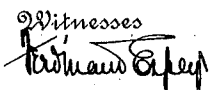


DOOR STOP.

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Fig. 1.



By

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DOOR-STOP.

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To all whom it may concern:

Be it known that I, JOHN T. KENT, a citizen of the United States, residing at Douglas, in the county of Cochise and State of Arizona, have invented certain new and useful Improvements in Door-Stops, of which the following is a specification.

My invention relates to improvements in door stops and has for one of its objects to provide a simply constructed device which will automatically engage a door when the latter is open and hold it positively open until the stop is manually released.

A further object of my invention is to provide a stop which may be adjusted for use with doors of various thicknesses to positively grip the door and hold the same against any swinging movement in either direction.

A further object of my invention is to provide a door stop which may be adjusted to and adapted for use with doors which swing either to the right or to the left.

With these and other objects in view, my invention will be more fully described, illustrated in the accompanying drawings and then specifically pointed out in the claims which are attached to and form a part of this application.

In the drawings:—Figure 1 is a top plan view of the door stop, the position occupied by the door being shown in dot and dash lines; Fig. 2 is a central longitudinal sectional elevation, the door being again indicated by dot and dash lines; Fig. 3 is an end elevation of the improved door stop; Fig. 4 is a transverse section on the line 4—4 of Fig. 2 looking in the direction of the arrow.

The improved device comprises a base plate or support 10 having a housing or bearing 11 on its upper face in which the body portion 12 of the stop device proper is mounted for rotation, as shown. At one end the body 12 is bent laterally as shown at 13 and thence extended obliquely as shown at 14, the free end of said oblique portion being directed downwardly to bear against the upper face of the base plate 10 or having its end beveled to permit the door to swing readily over the same in a manner hereinafter described. The portion 13 extends at right angles to the body 12, while the oblique portion 14 extends in the same plane with the portions 12 and 13. At its opposite end the stock or body 12 is extended into a

lateral arm 15 which also lies in the plane with the portions 13 and 14.

That portion of the device above described, when in use, is secured to the floor at a point where the door is to be stopped and at right angles to the plane of the door when swung to said point, by screws or other suitable fastening means 23, the rear end of the plate being provided with longitudinally extending, spaced slots 23' through which two of the screws are passed. The function of these slots will be hereinafter fully explained.

Fitting over the portion of the stock which includes the arm 15 is a housing 18 having a tubular extension 19. Fitting within the extension 19 is a sleeve or stop member 20 having a socket in its outer end to receive the cushion 21 of rubber or like material. The tubular extension 19 is provided with a set screw 22 which bears against the sleeve 20 and provides a simple means for adjusting the latter in the extension. This housing is bent at its lower end and is provided with laterally directed ears 23' through which securing screws are passed. Two of these ears, as shown, are so arranged as to extend over the slots 23' and are secured by the screws 23, previously mentioned, which pass through these slots. By this means the housing 18 is mounted in alinement with the base plate 10 and for adjustable movement toward and away from the portion 13 of the stop device. This latter adjustment, together with the adjustment of the sleeve 20, provides a wide range of adjustment for doors of various thicknesses, as the housing may be moved toward the portion 13 of the stop member to roughly adjust the distance between the stop member 13 and the cushion 21, and the sleeve 20 may then be adjusted to more accurately gage the door receiving space.

If desired the sleeve 20 may be rigidly secured within the neck 19 of the housing and the adjustment made entirely by the screws 23 and slots 23'. This is, however, not as satisfactory as it requires great exactness in the placing of the screws if all movement of the door is to be prevented.

The inner closed end of the sleeve 20 is provided with a central perforation, and a bolt 24 is passed through the perforation and threaded by its inner end into a tapped socket 25 formed in the inner face of the

housing 18, the bolt extending in spaced relation above and parallel to the inner portion of stop member 12.

The free end of the arm 15 of the stop member is perforated to receive one end of the helical spring 25, and the opposite end of this spring engages about the bolt 24 to normally hold the arm 15 in raised position. A second bolt 26 is passed through the front wall of the housing 18 and threaded by its inner end in a second tapped socket 27 formed in the inner face of the rear wall of the housing. This second bolt is in vertical alinement with the bolt 24 and is so positioned with respect to the base of the housing that the free end portion of the arm 15 will engage against the bolt, the bolt thereby holding the portions 15, 13 and 14 at a slight angle to the vertical, as best shown in Figs. 3 and 4 of the drawing. When the arm 15 bears against one side of the bolt 26, the stop is adapted for use with doors which swing to the right, while when it bears against the opposite side, is adapted for use with doors which swing to the left.

