July 12, 1932. H. DIXSON 1,866,882

COMBINATION SCREEN MOUNTING AND WEATHER STRIP FOR CASEMENT WINDOWS

Filed Nov. 25, 1929 2 Sheets-Sheet 1

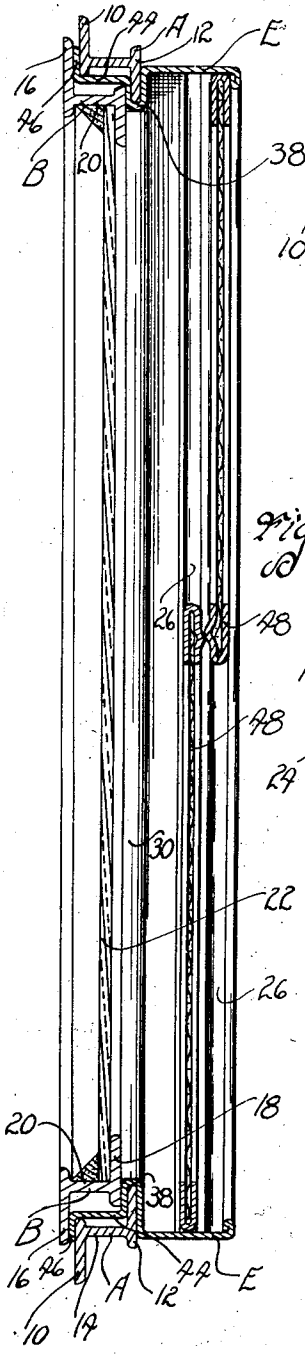
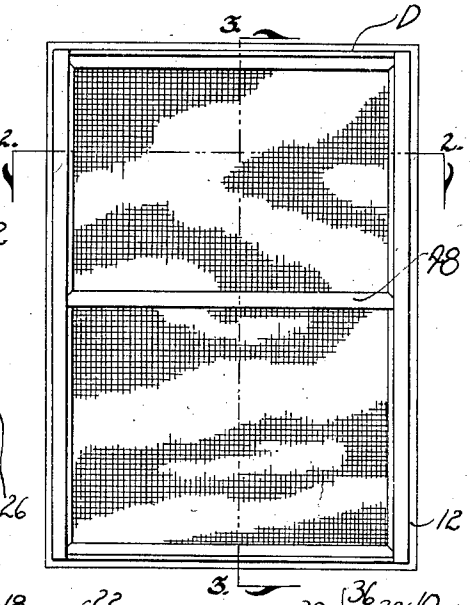


Fig. 1.



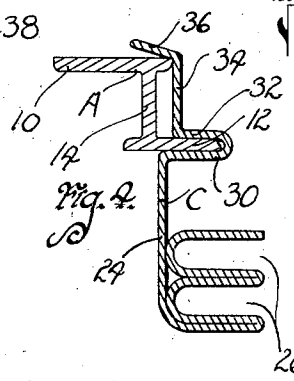


Fig. 4.

Fig. 3.

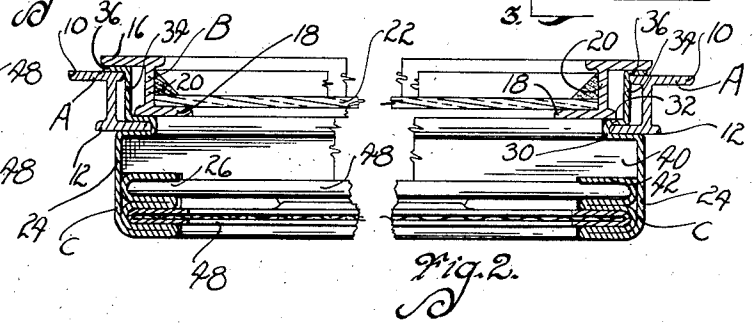


Fig. 2.

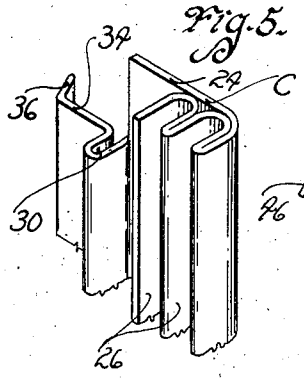


Fig. 5.

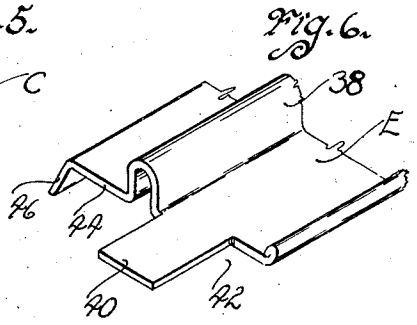


Fig. 6.

