No. 814,314. PATENTED MAR. 6, 1906.

G. H. PARKER.

WINDOW STOP AND BURGLAR ALARM.

APPLICATION FILED APR. 23, 1904.

2 SHEETS—SHEET 1.

Fig. 1.

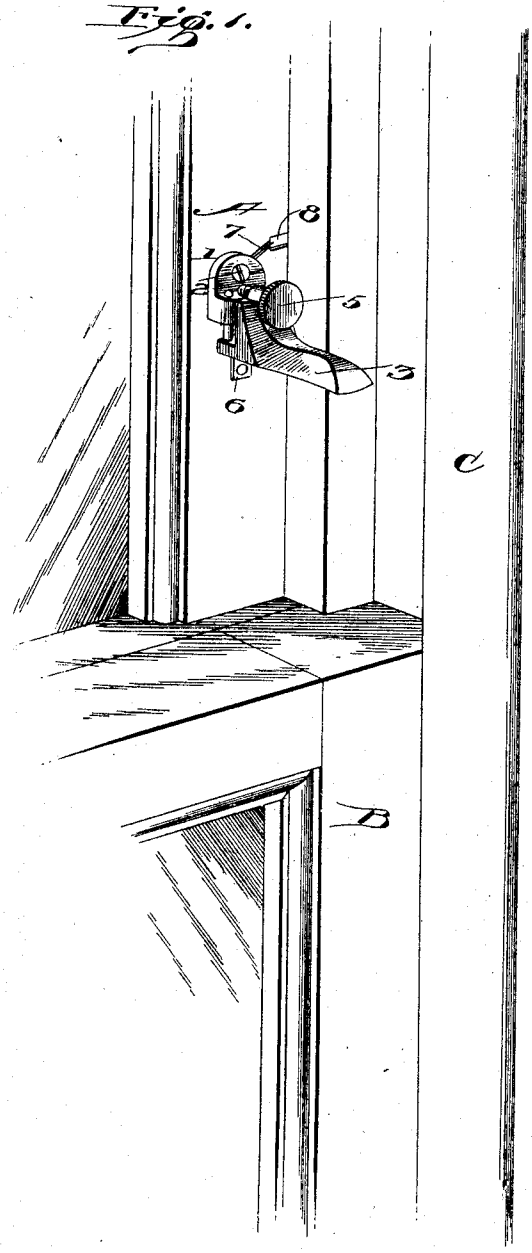
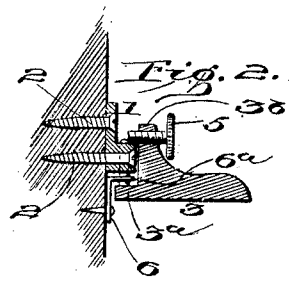


Fig. 2.



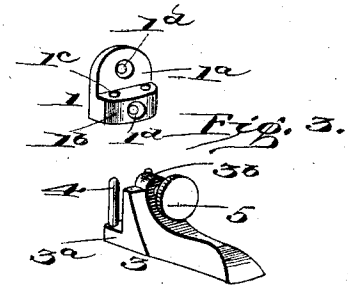


Fig. 3.

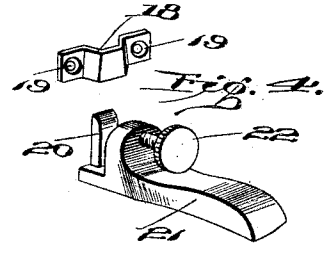


Fig. 4.

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2 SHEETS—SHEET 2.

Fig. 5.

