May 10, 1932. A. E. HUSS 1,857,958

SAFETY LATCH FOR WINDOWS

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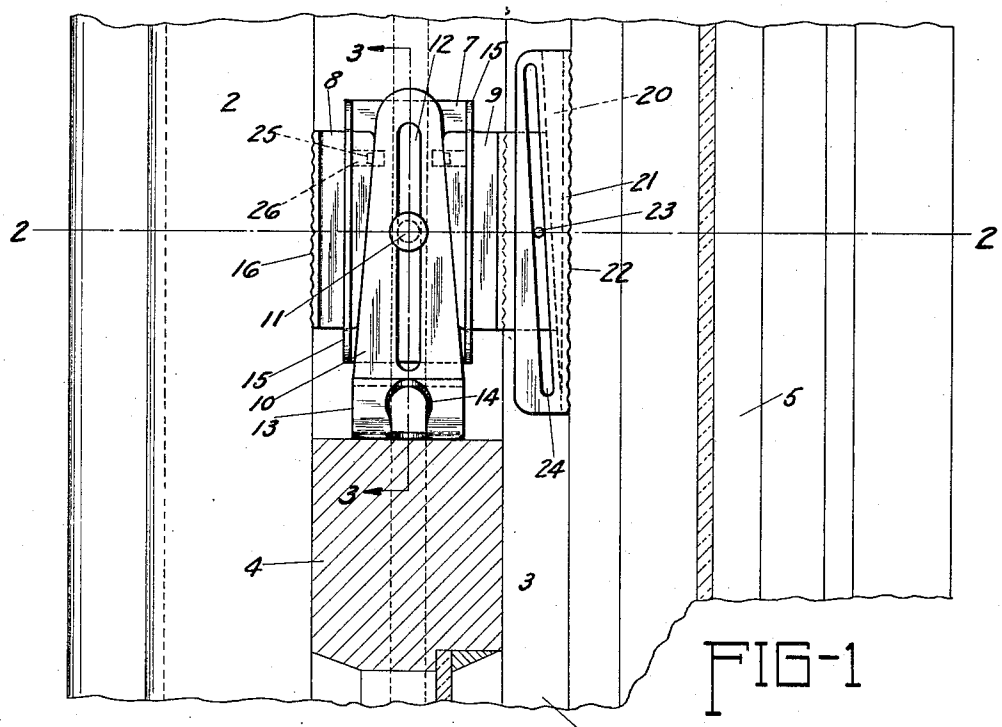


FIG-1

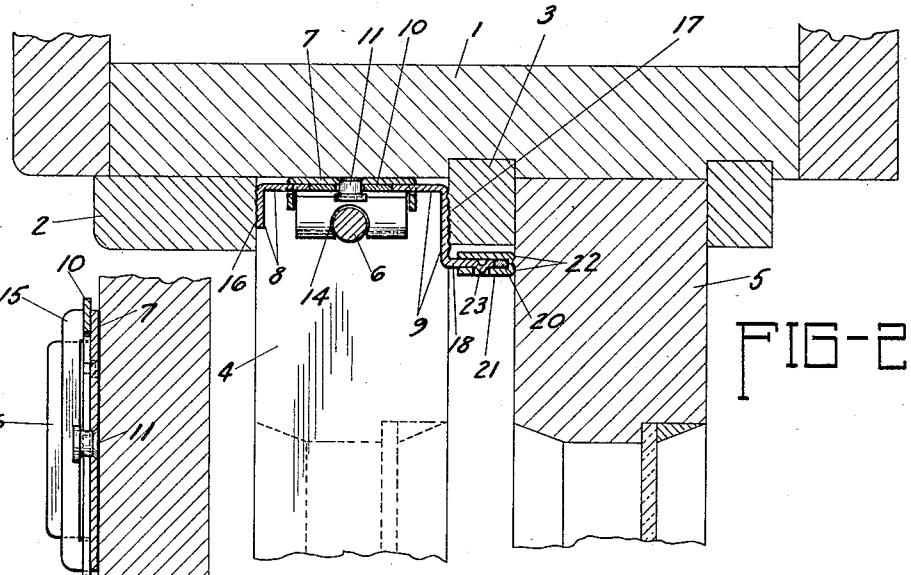


FIG-2

FIG-3

ADOLPH E. HUSS INVENTOR.

BY

Merrill M. Blackburn.

