Mar. 27, 1923. 1,450,151

H. M. FILBRICK

SASH FASTENER

Filed July 20, 1921

Fig. 1.

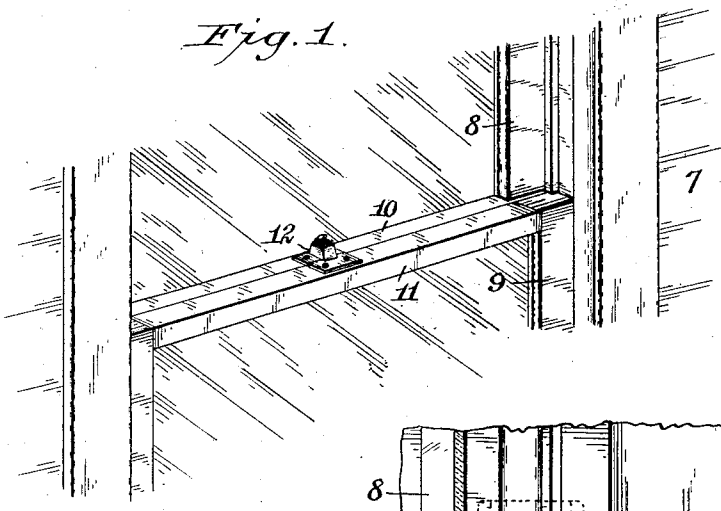


Fig. 2.

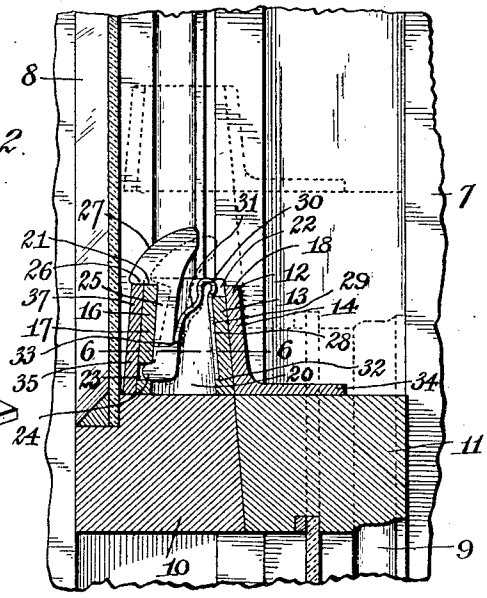


Fig. 3.

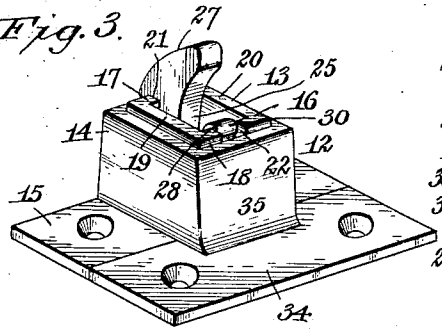


Fig. 4.

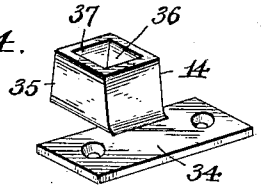


Fig. 5.

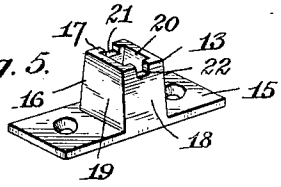
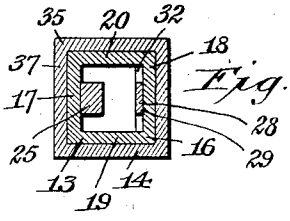


Fig. 6.



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UNITED STATES PATENT OFFICE.

HARRY M. FILBRICK, OF BUFFALO, NEW YORK.

SASH FASTENER.

Application filed July 20, 1921. Serial No. 486,145.

To all whom it may concern:

Be it known that I, HARRY M. FILBRICK, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Sash Fasteners, of which the following is a specification.

My invention relates to improvements in sash fasteners.

One of the objects of my invention is the production of a simple and inexpensive sash fastener, one especially adapted to be secured to the meeting rails of vertically-sliding window sashes and to become automatically locked when closing said sashes.

Another object of my invention is the production of a sash fastener of the kind mentioned, which will automatically draw the meeting rails together so as to make the sashes weather proof at such point.

A still further object of my invention is the production of a sash fastener of this kind so constructed that it cannot be unlocked by the insertion of a flat object between the meeting rails of the sashes.

