

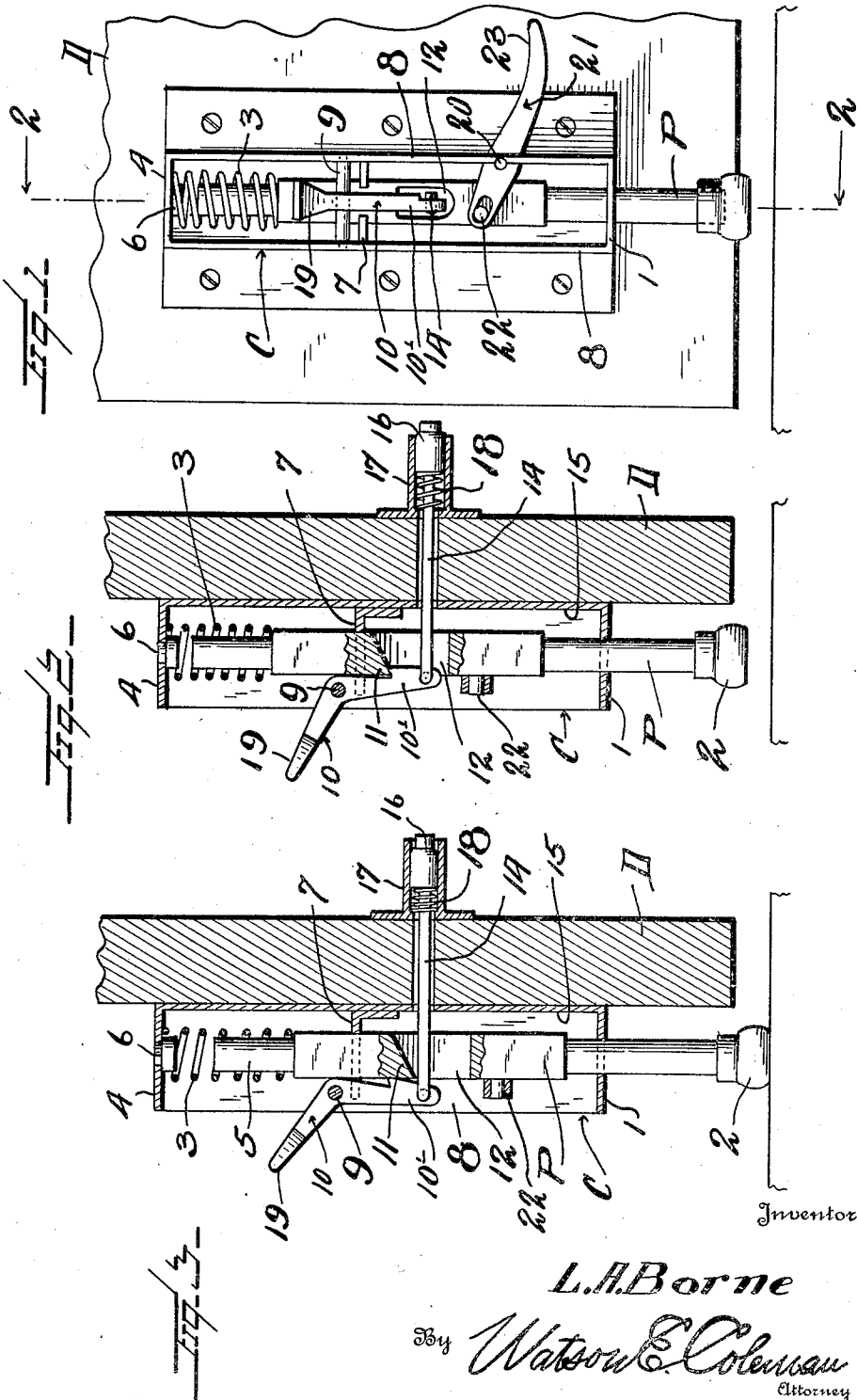
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L. A. BORNE

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DOORCHECK

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# UNITED STATES PATENT OFFICE.

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## DOORCHECK.

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*To all whom it may concern:*

Be it known that I, LOUIS A. BORNE, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Doorchecks, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to certain improvements in door checks and it is an object of the invention to provide a novel and improved device of this general character adapted to be carried by the door proper and which operates effectively to hold the door open at any desired angle.

It is also an object of the invention to provide a novel and improved device of this general character adapted to be carried by the door proper and which embodies the plunger normally urged in a direction to engage the floor or other surface over which the door swings together with releasable means for holding said plunger in a raised or inoperative position.

An additional object of the invention is to provide a novel and improved device of this general character adapted to be carried by the door proper and which embodies a plunger normally urged for movement in a direction for contact with a floor or other surface over which the door may travel together with means for maintaining said plunger in a raised or inoperative position, said means having associated therewith a mechanism operating under impact for releasing the plunger when in its inoperative or raised position.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved door check whereby certain important advantages are attained and the device rendered simpler, less expensive and otherwise more convenient and advantageous for use, as will be hereinafter more fully set forth.

The novel features of my invention will hereinafter be definitely claimed.

In order that my invention may be the better understood, I will now proceed to de-

scribe the same with reference to the accompanying drawings, wherein:—

Figure 1 is a fragmentary view in elevation illustrating a door check constructed in accordance with an embodiment of my invention and in applied position with the plunger in a raised or inoperative position;

Figure 2 is a sectional view taken substantially on the line 2—2 of Figure 1;

Figure 3 is a view similar to Figure 2 but showing the plunger in its lowered or working position.