Witness
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COMBINATION SCREEN MOUNTING AND WEATHER STRIP FOR CASEMENT WINDOWS

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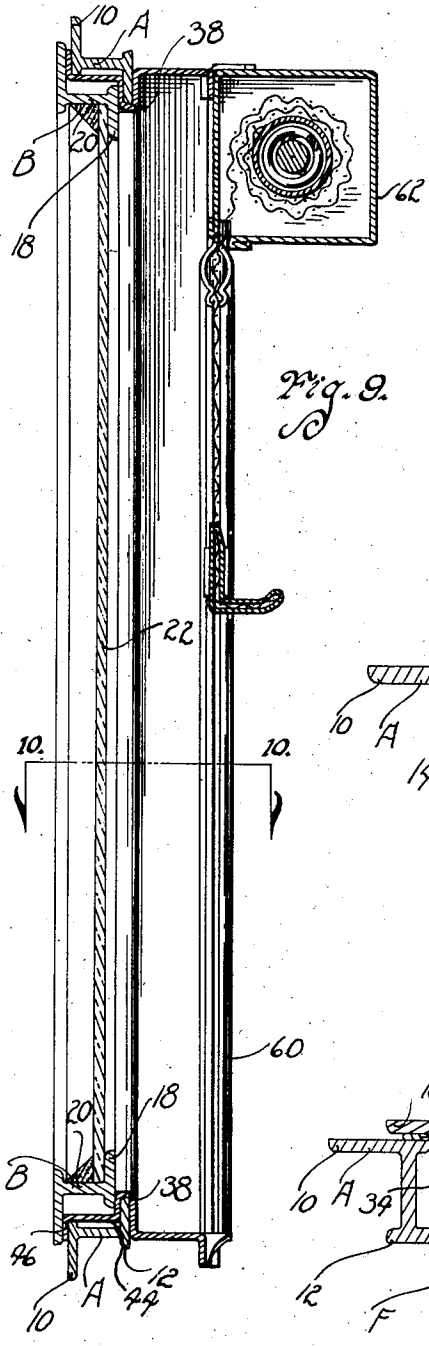


Fig. 9.

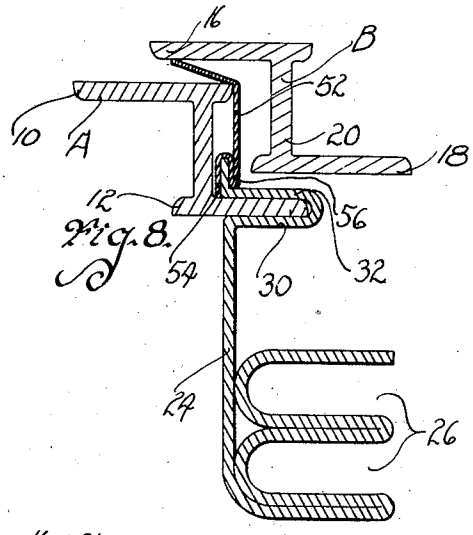


Fig. 8.

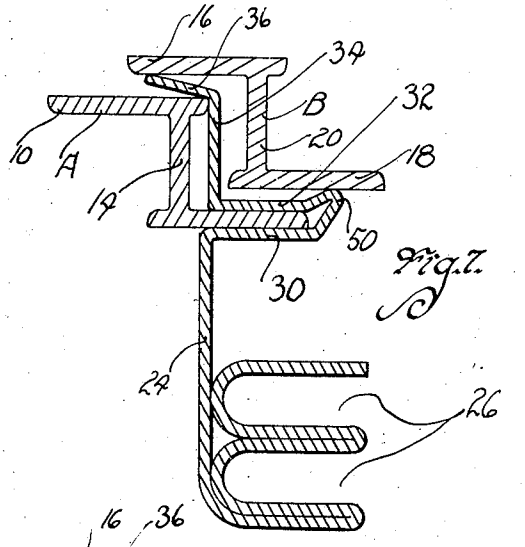


Fig. 7.

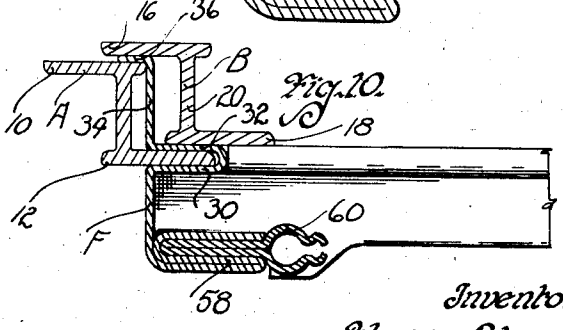


Fig. 10.

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Patented July 12, 1932 1,866,882

UNITED STATES PATENT OFFICE

HARRY DIXSON, OF PELLA, IOWA, ASSIGNOR TO ROLSCREEN COMPANY, OF PELLA, IOWA

COMBINATION SCREEN MOUNTING AND WEATHER-STRIP FOR CASEMENT WINDOWS

Application filed November 25, 1929. Serial No. 409,590.