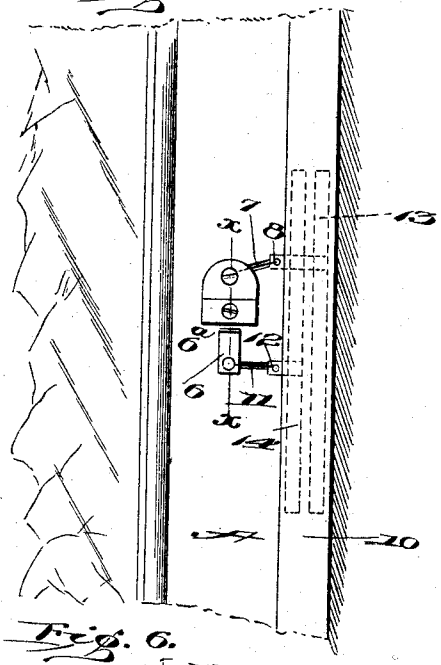


Fig. 6.

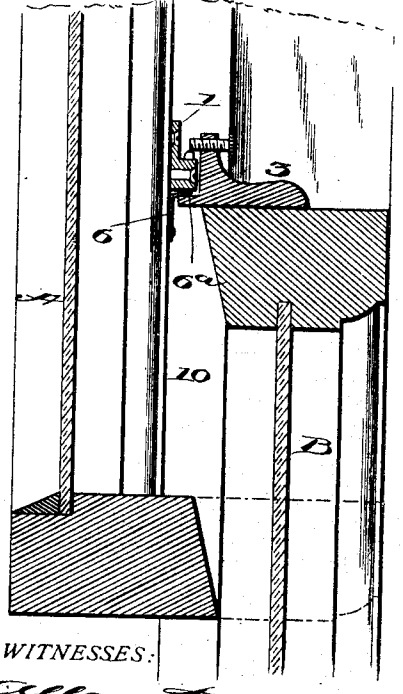
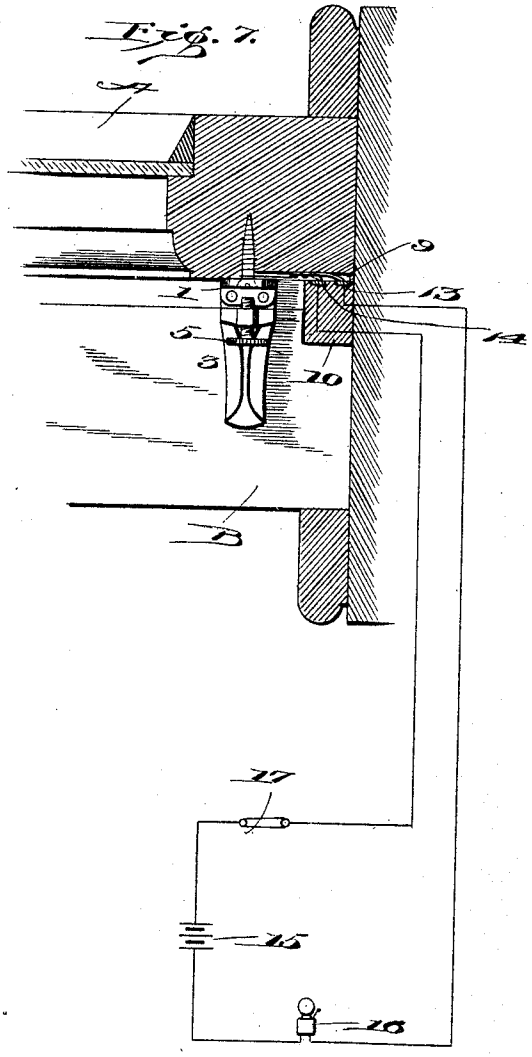


Fig. 7.



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UNITED STATES PATENT OFFICE.

GEORGE HENRY PARKER, OF NEW YORK, N. Y., ASSIGNOR TO CHARLES HEMINGWAY PLATT, OF NEW HAVEN, CONNECTICUT.

WINDOW-STOP AND BURGLAR-ALARM.

No. 814,314. Specification of Letters Patent. Patented March 6, 1906.

Application filed April 23, 1904. Serial No. 204,538.

To all whom it may concern:

Be it known that I, GEORGE HENRY PARKER, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Window-Stops and Burglar-Alarms, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to safety devices for windows. One of the objects thereof is to provide a detachable device whereby a window-sash or other movable member of that nature may be permitted to be opened to a limited extent and further opening thereof positively prevented.