My invention consists in a fastener having two members, one provided with a housing adapted to receive a part of the other, and in furnishing said last-mentioned member with a new and novel catch which will automatically engage the housing of the first-mentioned member when closing the window sashes.

It also consists in the novel features of construction and in the arrangement and combination of parts to be hereinafter described and more particularly pointed out in the subjoined claims.

In the drawings:—

Fig. 1 is a perspective view of a portion of a window showing my improved sash fastener applied to sashes thereof.

Fig. 2 is an enlarged vertical section through adjoining ends of two window sashes, the section being taken vertically through the sash fastener.

Fig. 3 is a perspective view of the complete sash fastener removed from the window sashes.

Fig. 4 is a detached perspective view of one of the fastener members.

Fig. 5 is a detached perspective view of the other fastener member or part showing the lock catch removed therefrom.

Fig. 6 is a horizontal section through the upwardly projecting parts of the lock fastener only, taken on line 6—6, Fig. 2.

Referring to the drawings in detail, the reference numeral 7 designates the wall of a building, 8 the upper glazed sash, 9 the lower glazed sash, said sashes having, respectively, meeting rails 10, 11. 12 designates the sash fastener considered as a whole; it comprising two main members 13, 14 fastened, respectively, to the meeting rails of the upper and lower sashes.

The fastener member 13 comprises a flat base 15 and an upwardly-extending hollow portion 16, preferably of rectangular formation in horizontal section. It therefore has an outer wall 17, an inner wall 18, and side walls 19 and 20. This hollow portion 16 is slightly tapered upwardly and it has notches 21, 22, formed respectively in the upper ends of its outer and inner walls 17, 18. The outer wall 17 of the hollow portion 16 is provided near its lower end with an opening 23 adapted to receive a rounded lug or toe 24 formed at the lower end of a lock catch 25, said lock catch comprising an elongated body portion having a hook 26 at its upper end and said hook having a receding contact edge 27 which trends from the outer end of the hook upwardly and inwardly, as best shown in Fig. 2. The hook is normally held within the notch 21 of said hollow portion 16, and for this purpose and also with a view of retaining the rounded lug or toe 24 in the opening 23, a spring 28 is provided, said spring having a flat inner bearing member 29 bearing against the inner side of the inner wall 18 of said hollow portion 16, a parti-circular portion 30 extending partly into the notch 22 of said hollow portion 16 and a flexible curved member 31 adapted to bear against the outer edge of the catch 25. The lower end of the flat bearing member 29 rests against a shoulder 32 formed on the inner side of the outer wall 18 near its lower end. The lower end of the flexible curved member 31 of said spring bears against an upwardly facing shoulder 33 formed on the inner edge of the catch 25. Said spring is therefore held against downward movement by the shoulders 32 and 33 and against lateral movement by reason of the parti-circular portion 30 engaging the side walls of the notch 22 in the hollow portion 16.

While the form of spring shown is highly efficient for the purpose intended, it may be

modified and need not necessarily have the parti-circular portion 30, nor need the parti-circular portion, if used, be entered in the notch 22. In some cases the space between the outer wall 17 and the inner wall 18 may be made smaller than shown in the drawing, and the upper end or bight of the spring terminated beneath the plane of the notch 22, and when so arranged said notch would provide clearance to allow the catch 25 to swing into it when unlocking the lock.

It will be noticed that no pivot pins are employed, thus making a fastener of a plurality of parts, which is easy to assemble, and in which no weak parts bearing undue strain are employed.

Member 14 of the fastener comprises a flat base 34 and an offset upwardly-tapering housing 35 of a formation conforming to that of the hollow portion 16 of the outer fastener member 13, said housing being adapted to fit snugly over said hollow portion 16.

The flat bases 15 and 34 of the fastener are adapted to be screwed or otherwise fastened to the upper sides of the meeting rails 10, 11, respectively, with the hollow portion 16 of the fastener member 13 alined with the opening or hollow interior 36 of the housing 35. Assuming that the meeting rails 10 and 11 are separated, as indicated by dotted lines in Fig. 2, in which the lower window sash is raised, upon lowering the lower sash, the lower end of the outer wall 37 of the housing will engage the receding edge 27 of the spring-pressed lock catch 25, gradually forcing the same inwardly until the upper edge of said wall 37 reaches the level of the hook portion of said catch, whereupon the spring 28 will force said catch over the upper end of said outer wall 37 and lock the two fastener members together.

