May 19, 1925.

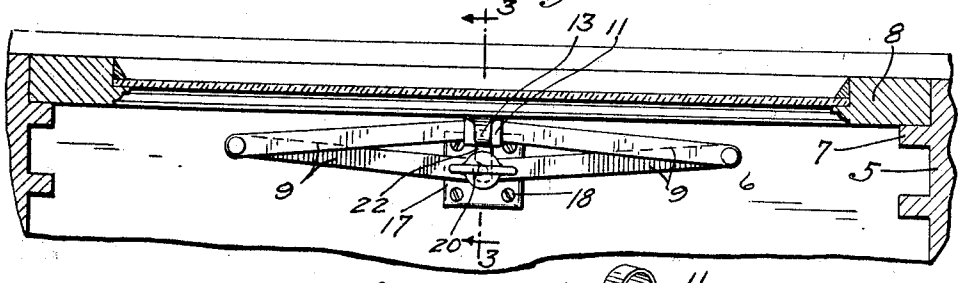
1,538,823

J. L. KILLION

STORM SASH OPERATOR AND LATCH

Filed Feb. 17, 1923

Fig. 1



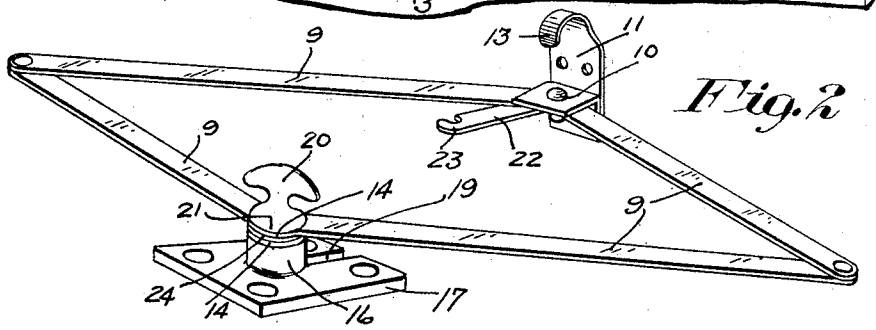


Fig. 2

Fig. 3

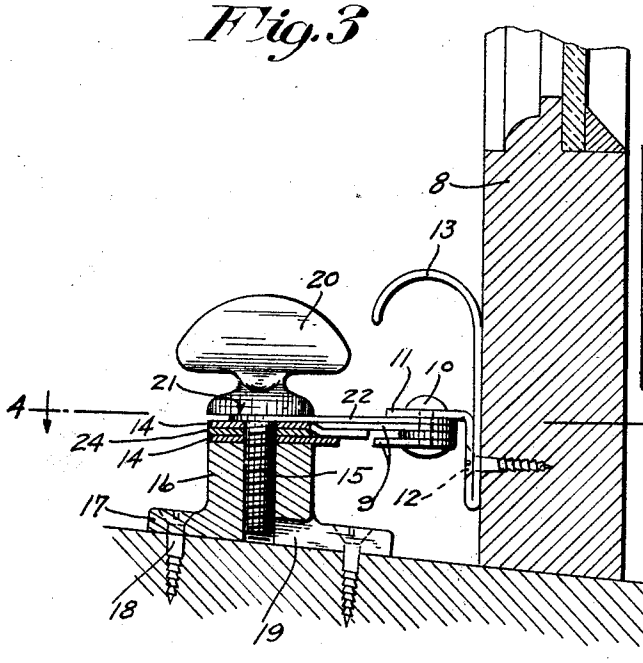
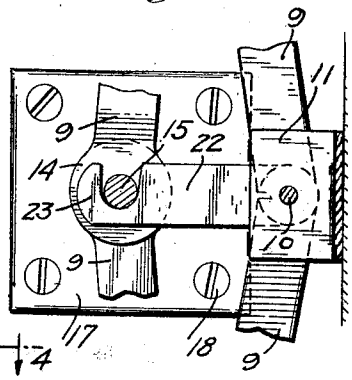


Fig. 4



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By his Attorneys

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UNITED STATES PATENT OFFICE.

JOSEPH L. KILLION, OF MINNEAPOLIS, MINNESOTA.

STORM-SASH OPERATOR AND LATCH.

Application filed February 17, 1923. Serial No. 619,783.