Another object is to provide a device of the above nature which will give notice of any attempt to raise the sash beyond the prescribed limit.

Other objects will be in part obvious and in part pointed out hereinafter.

The invention accordingly consists in the features of construction, combinations of elements and arrangement of parts, which will be hereinafter described, and the scope of the application thereof indicated in the following claims.

In the accompanying drawings, which illustrate two of various possible embodiments of my invention, Figure 1 is a perspective view of a portion of a window provided with a device embodying my invention. Fig. 2 is a detailed cross-section of the device in operative position. Fig. 3 is a perspective view of the stop with the several parts separated. Fig. 4 is a perspective view of a slightly-different form of stop. Fig. 5 is an elevation of a portion of a sash, showing electrical connections. Fig. 6 is a longitudinal section taken on line $x\,x$ of Fig. 5. Fig. 7 is a cross-section taken on line $y\,y$ of Fig. 5 and showing diagrammatically a circuit adapted to be used with my invention.

Similar reference characters are used to denote similar parts throughout the several views.

Referring now to Fig. 1, A and B represent, respectively, the upper and lower sashes of an ordinary window mounted in the customary manner in a window-frame C. The word "sash" as used throughout this specification and in the following claims is used in a broad sense as denoting any sliding member which is adapted in its normal position to close an opening in a wall. Upon sash A, at any desired distance above the upper end of sash B, when the sashes are in normal or in closed position, is secured a member 1. This member comprises a base 1^a and a lug or raised portion 1^b projecting in a direction away from the sash. Lug 1^b is provided with a plurality of vertically-extending holes 1^c. Member 1 is also preferably provided with countersunk screw-holes 1^d, whereby it may be secured to the sash by means of screws 2 or other retaining means.

A coacting member 3 is provided with a plurality of vertical posts 4, shaped and positioned substantially as shown in Fig. 3, so as to be adapted to enter the holes 1^c in member 1. These posts are preferably mounted upon a projection 3^a at the base of member 3 and may be secured thereto by brazing them into holes in this projection or by other desired means. An upwardly-extending portion 3^b of member 3 is provided with a screw-threaded hole for the reception of set-screw 5.

Secured to sash A immediately below member 1 is a contact-spring 6. This spring has an outwardly-extending portion 6^a lying parallel to and directly below the outwardly-extending portion 1^b of member 1. Portion 6^a is adapted in the normal operative position of parts shown in Fig. 2 to project into the space surrounded by parts 1^b and 3^a and posts 4 and be out of contact with these members. Leading from member 1 is a conductor 7, which may be beneath the surface of the sash and terminates in a contact-spring 8 in a slot 9 under parting-strip 10. A similar conductor 11 leads from spring 6 and is connected to a contact-spring 12. Located upon some part of the window-frame C, and preferably upon the surface of parting-strip 10 adjacent sash A, are contact-strips 13 and 14, adapted to coact with springs 8 and 12, respectively. The length of these strips is substantially equal to the distance from the upper surface of sash B to the lower surface of member 3 when the latter is in operative position. Strips 13 and 14 are connected by a circuit including a source of current 15 and a bell or other indicator 16. A switch 17 may also be included, if desired.

The method of using the above embodiment of my invention should be largely obvious from the above description. When unrestricted movement of the sashes is desired, the members 1 and 6 are secured to sash A, and sash B can then freely pass the same, as there is sufficient clearance between the adjacent surfaces of the sashes to permit such movement. When it is desired to limit this movement and place the safety device in operative condition, member 3 is attached to member 1 by inserting the posts 4 within openings 1^c and turning the screw 5 until it projects over the raised portion 1^b. In this manner the member 3 is positively secured upon the sash, being locked in position by means of set-screw 5. It may here be noted that the term "positively" is used throughout this description and the following claims in its well-known sense as denoting a manner of engagement in which the engaging parts are locked in their assembled positions by an agency other than that of the friction of their contacting surfaces. Sash B may then be raised until it takes against member 3 and lifts the same, so as to bring projection 3^a into engagement with spring 6 and member 1. The movement of members 3 and 6 necessary before contact is made with member 1 tends to cushion the parts and relieves the jar thereon. The window is thus securely held against further upward movement, and contact-spring 6 is forced into electrical connection with member 1. A circuit is thus completed through member 1, conductor 7, spring 8, strip 13, bell 16, source of current 15, switch 17, strip 14, spring 12, and conductor 11 to spring 6. The bell, alarm, or other indicator is thus rung, giving notice that it has been attempted to raise the window.

