C. ULRICH.

WINDOW CATCH.

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1,242,391.

Patented Oct. 9, 1917.

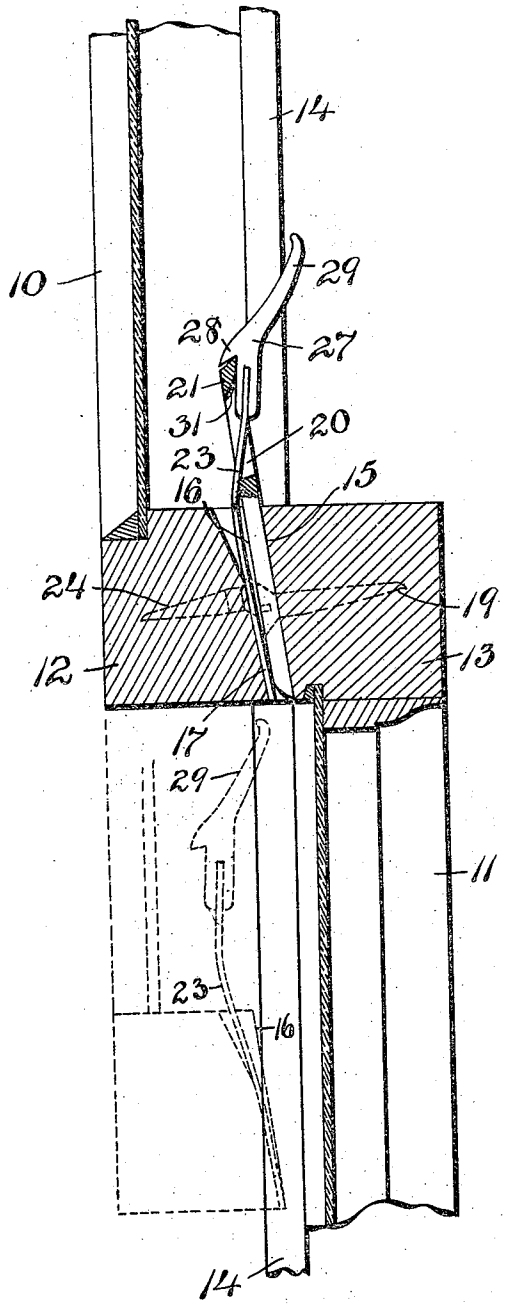


Fig. 1

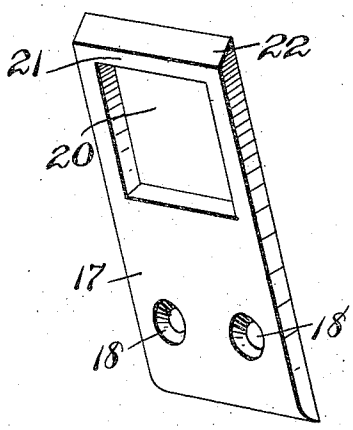


Fig. 2

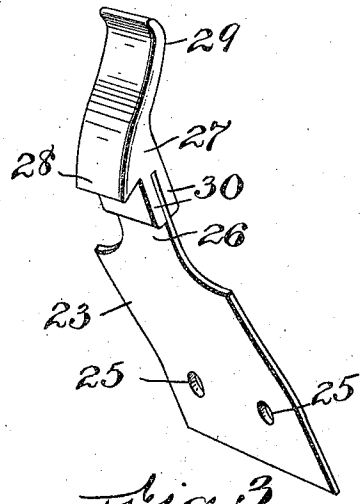


Fig. 3

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WINDOW-CATCH.

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To all whom it may concern:

Be it known that I, CHARLES ULRICH, a citizen of the United States, and a resident of Roselle, county of Union, and State of New Jersey, have invented certain new and useful Improvements in Window-Catches, of which the following is a specification.

This invention relates to a window catch that locks automatically when the two members of the catch are brought together, the members of the catch being preferably arranged on the meeting rails of the sashes in order to lock such sashes in closed position.

The catch comprises two members, one of them being a keeper having an opening in it, the other member being a spring member with a latch to engage the keeper after passing through the opening in the keeper so that the latch and the keeper are in locking engagement, the latch being guided through the opening in the keeper by a guide attached to the latch, this guide also having another function, that of a finger-piece to provide a means whereby the parts can be unlatched preparatory to opening one of the sashes. The parts are disposed so that the latch and the keeper, when in locking position, have put the spring, to which the latch is attached, under a tension which not only assists in locking the members against sliding movement, but pulls them toward each other and consequently against the dividing bead or strip in a window sash so that the sashes are held against rattling by the wind. The catch is also preferably disposed so that the two members are fastened against the opposed faces of the meeting rail of the sash so that when the sashes are closed the fastening means are covered and cannot be tampered with and it is furthermore impossible to unlock this catch by passing a knife blade or any similar thin element up between the meeting rails of the sashes.

The invention is illustrated in the accompanying drawing, in which Figure 1 is a section through two sashes where they meet, the meeting rails being supplied with the members of the catch, the keeper member being shown in section at its upper part. Fig. 2 is a perspective view of the keeper member of the catch, and Fig. 3 is a perspective view of the latch member.

It will be undersoood that modifications can be embodied in the structure other than the particular form shown, and the proportions and shapes of the parts can be altered and still embody constructions embraced in the clauses of the claim.

