Feb. 13, 1934. R. BROWN 1,946,833

SASH HOLDER

Filed Feb. 15, 1932

Fig. 1

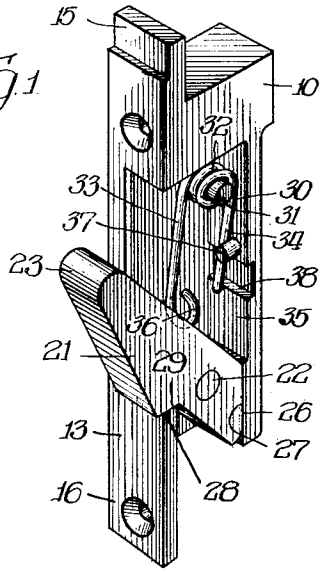


Fig. 2

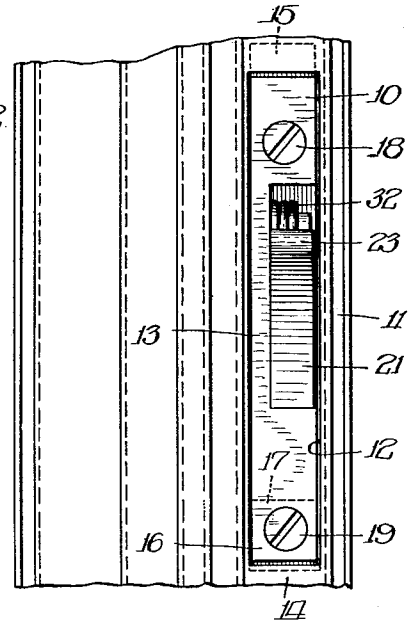


Fig. 3

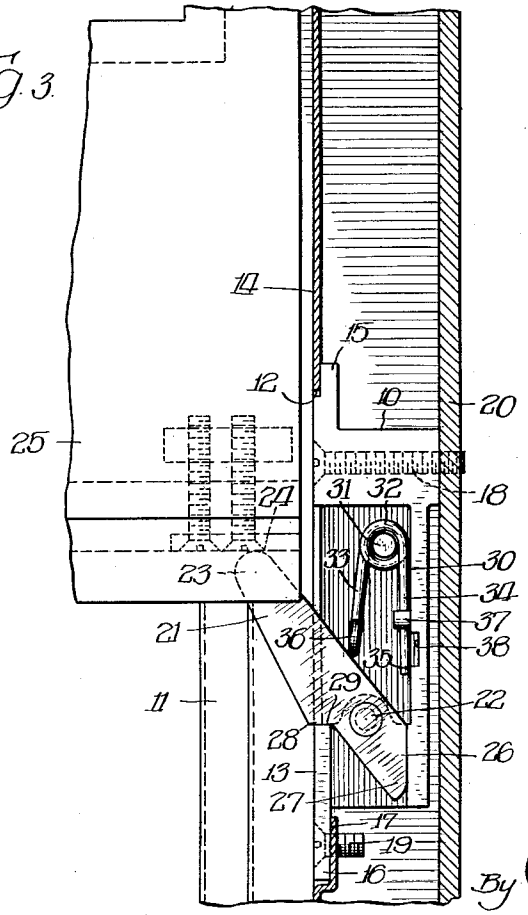
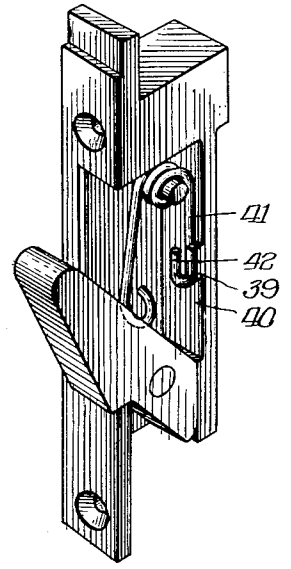


Fig. 4



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SASH HOLDER

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5 Claims. (Cl. 292—228)

The object of the present invention is to provide an improved sash holder for use in supporting the outer sash of a double-sash car window in raised position during warm weather or while the window is being cleaned.