As disclosed in the accompanying drawings, D denotes the lower outer portion of a door adapted to be supported in a conventional manner for swinging movement relative to the door opening. Secured to the outer face of said portion of the door D is a casing C which supports for sliding movement in a vertical direction the plunger P. The lower portion of the plunger is freely disposed through the lower end wall 1 of the casing C and is provided at its free extremity with a foot or pad 2 preferably of rubber adapted to have direct contact with the floor or other surface over which the door may travel. By having a foot or pad 2 of rubber or kindred material it is assured that the requisite action of the plunger P upon said floor or kindred surface will not mar or otherwise injure the same.

The plunger P is constantly urged downwardly by an expansible member 3 interposed between the upper end portion of the plunger P and the top end wall 4 of the casing C. This member 3 as herein disclosed, constitutes a coil spring possessing the requisite tension. One end portion of said member or spring 3 surrounds the upper reduced end portion 5 of the plunger P while the opposite end portion surrounds the inwardly directed lug or bore 6 depending from the top end wall 4.

The portion of the plunger P within the casing C is guided for endwise movement in substantially a fixed path of travel by a guide plate 7 through which the plunger P is slidably disposed.

Transversely bridging the casing C and supported by the side walls 8 thereof is a pin 9 which serves as a pivotal support for a de-

pending latch 10 the bill 10' of said latch, when in one position, engaging from below the upper beveled wall 11 of an opening 12 directed through the plunger, said bill 10' engaging said wall 11 when the plunger P is in its raised or inoperative position and operates to maintain such position.

To the lower portion of the latch 10 is operatively engaged a rod 14 which is directed through the opening 11 and through the bottom plate 15 of the casing C and through the door D and terminates beyond the opposite face of said door. This outer end portion of the rod 14 carries an enlargement or head 16 which is snugly engaged within the outstanding barrel or sleeve 17 secured to the outer face of the door D and interposed between said head or enlargement 16 and the base or bottom of the sleeve or barrel 17 is an expansible member 18 herein disclosed as a coil spring surrounding the rod 14. This spring 17 is of sufficient tension to constantly urge the rod 14 outwardly and to maintain the latch 10 in position to properly engage the upper wall 11 of the opening 12 and also to maintain the head or enlargement 16 slightly projected beyond the outer end of the sleeve or barrel 17.

With the plunger P in its raised or inoperative position it will be readily understood that when the door D is swung into its full open position the extended portion of the head or enlargement 16 will have contact with the adjacent wall or kindred abutment and by the resultant impact swing the latch 10 into open position and thereby permit the plunger P to be forced downwardly by the expansible member or spring 3 into proper contact with the floor to effectively hold or check the door D in such full open position. The plunger is adapted to be released for engagement with the floor when the door is open at any desired angle, other than full open position, and in order to effect the requisite release of the latch 10 the upper or pivoted end portion thereof is provided with an upwardly inclined arm or tail piece 19 so that by contact therewith from below by a foot or the like the latch 10 will be readily disengaged from the plunger P when in its raised or inoperative position.

Extending through the lower portion of a side wall 8 of the casing C and pivotally supported by a pin 20 is a lever 21 the inserted end portion of which being operatively engaged, as at 22, with the plunger P while the outer end portion 23 of said lever constitutes a pedal so that by exerting downward pressure upon said pedal 23 the plunger P will be readily raised into its inoperative position and to an extent to permit the desired locking engagement therewith of the latch 10.

From the foregoing description it is thought to be obvious that a door check con-

structed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and operated, and it will also be obvious that my invention is susceptible of some change and modification without departing from the principles and spirit thereof and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice except as hereinafter claimed.

I claim:—

1. In combination with a door, a floor engaging plunger carried by one side thereof, means for urging the plunger into contact with the floor, a latch for holding the plunger in a raised or inoperative position, and means engaged with the latch and extending beyond the opposite side of the door for releasing the latch from the plunger.

2. In combination with a door, a floor engaging plunger carried by one side thereof, means for urging the plunger into contact with the floor, a latch for holding the plunger in a raised or inoperative position, means engaged with the latch and extending beyond the opposite side of the door for releasing the latch from the plunger, and means coacting with said last named means for constantly urging the latch toward the plunger to hold the same in holding engagement with the plunger.

3. In combination with a door, a floor engaging plunger carried by one side thereof, means for urging the plunger into contact with the floor, a latch for holding the plunger in a raised or inoperative position, and means engaged with the latch and extending beyond the opposite side of the door for releasing the latch from the plunger, said means operating under impact to move the latch into inoperative position.

4. In combination with a door, a floor engaging plunger carried by one side thereof, means for urging the plunger into contact with the floor, a latch for holding the plunger in a raised or inoperative position, means engaged with the latch and extending beyond the opposite side of the door for releasing the latch from the plunger, and means carried by the latch and at the same side of the door for moving the latch into release position.

5. In combination with a door, a floor engaging plunger carried by one side thereof, means for urging the plunger into contact with the floor, a latch for holding the plunger in a raised or inoperative position, means engaged with the latch and extending beyond the opposite side of the door for releasing the latch from the plunger, and means for raising the latch.

6. In combination with a door, a floor en-

gaging plunger carried by one side thereof, means for urging the plunger into contact with the floor, a latch for holding the plunger in a raised or inoperative position, means  
5 engaged with the latch and extending beyond the opposite side of the door for releasing the latch from the plunger, said plunger being provided with a recess in which the latch engages to hold the plunger in its inoperative position. 10

In testimony whereof I hereunto affix my signature.

LOUIS A. BORNE.