D. HOYT.

WINDOW FIXTURE.

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1,214,035.

Patented Jan. 30, 1917.

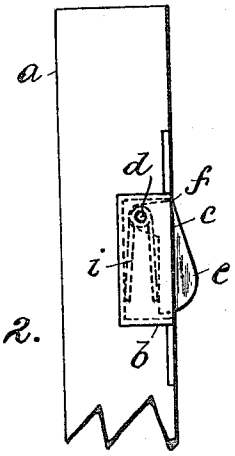


Fig. 2.

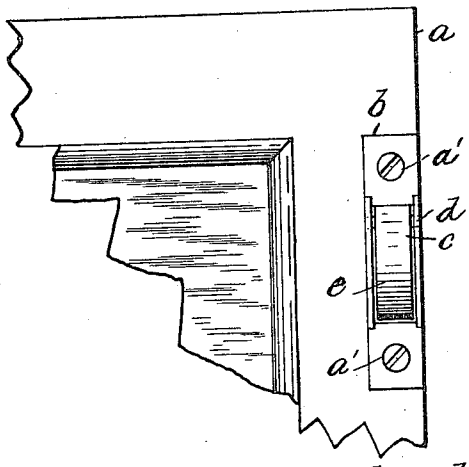


Fig. 1.

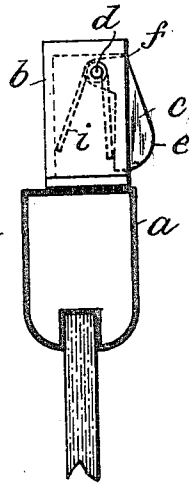


Fig. 4.

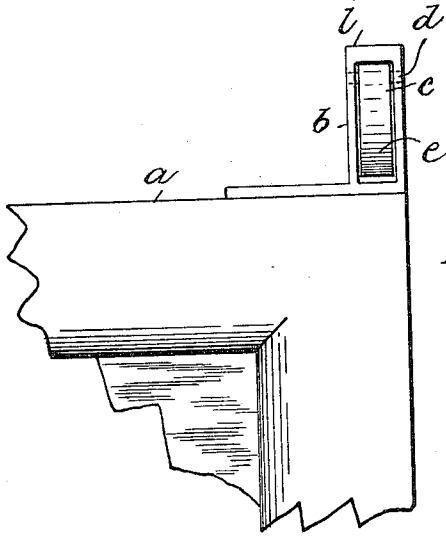


Fig. 3.



Fig. 8.

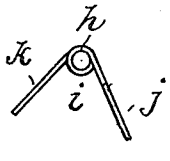


Fig. 7.

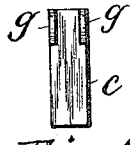


Fig. 6.



Fig. 5.

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WINDOW-FIXTURE.

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To all whom it may concern:

Be it known that I, DANIEL HOYT, a citizen of the United States, residing in the city of East Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Window-Fixtures, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, forming a part of this specification.

The invention relates to the class of devices employed to retain the sash firmly in the window frame.

One of the objects of my invention is to provide a simple device which can be readily applied to a window sash to compensate between the size of the sash and the frame in which it is designed to move, which will hold the sash firmly in the window frame, against lateral or edgewise movement, exclude the passage of air and dust at the side edges and prevent rattling of the same.

Another object is to provide a device which will permit the sash to be easily raised but which will retard its downward movement.

Still another object is to provide a device which can readily be secured to the top of a sash when it is found inconvenient or impossible to mortise out the side rail of the sash, as for instance in a metallic sash.

Other objects will appear from the description hereinafter given, and my invention consists in the combinations and arrangements of parts which will be hereinafter fully described and specifically defined in the appended claims.

In the drawings forming a part hereof, Figure 1 represents a fragmentary front elevation of an upper corner section of a sash, showing the device mortised into the face of the sash. Fig. 2 represents a side elevation of the same. Fig. 3 represents a fragmentary front elevation of an upper corner of a sash, showing the device applied to the top of the sash. Fig. 4 represents a side elevation of the same. Figs. 5 and 6 respectively, represent side and rear elevations of the cam; and Figs. 7 and 8 respectively, represent front and side elevations of the spring.

Similar letters of reference refer to like parts throughout the specification and drawings.

