H. G. VOIGHT.

DOOR STOP.

APPLICATION FILED SEPT. 21, 1911.

1,010,541.

Patented Dec. 5, 1911.

2 SHEETS—SHEET 1.

Fig. 1.

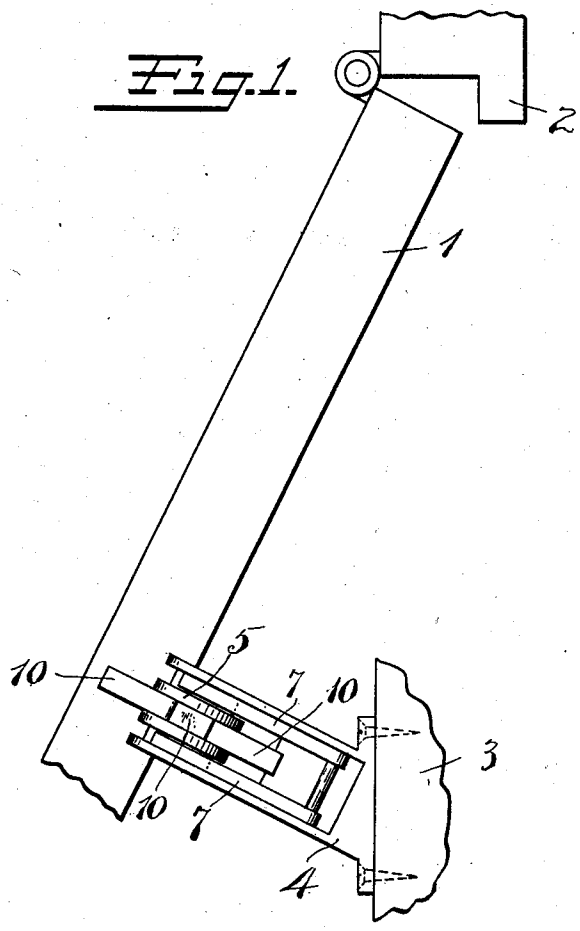
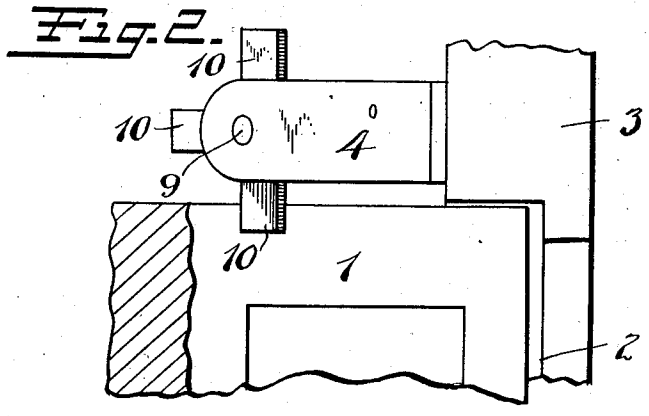


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

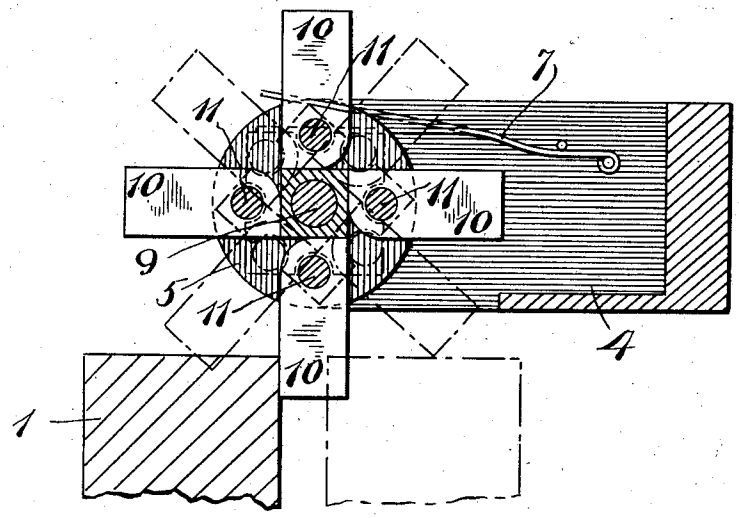


Fig. 4.

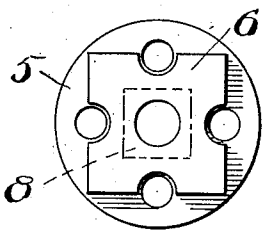
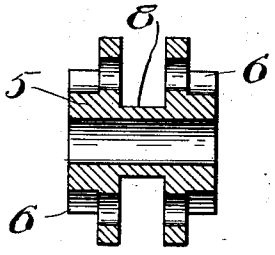


Fig. 5.



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HENRY G. VOIGHT, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO RUSSELL & ERWIN MANUFACTURING COMPANY, OF NEW BRITAIN, CONNECTICUT, A CORPORATION OF CONNECTICUT.

DOOR-STOP.

