

A. L. HENDERSON.  
DOOR STOP.

(Application filed Oct. 23, 1900.)

(No Model.)

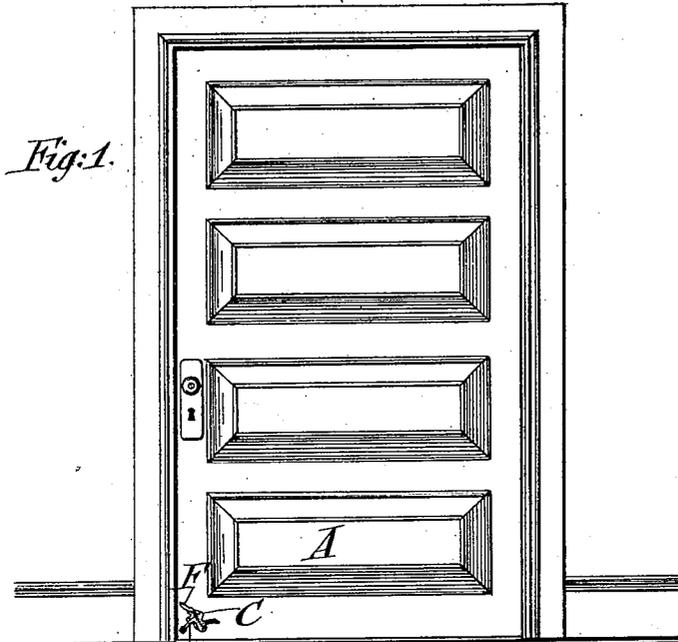


Fig. 1.

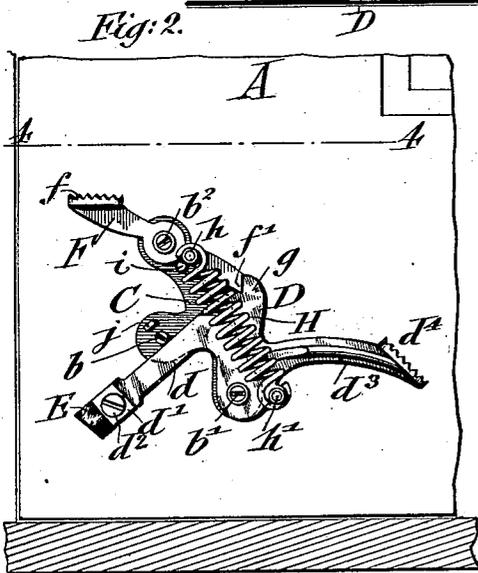


Fig. 2.

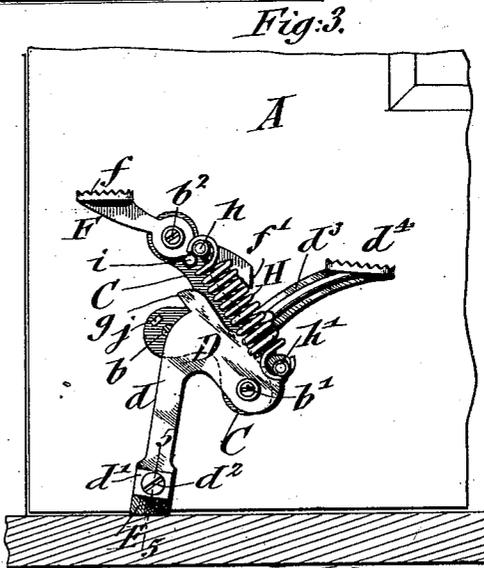


Fig. 3.



Fig. 4.

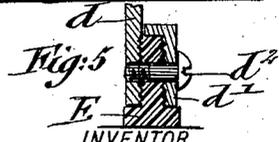


Fig. 5.

WITNESSES:  
*Chas. East*  
*Geo. S. Wheelock*

INVENTOR  
*Alex. L. Henderson*  
 BY *James R. Raper*  
 ATTORNEYS

# UNITED STATES PATENT OFFICE.

ALEXANDER L. HENDERSON, OF NEW YORK, N. Y.

## DOOR-STOP.

SPECIFICATION forming part of Letters Patent No. 666,669, dated January 29, 1901.

Application filed October 23, 1900. Serial No. 34,083. (No model.)

*To all whom it may concern:*

Be it known that I, ALEXANDER L. HENDERSON, a citizen of the United States, residing at New York, in the borough of Manhattan and State of New York, have invented certain new and useful Improvements in Door-Stops, of which the following is a specification.

This invention relates to door-stops of the class which are attached to the lower part of the door within convenient reach of the foot of a person, so that when the stop is properly actuated the door will be retained in its partially open or entirely open position.

One object of the present invention is to provide a door-stop which acts instantaneously in both actuating and releasing the stop, so that practically little trouble is encountered by the person who desires to retain the door in partially open or entirely open position or who desires to close the door.

Other objects of the invention are to provide a device of the described class which will be cheap, durable, and efficient in action, which is composed of comparatively few parts, and which is not liable to get out of order.

To these ends my invention consists of a door-stop which comprises a suitably-formed lever pivoted intermediately of its ends and provided at one side of the pivot with braking means and at the other side of its pivot with means for actuation and a pivoted dog provided at one end with means for actuation and at the other end adapted to engage a shoulder formed on the said lever, by which parts the braking means is adapted to be released through the medium of the dog, so as to engage with the floor, and is also adapted to be released from the floor, all as will be hereinafter described and then particularly claimed.

