Feb. 20, 1923. 1,445,681.

L. R. HAGE.

DOOR STOP.

FILED JUNE 4, 1921.

Fig. 2.

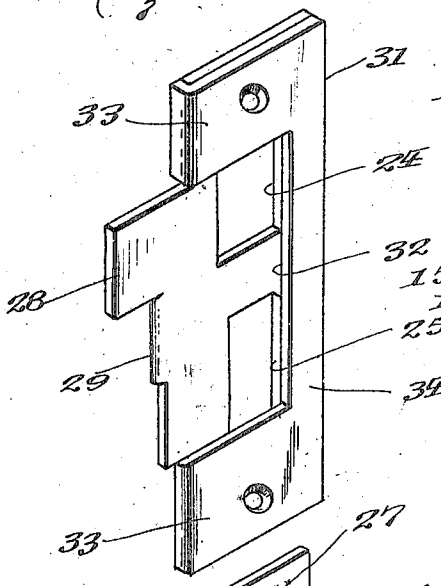
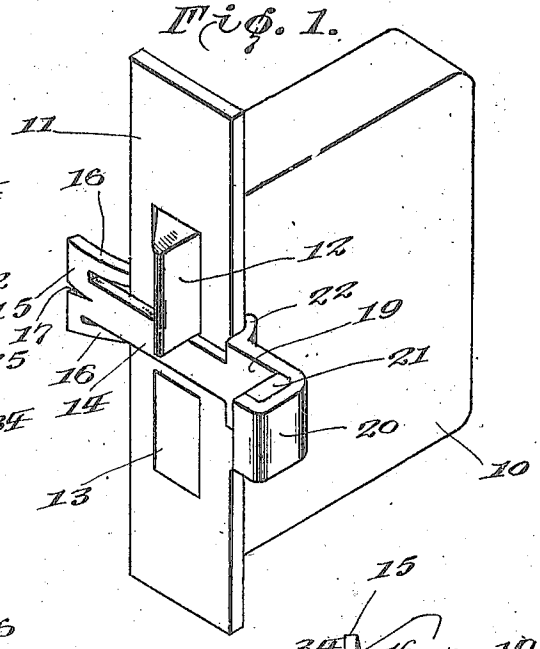


Fig. 1.



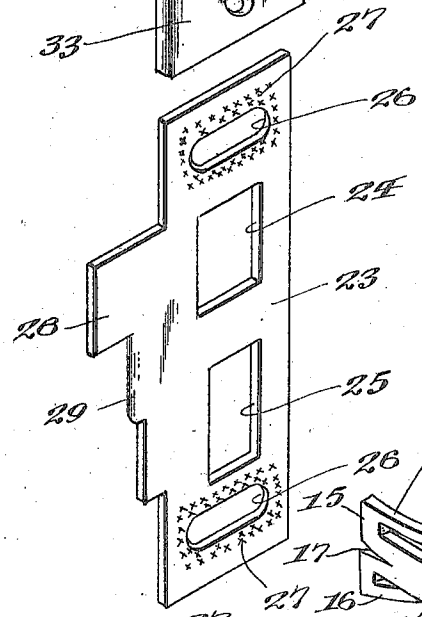
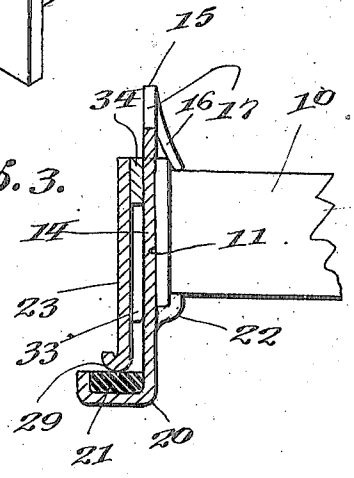


Fig. 3.



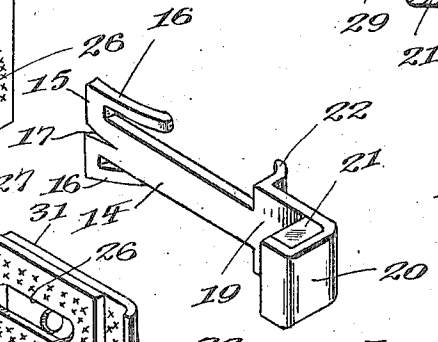


Fig. 5.

Fig. 4.

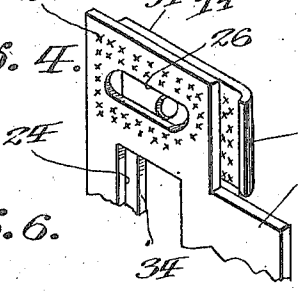


Fig. 6.

Inventor:
Leonell R. Hage.

By

Attorneys.

Patented Feb. 20, 1923. 1,445,681

UNITED STATES PATENT OFFICE.

LEONELL R. HAGE, OF HIGHWOOD, MONTANA, ASSIGNOR OF ONE-THIRD TO GEORGE SWANSTROM, OF GREAT FALLS, MONTANA.

