July 7, 1953 H. L. MITTS 2,644,659

SUPPORT FOR STORM WINDOWS

Filed April 28, 1950

Fig. 5

Fig. 1

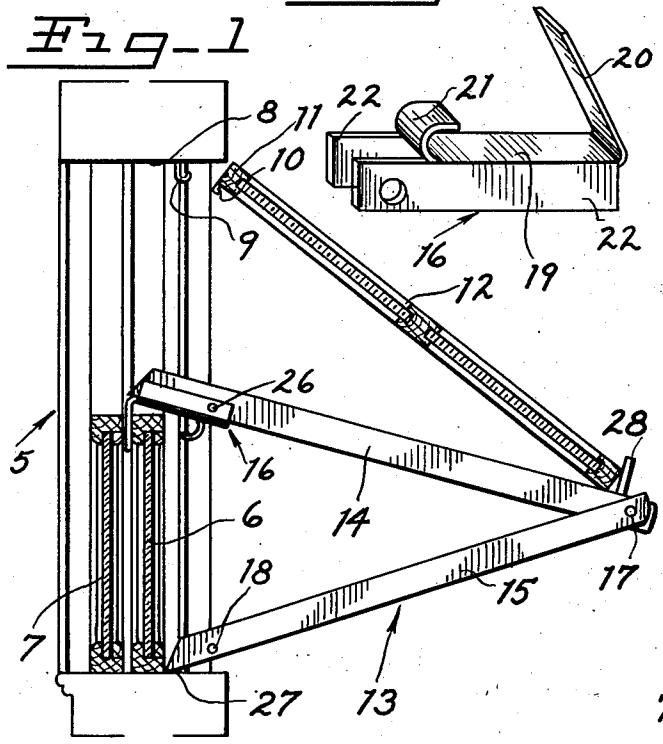
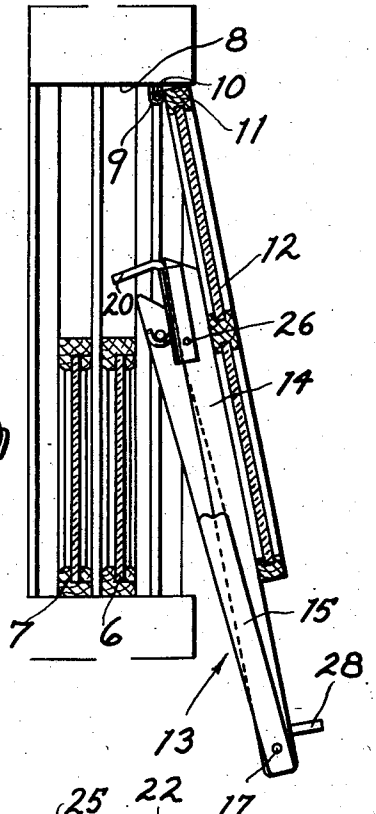


Fig. 2



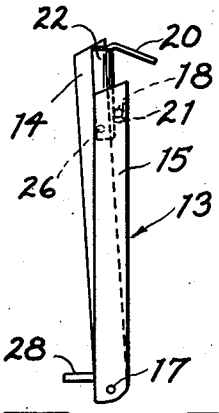


Fig. 3

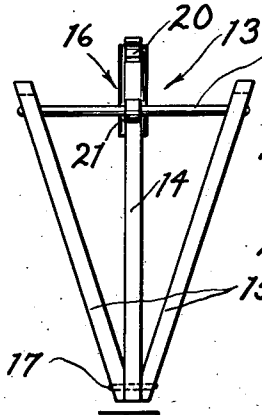


Fig. 4

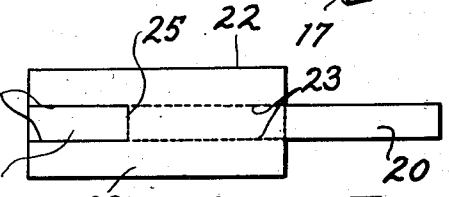


Fig. 6

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SUPPORT FOR STORM WINDOWS

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2 Claims. (Cl. 248—236)

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This invention is a device for use in hanging storm windows and is in the nature of a support for assisting the operator in properly positioning the storm sash and otherwise manipulating the sash preparatory to, and for the purpose of, effecting an engagement of the usual complementary suspension elements provided on the window casing and on the sash for suspending the latter in proper position for use.

