Nov. 10, 1925. 1,560,960

F. YOST

DOORSTOP

Filed Aug. 4, 1924

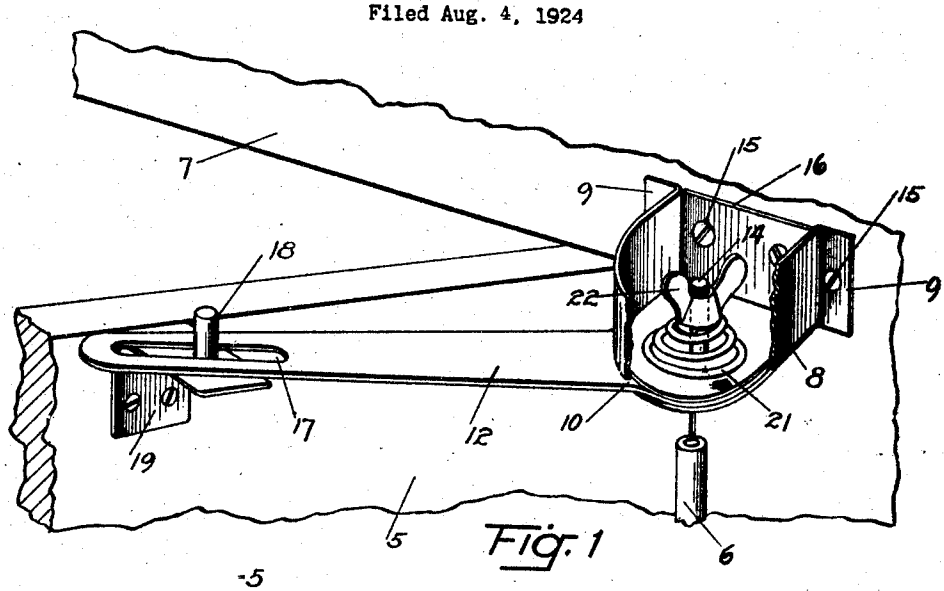

Fig. 1

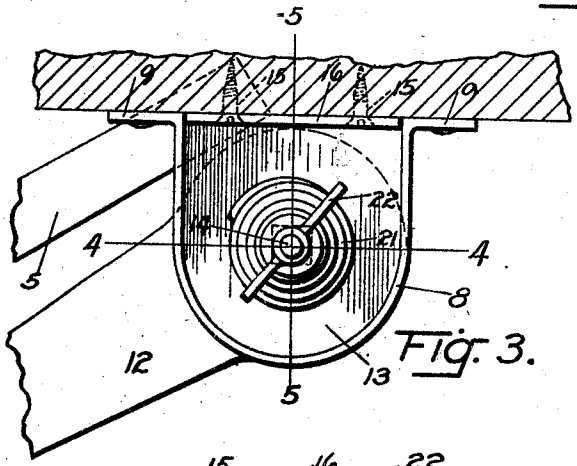

Fig. 3.

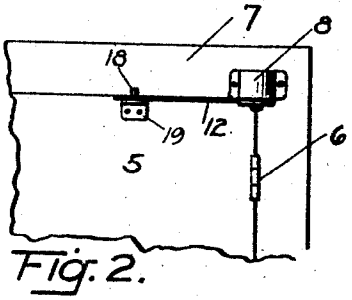

Fig. 2.

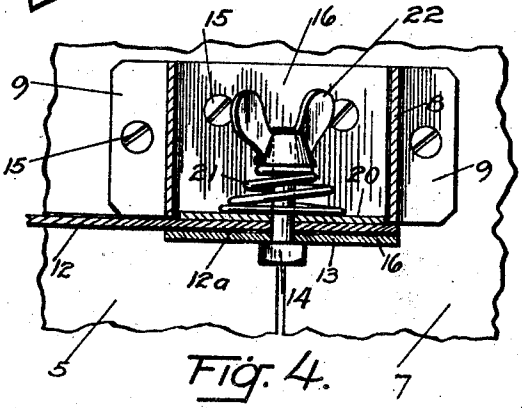

Fig. 4.

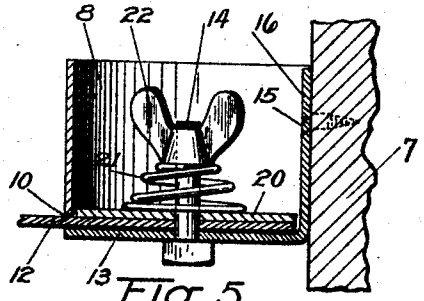

Fig. 5.

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UNITED STATES PATENT OFFICE.

FREDERICK YOST, OF GOLDEN, COLORADO.

DOORSTOP.

Application filed August 4, 1924. Serial No. 729,942.