In Fig. 4 is shown a slight modification of one of the features of the above embodiment, in which the member 1 is replaced by a strap 18, bent substantially as shown and provided at each end with countersunk screw-holes 19. The outwardly-bent portion of member 18 is adapted to be engaged by a correspondingly-shaped post 20 upon the coacting member 21. The parts are retained in assembled position by means of a screw 22, substantially the same in manner of mounting and in function as the previously-described screw 5. The contact-spring 6 may, if desired, be positioned between one side of member 18 and the lower projecting portion of member 21. The operation of this embodiment of my invention is substantially the same as that previously described.

It will thus be seen that I have provided a window safety device which is conveniently and quickly detachable and, while not interfering with the use of the window when unrestricted movement thereof is desired, will yet positively and securely limit such movement when placed in its operative condition and give notice of any attempt to open the same.

By the word "stop" as used throughout the following claims is intended a member of such considerable strength and in other ways so adapted as to act as a positive limit to the movement of the member which contacts therewith and is also adapted to hold this member in its limited position with a considerable degree of rigidity.

Among many other advantages of my invention it may be noted that a window equipped with an embodiment thereof may be raised to any desired extent, determined by the position of member 1 upon sash A, and all further movement positively prevented. Obviously also such a stop will limit the downward movement of the upper sash and may be used in various relations to the movable window members. The cheapness of construction and ease with which the above devices may be applied to windows now in use will be readily appreciated. A further advantage of this construction resides in the fact that the member attached to the window-sash may be used both in connection with a detachable stop member of the class herein described and with a window-swinging device of the class shown in my Patent No. 711,785, issued October 21, 1902. It will also be seen that upon the removal of the stop the alarm feature is made inoperative without opening any switch. Moreover, the several electrical parts may easily be concealed from view, and thus not detract from the appearance of the sash; also, the alarm is effective whether the upper sash is lowered or the lower one raised.

As many changes could be made in the above construction and many apparently widely different embodiments of my invention could be made without departing from the scope thereof, I intend that all matter contained in the above description and shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense. I desire it also to be understood that the language used in the following claims is intended to cover all of the generic and specific features of the invention herein described and all statements of the scope of the invention which as a matter of language might be said to fall therebetween.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In combination, a plurality of sashes, a member positioned upon one of said sashes adapted to permit free relative movement thereof, a stop adapted to be detachably mounted upon said member, and a plurality of means extending from said stop and engaging said member positively so as to interlock therewith.

2. In combination, a plurality of sashes, a member positioned upon one of said sashes adapted to permit free relative movement thereof, a stop having a post adapted to be detachably mounted upon said member, and means upon said stop engaging said member positively to maintain said post in engagement with said member.

3. In combination, a plurality of sashes, a stop adapted to coact with said sashes, a post upon said stop, and a member positively secured to one of said sashes adapted to detachably engage and interlock with said post.

4. In combination, a plurality of sashes, a stop adapted to coact with said sashes, a post upon said stop, a member adapted to engage said post detachably and be secured to one of said sashes, and retaining means upon said stop adapted to engage said member.

5. In combination, a plurality of sashes, a stop adapted to coact with said sashes, a post upon said stop, a member adapted to engage said post and be secured to one of said sashes, and a screw upon said stop adapted to engage said member.

6. In combination, a plurality of sashes, a stop adapted to coact with said sashes, a post upon said stop, a member adapted to engage said post and be secured to one of said sashes, and a screw passing through said stop adapted to engage the upper surface of said member and retain said member in engagement with said post.