The storm window support of the present invention embodies certain new and useful improvements over the storm window support disclosed in my copending application Serial No. 777,227, filed October 1, 1947, now abandoned, and entitled Support for Storm Window; and the present application is a continuation-in-part of my just referred to pending application.

The storm window support of the present invention is particularly characterized by the provision of a combination attaching hook for use in securing the device in position of use and a keeper hook for use in securing the device in collapsed position for storage, transportation and similar purposes.

Other details of construction which materially enhance the storm window support of this invention over the storm window support of my above referred to pending application and other storm window supports as now known or used, as to both structure and function, are set out in the following detailed description, and the objects and advantages of the present invention will be best understood and appreciated when that description is read with reference to the accompanying drawing in which is illustrated what is presently considered a preferred embodiment of the invention, and wherein:

Figure 1 is a view illustrating a practical application of the invention and showing a conventional window structure in vertical section and the device of this invention in side elevation and disposed in position for supporting the storm sash;

Figure 2 is a view similar to Figure 1 and showing the device of the invention collapsed preliminary to removing the device from the window after the storm window has been properly suspended from the window casing;

Figure 3 is a side elevational view of the device in fully collapsed condition;

Figure 4 is an elevational view taken substantially at right angles to Figure 3 for more fully showing the device in completely collapsed condition;

Figure 5 is a perspective view of a combination attaching hook and keeper hook; and

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Figure 6 is a plan view of the blank from which the combination attaching hook and keeper hook is fabricated.

Referring in detail to the drawing, it will be seen that the reference numeral 5 indicates the casing, and the reference numerals 6 and 7 the sliding sash, of a conventional window. For purposes of illustration, the head 8 of casing 5 is provided with suspension elements 9 with which coact complemental suspension elements 10 on the head rail 11 of a conventional storm sash 12 for hanging the latter in place.

As is well known, to hang a storm window sash of the type illustrated, it is necessary to hold the sash at an angle to the perpendicular, as shown, in order to effect engagement of the hanger elements 10 with the hanger elements 9. Such engagement provides a hinge connection between the sash 12 and casing 5, permitting the sash to then swing inwardly to a position within the frame in spaced parallel relation to the window sash 6, 7. My device, indicated generally by the reference numeral 13, serves to support the storm sash at the proper angle until the connection between the complemental hanger elements has been made.

In the presently preferred and illustrated embodiment thereof, the device of this invention comprises generally a rest member 14, a brace 15 therefor, and a combination attaching hook and keeper hook, indicated generally by the reference numeral 16.

Like to the device disclosed in my aforementioned copending application, the rest member 14 of the subject device is in the form of a single elongated narrow rest bar formed of a single length of wood or other suitable light, yet strong durable material.

The brace 15 of the subject device is characterized by being formed of a pair of brace bars of equal length and preferably formed of the same material as that from which the rest 14 is formed. The bars of the brace 15 at one end are pivotally connected with one end of the rest 14 through the medium of a suitable pivot 17. At their diverging ends the bars of the brace 15 are braced with respect to one another and connected together by a single cross or tie rod 18. Thus a strong durable brace, light in weight, is provided as a part of the support of this invention.

Brace 15 coacts with the combination attaching and keeper hook 16 to hold the rest 14 in a position extending outwardly and downwardly with respect to the sash 6, 7, and the combination attaching hook and keeper hook 16 cooperates with the tie rod 18 for securing the entire

device in a collapsed or folded condition, all in a manner more fully explained.