1,010,541. Specification of Letters Patent. Patented Dec. 5, 1911.

Application filed September 21, 1911. Serial No. 650,573.

To all whom it may concern:

Be it known that I, HENRY G. VOIGHT, a citizen of the United States, residing at New Britain, Hartford county, State of Connecticut, have invented certain new and useful Improvements in Door-Stops, of which the following is a full, clear, and exact description.

My invention relates to an improved door stop designed particularly for yieldingly holding doors open. There are many uses wherein a device of the character described may be employed with much success; for example, for use in connection with telephone booth doors. In such cases, it is desirable to have the doors of telephone booths left partially ajar when unoccupied, thus indicating to a prospective user which booths he may enter. The construction is such that when the booth is occupied, the user may, with slight effort, entirely close the door, overcoming the resistance of the stop.

In the drawings, Figure 1 is a plan view of my invention as in use. Fig. 2 is an end elevation. Fig. 3 is an end elevation, partly in section, of my improved device, generally in its preferred form and as it would appear in use. Fig. 4 is an end elevation of a detail. Fig. 5 is a vertical section of the detail shown in Fig. 4.

1 represents a door.

2 represents that part of the door casing to which the door is hinged.

3 represents an overhead part of the door casing to which the stop is secured. As shown in Fig. 1, the stop should preferably be placed at an appropriate angle to engage the door to the best advantage when it is being opened and closed, although the particular angle is immaterial to the invention. The door stop itself comprises a suitable frame or support 4, which may be secured to the overhead door casing in any suitable manner, as by screws (see Fig. 1). At the forward part of the frame 4 is mounted a rotatable carrier 5. 6 is an angular hub on said carrier presenting a series of flat faces to be engaged by a yielding member, such as a spring 7, the spring itself being suitably mounted in the frame 4. As shown in the drawings, each end of the hub 6 is provided with four flat faces, that number being best adapted for the purposes herein described, and also permitting the use of two springs, as shown at 7—7, Fig. 1. The central part of the revoluble carrier 5 is cut away to provide a squared central hub 8, the outline of said hub being indicated in dotted lines, Fig. 4.

9 is a pivot by which the revoluble carrier is mounted on the frame 4.

10—10—10—10 are stop arms which are pivoted in the central recess in the revoluble carrier. 11—11 are pivots therefor. Each of the stop arms 10 is, at its inner end, irregularly shaped so that each stop arm may have a free swinging movement in one direction but will be checked when swinging in an opposite direction so that it will stand radially to the carrier 5.

In operation, assuming the parts are arranged as shown in Fig. 3, it will be seen that the door 1 rests against the outer side of the lowermost stop arm 10 and that the spring 7 rests upon one of the squared flat portions, thereby frictionally holding the carrier 5 against rotation. In this position, the door will be held slightly ajar. If for any reason it is desired to close the door, it may be pushed, or drawn, in the proper direction, whereupon it will operate to turn the carrier, together with all of the arms, raising the spring 7 to the position indicated in dotted lines, and shifting the particular stop arm engaged thereby around to the position indicated in dotted lines in the lower right hand corner of Fig. 3. When the door has been moved sufficiently far, it will slide under said stop arm, at which point the spring 7 will operate to shift the carrier 5 around to its holding position, and will bring another of the stop arms into proper position to engage the door when it is again being closed. This stop arm will not retard the opening of the door because, as before said, each stop arm is free to swing back without disturbing the position of the carrier 5. Obviously, when the occupant of the booth, or room, controlled by the door leaves the room, he will open the door, whereupon it may be swung in a closing direction, either mechanically or by an ordinary spring hinge, or in any way, until it encounters the stop arm, which will offer sufficient resistance to check the door from further closing movement in the absence of more than the ordinary strain, thereby holding the door slightly ajar.

What I claim is:

1. In a door stop device, a frame, a revoluble carrier, a plurality of stop arms arranged around said carrier and pivotally connected thereto, means to permit each of said arms to swing freely in one direction, and means to limit the swinging movement of said stop arms in the opposite direction.

2. In a door stop device, a frame, a revoluble carrier, a plurality of stop arms arranged around said carrier and pivotally connected thereto, means to permit each of said arms to swing freely in one direction, and means to limit the swinging movement of said stop arms in the opposite direction, and means to yieldingly hold said revoluble carrier in predetermined positions.

3. In a door stop device, a frame, a revoluble carrier, a plurality of stop arms arranged around said carrier and pivotally connected thereto, means to permit each of said arms to swing freely in one direction, means to limit the swinging movement of said stop arms in the opposite direction, and means to yieldingly hold said revoluble carrier in predetermined positions, said means comprising a spring device.

4. In a door stop device, a frame, a revoluble carrier, a plurality of stop arms arranged around said carrier and pivotally connected thereto, means to permit each of said arms to swing freely in one direction, means to limit the swinging movement of said stop arms in the opposite direction, and means to yieldingly hold said revoluble carrier in predetermined positions, said revoluble carrier having a plurality of flat faces for receiving said spring device.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."