The drawing illustrates an upper sash 10 and a lower sash 11 having the respective meeting rails 12 and 13, these sashes running in guide-ways at the side of the frame, as is usual in frames with sliding sashes, and the window frame comprises a center bead or strip 14, the sides of the sashes being cut out to receive this strip on each side, the sashes being adapted to be drawn toward each other and tightly against the strip 14 by the latch to prevent rattling of either one of the sashes. The lower sash has its forward face inclined as at 15 and the upper sash has its meeting rail with an inclined face 16, the face 15 being cut away sufficiently to receive the member 17 which is the keeper member of the catch and has its lower portion provided with means for attaching it to the rail, in the form illustrated this means comprising screw-holes 18 through which the screws 19 pass, these screws being also screwed into the meeting rail 13. The front part of the keeper plate projects above the meeting rail of the sash and has an opening 20, across the top of which is a bar 21, the top face of which, 22, is preferably slightly inclined. In order to make the description clear the terms "forward" and "rear" are used, "forward" being away from the person operating the sash and "rearward" being toward the person operating the sash, assuming that the parts are in normal relation and the sliding sash is on the inside. The keeper plate is inclined slightly forward so that its top edge projects slightly over the meeting rail of the upper sash.

The latch member comprises a plate 23 which is fastened to the face 16 of the meeting rail 12, and to illustrate the fastening means I have shown the screws 24 which pass into the meeting rail through the openings 25 in the plate 23. The plate 23 is preferably made of spring metal, the upper part 26 being made slightly narrower to give it more resiliency and being provided on its top end with a latch 27. The latch

has a nose 28 and an extension 29 which forms a combined finger-piece and guide, the nose 28 and the finger-piece 29 inclining upwardly and to the rear. The latch is fastened to the top of the spring 26 in any suitable way, but in the form shown the cheek-pieces 30 are pressed down tightly against the top end of the spring so as to embrace the spring between them and thus securely press the parts together, although any desired means for fastening the parts can be used, such as rivets or screws. The parts are usually disposed on the window sashes so that when the sashes are separated the latch and its spring are relieved of tension, and in order to illustrate this I have shown in dotted lines in Fig. 1 the upper sash in a lower position showing how the latch member is substantially parallel with the keeper member and the spring is without any tension, thus being relieved of strain. When, however, the sashes are slid together, the end of the guide 29 passes along the keeper plate without obstruction, but engages the under face 31 of the bar 21, and the front face of the guide 29 and the nose 28 being downwardly and forwardly inclined, the latch is guided through the opening 20 and the nose 28 snaps over the top edge of the bar 21, due to the pressure of the spring 26 which is now sprung to a position away from its normal position. The tendency of the spring to assume its normal position not only locks the nose 28 down tight over the bar 21, but it presses so that its top edge pulls the keeper plate toward the upper sash and it pulls the meeting rail 12 toward the lower sash so that these sashes are tightly held against the strip 14 and the meeting rails are pulled toward each other, and if they are properly proportioned these edges meet and provide no space for the insertion of any tool calculated to be used in unlatching the members, but these members are so disposed that any manipulation of the latch to release it is extremely difficult and well nigh impossible.

The members are easily and economically manufactured, the device is simple and requires no operation to lock it, since the mere closing of the sashes to their closed positions brings the two members to relative positions where they automatically are snapped together as shown in full lines in Fig. 1.

The guide 29 acts as a finger-piece so that the latch can be pulled backward far enough to permit the nose 28 to clear the bar 21 and then either of the sashes can be slid and as soon as their movement toward an open position begins, the finger-piece can be released and the latch will pass backward out through the opening 20 and assume the normal position shown in dotted lines in Fig. 1.

The spring is caused to enter the keeper member with a "snake-like" motion, the guide on the end of the latch bearing first on the under face of the keeper and developing just enough tension on the spring to insure the spring entering the opening so that the upper face of the spring engages the under side of the keeper bar 21 which snaps over it. This easy motion of the spring does not cause enough friction to move a sash from its closed position when the other sash is being slid to its closed position, since the spring pressure is not sufficient for this, but it is amply sufficient for locking the members together and causing the engagement of the latch over the bar of the keeper.

In order to prevent breaking of the spring if it should be slightly bent out of place while the sashes are apart and to make the contact of the members easy and gradual, the upper end of the guide of the latch is turned over and the lower edge of the keeper member is curved so that there is no chance of the parts catching on one another on their initial engagement.

Having thus described my invention, I claim:

1. A window catch comprising a spring, a latch on the end of the spring, a finger-piece on the latch, and a keeper having an opening large enough to permit the passage of the latch and forming a bar at one end of the keeper, the tension of the spring causing the finger-piece and the spring to engage the keeper on its opposite faces at the opposite ends of the opening in the keeper, the keeper and the latch having means for securing them to the meeting rails of sashes.

2. A window catch comprising a spring, a latch on the end of the spring, a forwardly projecting finger-piece on the latch, the spring normally holding the latch in rear of its locking position, a keeper inclined relative to the finger-piece and having an opening therein and having a bar on the end, the parts being disposed so that the finger-piece guides the latch along the keeper from the end opposite the bar and through the opening to spring the latch over the bar, the spring and the keeper being approximately parallel to each other and to the direction of sliding movement of the sashes, the latch and bar engaging each other to draw the latch and keeper toward each other.

3. A window catch comprising a spring and a keeper which when separated are in substantially parallel planes and approximately parallel to the direction of sliding movement of the sashes, the keeper having an opening therein, a bar on the end of the keeper, and a latch on the end of the spring, the latch having a guide therein to direct the latch through the keeper so as to engage the keeper on the opposite side when the keeper and latch are brought together.

4. A window catch comprising a keeper

with an opening near its upper end and a bar at the top, the keeper being substantially parallel with the sliding movement of a sash, a spring substantially parallel to the keeper and having a latch on its end to form a guide whereby the latch is guided through the opening and engages the keeper bar on the opposite side when the keeper and spring are moved toward each other approximately parallel.

In testimony that I claim the foregoing, I hereto set my hand, this 23rd day of January, 1917.

CHARLES ULRICH.

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