To all whom it may concern:

Be it known that I, FREDERICK YOST, a citizen of the United States, residing at Golden, in the county of Jefferson and State of Colorado, have invented certain new and useful Improvements in Doorstops, of which the following is a specification.

My invention relates to door-stops and its primary object is to provide an appliance of highly efficient though very simple construction which by frictional resistance will automatically hold a door or window in any adjusted position.

With this and other objects in view, my invention consists in the construction and combination of parts illustrated in their preferred form and relative arrangement in the accompanying drawings in the several views of which like parts are similarly designated and in which

Figure 1 represents a partially sectional perspective view of my improved door-stop in its operative position relative to a door in a partially open position;

Figure 2, a face view of a corner portion of the door frame and the door in the closed position, drawn to a reduced scale, and showing the application of the stop;

Figure 3, a fragmentary top-view of the appliance on the door and the frame thereof, as shown in Figure 1;

Figure 4, a section along the line 4—4, Figure 3; and

Figure 5, a section taken on the line 5—5, Figure 3.

Referring more specifically to the drawings, 5 designates a door hinged as at 6 in a frame 7 to swing about a vertical pivot.

My improved door stop comprises a casing 8 having laterally projecting flanges 9 for its connection to the door frame and provided with a slot 10 for the projection of a flat arm 12 which is pivotally mounted on the bottom 13 of the casing by means of a headed bolt 14.

The casing may be open at its top as shown in the drawings and it is fastened to the door frame immediately above the door adjacent to the hinged edge thereof by means of screws 15 inserted through apertures in its flat back 16 and in the therewith alined flanges 9, it being desirable that the pivotal axis of the arm 12 be in a vertical plane at right angles to the door frame with the hinges of the door.

The arm 12 which at its outer end has a longitudinal slot 17, is connected with the door through the medium of an upright stud 18 on a bracket 19 which is fastened upon the face of the door at the upper edge thereof. The stud projects loosely through the slot of the arm and thus causes it to move about its pivot on the casing when the door is opened or closed.

A washer 20 engages the hub-part 12^a of the arm within the casing, and a conical spiral spring 21 is held against the washer by a wing-nut 22 screwed upon the upper end-portion of the headed bolt 14.

The spring tensioned by the nut, causes the hub-portion of the arm to frictionally engage between the bottom of the casing and the thereto superposed washer and it is this frictional engagement which resists the movement of the arm and thereby holds the door in its adjusted positions.

The tension of the spring is readily varied by rotation of the nut on the bolt and the stop may thus be adjusted to doors of different weights and sizes.

The slot-and-stud connection of the arm with the bracket 19 compensates for the difference in arcs through which the two parts move when the door is opened and closed and it will be evident that the adjustment of the spring permits of varying the frictional resistance to the movement of the door to any desired degree.

Having thus described my invention, it is to be understood that variations in details of construction and in the proportions and relative arrangement of the component parts of the stop may be resorted to within the scope of my invention as defined in the hereunto appended claims.

What I claim and desire to secure by Letters Patent is:

1, A door-stop comprising a support fixed upon the door frame, an arm having a hub-portion pivoted on the support, a spring holding the hub-portion in sliding contact with the support, and means to pivotally connect the outer end of the arm with a door hinged in the frame.

2. A door-stop comprising a support fixed upon the door frame, an arm having a hub-portion pivoted on the support, a spring holding the hub-portion in sliding contact with the support, a nut for adjustment of the spring, and means to pivotally connect the outer end of the arm with a door hinged in the frame.

3. A door-stop comprising a support fixed upon the door frame, an arm having a hub-portion pivoted on the support, a conical spiral spring holding the hub-portion in sliding contact with the support, a nut engaging the spring, and means to pivotally connect the outer end of the arm with a door hinged in the frame.

4. A door-stop comprising a support fixed upon the door-frame, an arm having a hub-portion pivoted on the support, a washer engaging the hub-portion, a spring holding the hub-portion in sliding contact with the support and the washer, and means to pivotally connect the outer end of the arm with a door hinged in the frame.

5. A door-stop comprising a slotted casing, adapted for connection with a door frame, an arm projecting through the slot of the casing and having a hub-portion engaging the bottom of the same, a bolt upon which said hub-portion is pivoted, a spring to frictionally hold the hub-portion of the arm in contact with the bottom of the casing, a nut on the bolt engaging the spring, and means to pivotally connect the outer end of the arm with a door hung in the frame.

6. A door-stop comprising a slotted casing adapted for connection with a door frame, an arm projecting through the slot of the casing and having a hub-portion engaging the bottom of the same, a bolt upon which said hub-portion is pivoted, a washer engaging the upper surface of the hub-portion, a spring engaging the washer, a nut on the bolt, engaging the spring, and means to pivotally connect the outer end of the arm with a door hung in the frame.

In testimony whereof I have affixed my signature.

FREDERICK YOST.