ATTORNEY

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ADOLPH E. HUSS, OF DAVENPORT, IOWA

SAFETY LATCH FOR WINDOWS

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The present invention pertains to a safety device for use in connection with windows such that when it is applied to a partially opened window it will prevent the same from being opened farther by anyone outside of the window. Among the objects of this invention are to provide an efficient construction of the character stated; to provide a construction of the character indicated which will lock both the upper and lower sashes of a window so that neither can be moved into a more open position than that occupied when the device is applied; to provide a construction of the character indicated which is readily applied to and removed from a window for the purpose indicated; to provide a simple efficient readily constructed instrument of the character stated; to provide an implement of the character indicated which will be simple in construction and yet extremely efficient in operation; and such further objects, advantages and capabilities as will hereafter appear and as are inherent in the construction disclosed herein. My invention further resides in the combination, construction, and arrangement of parts illustrated in the accompanying drawings, and, while I have shown therein what is now considered the preferred embodiment of this invention, I desire the same to be understood as illustrative only and not to be interpreted in a limiting sense.

In the drawings annexed hereto and forming a part hereof, Fig. 1 is a vertical section through a window showing the application of my safety catch thereto; Fig. 2 is a transverse section substantially along the plane indicated by the line 2—2, Fig. 1; Fig. 3 is a vertical section taken substantially along the plane of the line 3—3, Fig. 1.

Referring more in detail to the annexed drawings, the casing 1 is shown as having a window jamb or stop 2 and a guide rail 3. The lower sash is denoted by the numeral 4 and the upper sash by the numeral 5. A rope 6 is connected to the sash 4 and has a counter balance weight (not shown), as is customary.

Behind the rope 6 is inserted a safety device constructed in accordance with my invention and this safety device effectually prevents the sash from being raised. This device comprises a base plate 7 and a pair of gripping members 8 and 9. It also includes a more or less wedge shaped member 10 which is slidable between the members 8 and 9 and causes them to be forced laterally to engage the stop 2 and guide rail 3. A shouldered rivet 11 extends through a slot 12 and the body member or base plate 7. This rivet holds the member 10 closely against the base plate but yet there is sufficient room so that member 10 slides freely. The end of member 10 is bent so as to have a substantially triangular cross section as illustrated in Fig. 3 at 13. This triangular portion is perforated as shown at 14 for the reception of the rope or chain 6 upon which the window is suspended. This connection of the device with the rope holds the former in place when once installed and prevents the same from dropping away as might happen if there were no connection.

It is apparent from the drawings that the plate 7 has a pair of flanges 15 turned up along two of its opposite edges and that these flanges are slotted for the reception of members 8 and 9. Member 8 has a flange 16 turned up along one of its edges and this flange is corrugated on its outer surface to furnish a gripping surface to engage the window stop, as will be obvious. Member 9 has a flange 17 turned up along one of its edges and this flange is intended to be substantially parallel with the flange 16, when in use. This flange also is corrugated as is flange 16 and engages the guide rail 3 when forced outwardly by the action of member 10. Flange 17 has its edge turned into a plane substantially parallel with the body portion of member 9, as illustrated at 18. As indicated in Fig. 1, the outer edge of this flange 18 is inclined to cooperate with a wedge-shaped member 20 arranged between the arms of the gripping member 21. The edge of the latter is corrugated as indicated at 22 to engage the upper sash and prevent the same from being lowered when the latch is in place. Means 23 engages in slot 24 of member 20 and serves to prevent separation of flange 18 and member 20. Slot 24 is ar-

ranged parallel to the inner edge of the cam-shaped member 20. This arrangement of parts permits ready sliding of the gripping member 21 with relation to the parts by which it is carried. Preferably the means 23 is a lug formed by pressing outwardly a portion of the metal of the flange 18. Preferably a lug 25 is formed along the edge of each of members 8 and 9 and extends backwardly into a slot 26 in plate 7. This holds these members 8 and 9 against detachment from the plate 7 when the device is being handled.

When it is desired to latch a window against being opened or to latch it in partly opened condition against being further opened, one of these devices is placed above the lower sash and between the rope and the casing, with the rope extending through the slot 14. The lower edge of the slide 10 is then permitted to rest on top of the lower sash and the corrugated faces of flanges 16 and 17 are in proximity to the stop 2 and guide rail 3. Parts 7, 8 and 9 are then permitted to drop down until the corrugated faces engage the stop and guide rail and then the device is in position to prevent the window from being raised. At the same time, member 21 slides downwardly and outwardly until its corrugated face is against the upper sash. If an attempt is then made to lower this sash, it forces member 21 downwardly and outwardly still more and the corrugations 22 engage the sash so that a strong wedging action is produced when there is an attempt to force the sash 5 downwardly. This wedging action is caused by the inclined faces of flange 18 and wedge 20. If it is desired to remove this device from locking position, it is only necessary to raise the body member 7, thus reducing the wedging action and permitting the device to be removed from behind the rope. Of course, if desired, one of these may be used upon each side of the window. In such case, they would have to be made in rights and lefts. Otherwise, they would fit upon only one side of the window.

