No. 705,804. Patented July 29, 1902.

J. C. WINN.

DOOR STOP.

(Application filed May 16, 1900. Renewed May 2, 1902.)

(No Model.)

Fig. 1

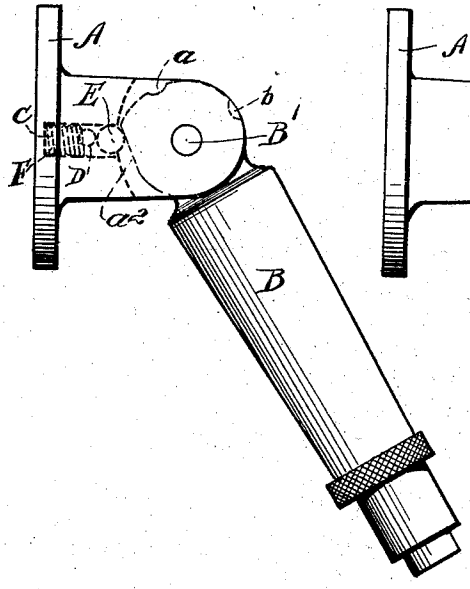


Fig. 3

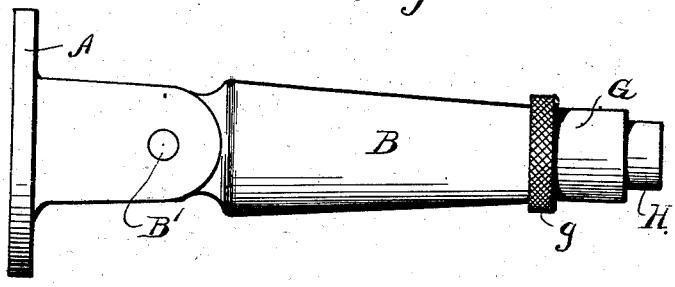


Fig. 2

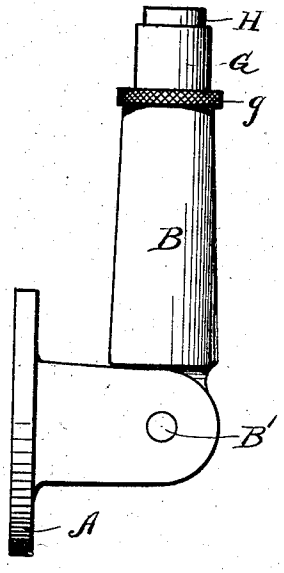


Fig. 4

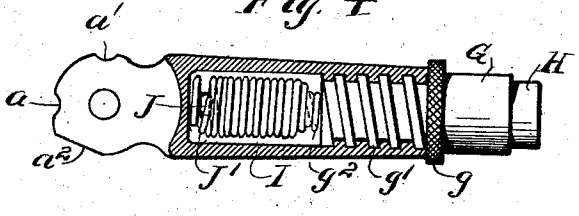
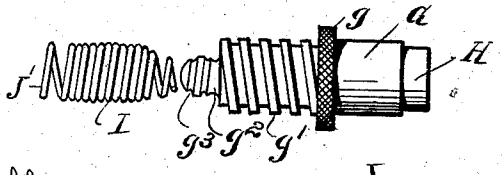


Fig. 5



Witnesses:

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UNITED STATES PATENT OFFICE.

JASPER C. WINN, OF CHICAGO, ILLINOIS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO JACOB ROTHSCHILD, OF CHICAGO, ILLINOIS.

DOOR-STOP.

SPECIFICATION forming part of Letters Patent No. 705,804, dated July 29, 1902.

Application filed May 16, 1900. Renewed May 2, 1902. Serial No. 105,693. (No model.)

To all whom it may concern:

Be it known that I, JASPER C. WINN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Door-Stops, of which the following, when taken in connection with the drawings accompanying and forming a part hereof, is a full and complete description, sufficient to enable those skilled in the art to which it pertains to understand, make, and use the same.

This invention relates to the class of door-stops provided with pivotal members which are turned into one position when in use and into a different position when not in use and which are designed to be adjusted relative to the length thereof after the door-stop has been placed on a door and then maintained in such adjusted position.

The object of this invention is to obtain a door-stop of the kind named which will consist of few parts readily adjustable, not liable to get out of adjustment, and the several parts so connected together that the same cannot be separated by children or readily separated by any person.

A further object of the invention is to obtain a door-stop which will be durable, the several parts not liable to breakage, and easily movable relative to each other, whereby the movable parts may be readily thrown into and out of an operative position.

In the drawings referred to as forming a part of this specification, Figure 1 is a side elevation of a door-stop embodying the invention with the several parts in operative position to hold a door open against a tendency to shut or to hold a door shut or partially open against a tendency to open. Fig. 2 is a side elevation of a door-stop embodying the invention with the several parts in an inoperative position. Fig. 3 is a side elevation of such door-stop with the several parts in position for use as a buffer. Fig. 4 is a vertical sectional view of the door-stop with the base thereof removed therefrom. Fig. 5 is an elevation of the spring and adjustable member of the door-stop.

A reference-letter applied to designate a given part is used to indicate such part throughout the several views wherever the same appears.

A is the base of the door-stop.

B is a movable member pivotally attached to base A, as by pin B'.

C is a spring in base A.

D is a ball on one end of spring C.

E is a second ball on ball D, between such ball D and the end adjacent thereto of the pivotally-movable member B.

