May 19, 1925. 1,538,599

H. E. SOREF

SAFETY DEVICE FOR HOLDING DOORS AJAR

Filed Dec. 8, 1922

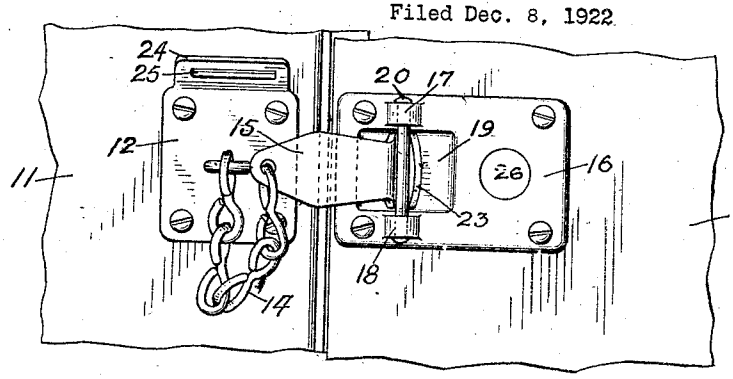


Fig. 1.

Fig. 2.

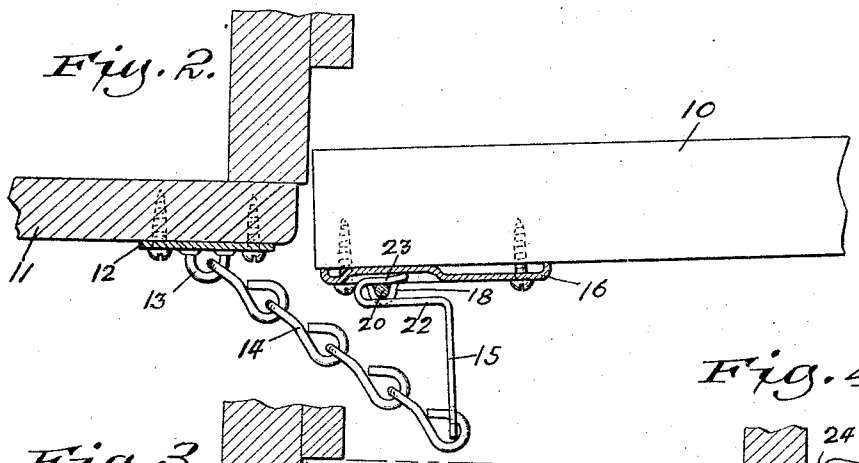


Fig. 3.

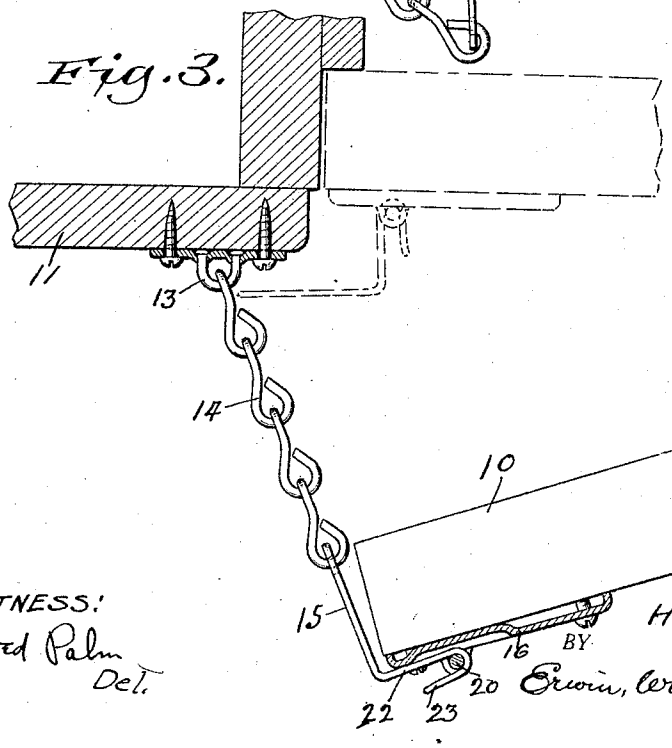
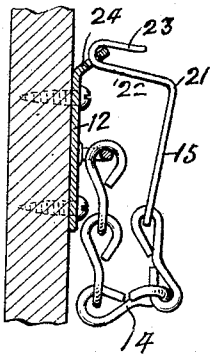


Fig. 4.



