Oct. 15, 1940. G. R. HAYNES 2,218,149

SASH HOLDER

Filed March 28, 1939

Fig. 1.

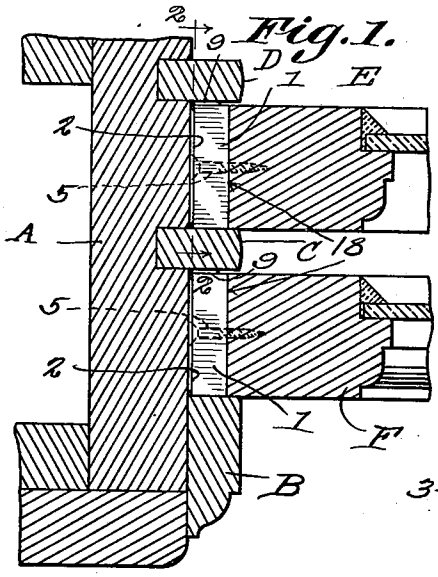


Fig. 2.

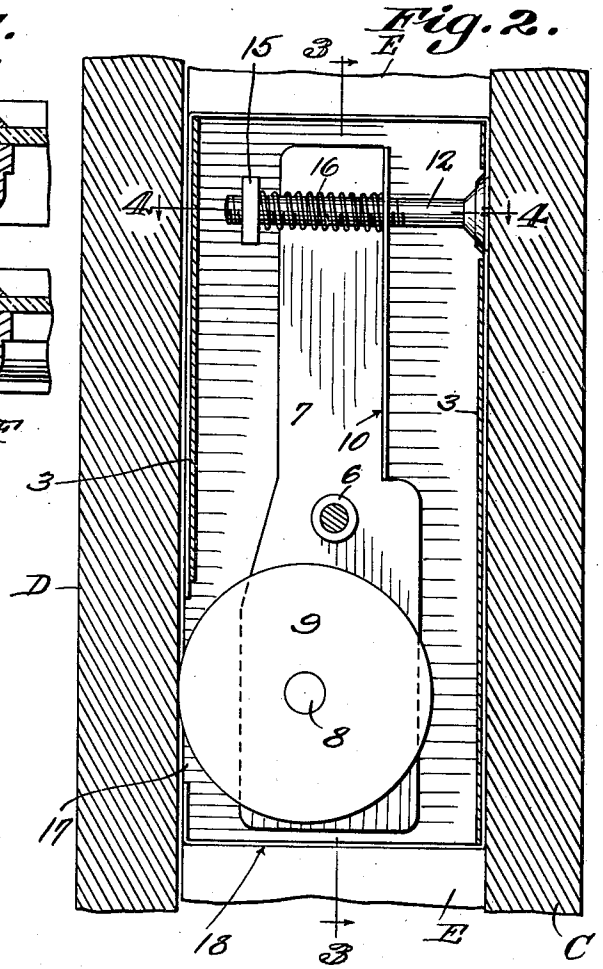


Fig. 3.

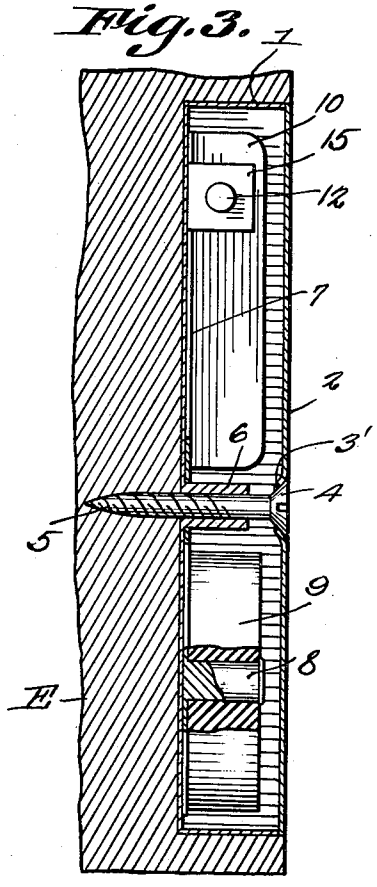
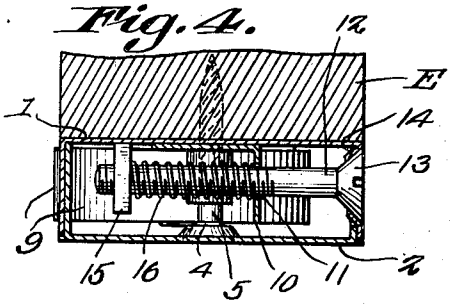


Fig. 4.



George R. Haynes

INVENTOR.

BY C. A. Snow & Co.

ATTORNEYS.

Patented Oct. 15, 1940

2,218,149

UNITED STATES PATENT OFFICE

2,218,149

SASH HOLDER

George R. Haynes, Danville, Va.

Application March 28, 1939, Serial No. 264,623

1 Claim. (Cl. 292—79)

This invention relates to a device for use in connection with a window sash and it is designed to support the sash in any position to which it may be moved and also to hold it against rattling and to press the sash tightly against the adjacent bead so as to obviate the necessity of utilizing weather-stripping.

A further object is to provide a device of this character which is simple and compact in construction and can be applied readily to a window sash.

A still further object is to provide a holder which is concealed while in use but to which access can be had readily for the purpose of effecting desired adjustments.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts hereinafter more fully described and pointed out in the claim, it being understood that changes may be made in the construction and arrangement of parts without departing from the spirit of the invention as claimed.

