E. E. KILMER.

VENTILATOR GUARD.

APPLICATION FILED OCT. 30, 1914.

Patented Feb. 16, 1915.

1,128,329.

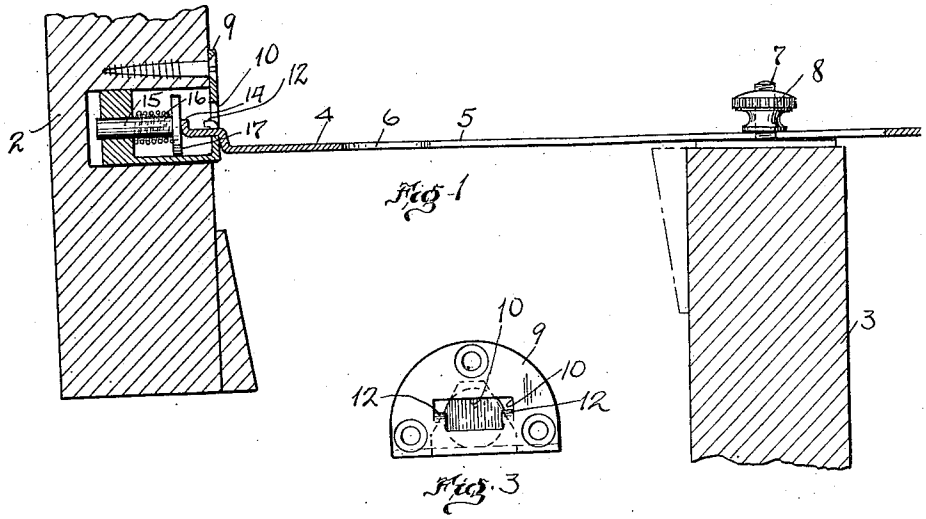


Fig. 1

Fig. 3

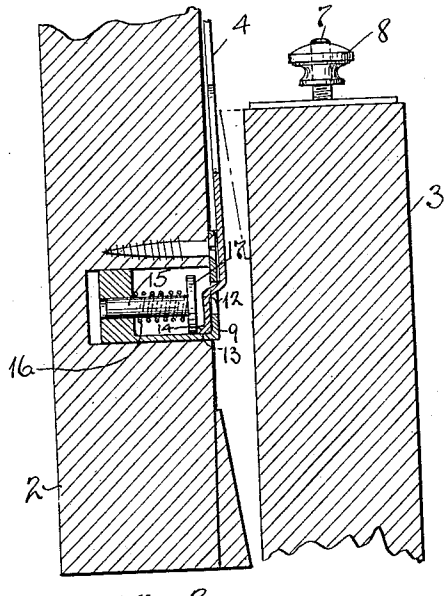


Fig. 2

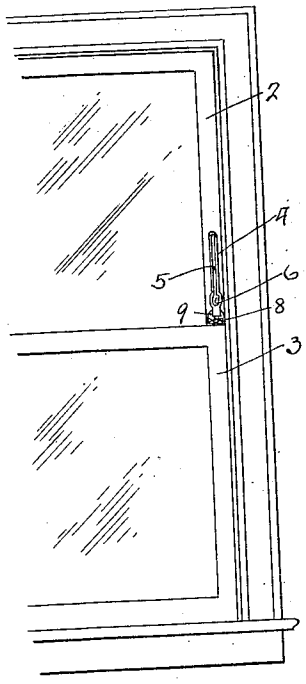


Fig. 5

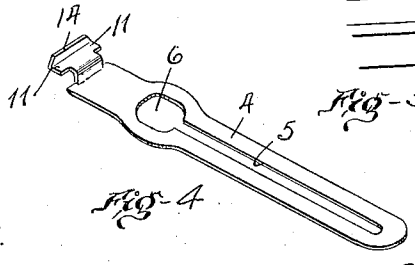


Fig. 4

WITNESSES=

O. M. Kappler.

Horace B. Fay

INVENTOR

Elmer E. Kilmer

BY Fay and Oberlin

ATTORNEYS—

NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ELMER E. KILMER, OF CLEVELAND, OHIO, ASSIGNOR TO THE FEDERAL SAFETY WINDOW COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

VENTILATOR-GUARD.

