Jan. 13, 1925.

1,522,998

R. H. BUERGER ET AL

DOORSTOP

Filed July 26, 1922

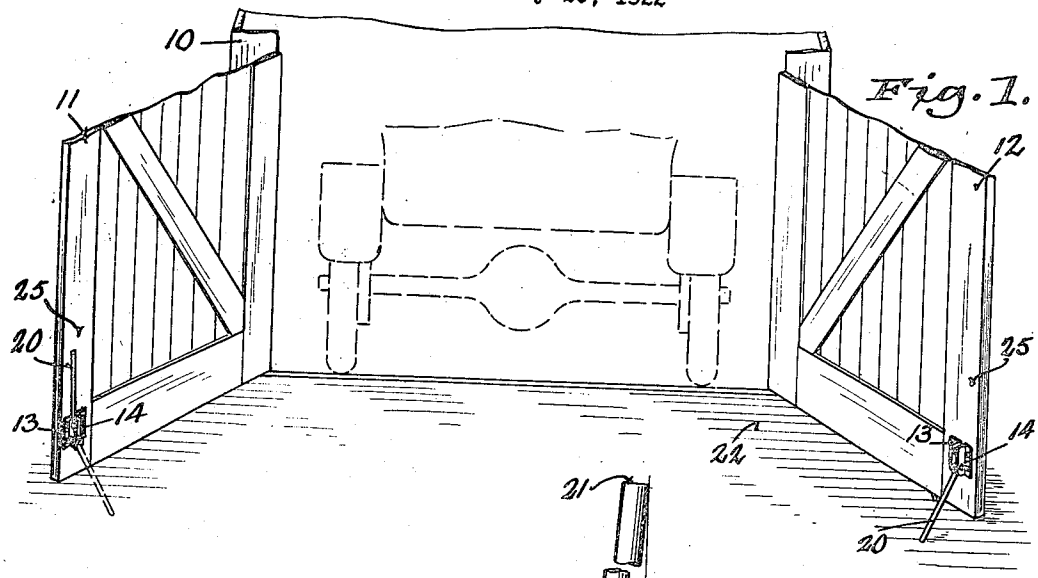


Fig. 1.

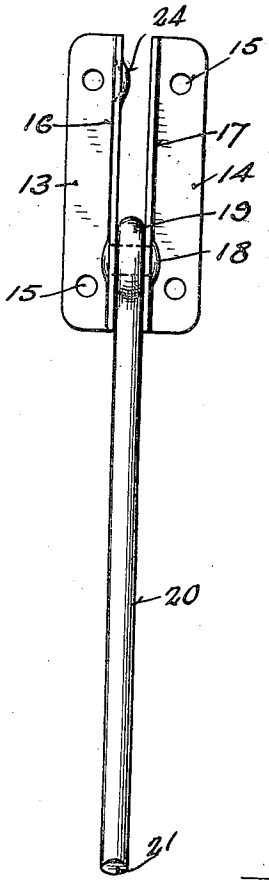


Fig. 2.

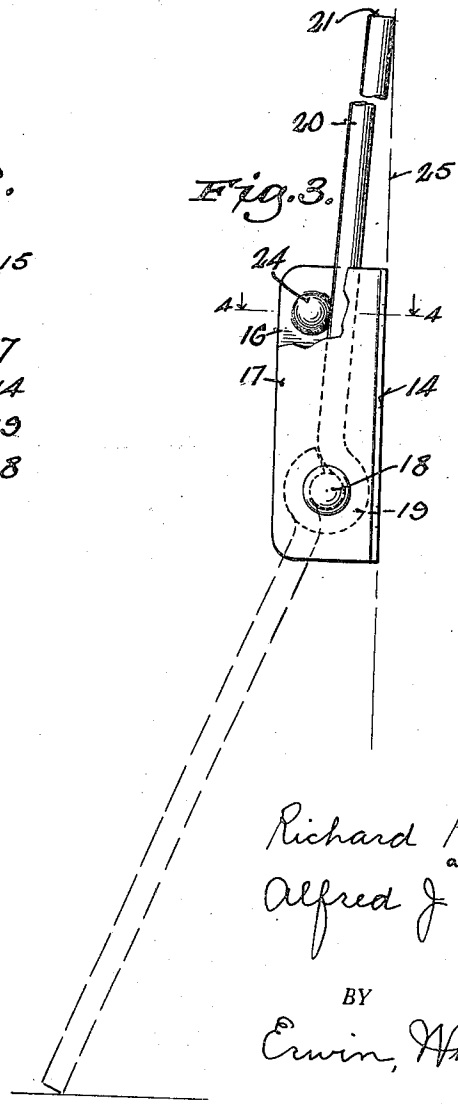


Fig. 3.

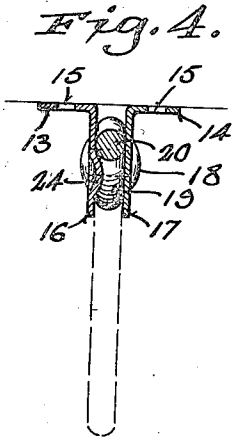


Fig. 4.

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UNITED STATES PATENT OFFICE.

RICHARD H. BUERGER AND ALFRED J. SCHULZ, OF MILWAUKEE, WISCONSIN.

DOORSTOP.

Application filed July 26, 1922. Serial No. 577,508.

