A. A. COFFIN.

DOOR STOP.

APPLICATION FILED JAN. 24, 1912.

1,037,439.

Patented Sept. 3, 1912.

Fig. 1

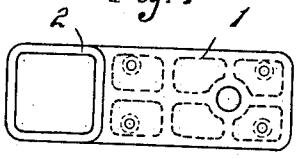


Fig. 4

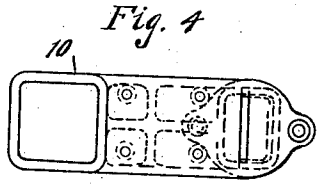


Fig. 6

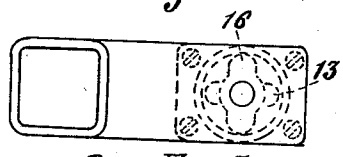


Fig. 2

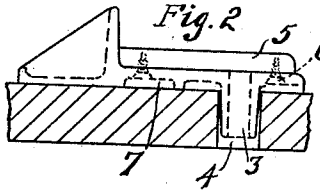


Fig. 5

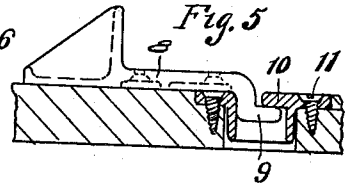


Fig. 7

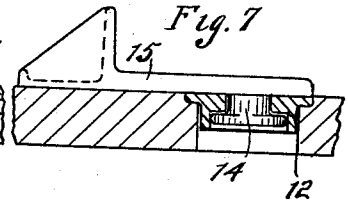


Fig. 3

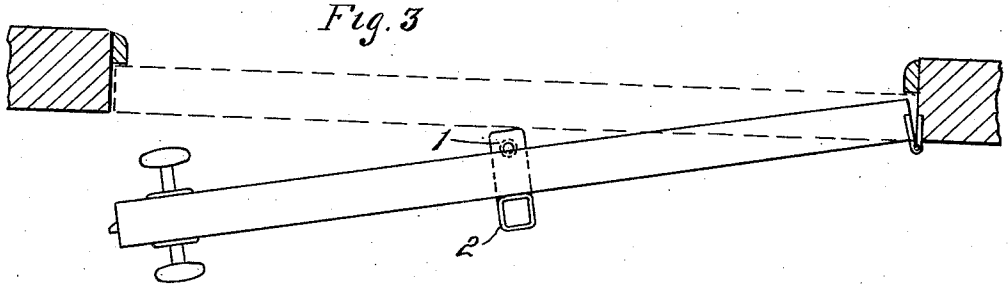


Fig. 8

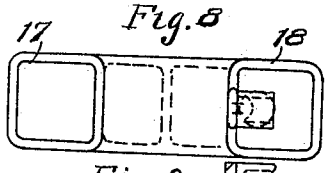


Fig. 9

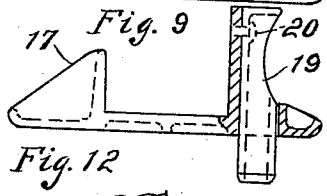


Fig. 10

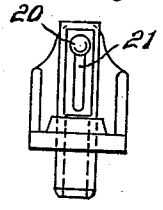


Fig. 11

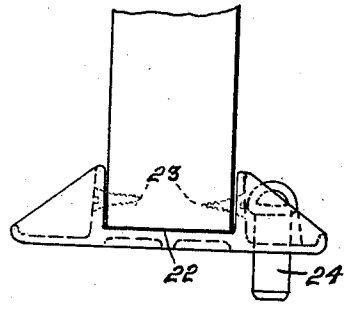
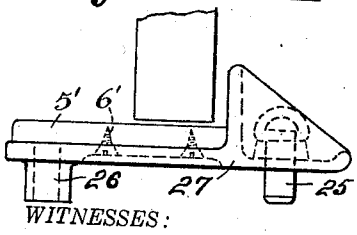


Fig. 12



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DOOR-STOP.

1,037,439. Specification of Letters Patent. Patented Sept. 3, 1912.

Application filed January 24, 1912. Serial No. 673,105.

To all whom it may concern:

Be it known that I, ANTOINETTE A. COFFIN, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Door-Stops, of which the following is a specification.

The invention relates to safety devices applicable to doors, whereby a door may be held against opening more than a limited distance.

The invention has for its primary objects; the provision of an inexpensive locking means which is impossible of removal from the outside of the door; the provision of a locking device which can be removed only after the closure of the door; the provision of a locking device which can be applied in such a way as to be inconspicuous and which will in no wise injure or deface the door or its surrounding casing.

Certain embodiments of the invention are illustrated in the accompanying drawings, wherein—

Figure 1 is a plan view of one form of stop which may be employed, Fig. 2 is side elevation of the device of Fig. 1, with the floor beneath the stop in section, Fig. 3 is a plan view of the stop as applied to a door, the dotted lines indicating the position of the door when in closed position, Figs. 4 and 5, and Figs. 6 and 7, are plan and side elevation views respectively of modified forms of construction, Fig. 8 is a plan view of still another form of stop applicable to doors which swing in both directions, Fig. 9 is a partial side elevation and partial section through the stop of Fig. 8, Fig. 10 is an end view of the stop shown in Fig. 9, Fig. 11 illustrates in side elevation still another form of stop as applied to the bottom of the door, and Fig. 12 illustrates still another modified type of construction.

The device is intended to take the place of chains and similar devices now in use for permitting a limited opening of the door, but at the same time preventing such an opening as would permit the entrance of objectionable persons, which chain devices and other devices corresponding thereto as heretofore used are more or less objectionable because they disfigure the door and door framing, and because they cannot be removed without leaving the traces of their attachment upon the woodwork.

