H. L. MENTZ.

SAFETY LOCK DOOR CATCH.

APPLICATION FILED FEB. 13, 1915.

1,147,530. Patented July 20, 1915.

Fig. 1.

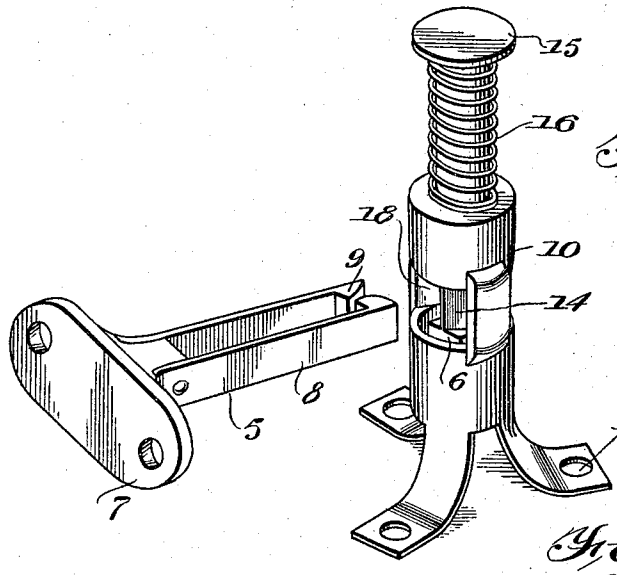


Fig. 5.

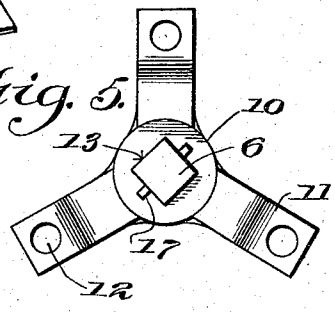


Fig. 2.

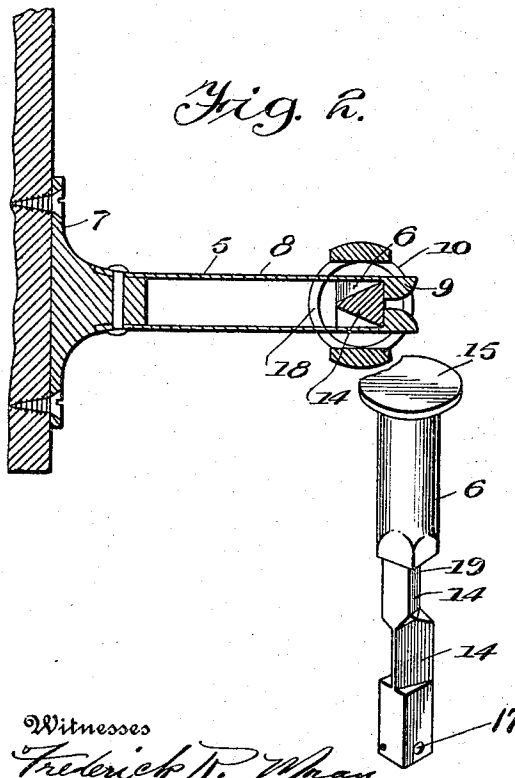


Fig. 3.

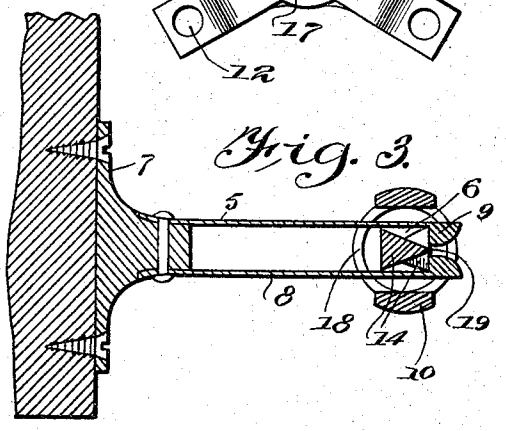


Fig. 4.

Witnesses

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SAFETY-LOCK DOOR-CATCH.

1,147,530. Specification of Letters Patent. Patented July 20, 1915.

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To all whom it may concern:

Be it known that I, HENRY L. MENTZ, a citizen of the United States, residing at Huntington, in the county of Cabell and State of West Virginia, have invented new and useful Improvements in Safety-Lock Door-Catches, of which the following is a specification.

The present invention relates to improvements in door catches.

The primary object of the present invention resides in the provision of a device of this character including a locking element carried by the door and adapted to automatically engage a bolt yieldably supported upon the floor when the door is swung to opened position, the bolt being of such construction to necessitate depression of the latter to release the locking element when it is desired to close the door.

Other objects will appear as the nature of the invention is better understood, the same residing in the specific construction, combination and arrangement of parts hereinafter more fully described.

In the drawing forming part of this application like numerals of reference indicate similar parts in the several views and in which:

Figure 1 is a perspective view of the parts showing the manner of associating the same. Fig. 2 is a horizontal sectional view through the device with the parts in operative position. Fig. 3 is a similar view showing the bolt depressed to permit release of the locking element. Fig. 4 is a detail perspective view of the bolt. Fig. 5 is a bottom plan view of the support with the bolt positioned therein.