The object of my invention is to provide a combination screen mounting and weather strip for casement windows of simple, durable and comparatively inexpensive construction.

More particularly, it is my object to provide in combination with a weather strip for casement windows a screen mounting, whereby a screen is supported upon the casement frame and the means which serves to support the screen in position serves at the same time as a weather strip for the casement.

The subject matter of my present application is related to my co-pending application entitled "Flat screen installation for casements," filed November 19, 1929, Serial No. 408,279.

A further object is to provide a weather strip formed of members adapted to support a screen in position on the inside of the casement window to serve as a weather strip feature between the meeting "bite" of the casement frame and the window thereof.

A further object is to provide a weather strip adapted to be yieldingly mounted upon the casement frame and to rest against two flat portions thereof, so as to contact with two flat portions of the window frame, whereby a tight weather seal will be provided between the casement frame and the window thereof.

With these and other objects in view, my invention consists in the construction, arrangement and combination of the various parts of my combination screen mounting and weather strip for casement windows, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which:

Figure 1 is a front, plan view of a casement frame with my combination screen mounting and weather strip applied thereto.

Figure 2 is a horizontal, sectional view taken on the line 2—2 of Figure 1.

Figure 3 is a detail, sectional view taken on the line 3—3 of Figure 1.

Figure 4 is an enlarged, sectional view showing the combination screen mounting and weather strip applied to the casement window frame.

Figure 5 is a perspective view of the upper end of the member that is adapted to be mounted on the jamb of the window casement.

Figure 6 is a perspective view of one end of the sill or head member forming a part of my invention.

Figure 7 is an enlarged, sectional view showing the casement frame and the window frame thereof in section with my combination screen mounting and weather strip installed thereon in position illustrating the window frame just before it is completely closed.

Figure 8 is a similar view wherein the weather strip and screen mounting are formed of separate and different pieces of metal.

Figure 9 is a vertical, sectional view illustrating a rolling window screen in position upon my screen mounting and weather strip; and

Figure 10 is a sectional view taken on the line 10—10 of Figure 9.

In the accompanying drawings, I have used the reference character A to indicate generally a casement frame which is substantially rectangular in outline and formed of a pair of flat bars 10 and 12 connected by a web 14, so that the frame may be referred to as formed of a double L-shaped member. A window frame B is also formed of a double L-shaped member and includes an outer portion 16 and an inner portion 18 connected together by the web 20.

An ordinary glass pane 22 is mounted within the frame B. The entire frame B is suitably mounted relative to the casement frame A by a hinge connection or any other construction now employed in casement windows.

The flat portions 16 and 18 of the window frame B are normally adapted to engage the flat portions 10 and 12 of the casement A, and the portions so engaged may be referred to as the "meeting bite" of the window frame relative to the casement frame.

The casement frame A normally includes

a pair of jamb members, a head member and a sill member.

My screen mounting and weather strip includes a pair of jamb elements C. Each element C as illustrated in Figures 4 and 5 of the drawings is formed of a single piece of material bent to provide a body portion 24 and a pair of screen guides 26. The screen guides 26 are channel-shaped in cross section as clearly illustrated in Figure 4.

The body portion 24 is bent so as to provide an outwardly opening channel 30 adapted to receive the portion 12 of a casement frame A. The channel portion 30 snugly receives the portion 12, and thus the entire member C is supported relative to the casement frame.

The outer wall of the channel member 30 as at 32 serves as a weather strip and is arranged to be received between the "meeting bite" of the portions 18 and 12 when the window frame is in closed position.

It is desirable that both of the meeting bites of the casement be provided with a weather strip, and I therefore have a projection 34 formed on each element C with an outwardly directed flange 36. The flange 36 is received between the meeting bite of the portions 16 and 10 of the casement window.

The flange 36 is arranged normally at an incline, so that when the casement window is in closed position, a real tight weather seal joint will be provided.

The flange 36 when the window frame B is in closed position will become flat and rest against the member 10 as clearly illustrated in Figure 2 of the drawings.

In order to retain the two members C in position upon the side jambs of the frame A in addition to their frictional mounting, I provide a sill member D and a head member E. The members D and E are similar in shape and purpose, one fitting the head portion of the frame A and the other the sill portion thereof. The members D and E each have a channel portion 38 adapted to project over the portion 12 of the casement frame A and at the same time the projected ends 40 of the members D and E are received between the two jamb elements C. The cutaway portion 42 formed on the members D and E is so arranged as not to interfere with the channel or screen guides 26.

The channel portion 38 includes an outwardly directed body portion 44 and a downturned flange 46. The flange 46 is received between the outer meeting bite of the casement window and its frame.

