

A. S. FLOWERS.
DOOR OPENING DEVICE.
APPLICATION FILED MAY 9, 1908.

934,153.

Patented Sept. 14, 1909.

2 SHEETS—SHEET 1.

FIG. 1.

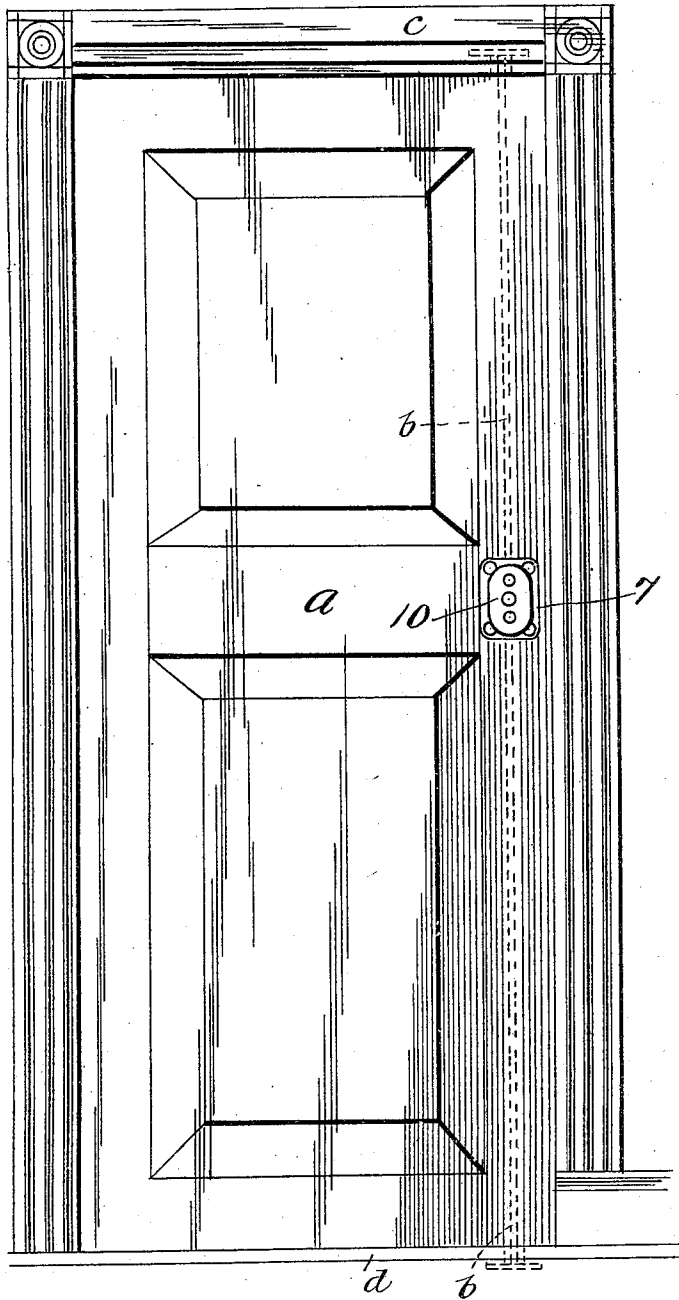
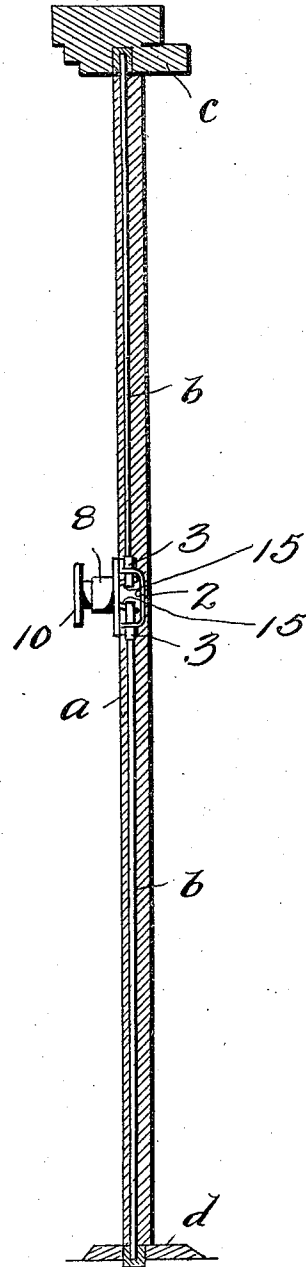


FIG. 2.