It will be seen from the foregoing that I have provided a novel device capable of accomplishing the objects set forth above.

Having now described my invention, I claim:

1. In a safety catch for windows, a base plate having guiding projections extending from a face thereof adjacent two opposite edges thereof, holding means engaging said guiding projections and slidable with relation thereto and to the base plate, and cam means slidable with relation to the base plate and the holding means and capable when moved in one direction of forcing the holding means laterally to engage fixed elements of the window structure.

2. In a window safety latch, a base plate having a substantially centrally arranged guiding means, actuating means, comprising a cam, mounted on the guiding means and slidable longitudinally with relation to the base plate, other guiding means arranged laterally with relation to the cam and capable of receiving and guiding holding means, holding means capable of engaging parts of the window casing to be held stationary thereby, said holding means engaging the laterally arranged guiding means of the base plate and being guided thereby, said device being adapted to be placed in the channel for the lower sash above the sash, with the actuating cam in engagement with the upper edge of the sash, said cam being movable longitudinally by raising the sash and acting to force the holding means laterally to prevent the latch from being lifted and thereby to prevent the sash from being raised.

3. In a latch of the character described, a body plate having a second plate secured thereto and slidable longitudinally thereon, said second plate having a pair of opposite edges arranged at a small angle to each other so as to have a wedging action when said second plate is moved longitudinally on the body plate, holding means mounted upon the body plate and adapted to engage the second named plate and be actuated laterally thereby, said holding means being adapted to engage portions of the window casing and be held thereby against vertical movement with the window sash, one of said holding means having a portion extending transversely across the central guide rail of the window casing and being provided with a movable portion engageable with the upper sash of the window.

4. In a latch for the purpose indicated, a body member, a plurality of movable elements thereon, two of said movable elements being holding members supported on the body member and movable laterally with relation thereto and a third element being a longitudinally movable tapered element having relatively inclined faces in engagement with the aforesaid holding elements, said tapered element, when moved longitudinally in one direction, forcing the holding elements laterally into engagement with a window casing, a separately movable holding element mounted on one of the first named holding elements and being movable both longitudinally and laterally to engage and hold a second window sash.

5. In a structure of the character described, having a body member, a pair of laterally movable holding members and a longitudinally movable actuating means for moving the holding members laterally, separate means mounted on one of the laterally moving members, means for holding such separate means against accidental displacement from the part upon which it is mounted, and means for giving said separate means a lateral motion when it moves longitudinally.

6. In a structure for the purpose indicated, a body plate, an actuating plate loosely mounted on the body plate and capable of sliding longitudinally thereon, said actuating plate having means thereon to engage a window sash cord or the like and prevent the device from being accidentally disconnected from the window.

7. In a safety catch for window, a base plate having a guiding element thereon, a cam element on the base plate mounted to slide longitudinally thereof and in use being movable longitudinally of the window casing into latching position, said second mentioned element being held in place by the guiding element, a window casing engaging element upon the base plate and slidable laterally with relation thereto, the cam element engaging the casing engaging element and forcing the same laterally into engagement with the casing to hold the base plate against vertical displacement with relation to the casing.

8. In a safety catch for windows, a base plate having a guiding element thereon, a sliding cam element on the base plate, held in place by the guiding element, a window casing engaging element upon the base plate and slidable laterally with relation thereto, the cam element engaging the casing engaging element and forcing the same laterally into engagement with the casing to hold the base plate against vertical displacement with relation to the casing, and means to engage the sash suspending means so as to prevent accidental displacement of the catch.

9. In a safety catch for windows, a base plate having a guiding element thereon, a sliding cam element on the base plate, held in place by the guiding element, a window casing engaging element upon the base plate and slidable laterally with relation thereto, the cam element engaging the casing engaging element and forcing the same laterally into engagement with the casing to hold the base plate against vertical displacement with relation to the casing, the casing engaging element being extended laterally beyond its casing engaging face to furnish a support for a sash engaging element, and a sash engaging element mounted on the extension and slidable vertically thereon, said sash engaging element also having a lateral component of motion with its vertical component.

10. In a latch for the purpose indicated, a body member, a plurality of movable elements thereon, one of said movable elements being a holding member supported on the body member and movable transversely thereof, another movable member being carried by the body member and being slidable longitudinally thereof, and a third movable member somewhat wedge-shaped and mounted on the body member to slide longitudinally thereof, whereby to move the first named movable member transversely of the direction of motion of the third movable member.

In witness whereof, I hereunto subscribe my name to this specification.

ADOLPH E. HUSS.