March 4, 1924.

1,485,954

L. F. BRASCH

DOORSTOP

Filed Jan. 4, 1923

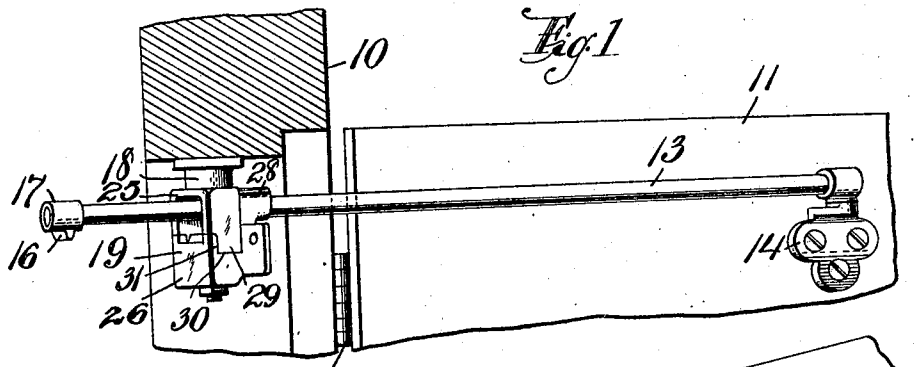


Fig. 1

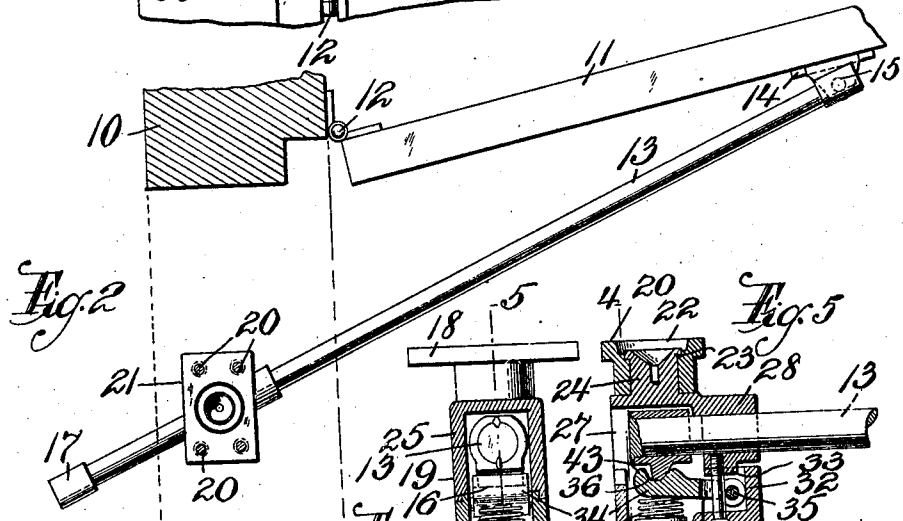


Fig. 2

Fig. 4

Fig. 5

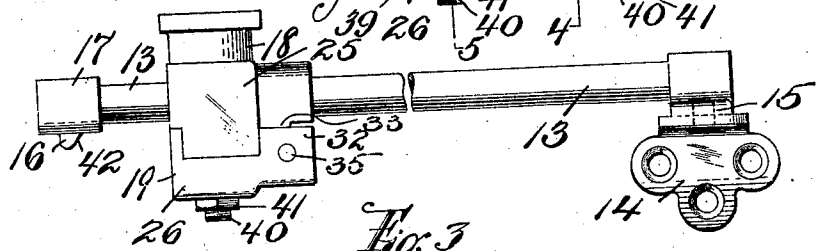


Fig. 3

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UNITED STATES PATENT OFFICE.

LOUIS F. BRASCH, OF NEWARK, NEW JERSEY.

DOORSTOP.

Application filed January 4, 1923. Serial No. 610,601.

To all whom it may concern:

Be it known that I, LOUIS F. BRASCH, a citizen of the United States, and a resident of Newark, county of Essex, and State of New Jersey, have invented certain new and useful Improvements in Doorstops, of which the following is a specification.

This invention relates to an improved door stop which is adapted to hold a door against normal movement, such as slight drafts and the like, when the door is in intermediate open positions, but which is adapted to securely hold the door until it is positively and forcibly moved in a predetermined open position.

The invention has for an object to provide such a door stop which is economically manufactured and which is constructed to distribute strains in parts that are normally cast, so that such parts will be supported and assembled so as to withstand the violent action to which they are sometimes subjected.

A further object of the invention is to provide a door stop of this kind which can have the tension or friction on the rod thereof altered or adjusted without difficulty, and which can have the lower part of one of the members removed to disclose the entire contents of the latch-holding part without removing the stop from where it is installed.

The invention is illustrated in the accompanying drawing, in which Figure 1 is a view showing part of a door frame and part of a door with my improved door stop attached thereto, the door being partly open. Figure 2 is a top view of the structure shown in Figure 1. Figure 3 is a side view partly broken away at the center, this view showing the door stop removed from the door. Figure 4 is a transverse section taken on line 4—4 in Figure 5, and Figure 5 is a section taken on line 5—5 in Figure 4.

In the drawing 10 indicates the door frame and 11 indicates the door, these being connected by the usual form of hinge 12, and to the door, at a suitable point, I secure the rod 13, this rod being pivoted, and I show the bracket 14 as one form of attaching means for pivotally holding the rod in position, the pivot permitting a free swinging of the other end of the rod, which other end is provided with a projection 16, this projection being usually a transverse lip which is usually formed on a collar 17, which in turn is secured to the end of the rod.