In the drawings, *a* represents the sash, to which my improved device is secured in any convenient manner, preferably by means of the screws *a'*. The device consists essentially of the metallic chambered case *b*, the pivoted cam *c*, pivot *d* and spring *i*. The case *b* may be formed of any suitable material, and may be made of any desirable size. Within and near the top of the case and at a suitable distance from the front opening thereof, a pivot *d* is located, upon which is pivotally secured the cam *c*, the lower portion of which is free to swing out from the case, and provided with a rounded bearing surface *e* adapted to bear against the inside stop of a window frame to hold the sash firmly against the outside stop. The cam *c* has a circular face and a bearing point midway of the circular face, which is in constant slidable contact with the window frame, and there is an inclined circular face above and below the bearing point. These inclined faces are for the purpose of guiding the bearing point smoothly over any unevenness that it might encounter while the sash is being raised or lowered.

f represents a shoulder formed at the upper end of the cam *c* designed to bear against the upper wall of the case *b* to limit the outward movement of said cam, whereby it will be impossible for the cam *c* to open wide enough for the bearing face *e* to reach a locking angle to the pivot *d*, said cam being further provided with two pivot lugs *g*, extending rearwardly therefrom, providing a space between said lugs for the reception of the coiled portion *h* of the spring *i*. Within the case and between the lugs *g* of the cam, I locate the spring *i*, which is preferably coiled around the pivot *d*, the ends of the spring being provided with arms *j* and *k*, the arm *k* bearing against the back wall of the case and the arm *j* bearing against the lower rear portion of the cam, thereby forcing the cam outward. In Figs. 2 and 4 of the drawings, I have shown the cams extended to their maximum limit, the shoulders *f* thereof contacting with the upper wall of the case, thereby preventing any further outward movement of the bearing

face of the cam. In practice, the cam face bears on the window stop when extended, from 1/16 to 1/8 of an inch beyond the face of the case. Of course it will be understood that any kind of a spring may be used and that it may be located in the case in any manner desired as long as it presses the cam outward. These compression cams are designed to be used on each side of a sash, with the cams constantly bearing against the inside window stops, which tend to press the sash outward against the outside stops, thereby making the sash dust-proof at the sides, and reducing the rattling of the sash to a minimum. When the sash is raised, the cams will easily compress within the case *b*, thereby permitting the sash to be easily raised, but when the sash is lowered, they "cam" to a certain extent, retarding the downward movement of the sash and preventing the same from falling suddenly. These compression cams may be secured to the sash in the manner illustrated in Figs. 1 and 2 of the drawings, or they may be secured to the top of the sash as illustrated in Figs. 3 and 4 of the drawings.

When the cams are secured to the top of a metallic sash, as illustrated in Figs. 3 and 4 of the drawings, I preferably reinforce the upper wall of the case *b* at *l*, so that said wall will constitute a stop or buffer portion, designed to contact with portions of the window frame on the opening of the window to its full extent. This buffer portion will protect the cam from injury arising from the sash striking the top of the window frame in the opening of the window.

Although I have shown the compression cams applied to the front of the sash and to bear against the inside stops, they may be applied to the back of the sash and bear against the outside stops, or to the outside edges of the sash and bear against the window frame, or they may be secured to the window frame or stops and bear against the sash.

Experience has demonstrated that the above arrangement is a highly efficient one, and while the device shown and described is the preferred embodiment of my present invention, I do not care to be restricted to the combination and arrangement therein shown and described, as obvious modifications of the same will appear to those skilled in the art.

I claim:

1. A series of devices adapted to be secured to the extreme side edges of a sash and to operate within the sash guideways, each device consisting of a case, a movable member pivoted within said case, said movable member having a convex face adapted to be in constant slidable bearing with the inside sash stop to hold the sash bodily against the outside sash stops at all times, a spring within the case to force the convex face of the movable member against the inside sash stop, said movable member being so formed that it cannot at any time lock the sash.

2. A device of the character described, adapted to be secured to the extreme side edges of a sash and to operate within the sash guideways, said device comprising a case, a movable member pivoted within the case and near the top thereof, a spring to force the movable member outward from the case, a shoulder on the movable member designed to contact the upper wall of the case to limit the outward movement of the movable member, said movable member having a convex face adapted to slidably bear on one wall of the guideway at all times to force the sash against the opposite wall, the convex face of the movable member receding from the bearing point to the case both above and below the bearing point, preventing the movable member from locking the sash at any point, said movable member sliding on the window frame tending to retard the downward movement of the sash.

3. A device of the character described, adapted to be secured to the extreme side edges of a sash and to operate within the sash guideways, said device comprising a case, a movable member pivoted within the case and having a convex bearing surface and limited in outward movement from the case, means on the face of said pivoted member to prevent it from locking the sash at any point whatever, said pivoted member adapted to be in constant slidable contact with the window frame and a spring to force the pivoted member against the frame.

This specification signed and witnessed this 16th day of August, 1912.

DANIEL HOYT.

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."