

Sept. 24, 1935.

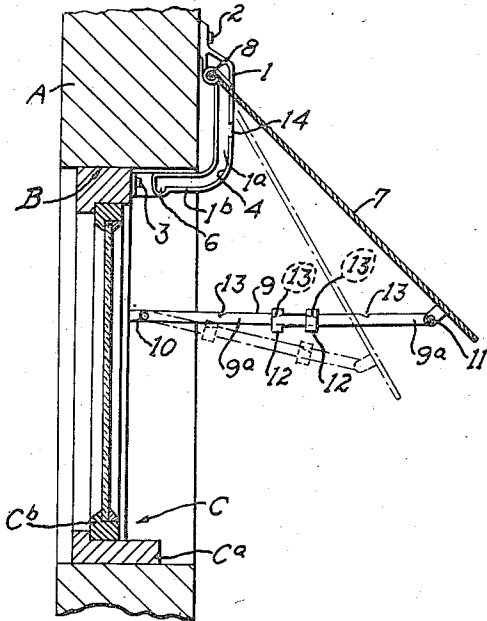
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2,015,305

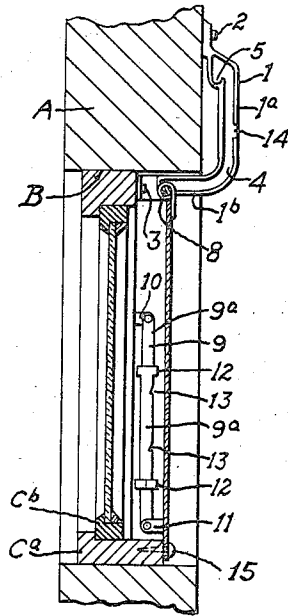
COMBINED AWNING AND STORM SHUTTER

Filed March 6, 1935

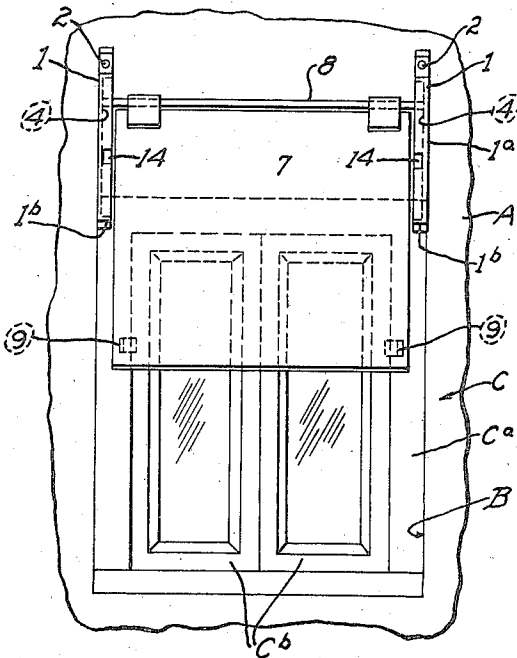
*Fig. 1*



*Fig. 2*



*Fig. 3*



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## UNITED STATES PATENT OFFICE

2,015,305

## COMBINED AWNING AND STORM SHUTTER

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Application March 6, 1935, Serial No. 9,586

6 Claims. (Cl. 189—55)

This invention relates generally to combined awnings and storm shutters, and more specifically to a shutter of this type which may be used at times as an awning and at other times as a storm shutter, at which latter times the structure is so positioned relative to the wall of a house or building on which it is employed that wind which follows said wall is prevented from tearing the structure loose from its fastenings or otherwise damaging it, the predominant feature of the invention being to provide a structure of this description which will perform its intended function in a very efficient manner.

In certain parts of the United States it is highly advisable to provide houses and buildings with storm shutters, to protect the windows of such houses and buildings from damage during storms. This is particularly true in the southern portion of the United States, where tropical storms occur with more or less regularity. Combination awnings and storm shutters have been known heretofore, but all of such structures with which I am familiar are so applied to the buildings that it is possible for wind following the walls of the buildings to get beneath the shutters and tear them from their fastenings. The predominant feature of this invention is that when the improved structure is used as a storm shutter it is disposed entirely within the window opening of the wall, and therefore wind following the wall cannot tear the structure loose from its fastenings or otherwise damage it.

Fig. 1 is a fragmentary, vertical section illustrating the improved combination awning and shutter in place at a window and showing the structure as it will appear when functioning as an awning.

Fig. 2 is a view similar to Fig. 1, but illustrating the combined awning and shutter in its closed condition as it will appear when serving as a storm shutter.

Fig. 3 is a front elevation of the structure illustrated in Fig. 1.