DOOR STOP.

Application filed June 4, 1921. Serial No. 474,894.

To all whom it may concern:

Be it known that I, LEONELL R. HAGE, a citizen of the United States, residing at Highwood, in the county of Chouteau, State of Montana, have invented certain new and useful Improvements in Door Stops, and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to new and useful improvements in door lock attachments, and particularly to attachments therefor which deaden the noise incident to the slamming or violently clossing the door.

One object of the invention is to provide a device of this character which is readily capable of adjustment to compensate for the shrinkage of the door and door frame.

Another object is to provide a device of this character which is readily capable of attachment to the ordinary lock.

Other objects and advantages will be apparent from the following description when taken in connection with the accompanying drawing.

In the drawing:

Figure 1 is a perspective view of the lock removed from the door and having the buffer thereon.

Figure 2 is a perspective view of the strike plate and the adjustable stop mounted thereon.

Figure 3 is a horizontal sectional view through the front plate of the lock and the buffer, and the stop and strike plate, the parts being in the position assumed when the door is in closed position.

Figure 4 is a perspective view of the strike plate, the adjustable plate being removed.

Figure 5 is a perspective view of the buffer removed from the lock.

Figure 6 is a fragmentary perspective view of a portion of the strike plate 23, showing the roughened portion of the reverse face thereof.

Referring particularly to the accompanying drawing, 10 represents the casing of the lock, which has the front or face plate 11, through which the latch bolt 12, and the lock bolt 13 move.

Disposed transversely of the outer face of the plate 11, between the latch and lock bolts, is a metal strip 14, one end of which is formed with a tranverse head 15. Each arm of the head is formed with an inwardly and longitudinally extending finger or lug 16, which projects out of the plane of the head and body of the strip. The intermediate portion of the head is formed with a notch 17. The fingers or lugs 16 are engaged against the rear face of the plate 11, as seen in Figures 1 and 3, of the drawing. The other end of the strip 14 is slightly wider than the main portion, as shown at 19, and is rebent at 20 to confine a rubber buffer block 21. The inner ends, at 22, of the wider part 19 are partly removed from the body and bent out of the plane of the body to embrace the other vertical edge portion of the face plate 11 of the lock. Thus the stem of the strip 14 engages with the plate 11 at both longer edges, with the result that the attachment is held firmly in position on the lock.

The strike plate comprises a plate 23 having the latch and lock bolt openings 24 and 25, and in which are formed the transverse elongated openings or slots 26, extending across the ends of the plate. Surrounding each of the slots 26, and on the opposite faces of the plate 23, are the roughened portions 27 and 27′, the purpose of which will presently appear. Extending from the outer edge of the plate 23, opposite the latch opening, 24, is the strike tongue 28, against which the latch bolt is arranged to engage, before passing into the opening 24. The edge of the plate 23, below the tongue 28, projects outwardly to a slightly greater degree than the portion of said edge above the tongue, and a part of this portion, below the tongue, is rolled as at 29, for engagement by the rubber buffer block 21, when the door is swung into closed position. The remaining part of the lower portion of the edge of the plate 23, is plain, as shown at 30, the portion of the edge below the part 30 being vertically aligned with the portion above the tongue.

A plate 31 is disposed on the outer wider face of the plate 23, and has a large cut out 32, resulting in the parallel end portions or arms 33, and the connecting strip 34. The arms 33 are perforated for the reception of screws, by means of which the plates 31 and 23 are secured to the door frame. The screws are adapted to pass through the slots

26. The faces of the arms 33 which engage with the roughened faces of the plate 23, are also roughened to prevent slipping of the plate 23, when adjusted to the proper position to be engaged by the rubber block 21. The outer ends of the arms 33 are turned laterally to engage with the outer edge faces of the plate 23, at the ends of the roughened portions thereof.

When the device is used with a door which closes in the opposite direction to that in which the device of Figure 2 is used, the strike plate has its projection 28 extending in the opposite direction, thus requiring the plate 31 to be placed against the other face of said plate. The roughened faces of the arms 33 then engage with the roughened portions 27′ of the plate 23.

Thus, when the door is swung violently into closed position, the rubber block 21 will engage with the rolled portion 29, checking the force of the door, and deadening the sound which usually occurs when the edge of the door strikes against the door frame. As the door and door frame change their relation, due to warping, the screws which retain the plates 23 and 31 are partly withdrawn, and as the case requires, the plate 23 slipped forwardly or backwardly, after which the screws are again tightened to secure the adjusted relation of the plates.

What is claimed is:

A buffer for a lock comprising a strip adapted to be disposed transversely of the face of the face plate of a lock casing between the latch and lock bolt openings, one end of the strip being formed with a head and projections engaged with the rear face of said face plate, and offset fingers on the other end embracing the opposite edge of the plate, the last-named end of the strip being rebent to confine a resilient block.

In testimony whereof, I affix my signature, in the presence of two witnesses.

LEONELL R. HAGE.

Witnesses:

D. S. HOLDERBAUM,

ELMER L. MADSON.