In the accompanying drawings, Figure 1 is an elevation of a door and door-frame, showing my improved door-stop applied, and in which illustration the door is supposed to swing away from the observer. Fig. 2 is an enlarged view of my door-stop applied to a door, showing the same in normal or released position. Fig. 3 is a similar view showing the door-stop in operation. Fig. 4 is a section on the line 4 4, Fig. 2; and Fig. 5 is a detail section on line 5 5, Fig. 3.

Similar letters of reference indicate like parts.

Referring to the drawings, A indicates a door, to which is fastened, by means of screws or other fastenings  $b\ b' b^2$ , a plate or mount C. This plate or mount may be of any suitable form to secure lightness and strength. The screw  $b$  is preferably countersunk in the plate C, while the screws  $b' b^2$  project from the plate, so as to form pivots for the two main portions of my device.

Mounted on the pivot-screw  $b'$  is a lever D, which is formed, preferably, with an angular leg  $d$ , the outer end of which is provided with serrations, which outer end, a clip  $d'$ , and a screw  $d^2$ , which passes through the clip and into the said serrated end of the lever, form means for securing or clamping in position at the extremity of the leg  $d$  of the lever a preferably elastic or other soft or yielding brake or friction-pad E. Extending oppositely from the leg  $d$  of the lever D is a leg  $d^3$ , which is provided at its outer end with a footpiece or treadle  $d^4$ , the object of which is to release under pressure of the foot the friction piece or pad from the floor or surface with which it engages to stop the door.

Mounted on the pivot-screw  $b^2$  is a dog F, which at one end is provided with a footpiece or treadle  $f$  and at its other end or toe  $f'$  is adapted to engage a shoulder or cam projection  $g$ , extending from the leg or angular member  $d$  of the lever D. Stud  $h\ h'$ , projecting, respectively, from the dog F and the lever D, provide means for hanging on or attaching the ends of a helical actuating-spring H, so that the said dog and the lever are connected and may be actuated by said spring. The tendency of the actuating-spring H is to draw the toe end  $f'$  of the dog and the treadle end of the lever toward each other, because the said ends are directly connected by said spring; but the movement of the toe of the dog in that direction is limited by means of a stop-pin or abutment  $i$ , which projects from the plate C adjacent to the hub of said dog. The movement of the lever in raising the friction piece or pad is limited by means of a stop-pin or abutment  $j$ , which projects from the said plate C.

The operation of the described door-stop is

as follows: The door being closed and it being desired to hold the door in open or partially open position, a person presses his foot down more or less forcibly upon the treadle of the dog F sufficient to overcome the action of the tension-spring H in holding the dog in engagement with the shoulder *g* on the lever D. This releases the toe or operative end of the dog from the said shoulder, and the spring H immediately acts so as to force the footpiece or pad E down upon the floor or surface under the door, said footpiece or pad thereby acting as a brake to the movement of the door in either direction. When the door is to be moved either to close it or to open it more or less, a person presses with one foot upon the treadle of the lever D, thereby raising the pad or footpiece from the floor or other surface and causing the cam projection or shoulder *g* on the lever to raise the operative or toe end of the dog, and as soon as the projection passes by the said end of the dog the latter snaps into engagement, under the actuation of the spring H, with the said shoulder and locks the lever in raised position.

A door-stop constructed as described is very simple and conveniently operated without the use of the hands either to stop the door in any position or to release the stop, so that the door may be closed or its position changed. The structure is quite simple, and the life of the same depends only upon the life of the spring, as all the parts are strong and durable and not apt to be broken. The surfaces of the treadles which serve for operating the dog and the lever are preferably roughened or serrated, so that the foot may more effectively engage with the same.

It is evident that it is within the power of skilled mechanics to alter the construction shown and described without departing from the spirit and scope of the invention.

What I claim is—

1. In a door-stop, the combination, with a

plate or mount and a lever pivoted to said plate or mount, said lever being provided with braking means for engaging a floor or similar surface and with means for releasing the braking means, of a dog pivoted to said plate or mount and provided with suitable means of operation, said dog being adapted to engage a shoulder or projection on the said lever, and a spring connecting the dog and the lever, substantially as set forth.

2. In a door-stop, the combination, with a plate or mount, of a spring-actuated lever pivoted to said plate or mount and provided with means forming a brake and with means for positive actuation, and a spring-actuated dog pivoted to said plate or mount and provided with suitable means for positive actuation, said dog being adapted to engage with a portion of said lever, substantially as set forth.

3. In a door-stop, the combination, with a suitably-supported pivoted lever provided with braking means and with means for positive actuation, of a suitably-supported pivoted dog provided with means for positive actuation and adapted to engage a portion of said lever, and a stop-pin or abutment for limiting the movement of said dog toward said lever, substantially as set forth.

4. In a door-stop, the combination, with a plate or mount, a lever pivoted to the latter, and provided with braking means and with means for positive actuation, and a dog pivoted to said plate and provided with means for positive actuation and adapted to engage a portion of said lever, of stops or abutments on said plate adapted to limit the movements of the dog and lever, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

ALEXANDER L. HENDERSON.

Witnesses:

GEO. L. WHEELLOCK,  
GEO. C. GEIBEL.