In the drawing, wherein is shown for the purpose of illustration, merely, one embodiment of the invention, A designates the wall of a building wherein a window opening B is provided. Located within the opening B is a window structure C of ordinary construction, said window structure comprising a window frame C<sup>a</sup> and window sashes C<sup>b</sup>. The window sashes C<sup>b</sup> may be of the casement type, as shown in the drawing, or said sashes may be of any other known construction and arrangement.

Secured at opposite sides of the window open-

ing B is a pair of brackets 1, each of these brackets being of substantially reverse L-shaped formation, as shown most clearly in Figs. 1 and 2. The vertically extended portion 1<sup>a</sup> of each bracket 1 is fixed in any suitable manner, as for instance, by fastening means 2, to the building wall A, and the horizontal portion 1<sup>b</sup> of each bracket 1 is extended into the window opening B in contact with or in close proximity to the top wall of the window opening B. The horizontal portion 1<sup>b</sup> of each bracket is secured in place by suitable fastening means 3, which may secure said horizontal bracket portion to the window frame C<sup>a</sup>, as illustrated in the drawing, or if preferred the fastening means 3 may secure the horizontal portion of the brackets to the wall A at the top face of the window opening B.

Each bracket 1 is provided with an angular guideway 4, this guideway in the drawing being illustrated as a slot, although, if desired, the guideway may be in the form of a channel. A portion of the guideway of each bracket extends longitudinally of the vertical portion of the bracket, and another connected portion of said guideway extends longitudinally of the horizontal portion of the bracket. At the top of the vertical portion of the guideway 4 of each bracket said guideway communicates with a seat 5 (Fig. 2), and at the inner end of the horizontal portion of the guideway of each bracket said guideway communicates with a similar seat 6.

The combined awning and storm shutter includes an awning and shutter element 7, which is constructed of any suitable material, and located at the upper end of this element 7 is a rod 8 which extends slightly beyond the opposite side edges of the element 7. The rod is extended into the guideways 4 of the oppositely disposed brackets 1, and as a result of this arrangement the element 7 may be moved with respect to the brackets 1, during which movement the opposite end portions of the rod 8 will travel through the guideways 4. The element 7 has associated with it, preferably at its opposite sides, suitable bracing means 9 which serves to maintain said element 7 in an outwardly extended and downwardly inclined position when the element 7 serves as an awning. The bracing means 9 comprise each a pair of members 9<sup>a</sup> which are slidably connected together, the innermost member 9<sup>a</sup> of each bracing means being pivotally attached to the window frame C<sup>a</sup> at the point designated by the reference character 10, and the outermost member 9<sup>a</sup> of each bracing means being

pivotaly attached at 11 to the awning and shutter element 7. The sliding connection between the associated pair of members of each bracing means is accomplished by providing each member at its inner end with a lug 12 which is provided with an opening through which the associated member extends for sliding movement. Each member of each bracing means is provided with notches 13 in which a portion of the lug of the associated member is seated for the purpose of locking the members of the bracing means in predetermined position, so as to lock the awning element in fully open and partially opened positions.

In the use of the improved combined awning and storm shutter disclosed herein, the rod 8 at the upper end of the element 7 may be located in the seats 5 at the upper ends of the guideways 4 formed in the oppositely disposed brackets 1. The lower end of the element 7 is then swung outwardly so as to arrange the element 7 in a downwardly and outwardly inclined position, as illustrated in Fig. 1. When the element 7 is so positioned, the means 9 will maintain the element 7 in its extended position, the lugs 12 of the various members of the bracing means being seated in the notches 13 of associated members so as to lock said members against relative sliding movement, whereby the awning and shutter element 7 is maintained in its fully extended position. If desired, the means 9 may be so arranged that the element 7 may be disposed in a partially lowered position, as illustrated by dotted lines in Fig. 1, the lugs 12 of the various members of the bracing means being seated in other notches of the associated members.

When it is desired to lower the element 7 so that it will perform its function as a storm shutter, the lower end of the element 7 is swung inwardly. The element 7 is then raised slightly to free the means 8 thereof from the curved seats 5 at the upper ends of the guideways 4 of the brackets 1. The element 7 may then be moved downwardly and moved inwardly into the window opening B, as shown in Fig. 2, the means 8 at the upper end of the element 7 traveling longitudinally through the vertical and horizontal portions of the guideways 4 of said brackets 1. When the means 8 at the upper end of the element 7 reach the inner ends of the horizontal portions of the guideways 4, said means will enter the curved seats 5, whereby the upper end portion of the element 7 will be retained in its position within the window opening. When the element 7 has been moved into the window opening B as described, suitable fastening devices 15 (Fig. 2) are introduced into place to secure the lower end of said element to the window frame C<sup>a</sup>.

