K. I. BRONSON.

DOOR OPENER.

APPLICATION FILED APR. 20, 1908.

918,730. Patented Apr. 20, 1909.

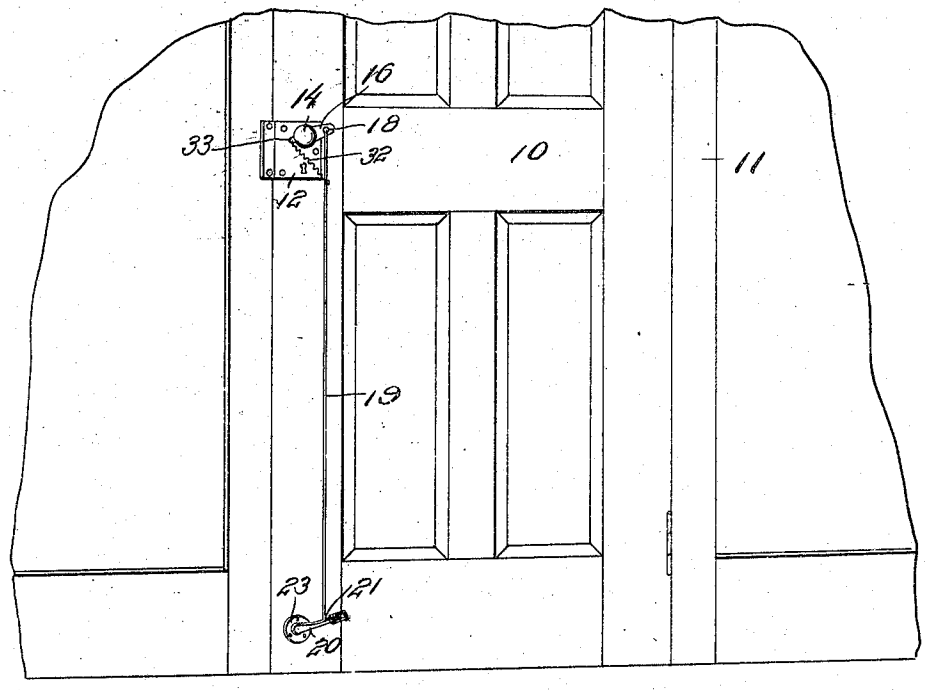


Fig. 1.

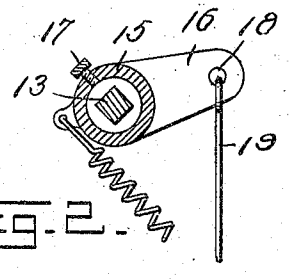


Fig. 2.

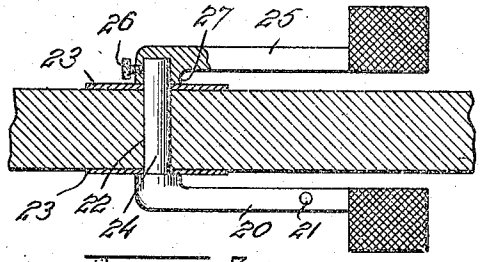


Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

KIMBELL I. BRONSON, OF RICE LAKE, WISCONSIN.

DOOR-OPENER.

No. 918,730. Specification of Letters Patent. Patented April 20, 1909.

Application filed April 20, 1908. Serial No. 428,189.

To all whom it may concern:

Be it known that I, KIMBELL I. BRONSON, a citizen of the United States, residing at Rice Lake, in the county of Barron and State of Wisconsin, have invented certain new and useful Improvements in Door-Openers, of which the following is a specification.

The present invention relates to that class of devices known as door openers, and more especially to those which are adapted to be operated by the foot.

An object of this invention is the provision of door opening means which may be readily applied to or detached from a door latch.

A further object is the adapting of the opener to doors of various thicknesses while enabling manipulation of the opener on both sides of the door.

The invention has for a still further object the provision of a door opener of this class in which a spring is utilized for the purpose of operating the same in lieu of the cumbersome weights now employed in devices of this character.

Other objects and advantages will be apparent from the following description, and it will be understood that changes in the specific structure shown and described may be made within the scope of the claim, and that any suitable materials may be used without departing from the spirit of the invention.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a side elevational view of an embodiment of the present invention illustrated as applied to an ordinary door, Fig. 2 is a transverse, vertical section through the latch spindle sleeve detached, connected parts being seen in elevation, Fig. 3 is a top plan view of the foot levers.

Referring to the drawings, 10 represents a door of any ordinary construction which is hung in the common frame 11. An ordinary latch lock 12 is attached in the usual manner to the door 10, the ordinary spindle 13 extending outwardly from the latch and being provided on its ends with knobs 14. Upon the spindle 13, a sleeve 15 is secured preferably by means of a set screw 17 in such a position that the projection or crank arm 16 extending therefrom will extend at the proper angle with respect to the mechanism hereinafter described. The arm 16 is formed, at its free extremity, with an eye 18 in which is secured a depending connecting rod 19. The lower end of the rod 19 is secured to a foot lever 20 through an eye 21. Obviously the connections of rod 19 are sufficiently loose for permitting the necessary movement of the rod during operation. The lower portion of the door is apertured, as at 22, the ends of which aperture are preferably protected by escutcheons 23, which latter serve as bearing for a spindle or shaft 24 extending through the aperture 22. The lever 20 is connected to one end of the spindle 24 and the opposite end of said spindle is connected to a lever 25, similar in construction and arrangement to lever 20, the levers 20 and 25 being thus arranged on opposite sides of the door, and each being provided with a treadle of any suitable type extending laterally from the door in position for being engaged by the foot of the operator.

In order to enable adjustment of the structure with respect to the thickness of the door, the lever 25 is bored transversely for the reception of the spindle 24, and the said spindle is slidingly extended through such bore and retained adjustably in position by a set screw 26 threaded through the end of the lever 25 into engagement with the spindle. The end of the lever 25 which engages the spindle 24 is shouldered, as at 27, for forming a stop adapted to contact with the respective escutcheon 23 for preventing binding of the parts when the levers are applied to a door. One end of a spring 32 is connected, as at 33, to the sleeve 15 while its opposite end is secured to the connecting rod 19 for the purpose of raising the foot levers to their normal position, when freed after operation. It is thus seen that a device of this construction can easily and readily be applied to any ordinary door.

The operation of the device is as follows:— When it is desired to open the door, one of the foot levers is depressed by the foot of the operator, whereby the connecting rod 19 is caused to draw downwardly the free end of the arm 16 and whereby the spindle 13 is partly revolved and the latch withdrawn. A lateral movement of the foot on the foot lever will cause the door to open.

What is claimed is:—

In a detachable door latch opener, the combination with a pair of spaced foot levers and a connecting rod secured at the lower end to one of said foot levers of a sleeve adjustably positioned upon the spindle of a

door latch, a laterally extended arm carried by said sleeve and pivotally connected to the opposite extremity of said connecting rod, a second arm disposed on said sleeve diametrically opposite to said first arm and a spring secured to the outer extremity of said arm and to a point on said connecting rod spaced from the upper end thereof for the purpose of expanding said spring from each end to effect an expansion proportionately double to the distance through which the said second arm rotates.

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

KIMBELL I. BRONSON.

Witnesses:

ODEN BRONSON,

ALFRED BRONSON.