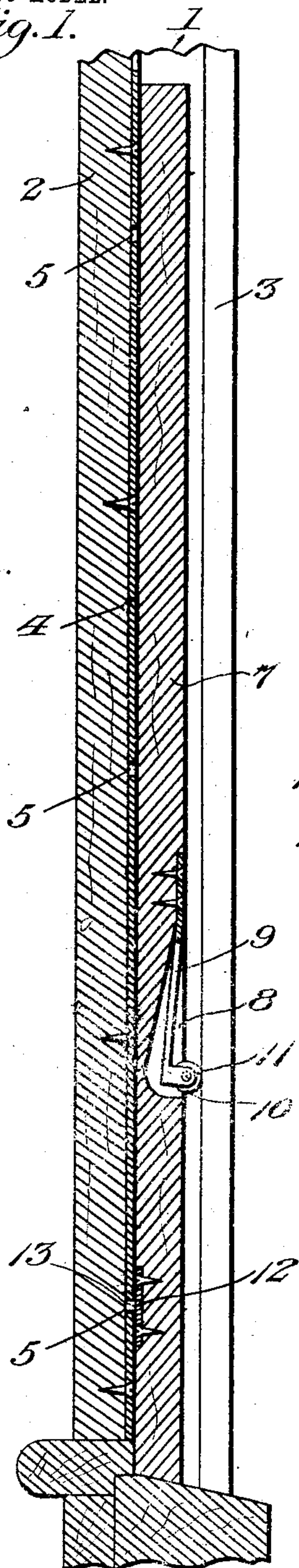


No. 765,025.

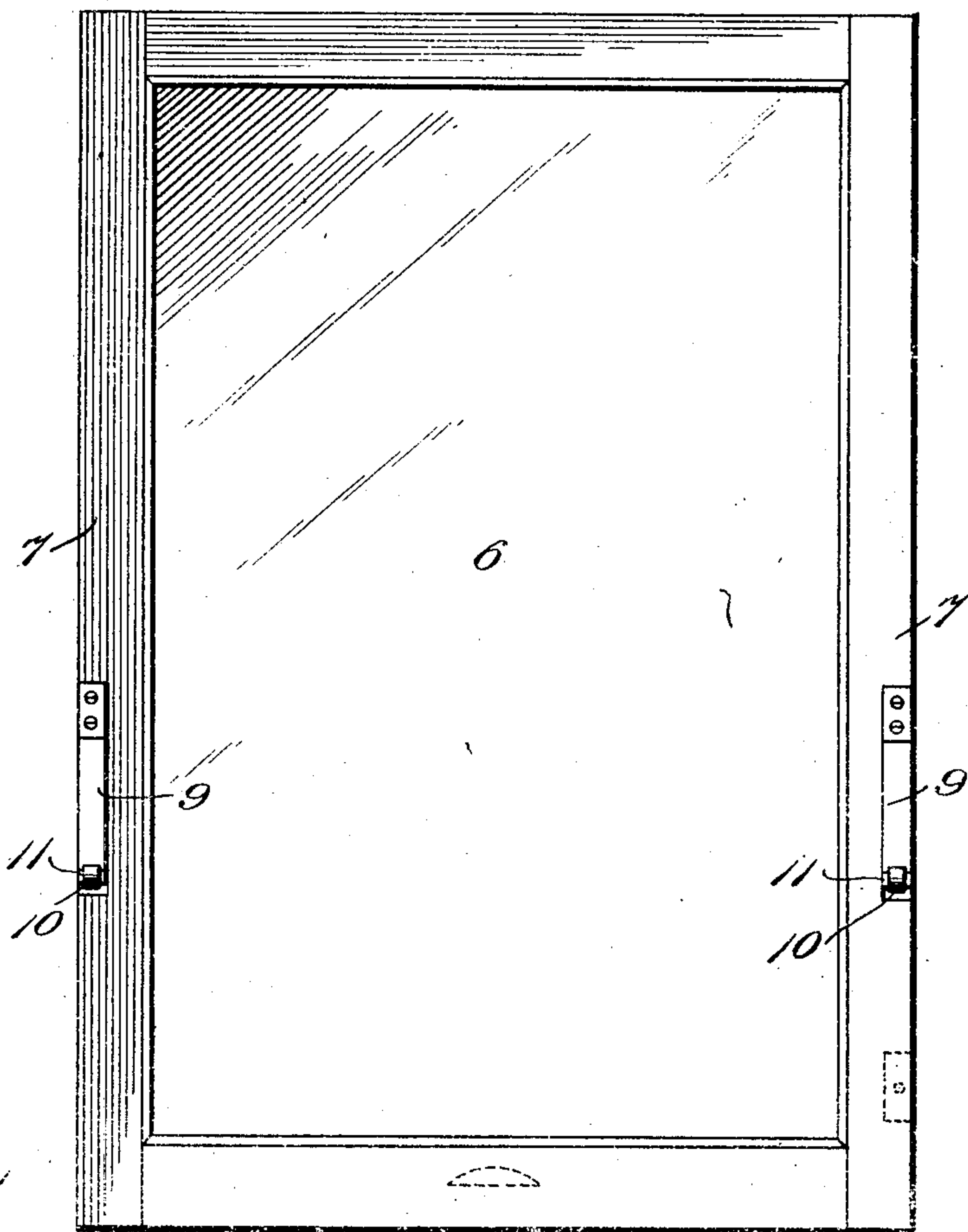
PATENTED JULY 12, 1904.