It is obvious that when the element 7 has been moved into the window opening as described and has been secured in place at its lower end by the fastening elements 15, said element 7 securely shuts the window structure C, whereby said window is entirely protected from damage by storms. Also, it is important to note that when the element 7 is disposed in position within the window opening and when it is serving as a shutter, the entire structure, with the exception of portions of the rigidly fastened brackets 1, is located inwardly of the wall A, and therefore wind which follows the wall during a storm cannot do damage to the awning and shutter structure, and cannot tear said structure loose from its fasten-

ings. When the element 7 is moved to its position within the window opening B, the associated members of the bracing means 9 are folded inside of the element 7, and therefore the bracing means also are protected from damage by storm.

An important feature of the invention is that the combined awning and shutter element 7 may be readily introduced into place or removed therefrom by merely engaging or disengaging the means 8 from the guideways 4 of the elements 1, and attaching or detaching the bracing means to or from the element 7. In order to quickly and easily detach the element 7 from the brackets 1, said brackets are provided with openings 14 which communicate with the guideways formed in said brackets. To detach the element 7 from the brackets 1, said element is moved to a position where the extended portions of the rod 8 are aligned with said openings 14, when said extended rod portions may be passed outwardly through said openings to free the element 7 from the brackets 1.

#### I claim:

1. In combination with a window disposed rearwardly of an opening formed in a wall of a building, a combined awning and shutter comprising an awning and shutter element, brackets to which the upper portion of said awning and shutter element is movably attached, said brackets being disposed partially outside and partially within the window opening and being adapted to support the upper end of said awning and shutter element in a position outside of the window opening when said element serves as an awning and in a position within the window opening when said element functions as a shutter.

2. In combination with a window disposed rearwardly of an opening formed in a wall of a building, a combined awning and shutter comprising an awning and shutter element, brackets to which the upper portion of said awning and shutter element is movably attached, said brackets being of angular formation and disposed partially outside and partially within the window opening and being adapted to support the upper end of said awning and shutter element in a position outside of the window opening when said element serves as an awning and in a position within the window opening when said element functions as a shutter.

3. In combination with a window disposed rearwardly of an opening formed in a wall of a building, a combined awning and shutter comprising an awning and shutter element, brackets to which the upper portion of said awning and shutter element is movably attached, said brackets being of angular formation with a portion of each thereof fixed to the wall of the building outside of the window opening and a portion secured within the opening, angular guideways formed in said brackets, means carried by the upper portion of said awning and shutter element which are extended into said guideways of said brackets, means at the upper end of the guideway of each bracket whereby the awning and shutter element may be supported in a position outside of the window opening when said element serves as an awning, and means at the lower end of the guideway of each bracket for supporting the awning and shutter element in a position within the window opening when said element functions as a shutter.

4. In combination with a window disposed rearwardly of an opening formed in a wall of a building, a combined awning and shutter comprising an

awning and shutter element, brackets to which the upper portion of said awning and shutter element is movably attached, said brackets being of angular formation with a portion of each there-

5 of fixed to the wall of the building outside of the window opening and a portion secured within the opening, angular guideways formed in said brackets, means carried by the upper portion of said awning and shutter element which are extended into said guideways of said brackets, means comprising a seat at the upper end of the guideway of each bracket whereby the awning and shutter element may be supported in a position outside of the window opening when said element serves as an awning, and means comprising a seat at the lower end of the guideway of each bracket for supporting the awning and shutter element in a position within the window opening when said element functions as a shutter.

10 5. In combination with a window disposed rearwardly of an opening formed in a wall of a building, a combined awning and shutter comprising an awning and shutter element, brackets to which the upper portion of said awning and shutter element is movably attached, said brackets being of angular formation with a portion of each thereof fixed to the wall of the building outside of the window opening and a portion secured within the opening, angular guideways formed in said brackets, means carried by the upper portion of said awning and shutter element which are extended into said guideways of said brackets, means comprising a seat at the upper end of the guideway of each bracket whereby the awning and shutter element may be supported in a position outside of

the window opening when said element serves as an awning, means comprising a seat at the lower end of the guideway of each bracket for supporting the awning and shutter element in a position within the window opening when said element functions as a shutter, and bracing means for maintaining said awning and shutter in raised positions when said element acts as an awning.

6. In combination with a window disposed rearwardly of an opening formed in a wall of a building, a combined awning and shutter comprising an awning and shutter element, brackets to which the upper portion of said awning and shutter element is movably attached, said brackets being of angular formation with a portion of each thereof fixed to the wall of the building outside of the window opening and a portion secured within the opening, angular guideways formed in said brackets, means carried by the upper portion of said awning and shutter element which are extended into said guideways of said brackets, means comprising a seat at the upper end of the guideway of each bracket whereby the awning and shutter element may be supported in a position outside of the window opening when said element serves as an awning, means comprising a seat at the lower end of the guideway of each bracket for supporting the awning and shutter element in a position within the window opening when said element functions as a shutter, and bracing means comprising elements arranged for relative sliding movement for maintaining said awning and shutter in raised positions when said element acts as an awning.

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