Considerable criticism has been directed against the sash holders which have been used for this purpose in the past, due to the work involved in replacing worn out or broken springs in the holders. By utilizing the improved sash holder which constitutes the subject matter of the present invention, this objection will be entirely eliminated. The spring in the improved holder may be taken out and replaced on the job without the use of special tools and without any need of sending the holder back to the repair shops.

While the foregoing statements are indicative in a general way of the nature of the invention, other more specific objects and advantages will be apparent to those skilled in the art upon a full understanding of the construction, arrangement and operation of the parts which together make up the improved holder.

Two slightly different forms of the invention are presented herein by way of illustration, but it will of course be appreciated that the invention is susceptible of embodiment in still other structurally modified forms coming equally within the scope of the appended claims.

In the accompanying drawing:

Fig. 1 is a perspective view of a sash holder which embodies one form of the invention;

Fig. 2 is a face view of the holder in operative position in a sash guide;

Fig. 3 is a vertical section taken on the line 3—3 of Fig. 2, showing the outwardly spring-pressed dog of the holder in engagement with the bottom rail of an outer sash; and

Fig. 4 is a perspective view of a similar sash holder which embodies a slightly modified form of the invention.

Referring in more detail to the drawing, it will be observed that the sash holder includes a casing 10 of generally rectangular form which is open for a portion of its length at the front and is also open at one side. This casing is adapted to be set into a sash guide 11 of any desired construction, in a rectangular aperture 12 cut in the latter, with the front face 13 of the casing flush with the back 14 of the guide. The casing is preferably provided, at its upper end, with an upwardly projecting tongue 15 which is adapted to be hooked behind the back 14 of the guide just above the top of the aperture 12, and, at its lower end, with a downwardly projecting flange 16 which seats against a rearwardly offset portion 17 of the back of the guide. The casing is held in position by means of screws 18 and 19. The screw 18 passes through the solid upper portion of the casing into a threaded aperture in the post plate 20 at the rear of the guide, while the screw 19, which is relatively short, passes through the flange 16 into the rearwardly offset portion 17.

The casing 10 contains a dog 21 which is pivotally mounted intermediate its ends on a headed stud 22. The upper end of the dog terminates in a rounded nose 23 which is adapted to engage with a bearing plate 24 on the bottom rail 25 of the sash, and the lower end of the dog is provided with an angularly disposed face 26 which is adapted to abut against a flat surface 27 on the rear wall of the casing when the nose of the dog is in its projected position. The lower end of the dog is also provided with a shoulder 28 for engagement with the lower edge 29 of the opening in the front face of the casing.

When the sash is down the nose 23 of the dog will be held back in the casing 10 by the edge of the sash, but when the sash is raised into a position wherein the bottom rail 25 is above the dog, the nose 23 of the latter will move out beneath the sash into engagement with the bearing plate 24, under the action of a spring 30.

The spring 30 is mounted in the casing 10 behind the upper end of the dog 21 on a plain-ended stud 31. The spring has a coil portion 32 which encircles the stud, a downwardly extending tangent portion 33 at the closed side of the casing which bears against the back of the dog, and another downwardly extending tangent portion 34 at the open side of the casing which bears against the rear wall 35 of the latter. The two end portions 33 and 34 of the spring are compressed together in the above described position to exert an outward pressure on the nose 23 of the dog. The end 33 of the spring is preferably turned sidewise at its point of engagement with the dog, into a loop 36 or other suitable formation, whereby to prevent such end from digging into the metal of the dog and setting up a frictional resistance which might otherwise interfere with free and instantaneous action of the dog.

