outer portion of the opening and permit the opening of the door without the necessity of turning the knob thereof.

In the door frame, and extending vertically from the strike plate to the bottom or sill thereof, there is formed a rabbet 19 in which is disposed a vertical rod 20 connected at its upper end to the said member 18, and at its lower end to a lever or pedal 21. This pedal is secured to a drum 22 which is mounted in a casing 23 secured in a recess 24 in the face of the door frame, and just inwardly of the point where the edge of the door strikes. This drum is provided with a coil spring 25 which normally turns the drum in such position that the pedal extends upwardly and outwardly between the edge of the door and the frame. By depressing this pedal, with the foot, the member 20 will be pulled downwardly so as to withdraw the member 18 below the latch bolt opening in the strike plate.

Also secured to the drum, and bearing lightly against the inner face of the door, is a bowed spring member 26. When the drum is turned by the depression of the pedal this spring will be pressed forcibly against the door, so that when the member 18 moves into a position below the latch bolt opening of the strike plate, the door will be pushed open by the pressure of the said spring 26. Thus, to open the door, it is only necessary to depress the pedal, when the latch bolt will be released and the door quickly and positively pushed into open position.

To assist in returning the parts to normal position there is disposed on the rod 20 a coil spring 27 which bears against the lower end of the member 18, and against a small bracket 28 mounted on the door frame, below the strike plate.

Mounted on the face of the door frame, at the other side of the casing of the drum, is a bracket 28′, on which is pivotally sup-

ported a second pedal lever 29, said lever having its inner end pivotally connected to the adjacent side of the drum, and its outer end provided with a foot piece 30. Thus when this lever 29 is depressed the drum will be rotated in the same direction as that in which the first pedal lever rotates it, thereby withdrawing the member 18 from engagement with the latch bolt and forcing the bowed spring 26 against the door to push the same into open position.

It will, of course, be understood that either or both of these pedal levers may be used, as desired. The device is especially useful in connection with doors which lead from pantries to kitchens or from kitchens to dining rooms, when the person who wishes to open the door has both hands occupied with culinary articles or food dishes.

What is claimed is:

1. The combination with a door and frame having a strike plate formed with an open ended slot for the reception of the latch bolt of the door, of a resiliently held rotatable member, a foot lever carried by said member for rotating the same, a slidable member arranged to normally hold the latch bolt in said slot, and connections between the slidable member and the foot lever for moving said slidable member out of engagement with the said bolt.

2. The combination with a door and frame having a strike plate formed with an open ended slot for the reception of the latch bolt of the door, of a resiliently held rotatable drum mounted on the frame and provided with a foot lever arranged to be depressed to turn the drum, a member slidably carried by the strike plate and normally disposed in position to hold the latch bolt in the slot, a link connected to the said member and to the foot lever, and a resilient arm carried by the drum and arranged to press the door into open position when the slidable member is disengaged from the latch bolt.

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

DUNCAN W. SMITH.

Witnesses:

WILLIAM GUTTON,

O. D. JOHNSON.