

T. DRAPER.
DOOR HOLDER.
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943,143.

Patented Dec. 14, 1909.

Fig. 4.

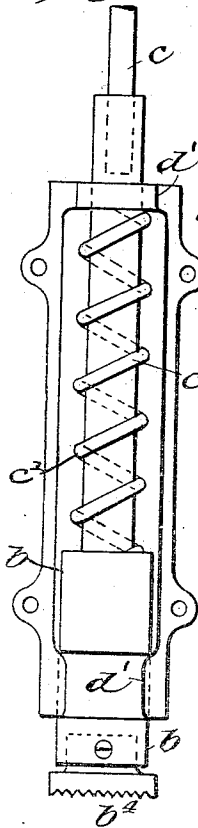


Fig. 1.

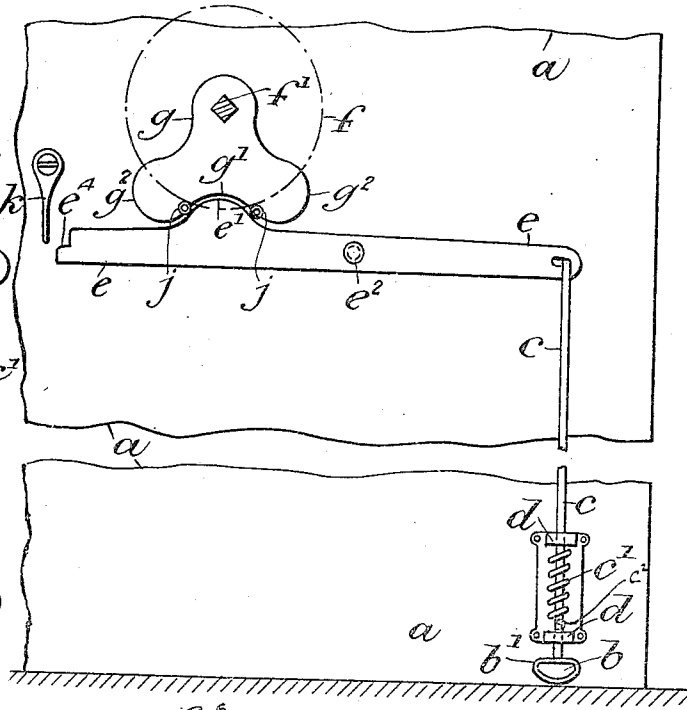
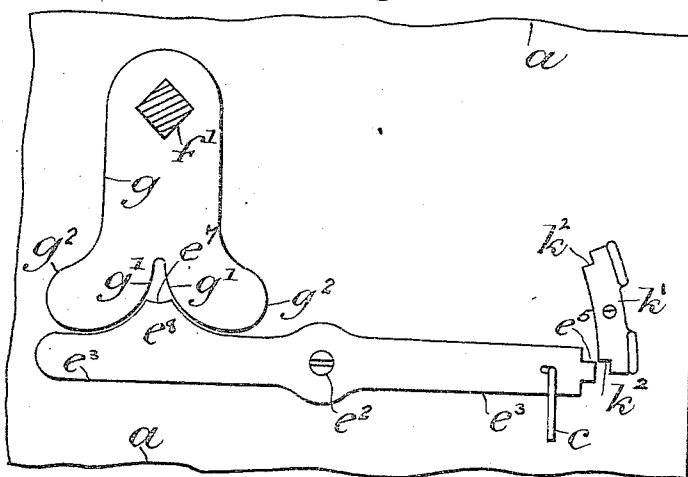


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

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DOOR-HOLDER.

943,143.

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

Application filed November 6, 1908. Serial No. 461,389.

To all whom it may concern:

Be it known that I, THOMAS DRAPER, a subject of the King of Great Britain, of 5 Windermere avenue, West Kilburn, London, in the county of Middlesex, England, engineer, have invented a new and useful Improvement in and Relating to Door-Holders, of which the following is a specification.

This invention relates to door-holders 10 which are adapted in use to automatically prevent the slamming of doors and the like. Hitherto, various means have been devised for preventing doors and the like from being violently brought to their closed position, but all have more or less necessitated 15 the fitment of complicated mechanism difficult to adjust and easily deranged.

The object of the present invention is to provide a simple, cheap and effective apparatus for arresting the movement of the door 20 or the like when closing so as to prevent slamming and its attendant injurious consequences.

The invention has particular reference to 25 that class of holder having a spring controlled catch or stop at the bottom of the door or the like which is arranged normally to firmly engage with the floor but adapted to be raised from engagement therewith 30 when the door handle is turned to open or close the door.

The present invention consists essentially in the particular construction, arrangement and combination of parts hereinafter fully 35 described and particularly pointed out by the appended claims.