To all whom it may concern:

Be it known that I, JOSEPH L. KILLION, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Storm-Sash Operators and Latches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has for its object to provide an extremely simple and highly efficient storm sash operator and latch, and to this end, it consists of the novel devices and combinations of devices hereinafter described and defined in the claim.

In the accompanying drawings, which illustrate the invention, like characters indicate like parts throughout the several views.

Referring to the drawings:

Fig. 1 is a view partly in horizontal section and partly in plan showing the invention applied to a window frame and swinging storm sash mounted therein;

Fig. 2 is a perspective view of the invention removed from the window frame and sash;

Fig. 3 is a view principally in vertical section taken on the line 3—3 of Fig. 1, on an enlarged scale; and

Fig. 4 is a detail view with some parts sectioned on the line 4—4 of Fig. 3.

The numeral 5 indicates a window frame as an entirety, with the exception of the sill 6 and outside stops 7 against which a storm sash 8 is arranged to close, and which sash is held suspended for swinging movement from the window frame by separable fasteners, not shown.

The invention includes a pair of toggle levers 9 arranged to form a parallelogram and having one of their ends pivoted at 10 to a bracket 11 rigidly secured by screws 12 to the inner face of the lower rail of the storm sash 8 at the horizontal center thereof. Formed with the bracket 11 is a finger piece 13 by which the storm sash 8 may be swung to and from a closed position. The other ends of the toggle levers 9 are expanded to form eyes 14 to receive a screw 15 having screw-threaded engagement with an anchor 16 provided with a base 17 which rests on the window sill 6 and is secured thereto by screws 18. The base 17 has the same pitch as the window sill 6 so as to rest directly thereon and support the anchor 16 in an upright position. A drain 19 is formed in the base 17 and extends to the screw-threaded bore thereof to permit the escape of water and dirt. Formed with the upper end of the screw 15 is a thumb piece 20 having a binding shoulder or surface 21. A horizontal swinging latch 22 is attached to the pivot 10, between the toggle levers 9 and the bracket 11, and has at its free end a hook 23 arranged to interlock with the screw 15 to lock the storm sash 8 closed, as best shown in Figs. 3 and 4. A spacing washer 24 is interposed between the eyes 14 of the toggle levers 9. Obviously, by operating the thumb piece 20 to turn the screw 15 into the anchor 16 the eyes 14, latch 22 and washer 24 may be frictionally clamped between the anchor 16 and shoulder 21 to lock the toggle levers 9 and latch 22 against pivotal movement and thereby hold the storm sash 8 closed.

To open the storm sash 8 it is only necessary to operate the thumb piece 20 and thereby turn the screw 15 sufficiently out of the anchor 16 to release the pressure on the parts held between the anchor 16 and shoulder 21, swing the latch 22 out of engagement with the screw 15, and move said sash outward by taking hold of the finger piece 13. When the storm sash is at the desired position, the thumb piece 20 may be operated to again turn the screw 15 into the anchor 16 and thereby frictionally clamp the eyes 14 of the toggle levers 9 and the washer between said anchor and shoulder 21. When the toggle levers 9 are thus held against pivotal movement, the storm sash will be securely held open and prevented from rattling and at the same time prevent the wind from lifting the storm sash and thereby release the separable fasteners holding the storm sash. By the use of the above described invention the storm sash may be held open in any desired position.

In removing the storm sash from the window frame it is only necessary to remove the screw 15 from the anchor 16 and detach the eyes 14 therefrom to release the toggle levers 9. The toggle levers 9 and latch 22 are permanently pivotally attached to the bracket 11 and hence cannot be detached therefrom or lost. The screw 15 may again be placed

in the anchor 16 or tied or otherwise secured to one of the parts of the sash operator or latch.

The above described invention has, in actual usage, proven highly efficient for the purpose had in view.

What I claim is:

A storm sash operator and latch comprising a pair of toggle levers in parallelogram arrangement, a bracket applicable to a window sash, an anchor applicable to a window frame and having a thumb screw, and a hook-acting latch, one of the links of the toggle levers and the hook-acting latch being pivoted to the bracket and the other links of the toggle levers being pivoted to said screw, said hook-acting latch being arranged to be interlocked with the screw by a swinging movement transversely of the movement of the toggle levers, said thumb screw affording common means for simultaneously clamping the respective links of the toggle levers and the hook-acting latch the one upon the other and onto the anchor to frictionally hold the toggle levers and hook-acting latch against pivotal movement.

In testimony whereof I affix my signature.

JOSEPH L. KILLION.