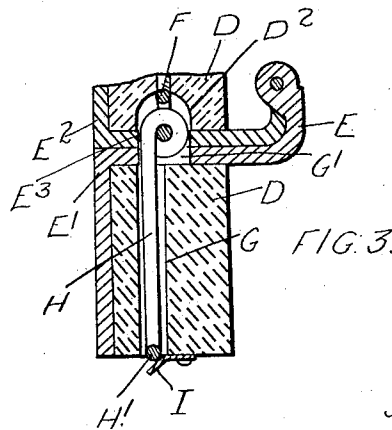
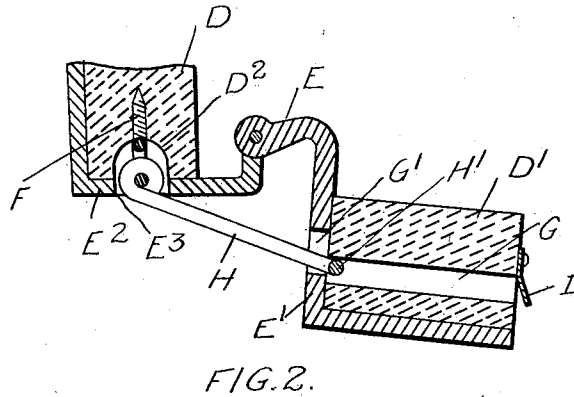
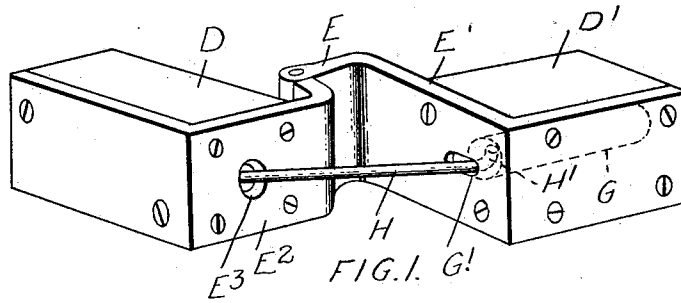


J. L. LAWRENCE.
DOOR STOP.
APPLICATION FILED MAR. 9, 1914.

Patented Oct. 13, 1914.

1,113,358.



WITNESSES

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UNITED STATES PATENT OFFICE.

JOSEPH LYLE LAWRENCE, OF TORONTO, ONTARIO, CANADA.

DOOR-STOP.

1,113,358.

Specification of Letters Patent.

Patented Oct. 13, 1914.

Original application filed October 29, 1913, Serial No. 798,117. Divided and this application filed March 9, 1914. Serial No. 823,470.

To all whom it may concern:

Be it known that I, JOSEPH LYLE LAWRENCE, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Door-Stops, of which the following is the specification.

My invention relates to improvements in door stops forming a divisional part of United States application, Serial No. 798,117, filed the 29th day of October, 1913, and the object of the invention is to devise a simple, durable and neat device which will be invisible when the door is closed and which will limit the outward swinging movement of the door to prevent any strain on the hinge due to the door swinging too far back and in which means are provided for preventing the vibration and rattling of the parts and it consists essentially of a link brace extending across the angle between the hinge pillar and the door when the door is in the open position and to enter one of the abutting members formed by the hinge pillar and door frame when the door is closed so as to be invisible and means bearing against the free end of the link brace when the door is in the closed position to prevent the same rattling as hereinafter more particularly explained by the following specification.

Figure 1, is a perspective view of a portion of a hinge pillar and door post of an automobile, my stop device being applied thereto. Fig. 2, is a plan section showing the door in the open position. Fig. 3, is a similar view to Fig. 2 showing the door in the closed position.

In the drawings like letters of reference indicate corresponding parts in each figure.

The drawings show my device as applied to the ordinary visible hinge of an automobile door. In this construction D is a hinge pillar and D' is the door post.

E is a hinge comprising members E' and E², the member E' being connected to the post D' and the member E² to the hinge pillar D. The member E² is provided with an orifice E³ located opposite the recess D² formed in the hinge pillar D.

F is a screw eye located in the recess D².

G is a bore extending through the door post D' in a horizontal direction.

G' is a slot formed in the hinge member

E' substantially opposite the inner end of the bore G.

H is a link bar swung at one end in the eye F and entering the bore G at the opposite or free end. Such end is provided with an upturned extremity H' as indicated by dotted lines in Fig. 1, which end engages with the inner face of the hinge member E' when the door is in the open position.

When the door is in the closed position as shown at Fig. 3 the hinge bar H slides into the bore G and is held therein as shown in Fig. 3.

In providing limiting means of this class the difficulty has been to prevent the vibration of the link bar causing a rattling noise. To prevent rattling of the link bar H in the bore due to vibration I provide a spring plate I against which the free end of the bar H is forced when the door is thrown into the closed position.

Although I show my device as applied to an automobile door it will, of course, be understood that it might with equal readiness be applied to any other form of door.

From this description it will be seen that I have devised a very simple device, which will be strong, durable and neat dispensing with the limiting straps ordinarily in use for limiting the outward swing of the door and which are liable to become worn and broken and unsightly in appearance.

What I claim as my invention is:

1. The combination with a hinge pillar member and door frame member, one member being provided with a suitable recess and the other with a horizontal bore, of a link member swung on a vertical pivot in such recess at one end and entering at its free end into the horizontal bore, and spring pressure means designed to bear against the end of the link member when the door members are in the closed position, as and for the purpose specified.

2. The combination with a hinge pillar member and door frame member, one member being provided with a suitable recess and the other member with a horizontal bore, of a stop plate having an opening extending over the inner end of the bore and having a less vertical diameter than the bore, a link member swung on a vertical pivot in the recess and having an upturned free end entering the bore, the upturned portion en-

gaging the inner face of the stop plate when the door members are in the open position, and means for preventing the rattling of the link member when the door members are in the closed position, as and for the purpose specified.

3. The combination with a hinge pillar member and door frame member, one member being provided with a suitable recess and the other member with a horizontal bore, of a stop plate having an opening extending over the inner end of the bore and having a less vertical diameter than the bore, a link member swung on a vertical pivot in the recess and having an upturned free end entering the bore, the upturned portion engaging the inner face of the stop plate when

the door members are in the open position, as and for the purpose specified.

4. The combination with a hinge pillar member and door frame member, one member being provided with a suitable recess and the other with a horizontal bore, of a link member swung on a vertical pivot in such recess at one end and entering at its free end into the horizontal bore, a spring plate extending in front of the outer end of the bore to engage the end of the link when the door members are in the closed position, as and for the purpose specified.

JOSEPH LYLE LAWRENCE.

Witnesses:

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