It will be noted that I have used the term "downwardly extending flange" and in this connection, it will be understood that when the member is reversed, so as to provide the head member D, then the flange member 46 projects upwardly.

Details of construction so far as the screen mounting, as illustrated in Figures 5 and 6 of the drawings, are clearly exemplified in my co-pending application hereinbefore referred to.

Within the screen guides 26, I mount a pair of flat screens 48.

In Figure 7, I have shown a slightly modified form of channel members 30 and in such case, the channel is provided with a V-shaped portion 50 adapted to engage the member 18 of the window B. The V-shaped portion 50 will be flattened when the window frame B is moved to completely closed position. The V-shaped portion 50 provides a yielding engagement of the member 18 with the weather strip at the inner meeting bite before the window frame has been moved to closed position.

In Figure 8, I have illustrated a slightly modified form wherein the outer weather strip portion is formed of a separate piece of metal 52. One end of the channel portion 30 is provided with a short flange or stub 54 to be inserted in the receiving channel 56 of the base or member 52.

The base 52 includes a flange 36 and in all details so far as function and purpose is concerned, it operates exactly as the jamb members or head and sill members illustrated in Figures 5 and 6 of the drawings.

Figure 8 has been shown to exemplify the use of two different weights of material, as well as two different kinds of materials.

Figures 9 and 10 illustrate my combination weather strip and screen mounting for use in connection with rolling window screens. In such case, a single channel 58 is provided in which is mounted a guide 60. The guide 60 is frictionally received within the channel 58 and is capable of slight movement relative thereto.

A roll screen casing 62 is carried by the jamb elements F in any suitable manner and preferably as disclosed in my co-pending application entitled "Rollscreen window installation for casement windows," filed November 7, 1929, Serial No. 405,374. The jamb elements F are installed in position exactly as the elements C and likewise a head member and sill member are also provided for mounting on the casement frame.

Practical installation

In the practical installation of my device, it is only necessary to open the window frame B. The two jamb members of either the form C or F are then positioned so that the channel portion 30 thereof receives the member 12 of the casement frame A.

The head member and sill members D and E are then positioned so that they coact with the head and sill members of the casement frame A and at the same time project between the two jamb members C or F as the case may be.

The screen frames or the roll screen are, of course, mounted on the members C or F.

When the casement window B is closed, there will be two portions of the weather strip received between the two portions of the meeting bite of the casement window and its frame.

It will be noted that I have provided a weather strip for casement windows, which is adapted to be positioned upon a casement frame without the use of any fastening means other than the arrangement of the weather strip so that it receives a portion of the standard casement frame.

It will also be noted that the weather strip forms part of the screen mounting, and thus the two parts when connected together cooperate with each other for providing a complete screen mounting and weather strip for casement windows.

Some changes may be made in the arrangement and construction of the various parts of my combination screen mounting and weather strip for casement windows, without departing from the real spirit and purpose of my invention, and it is my intention to cover by my claims, any modified forms of structure or use of mechanical equivalents, which may be reasonably included within their scope.

I claim as my invention:

1. A screen mounting and weather strip for mounting in a casement frame, comprising a jamb member, having a portion adapted to fit between the bite of the casement frame and the window thereof, whereby to support said jamb member upon the casement frame without the aid of other fastening means, said jamb member having another portion projecting outwardly from said first portion adapted to fit between another bite of the casement frame and the window thereof, and means to supoprt a screen device on said jamb member on the inner side of said casement frame.

2. A screen mounting and weather strip for mounting in a casement frame comprising a jamb member, having a channel portion formed therein for receiving an inner flange of the casement frame, one wall of said channel portion having a yielding projection for engaging the window and said wall being adapted to fit between the casement frame and the window thereof, whereby to provide a weather strip between the casement frame and the window thereof, and a screen device mounted on said member on the inner side of said casement frame.

3. A weather strip for a casement frame having channel portions formed therein for receiving an inner flange of the casement frame, one wall of the channel portion carrying an outwardly extending portion adapted to fit against the outer side of the casement frame, said last portion and one wall of the channel portion serving as a weather strip for sealing the junction between the window frame and its casement.

4. A weather strip for a casement frame having channel portions formed therein for receiving an inner flange of the casement frame, one wall of the channel portion carrying an outwardly extending portion adapted to fit against the outer side of the casement frame, said last portion and one wall of the channel portion serving as a weather strip for sealing the junction between the window frame and its casement, said weather strip being entirely supported upon the casement frame by the inner flange thereof without the aid of other fastening means.

5. A weather strip for a casement frame having channel portions formed therein for frictionally receiving an inner flange of the casement frame, one wall of the channel portion carrying an outwardly extending portion adapted to fit against the outer side of the casement frame, said last portion and one wall of the channel portion serving as a weather strip for sealing the junction between the window frame and its casement.

HARRY DIXSON.