To all whom it may concern:

Be it known that we, RICHARD H. BUERGER and ALFRED J. SCHULZ, citizens of the United States, residing at Milwaukee, county of Milwaukee, and State of Wisconsin, have invented new and useful Improvements in Doorstops, of which the following is a specification.

This invention relates to improvements in door stops.

The device hereinafter to be disclosed is particularly adapted for use in connection with garage or barn doors or the like.

It is the object of this invention to provide a door stop of novel construction which can be cheaply manufactured, readily applied, and easily operated.

It is a further object of this invention to provide, without adding materially to the expense of manufacture, convenient means for supporting the stop in an out of the way position at such times as it is not in use.

In the drawings:

Fig. 1 is a perspective view of the front of the garage showing the improved door stop applied to each of the doors.

Fig. 2 is a front elevation of the device in its operative position.

Fig. 3 is a side elevation of the device in its inoperative position with a portion broken away to expose the preferred construction.

Fig. 4 is a section taken on line 4—4 of Fig. 3.

Like parts are identified by the same reference characters throughout the several views.

The garage 10 is supplied with swinging doors 11 and 12 to each of which a door stop embodying this invention is shown to be applied. This device is particularly adapted for use upon garage doors not only because it will hold such doors effectively against displacement by the high wind pressures to which the relatively large surfaces of such doors are subjected, but also by reason of the fact that a stop of the kind hereinafter to be described is operative either upon the earth or upon a pavement, whether the surface of the earth or pavement lies closely adjacent the bottom of the door or whether it slopes away from the garage in such a manner that it will, at some points, be a considerable distance below the bottom of the door. It constitutes a peculiar problem that ordinarily the approach to a garage is upwardly inclined so that the distance between the lower margin of the door at its outer end and the earth varies according to the extent to which the door is open. The stop hereinafter to be disclosed is so constructed as to be operative to prevent the door from closing whether the distance between the door and the earth be great or small within the range of operation of the stop. A pair of flanged plates 13 and 14 are provided with openings 15 through which screws may be passed to secure the plates to the lower portions of a door with their outwardly projecting flanges 16 and 17 in a substantially parallel relation as shown. A rivet, or bolt, 18 connects the flanges 16 and 17 of plates 13 and 14, respectively, and serves as a pivot for an eye 19 which is formed in the end of a rod 20 which constitutes the door stop proper. The flanges 16 and 17 are so spaced as to receive and confine the eye 19 and the rod 20 closely between them, whereby these latter elements are secured against lateral displacement relative to the flanged plates. The lower extremity 21 of rod 20 is preferably cut off squarely in the manner indicated in Fig. 2, whereby the margins of the end portion 21 are reasonably sharp and are well adapted to engage the surface of a pavement such as is shown at 22 in front of garage 10 to prevent the doors from swinging shut. The rod 20 of the device shown attached to door 12 in Fig. 1 is illustrated in its operative position of engagement with the pavement.

For the purpose of supporting rod 20 in an inoperative position illustrated in the full line positions thereof in Figs. 1 and 3, the flanged plates 16 and 17 are made slightly resilient and a protuberance 24 is formed in one of the flanges 16 or 17 and is adapted to project inwardly into the space between said flanges to materially decrease the distance between them at this point. The arrangement is such that when the rod 20 is swung upwardly about the rivet, or pin, 18 as a pivot, it will encounter the protuberance 24 and will have to force the flange 16 outwardly in order to pass the protuberance. The flange 16, being resilient as aforesaid, will spring back into place following the passage of rod 20 and will serve to retain said rod in its upright position in the manner clearly shown in

Fig. 3. The position of protuberance 24 is carefully calculated with reference to the length of rod 20 so that an intermediate portion of the rod will remain in contact with the protuberance at the time when the upper end 21 of the rod contacts with the adjacent plane surface 25 of the door. This surface is shown in a broken line in Fig. 3. Rod 20 is thus secured against vibration and the consequent annoyance of rattling when it is in its inoperative position. The entire device projects but little from the door to which it is attached, and is inconspicuous as well as out of the way.

It will be apparent from the foregoing that the device disclosed herein satisfies the several objects specified for this invention in that it may be cheaply manufactured and easily operated, and is capable of satisfactory performance under all of the various conditions noted above.

We claim:

1. A door stop including a pair of plates connected by a transverse member and maintained in substantial parallelism thereby, one of said plates being formed of resilient material and being provided at a point remote from said transverse member with an integral protuberance extending in the direction of the other of said plates, laterally extending flanges integrally attached to the margins of said plates and apertured to receive securing screws, and a brace rod pivotally movable about said transverse member and engageable in one position behind said protuberance.

2. A door stop including a pair of plates connected by a transverse member and maintained in substantial parallelism thereby, one of said plates being formed of resilient material and being provided at a point remote from said transverse member with an integral protuberance extending in the direction of the other of said plates, laterally extending flanges integrally attached to the margins of said plates and apertured to receive securing screws, a brace rod pivotally movable about said transverse member and engageable in one position behind said protuberance, said rod being formed with an integral eye in one end to receive said transverse member.

3. A door stop including a pair of flanged plates connected by a transverse member and adapted to be secured in spaced relation upon a door, one of said plates having an inwardly projecting protuberance remote from said transverse member, and a rod hingedly mounted upon said member and adapted in one position to be engaged behind said protuberance, the positions of said member and of said protuberance and the length of the rod being such that when said rod is engaged its extremity will lie substantially in a plane including the flanges of said plates.

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