The preferred embodiment of the invention is illustrated in the drawing and consists of a locking element 5 secured to the door and adapted for engagement with the bolt 6, the latter being yieldably supported upon the floor in the path of movement of the door. The locking element comprises a bracket 7 adapted to be secured in any suitable manner to the door, and projecting horizontally therefrom are spaced parallel resilient fingers 8 having secured integrally or otherwise to the free ends thereof lugs 9 disposed in confronting relation. The adjacent face of each lug is beveled toward the free ends of the fingers to facilitate the operative association of the latter with the bolt when the door is swung to opened position in a manner presently described.

The bolt 7 is slidably mounted in a hollow tubiform support 10, the latter being formed to provide feet 11, preferably three in number having the apertures 12 for the reception of suitable fastening elements to secure the device to the floor. The support 10 is closed at both ends except for the openings 13 for the reception of the bolt 7, the openings being square to accommodate a bolt having its major portion and one end of corresponding configuration to prevent turning of the bolt within the support. The shank of the bolt is formed with oppositely disposed substantially triangular shaped portions 14 arranged in superimposed relation. Encircling the shank of the bolt and having one end bearing against the upper end of the support 10, and its opposite end against the head 15 of the bolt, is a coil spring 16 operating to normally retain the bolt in elevated position, the lower end of the latter being provided with suitable stops 17 adapted to abut against the bottom of the support 10 to limit the upward movement of the bolt. The stop 17 is preferably in the nature of a short piece of wire passed through suitable openings 17′ in the lower end of the bolt. The disposition of the triangular shaped portions 14 of the bolt are such, that under the action of the spring 16 the lowermost angular portion 14 is normally disposed in a line with the entrance opening 18 of the support 10, with one of its sharp edges facing said opening, so that when the fingers 8 of the locking element enter said opening, the said sharp edge of the lowermost angular portion 14 will pass between said fingers. The inclined surfaces of said triangular portion spread said fingers during the operative association of the parts until the bolt is wholly disposed between the fingers, whereupon the fingers spring together, at which time the lugs 9 engage the opposite rear edges of the said lowermost portion 14, thus effectively locking the parts operatively associated. In this position of parts the door is positively held in opened position, sudden jars and undue pressure against the door being insufficient to effect its release. Now, when it is desired to close the door, it is only necessary to depress the bolt 6 by means of the foot to bring the sharp edge 19 of the upper-

most triangular portion 15 of the bolt in line with the space between the free ends of the fingers 8, whereupon a slight pressure against the door will effect a release of the parts and allow the door to be closed. Obviously the spring 16 automatically returns the parts to normal position subsequent to such operation.

It is believed that from the foregoing description the nature and advantages of the invention will be readily understood without requiring a more extended explanation and therefore the same has been omitted. However I desire to have it understood that the drawings illustrate but one embodiment of the invention and that various changes in the construction and arrangement of parts as shown may be resorted to when desired as fall within the scope of the appended claims.

What I claim is:—

1. A door catch comprising a support adapted to be fixed to the floor, a foot operated bolt yieldably mounted therein, a locking element secured to the door for automatic engagement with said bolt when the door is swung to opened position, said bolt having angular portions providing oppositely disposed sharp edges adapted to be alternately engaged by said element for the purpose described.

2. A door catch comprising a support adapted to be fixed to the floor, a bolt yieldably mounted thereon and having angular portions providing oppositely disposed sharp edges, a locking element carried by the door for automatic engagement with said bolt when the door is swung to opened position, one of said sharp edges being normally disposed in the path of movement of said element, and said bolt being adapted to be depressed to bring the other of said sharp edges in the path of movement of said element to permit release of the latter.

3. A door catch comprising an element secured to the door and including spaced resilient fingers, lugs fixed to the free end of said fingers in confronting relation, a support fixed to the floor, a bolt yieldably mounted thereon and having angular-shaped intermediate portions, one of said portions being adapted to be automatically embraced by said fingers when the door is swung to opened position to retain the door in said position, and said bolt being adapted to be depressed to bring the other of said angular portions between the fingers to permit the release of said element.

4. A door catch comprising an element secured to the door and including spaced resilient fingers having lugs at the free ends thereof disposed in confronting relation, a support fixed to the floor, a bolt slidably mounted therein and having oppositely disposed angular portions arranged in superimposed relation, the lowermost of said angular portions being adapted to be automatically engaged by said fingers when the door is swung to opened position, said bolt being adapted to be depressed to bring the uppermost angular portion between said fingers to permit the release of said element, and means for automatically returning said bolt to normal position.

5. A door catch comprising an element secured to the door and including spaced parallel fingers, a support of tubular formation fixed to the floor and having an opening between the ends thereof, a bolt slidably mounted therein and having oppositely disposed triangular shaped portions arranged in superimposed relation, means yieldably supporting said bolt in elevated position to normally maintain the lowermost angular portion in a line with said opening, said fingers being adapted to enter said opening to automatically engage said angular portion when the door is swung to opened position, said bolt being adapted to be depressed to move the uppermost angular portion between said fingers to permit release of the latter, and said means operating to return the parts to normal position.

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

HENRY L. MENTZ

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."