1,128,329. Specification of Letters Patent. Patented Feb. 16, 1915.

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To all whom it may concern:

Be it known that I, ELMER E. KILMER, a citizen of the United States, and a resident of Cleveland, county of Cuyahoga, and State of Ohio, have invented a new and useful Improvement in Ventilator-Guards, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

The subject of the present invention is a device for maintaining a hinged window, such for example as is shown in the application of Mr. A. J. Johnson, now owned by the applicant's assignee company, Serial No. 807,005, filed December 16, 1913, in the swung position, in which position the lower sash is at an acute angle to the vertical plane. It has been customary in this type of window to provide what is known as a ventilator guard, which is attached to the lower cross bar on the upper sash and has a swinging arm which may be fastened at various points to a projection in the form of a set screw on the upper cross bar of the lower sash. One very great disadvantage in the usual construction is that this pivot arm on the lower bar of the upper sash, is unsightly, and is liable to be broken if it should by accident be swung over the lower sash when the latter is being raised. On numerous occasions this bar has been broken by the raising of the lower sash by a person who did not notice that the pivoted arm of the ventilator guard was not in the proper position.

My invention relates to a ventilator guard for use in this type of window which may be placed at the side of the window, where it is concealed by the curtains, and which is provided with a mechanism which causes the guard to be swung out of the range of movement of the lower sash when being raised upon the initial movement of the latter. An additional advantage of my improved device is that it is simpler in construction than the ones formerly used and is hence less expensive to manufacture.

To the accomplishment of the foregoing and related ends, said invention, then, consists of the means hereinafter fully described and particularly pointed out in the claims.

The annexed drawing and the following description set forth in detail certain mechanism embodying the invention, such disclosed means constituting, however, but one of various mechanical forms in which the principle of the invention may be used.

In said annexed drawing: Figure 1 is a vertical section through a portion of a window of the type referred to above, when in its swung or ventilating position; Fig. 2 is a similar section but showing the lower sash in a slightly raised position with the ventilator guard inoperative; Fig. 3 is a front view of the plate to which the pivoted arm of the guard is attached; Fig. 4 is a view in perspective of the pivoted arm; and Fig. 5 is a partial front view of a window equipped with my invention when the same is in inoperative position.

In Fig. 1 there is shown the usual upper sash 2 and a lower sash 3 which may be constructed in any suitable way that will permit of its being swung about a pivoted point adjacent to its lower end so that it will assume the position indicated in this figure. The lower sash 3 is held in this swung position by means of a ventilator guard comprising an arm 4 having therein a longitudinally disposed slot 5 provided with an enlargement 6 at its inner end through which the top of a knurled nut 8 is adapted to pass, such nut 8 being mounted upon a screw 7 on the lower sash. The remaining portion of the slot is too small to permit of the passage of the knurled nut. The upper cross bar of the lower sash 3 is provided with a plate in which there is set the screw 7 adapted to pass through the slot in the arm 4 and upon this screw there is mounted the knurled nut referred to, which may be adjusted to clamp the ventilator guard at any desired point, thus holding the window in a ventilating position.