The accompanying drawings are an illustration of the invention, Figure 1 being an elevation of part of a door fitted with the 40 present improvements, only so much of said door being shown as is necessary for clearness. Fig. 2 is a detail view to an enlarged scale of a slightly modified form of the pivoted lever and wiper arm, hereinafter more 45 fully described. Fig. 3 is a side view of a further form of pivoted lever. Fig. 4 is a detail view, to an enlarged scale, of a convenient form of spring controlled catch or stop for use with the present invention.

50 Like letters of reference indicate the same or analogous parts in the various illustrations.

In the construction shown in Fig. 1, I fit 55 at or near the lower edge of the door *a* or the like a spring controlled catch or stop *b*

which is furnished at its upper side with a connecting rod or wire *c* working in suitable guides *d, d*. Clearly other guides may be fitted where required along the length of the rod or wire *c*. This connecting rod *c* is 60 of suitable length and is hinged at its upper end to one extremity of a pivoted lever *e* arranged adjacent and at a convenient distance from the door handle *f*, shown in dot and dash lines only.

65 Adjacent the door handle *f* and located preferably near the other extremity of the pivoted lever *e* aforesaid there is formed a curved projection or undulation *e'* with which engages a depending wiper or cam 70 piece *g* conveniently secured to the door handle spindle *f'*. This cam or wiper *g* is formed at its edge, which engages with the projection upon the pivoted lever, somewhat arched or curved, as shown in Figs. 1 and 2, 75 or in other words, a notch *g'* is formed therein which normally fits easily over the aforesaid projection *e'*, so that, when the wiper or cam *g* is moved in either direction by turning the door handle *f*, one or other 80 of the outer and lower parts *g², g²* thereof will be moved over the upper surface of the projection *e'* and tend to depress the same, thereby moving the lever *e* on its pivot *e²* and raising the connecting rod *c* and spring 85 controlled catch or stop *b*. When the door handle *f* is released the spring *c'*—which is conveniently disposed between the upper guide *d* and a pin *c²*—will tend to return the parts instantly to their normal position 90 and the stop *b* be caused to engage with the floor or other surface thereby “breaking” the movement of the door *a* which will be prevented from slamming to. Or, I may form the wiper or cam *g* as above described 95 and furnish dual projections *e⁶—e⁶* (Fig. 3) upon the pivoted lever *e* over which the notched piece *g'* normally lies. When the wiper or cam *g* is turned in either direction the pivoted lever *e* will be depressed while 100 when one of the outer lower parts *g²* of said wiper *g* is moved between the dual projections *e⁶—e⁶*, the apparatus will be retained out of gear. Or a slight recess or notch *e⁷*, (Fig. 2) formed in the crown of a projection 105 *e⁸* may be provided to answer the same purpose.

Anti-friction rollers *j, j* (Fig. 1) may be fitted either on the notched projection *e'* or upon the lower edge of the wiper or cam 110

piece *g* in the recess or notch *g'* to facilitate ease in action. Further the stop or catch *b* may be suitably covered with some durable friction material such as leather *b'*, as shown in Fig. 1: or the lower surface of the catch which may be mounted in guide ways *d'* may be serrated as shown at *b'* in Fig. 4 for obtaining a better grip upon the floor or surface.

10 A pivoted catch or detent *k* (Fig. 1) may be provided near the outer end of the pivoted lever *e* remote from that at which the connecting rod *c* is attached which may be moved into engagement with a notch *e'* 15 formed thereon and thus retain the apparatus out of gear. Or a swiveling catch *k'* (Fig. 2) may be fitted with notches *k''* formed thereon adapted to be engaged by a projection *e''* on the end of the lever *e* to 20 which the connecting rod *c* is united.

From the foregoing it will be seen, that by the present invention a simple and effective device for the purpose specified is furnished which will be particularly advantageous in places where strong or sudden currents of air are prevalent, as the movement of the door *a*, when the handle *f* is released after opening, will be instantly and automatically retarded or arrested. Furthermore it is obvious that the entire apparatus may be embedded in the framework of the door *a*.

What I claim as my invention and desire to secure by Letters Patent, is:—

1. In combination with a door and knob, 35 of a spring actuated stop movably mounted on said door in a position to engage the floor, a pivoted lever connected with said stop and provided with cam surfaces on one margin, and a cam member actuated by said knob and disposed above said lever and provided with cam surfaces on its margin adjacent said lever and acting downwardly 40 on said lever cam surfaces to actuate the lever when the knob is turned.

2. In combination with a door and a knob 45 therefor, of a spring actuated stop movably mounted on said door in a position to engage the floor, a pivoted lever connected with said stop and provided with a cam projection extending from one of its lateral 50 margins, and a member located above said lever and provided with a recessed cam surface corresponding with said projection, and lateral cam surfaces having extensions of 55 said recessed surface and acting downwardly on said projecting cam to actuate the lever when the knob is turned.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

THOMAS DRAPER.

Witnesses:

ARTHUR E. EDWARDS,
D. K. BOYLE.