7. In combination, a plurality of sashes, a stop adapted to limit the relative movement of said sashes, a post upon said stop, a member adapted to engage said post and be secured to one of said sashes, a lug upon said stop, and means within said lug adapted to engage said member.

8. In combination, a plurality of sashes, a stop adapted to limit the relative movement of said sashes, a post upon said stop, a member adapted to engage said post and be secured to one of said sashes and means upon said stop adapted to retain said member in such engagement.

9. In combination, a plurality of sashes, a stop adapted to limit the relative movement of said sashes, a post upon said stop, a member adapted to engage said post and be secured to one of said sashes, a lug upon said stop, and a screw within said lug adapted to engage said member and retain the same in engagement with said post.

10. In combination, a sash, a member mounted adjacent the path of movement of said sash, a stop adapted to be secured detachably to said member and to project within the path of movement of said sash and means upon said stop adapted positively to retain the same in engagement with said member.

11. In combination, a sash, a frame, contact-strips upon said frame, means carried by said sash adapted to coact with said strips and complete an electrical circuit through the same and limit the movement of said sash upon a definite sliding movement of said sash taking place, and means whereby said first-mentioned means may be placed in operative condition.

12. In combination, a plurality of sashes, a member secured to one of said sashes in such manner as to permit free relative movement thereof, a stop adapted to be secured detachably to said member and adapted to limit the relative movement of said sashes, and a member secured to said sashes and adapted to be forced into contact with said first-mentioned member by said stop upon the engagement thereof by one of said sashes.

13. In combination, a plurality of sashes, a stop adapted to limit the movement of said sashes, a post upon said stop, a member adapted to engage said post and be secured to one of said sashes, a lug upon said stop, means within said lug adapted to engage said member, and means adapted to complete an electric circuit upon said limit being reached.

14. In combination, a plurality of sashes, a stop adapted to limit the relative movement of said sashes, a post upon said stop, a member adapted to engage said post and to be secured to one of said sashes, a lug upon said stop, a screw within said lug adapted to engage said member and retain the same in engagement with said post, and a member adapted to be interposed between said first-mentioned member and said stop and adapted to complete an electric circuit upon said limit being reached.

15. In combination, a plurality of sashes, a stop adapted to limit the relative movement of said sashes, a post upon said stop, a member adapted to engage said post and be secured to one of said sashes, a lug upon said stop, means within said lug adapted to engage said member and retain the same in engagement with said post, and a member adapted to be interposed between said first-mentioned member and said stop and adapted to complete an electric circuit upon said limit being reached.

16. In combination, a plurality of sashes, a stop adapted to coact with said sashes, a post upon said stop, a member adapted to engage said post detachably and be secured to one of said sashes, retaining means upon said stop adapted positively to engage said member, terminals upon one of said sashes, one of said terminals being interposed between said member and said stop, said stop by a movement relative to said member being adapted to force said last-mentioned terminal into contact with the other of said terminals to complete an electric circuit.

17. In combination, a plurality of sashes, a stop adapted to coact with said sashes, a post upon said stop, said stop being provided

with a projection upon which said post is mounted, a member adapted to engage said post detachably and be secured to one of said sashes, retaining means upon said stop adapted positively to engage said member, terminals upon one of said sashes, one of said terminals being interposed between said member, and a projection upon said stop, said stop by a movement relative to said member being adapted to force said last-mentioned terminal into contact with the other of said terminals to complete an electric circuit.

18. In combination, a plurality of sashes, a contact device, a member secured to one of said sashes, a stop adapted to limit the range of relative movement of said sashes and actuate said contact device upon said limit being reached, said stop being provided with a post which engages said member, means extending from said stop adapted positively to engage said member to maintain said post in engagement therewith, conductors mounted within the frame within which one of said sashes moves, and means adapted to complete an electric circuit from said contact device to each of said conductors.

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

GEORGE HENRY PARKER.

Witnesses:

H. S. DUELL,

F. P. WARFIELD.