Set into the upright adjacent to the lower cross bar of the upper sash is a plate 9 provided with a frontal opening 10 in which there may be removably inserted the rear end of the arm 4. This rear end of the arm

4 is provided at either side with extensions or lugs 11 which will pass through the upper portion of the opening in the plate and which are hinged beneath inturned lugs 12 formed on the sides of the lower part of the opening, thus making the arm pivotal about an axis passing the front of the opening in the plate. The rear portion of the arm is also provided with two contacting surfaces 13 and 14 disposed at right angles to each other and these surfaces are adapted to be operatively contacted by a plunger 15 normally pressed outward by a suitable spring 16 and provided at its outer end with a contact button 17. When the arm 4 is in the position indicated in Fig. 1 the button 17 contacts the surface 13 and thus maintains the arm in such position. Upon being swung upward through an angle of about 45° the pressure of the button begins to act upon the surface 14, at right angles to the first-named surface, and thus throws the ventilator guard into a vertical position and maintains the same in such position until the guard is moved outward by an operator. When the lower sash is placed in its normal position parallel to the upper sash the knurled nut is brought within the enlargement 6 of the inner end of the slot 5. The raising of the lower sash then acts against the ventilator guard and swings the same upward and the enlargement 6 is sufficient in extent to permit the knurled nut to pass through the same without catching the sides of the guard and as soon as the arm has reached an angle of 45° to the vertical the spring pressed plunger automatically operates and rapidly swings the arm to a vertical position where it will not be in the path of the lower sash.

The important features of my invention are the simplicity of the construction and safety in operation. The construction also permits of a position at the side of the window where the guard is usually concealed by the curtain or draperies. The pivoted arm while projecting slightly from the face of the upper sash is not in the path of the lower sash by reason of the bevel given each sash at their overlapping.

Other modes of applying the principle of my invention may be employed instead of the one explained, change being made as regards the mechanism herein disclosed, provided the means stated by any of the following claims or the equivalent of such stated means be employed.

I therefore particularly point out and distinctly claim as my invention:—

1. A ventilator guard comprising an arm pivotally attached to the frame of the upper sash about a horizontal axis, and means adapted to attach said arm to the frame of the lower sash to hold the latter in various angular positions, said means being inoperative when such lower sash is in position to be raised, whereby upward movement of such lower sash will swing said arm into a vertical position parallel with such sashes.

2. A ventilator guard comprising an arm pivotally attached to the frame of the upper sash about a horizontal axis, means adapted to attach said arm to the frame of the lower sash to hold the latter in various angular positions, said means being inoperative when such lower sash is in position to be raised, whereby upward movement of such lower sash will swing said arm into a vertical position parallel with such sashes, and means adapted to maintain said arm in such raised position until actuated by an operator.

3. A ventilator guard comprising an arm pivotally attached to the frame of the upper sash about a horizontal axis, means adapted to attach said arm to the frame of the lower sash to hold the latter in various angular positions, said means being inoperative when such lower sash is in position to be raised, whereby upward movement of such lower sash will swing said arm into a vertical position parallel with such sashes, and resilient means adapted to maintain said arm in such raised position until actuated by an operator.

4. A ventilator guard comprising an arm pivotally attached to one of the side bars of an upper sash of a window adjacent to the bottom of such sash about a horizontal axis, resilient means tending to maintain said arm in either a vertical or horizontal position, said arm having a longitudinal slot therein with an enlarged portion at its inner end, and clamping means on the lower sash of such window, such slot being adapted to permit said clamping means to pass freely through such enlarged portion but not through the remainder of such slot, and such enlarged portion of such slot, being positioned to permit entrance or exit of said clamping means only when such lower sash is in normal vertical position.

5. A ventilator guard comprising a plate having an opening and a rearwardly projecting lug at either side of said opening, an arm having an end portion adapted to enter such opening and a lug at either side of such end portion, such last-named lugs being adapted to pivotally engage behind such first-named lugs, and resilient means tending to maintain said arm in one of two predetermined positions.

6. A ventilator guard comprising a plate having an opening and a rearwardly projecting lug at either side of said opening, an arm having an end portion adapted to

enter such opening and a lug at either side of such end portion, such last-named lugs being adapted to pivotally engage behind such first-named lugs, and a spring pressed plunger mounted on said plate and tending to maintain said arm in one of two predetermined positions.

Signed by me, this 28th day of October, 1914.

ELMER E. KILMER.

Attested by—
H. B. FAY,
O. M. KAPPLER.

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