

G. HARMUTH.
SASH LOCK.
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956,963.

Patented May 3, 1910.

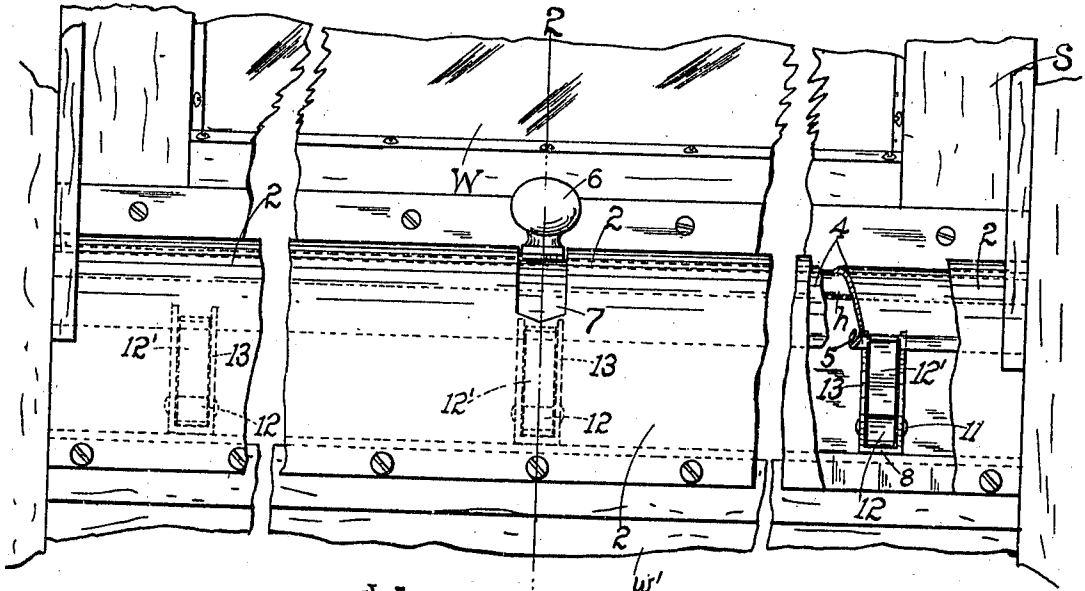


FIG. 1.

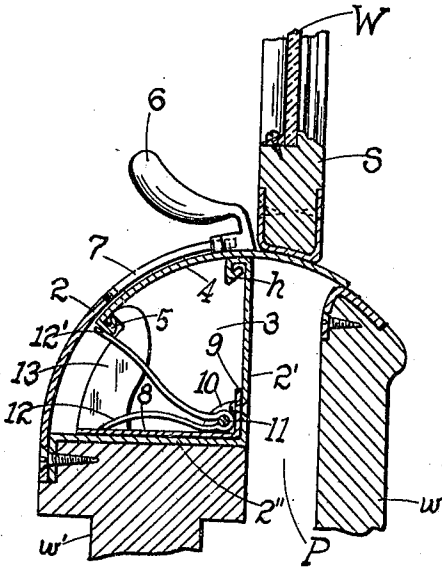


FIG. 2.

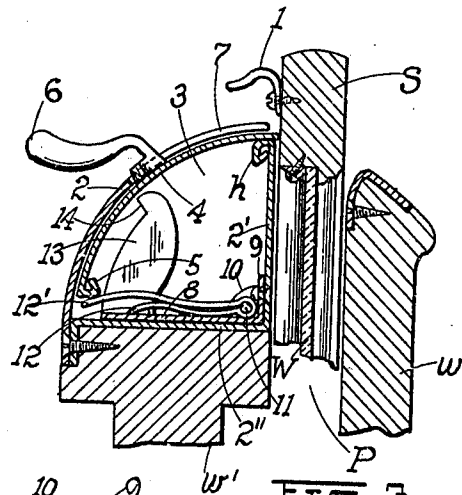


FIG. 3.

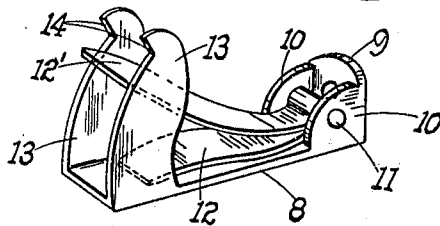


FIG. 4.

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GUSTAVE HARMUTH, OF ST. LOUIS, MISSOURI.

SASH-LOCK.

956,963.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GUSTAVE HARMUTH, citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Sash-Locks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention has relation to improvements in sash-locks; and it consists in the novel details of construction more fully set forth in the specification and pointed out in the claims.

In the drawings, Figure 1 is an elevation of the bottom of a window-frame showing my invention applied thereto, parts being broken; Fig. 2 is a vertical transverse section on the line 2—2 of Fig. 1 taken through the casing in which the parts are confined, the sash being shown closed or raised; Fig. 3 is a similar section with sash shown lowered or open; and Fig. 4 is a perspective of the arresting device or stop which likewise serves as a mounting for the operating springs.

The present invention is more particularly designed in connection with car windows which are lowered, when opened, into a pocket designed to receive them, street cars not being constructed as a rule to allow a sash to be lifted for purposes of opening the same.

The object of the invention is to provide a lock which automatically swings or rocks into position under the sash when the latter is raised, thus locking the same in its closed position, the locking apron serving to frictionally hold the sash in a partially open position should it be desirable. It also constantly bears against the sash so that there is no rattling of the window when the car is in motion.