It is also to be noted that by reason of the fact that the upwardly extending hollow portion 16 (which may be termed the male portion of the fastener) is tapered, and the housing 35 of the sash member on the lower sash (which may be termed the female portion of the housing) is correspondingly tapered and adapted to receive said hollow portion 16, the two meeting rails of the sashes are drawn together when closed, thus rendering them weathertight.

It will be apparent from the foregoing, that this fastener is a self-locking fastener and that in order to open the lower or upper window sash, or both of them, it is simply necessary to pull the upper end of the spring-pressed catch 25 inwardly to disengage the hook portion thereof from the upper end of the outer wall 37 of the housing portion 35 and retain said spring-pressed catch in such position until the housing 35 is moved upwardly away from the hollow portion 16, or until the hollow portion 16 is moved downwardly out of the housing 35, after which said catch will assume its locking position without locking onto any portion of the fastener or window, this position being merely one which enables it to become automatically locked when bringing the meeting rails of the two sashes together.

While I have shown the male member of the fastener on the upper sash, and the female member on the lower sash, this order may be reversed; but the arrangement shown is considered the preferable one, due to the fact that any object coming in contact with the lock catch from within the room, would not result in moving the catch out of locking engagement with the upper edge of the wall 37 of the housing 35.

Having thus described my invention, what I claim is:—

1. A fastener, comprising two co-acting members adapted to be attached to relatively movable parts of a building, one of said members having a hollow tapered portion and a spring-pressed catch therein, and the other having a hollow portion to receive said hollow tapered portion and against which said spring-pressed catch is adapted to engage, said hollow portion and hollow tapered portion co-acting to draw said members together.

2. A fastener adapted for attachment to two relatively movable parts, comprising two members, one having a hollow rectangular tapering portion and a spring-pressed catch within said hollow tapering portion, and the other having a housing whose interior is shaped to correspond to the exterior of said hollow rectangular tapering portion, said housing being adapted to receive said hollow rectangular tapering portion and to be engaged by said spring-pressed catch, and said hollow rectangular tapering portion and housing co-acting to draw said members together.

3. The combination with two slidable window sashes having meeting rails, of a sash fastener comprising two members, one of said members being adapted to be secured to one of said meeting rails and having a flat base and a hollow upwardly-extending tapering portion and a spring-pressed catch within said hollow tapering portion, and the other member being adapted to be secured to the other meeting rail and having a flat base and a hollow upwardly tapering housing offset with respect thereto and adapted to surround said hollow upwardly-extending tapering portion, said spring-pressed catch being adapted to engage the upper end of said housing and said hollow tapering portion and hollow tapering housing co-acting to draw said members together.

4. A sash fastener, comprising two co-acting members, one of said members having a hollow upwardly-tapering portion and be-

ing of rectangular formation in horizontal section, one of the walls of said hollow upwardly-tapering portion having an opening, a catch within said hollow upwardly-tapering portion having a toe at one end thereof entered in said opening and a hook at its other end, and a spring between said catch and the opposite wall of said hollow upwardly-tapering portion, the other member having a housing tapered to correspond with the taper of said hollow upwardly-tapering portion and adapted to snugly fit around the latter, one wall of said housing being adapted to be engaged by the hook of said catch.

5. A window fastener, comprising two members adapted for attachment to relatively movable parts of a building, one of said members having a hollow rectangular tapering portion, one wall of which is provided with an opening and the opposite wall thereof with a shoulder, a lock catch within said hollow rectangular tapering portion having a lug at one end fitted into said opening, a hook at its other end and a shoulder on its inner edge facing said last-mentioned end, a substantially V-shaped spring having one end thereof bearing against said last-mentioned shoulder and the other end thereof against the shoulder of said hollow rectangular tapering portion, the other member having a housing adapted to snugly fit over said hollow rectangular tapering portion and having the upper end of one of its walls engaged by the hook of said lock catch.

6. A sash fastener, comprising two members adapted to be attached to relatively movable parts of a building, one of said members having a hollow portion provided with an opening in its wall, a shoulder at a point opposite said opening and a notch in its wall at the outer end thereof alined with said opening, a lock catch within said hollow member having a rounded lug entered into said opening and a hook extending through said notch, a substantially V-shaped spring within said hollow portion and having one end thereof engaging said shoulder and the other end thereof in contact with said lock catch, and a housing surrounding and snugly fitting said hollow portion and adapted to be engaged by the lock of said lock catch.

In testimony whereof I affix my signature.

HARRY M. FILBRICK.