WITNESSES
Chas. H. Davis

Myron L. Clear

INVENTOR

Addison S. Flowers

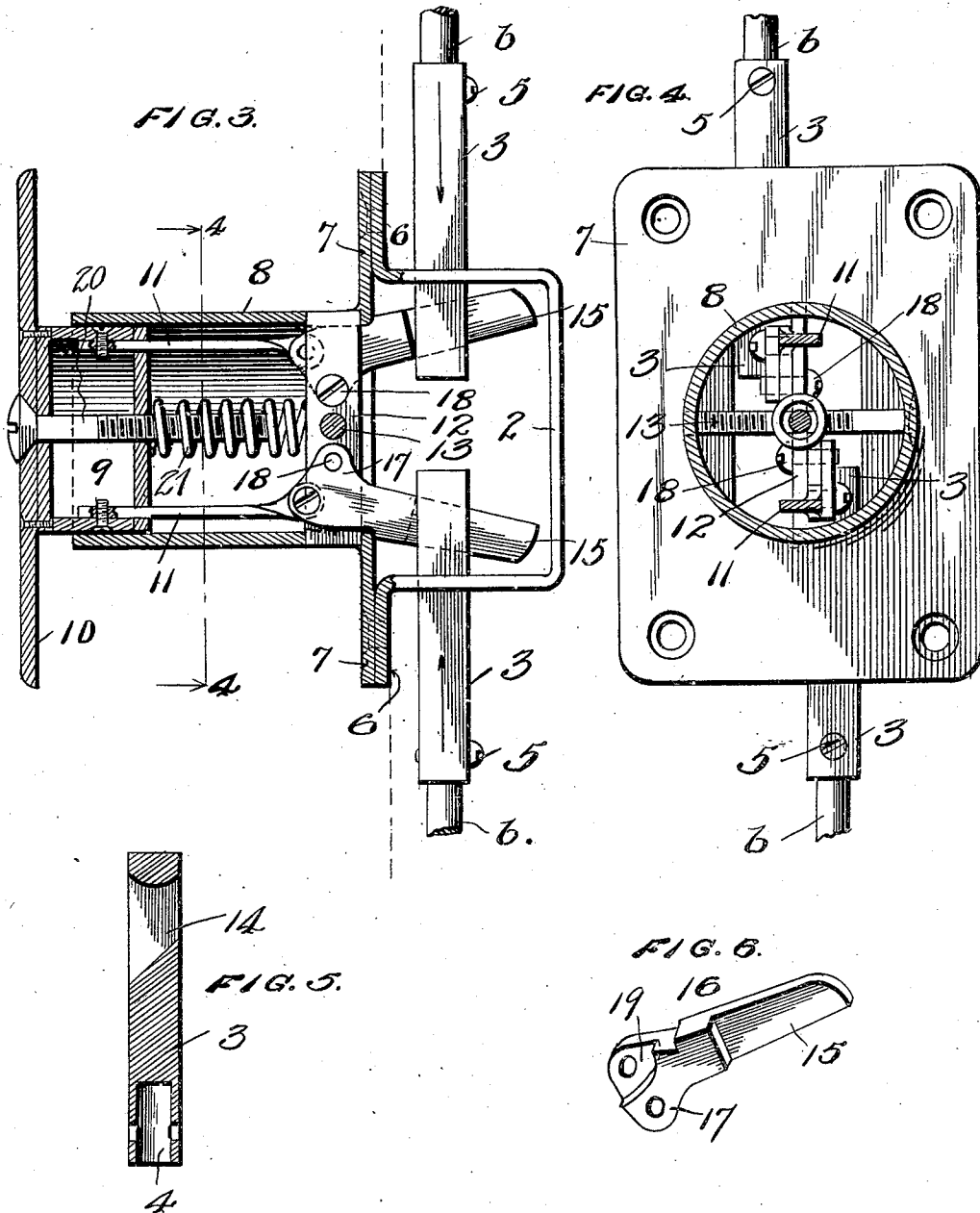
By C. L. Parker Attorney

A. S. FLOWERS.
DOOR OPENING DEVICE.
APPLICATION FILED MAY 9, 1908.

934,153.

Patented Sept. 14, 1909.

2 SHEETS—SHEET 2.



WITNESSES
Chas. K. Davis.

Myron C. Clear

INVENTOR

Addison S. Flowers,
By L. H. Parker, Attorney

UNITED STATES PATENT OFFICE.

ADDISON S. FLOWERS, OF MOUNT JOY, PENNSYLVANIA.

DOOR-OPENING DEVICE.

934,153.

Specification of Letters Patent. Patented Sept. 14, 1909.

Application filed May 9, 1908. Serial No. 431,874.

To all whom it may concern:

Be it known that I, ADDISON S. FLOWERS, citizen of United States, residing at Mount Joy, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improvements in Door-Opening Devices, of which the following is a specification.