The advantages of the construction will be fully apparent from a detailed description of the invention which is as follows:—

Referring to the drawings, S, represents the sash of an ordinary car window W, the upper rail of the sash being provided with a finger-hold 1 as usual. P, represents a pocket into which the sash is lowered between the outer wall *w* of the car and the inner panel *w'*. The features referred to are however, well known in the art and no claim thereto is herein made.

Secured in front of each window along

the top of the panel *w'* and virtually forming a window sill is a curved shell 2 bent in the curve of a cylinder, said shell forming a casing or housing 3 behind the sill 2, within which casing the operating parts are housed. Oscillating along, and bearing against the inner surface of the casing wall 2 is an apron 4 having an upper straight edge as shown and a lower inwardly formed bead 5, said apron being depressed by means of a finger-hold or arm 6 secured approximately along a medial line of the apron, and projecting through a slot or recess 7 cut along the upper edge of the shell 2 opposite the center of the window sash. Disposed along the top of the panel *w'* within the casing 3 are a series of plates 8 having rear terminal walls 9 through which they are secured by rivets or otherwise to the rear vertical wall 2' of the casing, the plate 8 being connected to the wall 9 by the side walls or cheeks 10 between which is mounted a bearing pin 11 (Fig. 4). About the pin 11 is looped the medial portion of a spring or plate bent so as to form two resilient arms 12, 12', the former normally resting on the plate, and the latter tending to deflect or separate therefrom. The free end of the spring arm 12 rests, and the free end of the spring arm 12' plays, between the fork members or arms 13, 13, cast on the sides of the outer end of the plate 8, the terminals of the arms having formed thereon shoulders 14, which serve to arrest the upward oscillation of the apron 4 by engaging the bead 5 formed thereon. The plates rest on the metal plate 2" forming the bottom of the chamber 3.

The operation of the device is as follows:—When the window sash is lifted up its full extent so as to close the window, thereby bringing the lower edge of the bottom sash rail slightly above the top of the pocket P, the resilience of the expanding or dilating springs 12, 12' drives the apron upward, causing it to oscillate or ride along the inner surface of the curved casing wall 2 until arrested by the bead 5 of the apron coming in contact with the stop shoulders 14 of the arms 13, of the several plates 8 housed within the casing 3. By this movement the apron sweeps across and spans the mouth of the pocket P, and when the sash is released, the window remains supported on the apron in its (the window's) closed or raised position. To open the window, the passenger takes hold of the arm 6, oscillat-

ing the apron inwardly or downwardly until the arm reaches the base of the recess 7 of the wall 2, by which time the springs 12, 12' will have been compressed or closed (Fig. 3), and the upper edge of the apron will have just cleared the inner surface of the sash, the latter being free to drop into the pocket P, and the window be thus opened. Should it be desired to raise the window partially, the release of the apron at any particular elevation of the window will permit the springs 12, 12' to force the straight edge of the apron with sufficient force against the side rails of the sash to hold the window open to any degree desired, it being understood that the stiffness of the springs is sufficient for the purpose. Any expanding spring will obviously answer the purpose.

When the window is fully raised or closed, the base of the bottom sash-rail resting as it does on the upwardly convexed face of the apron is prevented from rattling. When the window is open fully or partially, the rear edge of the apron bearing as it does against the sash under the resilient action of the springs 12, 12' is likewise prevented from rattling.

In practice the wall 2 need not be continuous as shown. It may be open in places so as to expose the inner apron; and the apron may likewise be made of open-work so as to insure a light construction. Other changes will suggest themselves to the skilled mechanic. The device is of course, applicable to a sash opening upwardly as well as to one opening downwardly.

It will be seen that the upper edge of the rear wall 2' of the casing 3 is provided with a stiffening bead *h*, the apron 4 in its reciprocations riding on this bead and being properly guided so as to bear evenly against the inner face of the wall 2. Of course the wall 2' need not be a continuous one, and in practice it may be sufficient to support and guide the apron at a few points along the length thereof.

Having described my invention, what I claim is:—

1. In combination with a sliding sash closing by an upward movement, a curved casing wall at the base of the window-frame, an oscillating apron bearing against the inner face of said wall, springs for forcing the apron outwardly to span the bottom of the lower sash-rail, and means located within the casing for arresting the movement of the apron when projected the proper distance beyond the curved casing wall aforesaid.

2. In combination with a sliding sash closing by an upward movement, a curved wall at the base of the window frame, an oscillating apron bearing against the inner face of the curved wall, a series of dilating springs for projecting the apron across the base of the bottom sash-rail for an elevated position of the sash, a bead formed at the lower edge of the apron, and a series of arresting devices engaging the bead for a properly projected position of the apron.

3. In combination with a sliding sash, a hollow sill provided with an outer curved wall, a curved oscillating apron bearing against the inner face of said wall, the latter being provided with a recess along its upper edge, an arm carried by the apron and operating in said recess, a pocket for the reception of the sash when lowered, springs for projecting the apron for a raised position of the sash across the pocket and under the bottom sash-rail, a series of members provided with terminal arresting shoulders, the lower edge of the apron being provided with a bead for engaging said shoulders when projected across the pocket and under the sash-rail, substantially as described.

In testimony whereof I affix my signature, in presence of two witnesses.

GUSTAVE HARMUTH.

Witnesses:

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FANNIE E. WEBER.