J. H. MACHEN.  
AUTOMATIC SASH CATCH.  
APPLICATION FILED OCT. 3, 1903.

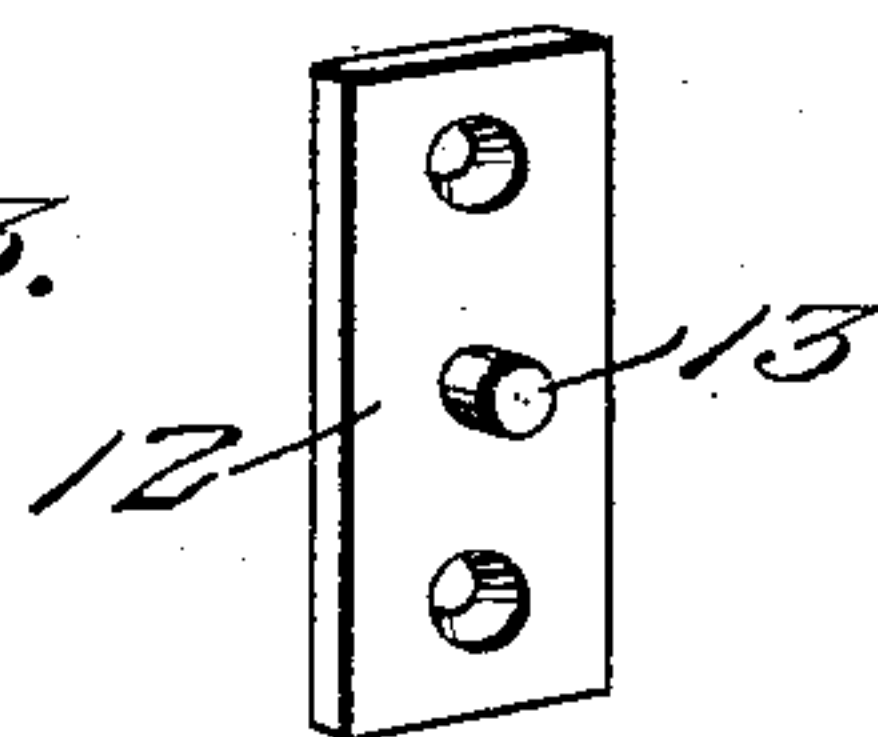
NO MODEL.  
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses

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By

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# UNITED STATES PATENT OFFICE.

JAMES H. MACHEN, OF NORFOLK, VIRGINIA, ASSIGNOR OF ONE-HALF TO  
OLIVER BERRIEN BURROUGHS, OF NORFOLK, VIRGINIA.

## AUTOMATIC SASH-CATCH.

SPECIFICATION forming part of Letters Patent No. 765,025, dated July 12, 1904.

Application filed October 3, 1903. Serial No. 175,629. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES H. MACHEN, a citizen of the United States, residing at Norfolk, in the county of Norfolk and State of Virginia, have invented new and useful Improvements in Automatic Sash-Catches, of which the following is a specification.

This invention relates to an automatic sash-catch particularly adapted for use in connection with car and other windows.