In the accompanying drawing the preferred form of the invention has been shown.

In said drawing

Figure 1 is a horizontal section through a portion of a window frame and sashes mounted therein, the said sashes being equipped with the present improvements.

Figure 2 is an enlarged section on line 2—2, Figure 1.

Figure 3 is a section on line 3—3, Figure 2.

Figure 4 is a section on line 4—4, Figure 2.

Referring to the figures by characters of reference, A designates a portion of a window frame which is provided with the usual jamb stop B, parting bead C, and blind stop D. Portions of the upper and lower sashes mounted in the frame have been indicated at E and F respectively.

The holder constituting the present invention includes a box-like casing 1 the width of which is equal to the thickness of a sash. This casing is provided with a cover plate 2 having side flanges 3 insertible into the casing and when this cover plate is properly located, it is adapted to lie flush with the side surface of the sash in which the holder is located.

The cover plate has an opening 3′ in which is seated the head 4 of a screw 5 and this screw is extended through a tubular post 6 which extends from the bottom of casing 1 and is preferably made integral therewith.

A lever 7 formed preferably of sheet metal, is pivotally mounted on the sleeve 6 and one end portion thereof has a laterally extending stud 8 on which is mounted a roller 9 formed preferably of hard rubber although other materials may be used.

A longitudinal flange 10 is extended laterally from the lever inwardly from the other end portion thereof and this flange 10 is provided with an opening 11 in which is loosely mounted an adjusting screw 12 having a head 13 seated in an opening 14 in one side of casing 1. A nut 15 is engaged by screw 12 and is adapted to slide along the bottom of casing 1. Interposed between this nut and the flange 10 is a cooled spring 16 which extends about the screw.

The exposed face of screw head 13 is constantly flush with the outer surface of the wall in which it is located. The opposite side wall of the casing has a slot 17 located where the roller 9 can move thereinto when flange 10 is subjected to thrust by spring 16.

The holder constituting the present invention is adapted to be sold as a complete unit. In practice the sash to be placed in the frame A is provided at each side at or adjacent to the center thereof with a mortise 18 extending transversely therethrough, the depth of this mortise being equal to the overall thickness of casing 1 and its cover 2 while the length of the mortise is equal to the overall length of casing 1. After the sash has been mortised, one of the present devices is placed in each of the recesses thus produced, the holder being so positioned that the slot 17 will be located at the outer side of the sash so that roller 9 can thus thrust outwardly from the casing 1. Each holder is secured in place by means of the screw 5 which serves also to fasten the cover 2 in position. After the sashes have been supplied with holders as described the upper sash E is placed in the frame A against blind strip D, parting bead C is then placed in the frame at each side, sash F is inserted in the frame, and stops B are secured in place. Before the sashes are thus placed, however, the screws 12 in the holders are adjusted to place springs 16 under desired tension, this tension being such as to force the rollers yieldingly against the adjacent strip or bead with sufficient force to hold the sashes against sliding movement under their own weight. The pressure of the rollers 9 against strip D and bead 3 will be such as to press the respective sashes inwardly, sash E being pressed against the parting bead C while the lower sash F is pressed inwardly against the stop B. Because of the

tight fit thus effected, it becomes unnecessary to use weather-stripping to keep out air. Furthermore the pressure exerted by the rollers against the adjacent surfaces will be such as to set up a frictional contact between the sashes and the bead C and stop B respectively sufficient to overcome the weight of the sashes so that these sashes will be supported in any positions to which they may be moved. Obviously, also, by providing each sash with one of these holders at each side thereof, the sash will be prevented from rattling. If, at any time, it should be found desirable to adjust the tension of spring 16, the stops B can be removed and this will expose the holders at the two sides of sash F and also expose the heads 13 of the screws 12. Thus the screws can be turned readily by means of a screw-driver to increase or reduce the tension of springs 16. The same result can be effected in connection with the upper sash E simply by removing the parting bead C. Normally, however, the holders are completely concealed between the strips and bead.

By providing each sash with holders such as herein described it is possible to completely eliminate the ordinary counterbalance and cord and, by making the stop B and the parting bead C readily removable, the sashes can easily be removed from the frame for the purpose of washing, glazing, etc.

The cost of installing the present improvements is much less than that of installing counterbalances.

The present improvements are also advantageous because they permit sufficient clearance to be left between the sashes and the strip D and bead C respectively to allow for expansion due to changing climatic conditions and, therefore, the danger of the sashes becoming wedged in the frame is eliminated.

Where holders such as herein described are employed it is preferred to use lifts at the sides of each sash adjacent to the frame thereof although this is not essential.

What is claimed is:

A window sash holder including a casing, a cover plate mounted on the casing, means extending through the cover plate and casing for holding them together and to a sash, a lever fulcrumed in the casing for movement about said means, a roller carried by the lever, there being a slot in that side of the casing opposite to the bearing surface of the casing, an adjusting screw having a head exposed within and flush with said bearing surface, a nut slidable in the casing and supported and engaged by the screw, said nut being non-rotatably mounted with respect to the casing, a spring mounted on said screw and bearing against the nut, and means on the lever for receiving thrust from the spring, thereby to exert a thrust through the lever to the roller to project the roller through the slot and beyond that surface of the casing opposite to the bearing surface thereof.

GEORGE R. HAYNES.