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UNITED STATES PATENT OFFICE.

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SAFETY DEVICE FOR HOLDING DOORS AJAR.

Application filed December 8, 1922. Serial No. 605,588.

To all whom it may concern:

Be it known that I, HARRY E. SOREF, a citizen of the United States, and a resident of the city of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Safety Devices for Holding Doors Ajar; and I do declare the following to be a clear, exact, and complete description thereof, such as will enable persons skilled in the art to make and use the same, reference being had to the accompanying drawing as illustrating a simple construction in which my invention has been embodied.

It is often desirable to set a house door slightly ajar for purposes of ventilation. At the same time it is very desirable that an intruder be not permitted to take advantage of the slightly opened door, to gain an unauthorized admission into the house. It is further desirable that when a door is set slightly ajar, it be anchored in a predetermined position, so that children of irresponsible age cannot open the door and crawl from the house, to the distraction and often sorrow of their mothers.

My invention resides in a convenient and simple device, one part of which is attached to the free edge of the door and the other to the abutting portion of the door casing, the parts being connected by a detachable chain of definite short lengths, so that the door may be moved only a limited distance away from the door jamb, the distension of the chain when the slack thereof is taken up, limiting such movement.

My invention goes farther in that it embodies provisions which require that the door be closed or substantially so before the holding chain, which is connected to one part, can be connected with the other. The construction of the devices is such that the door must likewise be practically closed before the holding devices can be disconnected so as to permit the door to be opened.

In this latter provision lies the safeguard residing in my invention which prevents any disconnection of the chain from the outside, by reason of the fact that the door must be so nearly closed that neither the hand of the intruder nor any instrument held thereby can manipulate the fastening so as to uncouple the same.

The novel features of my invention will now be specifically described and pointed out in the appended claims.

In the accompanying drawing:

Figure 1 is a view in elevation showing portions of a door and the adjacent casing, with the safety devices embodying my invention as in operative position.

Fig. 2 is a plan view partly in section, showing the same parts, and illustrating the degree to which the door must be moved to closing position, in order to permit disconnection of the safety devices.

Fig. 3 is a like view showing in full lines the position of the door when secured in its partially opened position for purposes of ventilation, and showing in dotted lines its closed position, with the hook of the fastening device as in a position of rest but active to prevent opening of the door without first disconnecting the same.

Fig. 4 is a vertical section through a portion of the door casing showing how the safety hook and chain may be held by a supplementary provision so that the parts will not be caught between the door and casing when not applied to their intended use.

In the drawing, a portion of the door is indicated by the numeral 10 and a portion of the adjacent casing against which it abuts by the numeral 11. My invention comprises a device which in its simplest form consists of a stamping 12, adapted to be secured to the door casing, such stamping being provided with an eye or staple 13, to which one end of a chain 14 is attached. The free end of the chain has connected therewith a hook 15, the peculiar construction and functions of which will be later described. The chain 14 constitutes a flexible connection between the eye 13 and hook 15.

Attached to the door in the horizontal plane of the part 12 is an adjunctive device 16, illustrated in the present instance as a stamping, and intended to be secured near the edge of the door. In the stamping operation two ears 17 and 18 are struck so as to extend outwardly from the face of the stamping 16, and in the same operation a depression 19 is produced. A pin 20 is fastened in the projecting ears 17 and 18, in such manner as to afford a clearance between the pin fixed in the separated ears and the bottom of the depression 19.

The hook 15 before referred to is bent to constitute an angle 21 formed by the flat portion 15 and the angular extension 22. The free end of the angular member 15—22

is returned to form a point 23 lying parallel with the portion 22, and separated therefrom sufficiently to permit the seating of the pin 20 in the space thus provided.