It is the purpose of my invention to obviate these difficulties and provide a device for performing the desired function and a very inexpensive construction.

Briefly stated, the device in its preferred form, consists of a small casting which fits releasably into the floor beneath the lower edge of the door and which it is impossible to remove without closing the door.

The construction will readily appear from an inspection of Figs. 1, 2 and 3. The device as here shown consists of a casting 1 with the upwardly projecting rectangular stop 2 at one end, and at the other end the downwardly projecting lug or pin 3, such lug being adapted to engage a socket 4 bored into the floor beneath the door. The device fits beneath the door as indicated in Fig. 3, and the upwardly projecting stop 2 engages the rear face of the door and prevents its opening beyond the point indicated in the full lines. In order that the plate 1 may fit against the bottom of the door, a wood strip 5 is secured to the top of the plate 1 by means of the screws 6. By changing the thickness of this strip 5, the device may be made to fit snugly beneath the bottom of the door, regardless of the distance of the bottom edge of the door from the floor. This snug fit between the device and the bottom of the door is desirable in that it insures a more secure engagement between the pin 3 and the socket 4. As will be seen from an inspection of Figs. 1 and 2, the stop 2, and the pin 3 are cast hollow in order to reduce the weight of the device and give a maximum amount of strength in proportion to the weight. The bottom of the plate 1 is also cored out as indicated at 7 in order to reduce the weight of the device.

It will be seen from the foregoing that it is impossible to remove the stop without closing the door, so that it is absolutely impossible to remove the device and effect an entrance from the outside of the door. In order to remove the stop the door is swung to the position indicated in dotted lines in Fig. 3, after which the stop may be readily lifted from its position of engagement with the floor. In some cases it may be desirable

to strengthen the socket 4 by a metal liner, such a construction being shown in a somewhat different form in Fig. 5.

In the construction shown in Figs. 4 and 5 the end of the plate 8 which fits beneath the door is provided with a hook portion 9 which engages a socket 10 held in position in the floor by means of the screws 11. The device is detached from the floor after the door is closed, by simply lifting the free end of the device vertically. The stop 10 on the plate 8 is substantially the same as that shown in Figs. 1 and 2.

In Figs. 6 and 7 still another method of securing the device to the floor is illustrated. As here shown the socket 12 in the floor is provided with an irregular elongated opening 13 (Fig. 6), and the downwardly projecting pin 14 on the plate 15 is provided with a flange portion 16 (Fig. 6). The device is secured in engagement with the socket 12 by turning the device at an angle of ninety degrees from the position indicated in Fig. 6 at which time the flange 16 will pass through the elongated opening 13 in the socket 12. After pressing the pin 14 downward into position it is rotated into the position indicated in Fig. 6, in which position it is of course impossible to disengage the device by vertical movement.

Figs. 8, 9 and 10 indicate a modified type of construction applicable to doors which swing in both directions. In such construction it is necessary to provide two stops, the stop 17 serving to engage the front side of the door, and the stop 18 serving to engage the rear side of the door. Instead of a fixed lug or pin for engaging the floor a movable pin 19 is provided, such pin being hollow as indicated in the drawing and being guided upon the front side of the stop 18 by means of the rivet 20 working in the slot 21. In order to disengage this device from the door, the pin 19 must be moved to its upper position, and the device then slipped endwise to the outside edge of the door.

A construction somewhat similar to that of Figs. 8, 9 and 10 is indicated in Fig. 11. In this construction the bottom plate 22 may be secured permanently to the bottom edge of the door by means of the screws 23, and the holding bolt 24 is of the type illustrated in the figure.

In the construction of Fig. 12, the movable pin 25 is used in addition to the fixed pin 26, thus giving a holding means at each end of the plate 27. A wood strip 5′ is secured to the top of the plate 25 by means of the screws 6′, the function of such strip being the same as explained in connection with Figs. 1 and 2.

Having thus described my invention and illustrated its use, what I claim as new and desire to secure by Letters Patent, is the following:

1. A safety stop for a door comprising a one piece plate adapted to lie loosely and removably on the floor beneath the door and having a stop projecting upward from the top of the plate and adapted to engage the rear side of the door and having a lug projecting downward from the bottom of the plate and adapted to releasably engage a socket in the floor, the said plate being movable laterally over the surface of the floor around the said lug as an axis.

2. A safety stop for a door comprising a metal plate adapted to lie removably on the floor beneath the door and having a stop projecting upward from the top of the plate and adapted to engage the rear side of the door, and having a pin circular in cross section projecting downward from the bottom of the plate and adapted to releasably engage a socket in the floor, the said plate being freely removable vertically from the floor.

3. A safety stop for a door comprising a metal plate adapted to lie removably on the floor beneath the door and having a stop projecting upward from the top of the plate and adapted to engage the rear side of the door, and having a pin circular in cross section projecting downward from the bottom of the plate and adapted to releasably engage a socket in the floor, the said plate being freely-removable from the floor and a wood strip removably secured to the top of the plate.

4. A safety stop for a door comprising a plate adapted to lie beneath the bottom edge of the door; an upwardly projecting stop carried by the plate and adapted to engage the rear face of the door; and a vertically movable bolt carried by the plate and adapted to engage a socket in the floor beneath the door.

In testimony whereof I have hereunto signed my name in the presence of the two subscribed witnesses.

ANTOINETTE A. COFFIN.

Witnesses:
GEO. A. ROOD,
W. E. COFFIN.

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