F is a recess in base A, in which spring C, ball D, and ball E are placed and retained in operative position. As ball E is designed to come in contact with the end of pivotally-movable member B and hold it yieldingly in any one of three positions, such end is provided with recesses a and a' and flattened part or portion a^2.

G is the adjustable member of the door-stop, having the knurled part g, by which it may be turned for adjustment, the screw-threads g' fitting into corresponding screw-threads b' in pivotally-movable member B, and head g^2, provided with screw-threads g^3 thereon, (see Fig. 5,) turned in the opposite direction from screw-threads g' and engaging with one end of the spring I.

H is a rubber stop in one end of the adjustable member G.

Spring I is wound so that as the adjustable member G is turned in the pivotally-movable part B to increase the length of the door-stop such spring is subjected to tension before such adjustable member is separated from such movable part, and as such adjustable member G is turned to lessen the length of the door-stop the spring draws on such adjustable member. To hold the spring I in place in the pivotally-movable member B, such member is provided with lug or projection J, with which the spring engages when inserted in place in the recess in such pivotal member. When the pivotally-movable member B is made of cast metal, the same may be cored and projection J cast integral with such member B. I prefer at all times to cut the threads b' and also the screw-threads g'.

To assemble the several parts of the door-stop embodying this invention, the end J' of spring I is drawn out so as to be engageable with lug or projection J when such spring is

inserted in the recess in movable member B, as hereinafter described. The screw-threads g^3 on head g^2 of adjustable part G are brought into engagement with the small end of the spring I and turned until the spring has been drawn over the head g^2. Spring I is then put in the screw-threaded recess of pivotally-movable member B, and screw-threads g' are brought into engagement with screw-threads b', after which adjustable member G is turned until adjusted to the proper place so that spring I engages at end J′ thereof with projection J. After the spring I has been properly engaged with projection J in the manner last described adjustable member G may be turned to lengthen the door-stop—that is, turned to screw out of the pivotally-movable member B, and such turning will cause the end J′ of the spring I to engage more firmly with the lug or projection J until the spring has been so far turned thereon that such spring will not further turn. The last above-described engagement of spring I with the lug or projection J is effected because the spring is wound in the opposite direction to the thread g'—that is, if the screw-threads g' are left-handed the spring I is right-handed, (as are also screw-threads g^3, engaging with such spring, as hereinbefore described.) When the spring I is engaged, as described, with the lug or projection J, the adjustable member G may be turned in either direction and spring I will not become disengaged from projection J or from head g^2 of such adjustable member. It will therefore be impossible to disengage the member G from the member B without breakage of one of such members or of spring I; but member G may be adjusted to any position within the limits of movement secured by means of screw-threads g' and b'. The spring I will hold the adjustable member G in any adjusted position in pivotally-movable member B without the use of a jam-nut, as such spring holds such adjustable member G against accidental turning in the member B either in the ordinary use of the door when the door-stop is turned up into an inoperative position or by the jarring of the door or building due to wind, machinery, or other ordinary causes. Spring C is then put in the recess F, ball D is dropped on such spring, and ball E is put on ball D. The adjustable member B is then put in place, so that the pin B′ may be inserted, with the ball E pressed against the end of the pivotally-movable member B. The device may then be attached to a door in the same manner as an ordinary door-stop.

The manner in which the door-stop is used in no way differs from the manner of using an ordinary door-stop of the kind to which it relates, and no description thereof is necessary.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a door-stop the combination of a base, a movable member provided with a recess in one end thereof and fulcrumed to the base, an adjustable member provided with screw-threads fitting into corresponding screw-threads in the recess in the movable member, a head on one end of the adjustable member provided with screw-threads turned in a direction opposite to the first-named screw-threads, a spring wound to correspond with the screw-threads on the head of the adjustable member and engaged therewith, and a lug in the recess wherein such spring is contained engaging with the spring, substantially as described.

2. In a door-stop, the combination of a base, a movable member fulcrumed to the base, an adjustable member, a spring connected to the members and attaching them together, and means for longitudinally adjusting the adjustable member relative to the fulcrumed member; substantially as described.

3. In a door-stop the combination of a base, provided with a recess, a spring in the recess, a ball on one end of the spring, a second ball on the first-named ball, and a member fulcrumed to the base and provided with recesses in the end adjacent to the base, with which recesses the second-named ball comes in contact as such member is turned on its fulcrum; substantially as described.

4. In a door-stop the combination of a base, provided with a recess, a spring in the recess, a ball on one end of the spring, a second ball on the first-named ball, a member fulcrumed to the base and provided with recesses in the end adjacent to the base, with which recesses the second-named ball comes in contact as such member is turned on its fulcrum, and provided with a recess at the other end thereof in which a spring and an adjustable member are placed, an adjustable member provided with screw-threads fitting corresponding screw-threads in the recess in which it is placed, a head on one end of the adjustable member provided with screw-threads turned in a direction opposite to the first-named screw-threads, a spring wound to correspond with the screw-threads on the head of the adjustable member and engaged therewith, and a lug in the recess wherein such spring is contained engaging with the spring; substantially as described.

5. In a door-stop, the combination of a base, provided with a recess, a movable member fulcrumed to the base, an adjustable member, a spring connected to the members and attaching them together, means for longitudinally adjusting the members, a spring in the recess in the base, a ball mounted on the spring and a second ball on the first-named ball, between such first-named ball and the end adjacent thereto of the fulcrumed lever; substantially as described.

JASPER C. WINN.

In presence of—
CHARLES TURNER BROWN,
T. P. BREWER.