With the door in its closed position the point 23 may be slipped into the depression in the plate 16 so as to seat the pin 20 at the bottom of the space provided by the return. When the door is opened, the hook member will pivot about the pin 20, and be turned into the position indicated in Fig. 3, in which the angular parts 15—22 will bear upon or lie closely adjacent the forward edge of the plate 16 and the front edge of the door. The opening movement of the door is thus limited by the length of the chain 14, and pressure against the door will not be upon the pin 20, but on the contrary will be taken up by the edge of the plate 16 upon which the angular extension 22 bears.

Many devices of the class to which the present invention relates may be disconnected by passing the hand through the space between the partially opened door and the casing, and thus unauthorized ingress to the house may be obtained. But with my invention any such disengagement of the fastening devices is impossible, for the reason that the hook member must be rotated about 180° before disconnection can be effected. In such rotation the hook member fulcrums upon the point of its connection with the free end of the chain, and with the latter distended, the door will move toward its closing position. The degree of such movement necessary to enable the hook member to be disconnected from the pin supported by the plate 16, is indicated in Fig. 2. Manifestly it will be impossible therefore to disconnect the fastening by any one from the outside.

When the occupants of the house close the door after passing out, the chain ordinarily would depend from the staple 13, leaving the hook free to swing and be caught between the edge of the door and the casing. To avoid this occurrence I provide means for holding the chain in a position so that the hook thereon cannot be caught in the manner described. To effect this result, I turn the upper edge of the plate outwardly as at 24, and provide therein a slot 25, into which the point of the hook is adapted to be inserted as shown in Fig. 4 .

Although I have shown and described my invention in its simplest constructional form in which it occurs to me that it can be manufactured, it is obvious that the invention may be embodied as a part of the lock construction, the casing of which will support the pin 20, and the keeper of which will support the staple 13. The invention may also be used in connection with a mortise lock or latch, the hole 26 in the plate 16 receiving the shank thereof. In all forms in which the invention is embodied, the principle of operation is unchanged.

If the door be closed from the inside after the safety devices have been applied to hold it in its partially opened position, the hook member will automatically assume the dotted line position shown in Fig. 3.

The device in the simple form illustrated is extremely economical in the matter of manufacturing cost, and attains in a most efficient manner the achievement of the purposes which it is intended to fulfill. Any person from the outside who should attempt to effect disconnection of the locking devices by stealth would be frustrated by the automatic closing of the door in his efforts to effect such disconnection.

Having thus described my invention, what I claim and desire to secure by Letters Patent of the United States, is:

1. A safety device for securing a door in a partially opened position, comprising a part for attachment to the door casing and a short flexible connection including a hook extending therefrom, a part for attachment to the door and provided with a retaining member adapted to be engaged or disengaged with the hook only when the door is substantially closed, the hook being rotated about its vertical axis to locked position by movement of the door away from the casing.

2. In a safety device for securing a door in a partially opened position, a plate for attachment to the door casing and a chain connected thereto with a hook at its free end, a plate for attachment to the door and provided with means for engagement by the hook to limit movement of the door, the said hook being formed as an angular member the sides of which are adapted to embrace the side and front edge of the door when the latter is moved to its partially opened position.

3. In a safety device for securing a door in a partially opened position, a plate for attachment to the inside of the door and supporting a pin, a plate for attachment to the door casing and a hook connected thereto, the hook being formed as an angular member the sides of which are adapted to embrace the side and edge of the door when the door is moved to position, the point of the hook being returned to lie in parallelism with one side of the angular member to form a space for the reception of the pin.

4. Means constituting a safety device for holding a door slightly ajar, the said means comprising an attachment to the inside of the door and a pin supported thereon to provide a clearance under the pin, an attachment to the door casing and a short chain with a hook thereon connected to said last mentioned attachment, said hook being formed as an angular member with its point

returned and lying parallel to one side thereof, whereby the point of the hook may be entered in the clearance to embrace the pin and withdrawn therefrom only when the door is closed, the hook being rotated to locking position by movement of the door away from the casing.

In testimony whereof, I have signed my name at Milwaukee, this 22d day of November, 1922.

HARRY E. SOREF.

Witnesses:
W. F. WOOLARD,
WARREN G. WHEELER.