Considerable annoyance ensues from the sash of car-windows sticking in the frame and offering considerable resistance to elevation thereof and also the frailty of locks and unreliable operation thereof in holding sashes elevated. In order to overcome these disadvantages and to have a sash loose enough in its frame to be readily raised and lowered and render it serviceable in connection with a car, care must be taken to have the same dust-proof.

The present invention consists of a sash which is loosely held within its frame by spring-actuated antifrictional devices applied thereto at one side and a locking projection at the opposite side to engage openings in a catch-strip secured against the outer surface of the inside stop of the frame.

The invention also consists in the details of construction and arrangement of the several parts, which will be more fully hereinafter described and claimed.

In the drawings, Figure 1 is a transverse vertical section through a portion of a car-window frame and sash embodying the features of the invention. Fig. 2 is an elevation of a sash constructed in accordance with the features of the invention. Fig. 3 is a detail perspective view of a catch device secured to one side of the sash.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

The numeral 1 designates a car-window frame having inside stops 2 and outside stops 3, as usual. Against one of the inside stops a metallic catch-strip 4 is secured and at intervals has openings 5 formed therein. The sash 6 is of the usual form and has side stiles 7. In the outer portion of the side stiles at

a suitable elevation above the lower rail recesses 8 are formed, one in each stile, the said recesses gradually increasing in depth toward their lower extremities. The upper ends of spring-arms 9 are secured to the stiles 7 above the recesses 8; and the greater portions of said arms are free to move into the recesses 8 and have brackets or bearings 10 at their lower ends in which antifrictional rollers 11 are mounted and continually held in contact with the outer stops 3 of the window-frame. The recesses 8 are deep enough to permit the rollers 11 to be pressed inwardly thereinto for a purpose which will be presently set forth.

On one of the side stiles 7 at the front and near the bottom a catch element is secured and consists of a metallic plate 12, which is countersunk in the stile and has a projection in the form of a stud or pin 13 to engage either of the openings 5 in the strip 4 to lock the sash either closed or in elevated position.

The sash being closed, it can be raised by pressing outwardly thereon to force the arms 9 and rollers 11 inwardly into the recesses 8 and permit the stud or pin 13 to clear the lowermost opening 5, when the sash may then be elevated, and during such elevation the rollers 11 move or bear on the outside stop 3. The inner end of the stud or pin 13 during the elevation of the sash easily slides over the strip 4 until the next opening 5 above is reached, when the stud or pin will be forced into the latter opening and the sash allowed to remain at such elevation, or if it is desired to raise it still higher the sash is again pressed outwardly and force applied thereto to elevate it a sufficient distance to cause the pin or stud to engage the uppermost opening. Three openings 5 have been shown; but it will be understood that as many of the same may be employed as found necessary and desirable. The spring-arms 9 always tend to throw the sash inwardly and the stud or pin 13 into engagement with the openings, and it will be seen that sticking resistance of the sash will be obviated, and at the same time a dust-proof joint will be established between all parts of the sash and the frame engaged thereby. To accommodate the outward and inward move-



ment of the sash, as set forth, the distance between the inner opposing surfaces of the inside and outside stops is greater than the maximum thickness of the sash or said stiles, 5 as clearly shown by Fig. 1. It will also be observed that in order to apply the improved stop or holding mechanism the frame is not mutilated or its construction varied, and thus the sashes now in use in cars can be readily 10 replaced by those having the stop devices thereon embodying the features of the present invention.

The sash and automatic catch heretofore described may also be used on steamboats by 15 reversing the sash, so as to have it lower to open the window instead of resorting to an elevation, as in ordinary window constructions. It is also obvious that changes in the proportions, dimensions, and minor details of 20 the invention may be resorted to without departing from the spirit thereof.

Having thus fully described the invention, what is claimed as new is—

The combination with a window-frame, hav-

ing inside and outside stops, of a flat catch- 25 strip secured to one of the inside stops and having openings therein at intervals, a window-sash having a frame of less thickness than the distance between the stops and provided 30 with recesses in one side of the side stiles adjacent to the outer edges of the latter, spring-arms secured to the side stiles adjacent to the recesses and having their free extremities projectable into the latter, the lower ends of the spring-arms carrying antifrictional rollers, 35 and a plate secured to one of the side stiles and having a central projecting stud to engage the openings in the catch-strip, the plate having the stud being applied to the side stiles on the side opposite that carrying the spring- 40 arm.

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

JAMES H. MACHEN.

Witnesses:

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LEO JUDSON.