My invention relates to door openers, particularly applicable to outwardly opening exit doors of public buildings, amusement houses and the like, and the object thereof is to provide a door opening device embodying a bolt operating mechanism, and which upon the initial pressure exerted thereagainst, will operate to withdraw the door bolt or bolts, the subsequent pressure thereagainst serving to open the door.

Further objects and advantages of my present invention will appear in the course of the following description, in which reference is made to the accompanying drawings, forming a part of this specification, in which like numerals are used to designate like parts throughout the several figures, and in which,

Figure 1 is an elevation of an outwardly opening door, looking from the inside thereof, and illustrating my improved opening device attached thereto. Fig. 2 is a central vertical sectional view taken therethrough. Fig. 3 is a side elevation, partly in section, of my improved door opening device removed and on an enlarged scale. Fig. 4 is a transverse sectional view taken there-through on the line 4—4 of Fig. 3. Fig. 5 is a central longitudinal sectional view taken through one of the bolt end sockets, and Fig. 6 is a perspective view of one of the bolt operating levers.

As herein shown, my invention is especially adapted for use in connection with an outwardly opening exit door indicated at *a* in Figs. 1 and 2, provided with longitudinally movable bolts *b* slidably mounted in and adapted to project within openings in the door casing *c*, and sill *d* as shown in Fig. 2 to lock the said door. Thus to unlock the door necessitates the inward longitudinal movement of the said rods *b* after which the door may be pressed open. Therefore, in the practical embodiment of my invention, I provide a U-shaped bolt cage 2, adapted to be seated within a cut out portion upon the inner face of the door, and provided with openings therein to receive the inner ends of the bolts *b* therethrough and projecting

slightly therein, for the reception as herein shown, of socket pieces 3; having central bores 4 in one end thereof adapted for the reception of the inner ends of the said bolts *b*, secured therein by set screws 5, said socket pieces extending within the said cage 2. The cage 2 is provided with angular flanges 6 upon its ends, which flanges abut the flanged base 7 of a tubular outstanding casing 8, and are secured to the door by screws or bolts, passing also through said flanged base 7. Within the outer end of the tubular casing 8, extends a circular plunger 9, which may be hollow, as herein shown, and which is provided with an exterior face plate 10 of substantially enlarged area and against which the pressure is applied to draw the bolts *b* inwardly. Secured within the hollow plunger 9, and extending within the casing 8 therefrom, at diametrically opposite points, are a pair of connecting arms 11. Adjacent its inner end and its flanged base 7, the tubular casing 8 is provided with diametrically opposite slots through which a transverse pivot plate 12 projects and is supported by a bolt 13 locked transversely through the said casing 8 at right angles to, and projecting through the said plate 12.

The inner projecting ends of the bolt end socket 3, are provided with transverse openings 14 through which the reduced extending ends 15 of the bolt operating levers 16, project, said operating levers having angular extensions 17 upon their inner ends, pivoted to the opposite faces of the pivot plate 12 upon opposite sides of the supporting bolt 13 thereof, thus allowing the said operating levers to be rocked upon their said pivots designated at 18. When the plunger 9 is pressed inwardly, inasmuch as the inner end of its connecting arms 11 are pivotally secured to the inner ends of said operating levers 16 within a reduced portion 19 thereof, opposite its pivot 18.

In order to return the plunger 9 to its normal position, I provide the same with an elongated screw projecting centrally therethrough and within the casing 8, the said screw 20 having a coil spring 21 associated thereabout, and extending between said plunger and the transverse pivot plate 12.

Having fully described my invention, I claim:

A door opener comprising a casing, said casing consisting of a forward cylindrical

portion and a rear rectangular portion, said
cylindrical portion having a flange base, said
rear rectangular portion having a flange
base adapted to coincide with the said base
5 of the said cylindrical portion, a transverse
plate secured diametrically within said
cylindrical portion and adjacent the rear
end thereof, a hollow cylindrical plunger
provided with a suitable head, slidably
10 mounted within said cylindrical portion, a
screw passing centrally and longitudinally
through said plunger and cylindrical por-
tion of said casing, a spiral spring around
said screw and abutting said plunger and
15 said transverse strip, L shaped operating
levers pivoted to said transverse strip near

the center thereof, sliding locking bolts,
passing through said rear portion of said
casing and having central longitudinal slots
adjacent the inner ends thereof adapted to 20
loosely engage the extremities of said L
shaped links, and pivotal connecting means
between said plunger and said L shaped
links, whereby said locking bolts may be
drawn inwardly and forced outwardly, sub- 25
stantially as described.

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

ADDISON S. FLOWERS.

Witnesses:

M. L. GREIDER,
C. N. MUMMA.