The spring 30 is locked against escape through the open side of the casing by a short projection 37 which is located on the back wall 35 of the casing between the end 34 of the spring and the edge of the wall. Because of this projection, the spring cannot be removed from the stud 22 until the end 34 of the spring has been pried away

from the back wall 35 far enough to clear the projection. To facilitate removal when replacement of the spring is necessary, the back wall 35 is preferably provided with a shallow groove 38 which extends laterally beneath the end 34 of the spring, at right angles to the latter, and permits the point of a screw driver or other available tool to be placed therein behind the spring and used as a fulcrumed lever to snap the end of the spring over the projection. As soon as the end of the spring has passed over the projection, the spring may be easily withdrawn from the casing and will ordinarily move out of the same of its own accord.

By the employment of this improved spring mounting arrangement, the replacement of a worn out or broken spring becomes a very simple operation.

In the modification shown in Fig. 4, the locking projection for the rear end of the spring consists of a small outturned flange 39 which is located at the edge of the rear wall 40 of the casing. The groove in the rear wall for use in positioning a tool behind the end of the spring is eliminated in this embodiment and the rear end 41 of the spring is instead provided with a reversely bent portion 42 which forms an open loop into which the end of a screw driver or other tool may be inserted in order to obtain a purchase on the spring. In place of this loop formation, the spring may be humped or offset to give the desired clearance between a limited portion of the spring and the rear wall of the casing.

I claim:

1. In a sash holder, a casing which is open at the front and is also open at one side, a dog which is pivotally mounted in the casing and is movable through the open front of the latter, a stud in the casing terminating at the open side of the latter in a plain free end, a spring which is supported on the stud with one end projecting into engagement with the back of the dog and with the other end projecting into engagement with the rear wall of the casing, and means for preventing removal of the spring from the free end of the stud until after the last mentioned end of the spring has been pried away from the rear wall of the casing.

2. In a sash holder, a casing which is open at the front and is also open at one side, a dog which is pivotally mounted in the casing and is movable through the open front of the latter, a stud in the casing terminating at the open side of the latter in a plain free end, a spring which is supported on the stud with one end projecting into engagement with the back of the dog and with the other end projecting into engagement with the rear wall of the casing, and an abutment in the casing at the open side of the same for preventing the spring from being withdrawn from the free end of the stud through the open side of the casing except when first pried away from the rear wall.

3. In a sash holder, a casing which is open at the front and is also open at one side, a dog which is pivotally mounted in the casing and is movable through the open front of the latter, a plain-ended stud in the casing pointing toward the open side of the latter, a wire spring which is coiled on the stud and has a tangential end at the closed side of the casing projecting into engagement with the back of the dog and has a tangential end at the open side of the casing projecting into engagement with the rear wall of the casing, and an abutment on the rear wall of the casing at the open side of the latter for preventing the end of the spring in engagement with such wall from moving out through the open side of the casing except when pried away from the rear wall of the latter, said casing being provided with a groove in the rear wall thereof adjacent the abutment for permitting insertion therein of the point of a screw driver or other tool into a position behind the adjacent end of the spring, whereby to permit the latter to be pried away from the rear wall far enough to clear the abutment.

4. In a sash-holding device, a casing which is open at one face and is also provided with an opening at one edge, a member which is pivotally mounted in the casing and is movable through the opening in the edge of the latter, a stud in the casing which is directed toward the open face of the latter and terminates in a plain free end, a wire spring having a coiled intermediate portion which is sleeved over the stud and having two tangential end portions which project into engagement respectively with the back of the member and the rear wall of the casing, and an abutment in the casing adjacent the open face of the same for preventing the spring from being withdrawn from the free end of the stud through the open face of the casing except when first pried away from the rear wall.

5. In a sash holder, a casing which is open at the front and is also open at one side, a dog which is pivotally mounted in the casing with its upper free end movable through the open front of the latter, a plain-ended stud in the casing pointing toward the open side of the latter in spaced parallel relation to the pivotal axis of the dog, a coil spring which is sleeved over the stud and is provided with tangentially extending ends which bear respectively against the dog and the casing, and an abutment at one side of one end of the spring for preventing the spring from being slid off the stud until after such end has been forced back far enough to clear the abutment.

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