In operation, assuming the device to be properly mounted upon the floor with respect to the door, the door when swung to open position will engage by its lower end against the inclined portion 14 of the stop which, under pressure of the door, will cause the stop 12 to rotate in its housing against the action of the spring 25 until the door has passed over the portion 14 of the stock. The stop being then released from the door will, because of the spring 25, spring upwardly to the position shown in Figs. 1 and 2 of the drawings to lock the door between the portion 13 of the stop and the cushion 21. When the door is to be closed, the stop may be swung manually in any suitable manner as by pressing the foot upon the portion 14 and the door swung from the portions 13 and 14 of the stop while in lowered position. The end elevation in Fig. 3 shows the correct inclination of the portions 13 and 14 when the stop is to be employed with a door hinged at a point to the left of the figure. If the door was mounted at the right the bolt 26 would be removed, the stop 12 rotated to bring the arm 15 to the opposite side of the bolt receiving wall and the bolt 26 replaced.

The improved device is simple in construction, can be inexpensively manufactured from any suitable material and in any size desired or necessary to give it the requisite strength. It may be applied to doors of various thicknesses and adjusted to meet all requirements as previously described.

The entire device with the exception of the cushion 21 will preferably be formed of metal, and if so formed may be plated, japanned, or otherwise ornamented or protected from dampness.

Having described the invention, what is claimed as new is:

1. A door stop including a base, a rod mounted for rotation on said base and extended laterally at one end and thence extended obliquely to the longitudinal plane of the rod, yieldable means for maintaining the oblique portion of said rod normally in a slanting position, a positive stop rising from said base and spaced from the lateral extension of the rod, and means for adjusting said stop to adapt the device to doors of varying thickness.

2. A door stop including a base, a rod mounted for rotation on said base and extended laterally at one end and thence extended obliquely to the longitudinal plane of the rod, yieldable means for maintaining the oblique portion of said rod normally in a slanting position, a support adjustably engaging said base, a stop carried by said support, and means for holding said support in adjusted position.

3. A door stop including a base, a rod mounted for rotation upon said base and extended laterally at the ends, one of said lateral extensions being further extended obliquely to the longitudinal plane of the rod, a spring engaging the other of said lateral extensions and yieldably maintaining the oblique portion of said rod normally in slanting position, and a positive stop rising from said base and spaced from said oblique extension.

4. A door stop including a base, a rod mounted for rotation upon said base and extended laterally at the ends, one of said lateral extensions being further extended obliquely to the longitudinal plane of the rod, a spring engaging the other of said lateral extensions, a housing bearing over the spring supported lateral extension of the rod and provided with a socket, a stop member movable in said socket, and means for holding said stop in adjusted position in said socket.

5. A door stop including a base, a rod mounted for rotation upon said base and extending laterally at its ends, one of said lateral extensions being further extended obliquely to the longitudinal plane of the rod, a housing mounted over the other of said extensions, a spring carried by the housing and engaging by one end with the lateral extension within the housing to maintain the same in raised position, and an adjustable stop cushion carried by said housing.

6. A door stop including a base plate having a longitudinally extending bearing, a rod rotatable in said bearing, one end of said rod being bent at right angles to the body portion to provide an arm, the other end of said rod being also bent at right angles to the body portion and in the same

plane with the arm, the terminal of said latter end being further bent to extend obliquely to the base and in alinement with the body portion, a housing mounted over the rear portion of the base plate and adjustable toward and away from the oblique terminal of the rod, longitudinally extending bolts carried internally of the housing and in vertical alinement with each other and the rod, one of said bolts lying in a plane below the free end of the arm of said rod when the latter is in raised position, the other of said bolts lying in a plane above the first, and a spring connecting the last of said bolts with the free end of the arm to normally maintain the arm in engagement with the first of the bolts.

7. A door stop including a base, a rod mounted for rotation upon said base and extended laterally at the ends, one of said lateral extensions being further extended obliquely to the longitudinal plane of the rod, a housing mounted over the other of said extensions, a spring carried by the housing and engaging by one end with the lateral extension within the housing to maintain the same in elevated position, and a stop detachably engaging the extension within the housing and holding it at either side of the center against the resistance of the spring.

8. A door stop including a base, a rod mounted for rotation upon said base and ex-

tending laterally at its ends, one of said lateral extensions being further extended obliquely to the longitudinal plane of the rod, a spring supported at one end in vertical alinement with the rotating portion of the rod and connected at the other end to one of the lateral extensions, and a stop detachably supported and against which the lateral extension is yieldably held by the spring.

9. A door stop including a base, a rod mounted for rotation upon said base and extending laterally at its ends, one of said lateral extensions being further extended obliquely to the longitudinal plane of the rod, a housing mounted over the other of said extensions, rods spaced apart within said housing and in vertical alinement and extending in the same longitudinal plane as the rotating portion of the rod, the lower rod being detachable and against which the rod extension which is located within the housing bears, and a spring connected at one end to the upper rod and at the other end to the rod extension within the housing.

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

JOHN T. KENT. [L. s.]

Witnesses:

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