The other part of the door stop is a swivelled member comprising a support 18 which is swivelled to the casing 19, the support 18 being usually secured in position by screws 20 passing through holes in a plate 21 of the support, the support having a depressed part 22 into which is headed, as at 23, the top edge of the projection or boss 24 of the upper part 25 of the casing which forms, with the lower part 26, the complete casing 19.

The upper part 25 is provided at the front with a recessed part 27 large enough to receive the end of the rod 13 which is provided with the projection, and has on the end a bearing 28 which supports the rod 13 in the swivelled member. The lower part 26 fits against the upper part and is held against longitudinal movement, one on the other, by reason of the side walls of the upper part, shown at 29, fitting down into the recessed part 30 of the side walls of the lower part so as to form a front flange 31 which bears against the front edges of the lips 29 and thus prevents any backward movement of the lower part relative to the upper part of the casing, and the rear portion 32 of the lower part prevents any forward movement, so that the parts are thus held against horizontal movement relative one to the other, since the rear portion 32 has its side walls embracing the projecting part 33 of the top part of the casing to prevent any side movement.

A latch 34 is pivoted in the lower part with its free end in the chamber formed by the marginal walls thereof, this latch being pivoted at 35 and having a suitable depression, such as shown at 36, to receive the projection on the rod. The latch has an opening 37 near its pivot, this opening usually being provided by making the pivoted end forked, and through this opening or forked end the screw 38 passes, this screw serving, when screwed into the under side of the bearing 26, to hold the lower part on the upper part, and since, as previously described, there is no transverse strain on the screw, it is in itself sufficient to hold the parts together and is the only fastening that must be released to permit the lower part to be taken from the upper part. This is done when repairing or inspection is necessary, and when this lower part 26 is taken away, the rod 13 does not fall down as it is supported in the bearing 28.

The latch is pressed in normal engage-

ment with the projection 16 when the projection is forced inside the casing to hold the door in open position, since the latch is normally under the influence of the spring 39. I prefer to make the spring adjustable by having it abut at its bottom end on the screw 40, which screw is screw-threaded in the bottom of the lower member 26 and may be provided with a lock nut 41.

It will be evident that when the door is pulled out to a predetermined position, that is, its limit of movement, which can be determined by affixing the bracket 14 and the supporting member 18 at the proper points, it is held in locked position by the latch 34 firmly gripping the projection 16, this holding being pronounced because the rod, the main strain on which is longitudinal and which can thus be made of relatively thin material, is held against movement at its gripped end, since the bearing 28 is close up to the latch and there is no chance of play or bending of the rod when the projection engages the latch. A vigorous jerk or pull on the door, however, will force the latch downward to release the projection. The movement of the door now is comparatively easy, but is not particularly free, because the latch will engage the bottom edge of the rod 13 and hold the door against swinging from any position in which it is placed.

The front edge 42 of the projection 16 is bevelled or tapered, and in the same way the free end 43 of the latch is rounded, so that when the parts are forced together the latch will be swung down by these contacting tapered faces.

The rearward pressure against the latch transmitted to the pivot 35 will be easily withstood by the casing, due to the projection of the lips 29 into the side walls of the lower part 26, so that the screw 38 will not be subjected to any bending or breaking strain.

If the parts are to be adjusted, the screw 40 is all that needs to be manipulated. If it is necessary to inspect the inside of a member, all that it is necessary to do is to unscrew the screw 38 and the bottom part 26 can be removed, the spring and the latch thus being exposed, and, if broken, can be easily replaced by others while the remainder of the door stop remains in position.

I claim:

1. A door stop comprising a pivoted rod with a projection at its free end, a member comprising a support and a casing swivelled one on the other, the casing comprising two parts, the upper part having on one end a bearing for the rod and having a recess to receive the projection, the lower part having a recessed portion, a latch pivoted at one end with its free end in the recessed portion, and a spring in the recessed portion, said spring bearing on the under side of the latch.

2. A door stop comprising a pivoted rod with a projection at its free end, a member comprising a support and a casing swivelled one on the other, the casing comprising two parts, the upper part having on one end a bearing for the rod and having a recess to receive the projection, the lower part having a recessed portion, a latch pivoted at one end with its free end in the recessed portion, a spring in the recessed portion, said spring bearing on the under side of the latch, and a screw in the bottom of the lower part and supporting the spring, whereby the tension of the latch against the rod can be regulated.

3. A door stop comprising a pivoted rod with a projection at its free end, a member comprising a support and a casing swivelled one on the other, the casing comprising two parts, the upper part having on one end a bearing for the rod and having a recess to receive the projection, the lower part having a recessed portion, a latch pivoted at one end with its free end in the recessed portion, a spring in the recessed portion, said spring bearing on the under side of the latch, the latch having an opening near the pivot thereof, and a screw securing the lower part to the upper part, said screw passing through said opening.

4. A door stop comprising a pivoted rod with a projection on its free end, a member comprising a support and a casing swivelled one on the other, the casing comprising two parts, the upper part having depending side walls with a bearing on one end for supporting the rod, the bottom of said side walls having a projecting lip, the lower part comprising side walls and an end wall and having a bearing on the other end, the side walls having depressions to receive the lip, a latch pivoted at one end in the lower member, a spring in the lower member and abutting on the bottom thereof and on the bottom face of the latch, the latch having a depression in the top thereof to receive the projection on the rod, the latch also having an opening near its pivot, and a screw passing through the bottom of the lower member through the opening in the latch and being in screw-threaded engagement with the bearing of the upper member.

In testimony that I claim the foregoing, I have hereto set my hand, this 2nd day of January, 1923.

LOUIS F. BRASCH.