The combined attaching and keeper hook 16 is a salient feature of the present invention and is formed from a single blank or metal cut, shaped and dimensioned to provide a substantially channel-shaped body 19, an elongated hook bill 20 that extends from one end of the body 19 at an acute angle thereto and a curved keeper hook 21 that extends from the body 19 inwardly from one end of the body and substantially in opposing position with respect to hook 20 (Figure 5). Preferably, in forming the combination attaching and keeper hook 16, the blank of Figure 6 and from which said combination attaching and keeper hook is formed, comprises a substantially rectangular portion 22 and a narrow elongated portion extending from one end thereof. The portion 22 of the blank is bent on parallel fold lines 23 to form the channel body 19 and the elongated narrow portion of the blank is bent with respect to the rectangular portion 22 of the blank to form the hook 20. Portion 22 of the blank is also slit on parallel lines 24 and is bent on a transverse fold line 25 to provide the keeper hook 21 of the combination element 16.

The combination attaching and keeper hook 16 formed as just described accommodates, within the channel body thereof, the free end of rest 14 and the channel body 19 and rest 14 are pivotally connected together as at 26.

A stop 28 in the form of a dowel or as may be otherwise desired, is provided on the rest 14 adjacent the end thereof pivoted to the brace 15 and serves to limit movement of the storm sash 12 along the rest 14 in one direction.

The manner of using the device is believed to be clear from the foregoing, but is briefly explained as follows:

With sash 6, 7 in the fully lowered position shown, the device is passed outwardly through the open upper half of the window and the free end of the brace 15, that is, at the diverging ends of the bars of the brace, is placed at rest on window sill 27 against the lower rail of sash 6. Hook bill 20 is then engaged over the upper rail of sash 6 and the device is now in position of use shown in Figure 1 of the drawing. Storm sash 12 is then passed through the open upper half of the window with the bottom rail thereof foremost and resting on and moving along rest bar 14, until the sash has cleared the casing 5 with the sash 12 resting on bar 14. At substantially the angle shown, little or no difficulty is experienced by the workman in manipulating the sash 12 as required to engage the hangers 10 with the hangers 9 and thus suspend the storm sash 12 from the head rail 8 of the window casing. When that has been accomplished the operator or workman then raises the rest bar 14, disengaging hook bill 20 from the top rail of sash 6, allowing the weight of the storm window 12 to cause the support 14 to swing vertically downwardly towards the window frame. This will result in the bars of brace 15 riding or sliding upwardly on the vertical rails of sash 6 from the position shown in Figure 1 to substantially the position shown in Figure 2 until tie rod 18 moves into abutment with the combination attaching hook

and keeper hook 16 which latter is at a slight angle with respect to the rest bar 14. Being at such an angle permits the tie rod 18 to clear the hook 21 and move into abutment with the body portion 19 of the member 16. As the brace 15 continues to move towards the rest bar 14 to fully collapsed position the member 16 is caused to move into substantially complete alignment with the bar 14 resulting in the hook 21 positively engaging the tie rod 18 and thus securing the device 13 in the completely collapsed position shown in Figure 2. With the device so secured in collapsed condition it is a simple matter to draw the collapsed device inwardly through the open upper half of the window, permitting the sash 12 to then swing into final position within the confines of window casing 5. Sashes 6 and 7 are then raised for hooking or otherwise securing the lower end of the sash 12 to the window sill 27 as is conventional.

It will thus be seen that the device of this invention provides for a substantial automatic collapsing of the storm window support, incidental to the final operations of hanging the storm window, and for positively securing the support in the collapsed condition for storage or other purposes until further use.

While the invention in its preferred embodiment has been described in detail it will of course be understood that such has been done for purposes of illustration only and not by wy of limitation, and therefore only such limitations are to be imposed thereon as may reasonably come within the scope of the appended claims.

What is claimed as new is:

1. A support for use in hanging storm windows comprising a rest member, a brace pivotally connected to the rest member, and a combination attaching hook and keeper hook, the attaching hook and keeper hook including a channel shaped member pivotally mounted on the rest member, a portion of one end of the channel being extended to provide an attaching hook for engagement over a part of a window, a portion of the opposite end of said channel being reversely folded to provide the keeper hook and a recess to permit pivotal movement of the channel on the rest member and allow engagement of the keeper hook with the support when the rest member and brace are collapsed.

2. Subject matter of claim 1 with the addition of a stop on the rest member to limit movement of the storm sash on the rest when the support is in use.

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