

(No Model.)

C. F. DAVIS & P. L. COOPER.  
SASH HOLDER.

No. 594,356.

Patented Nov. 23, 1897.

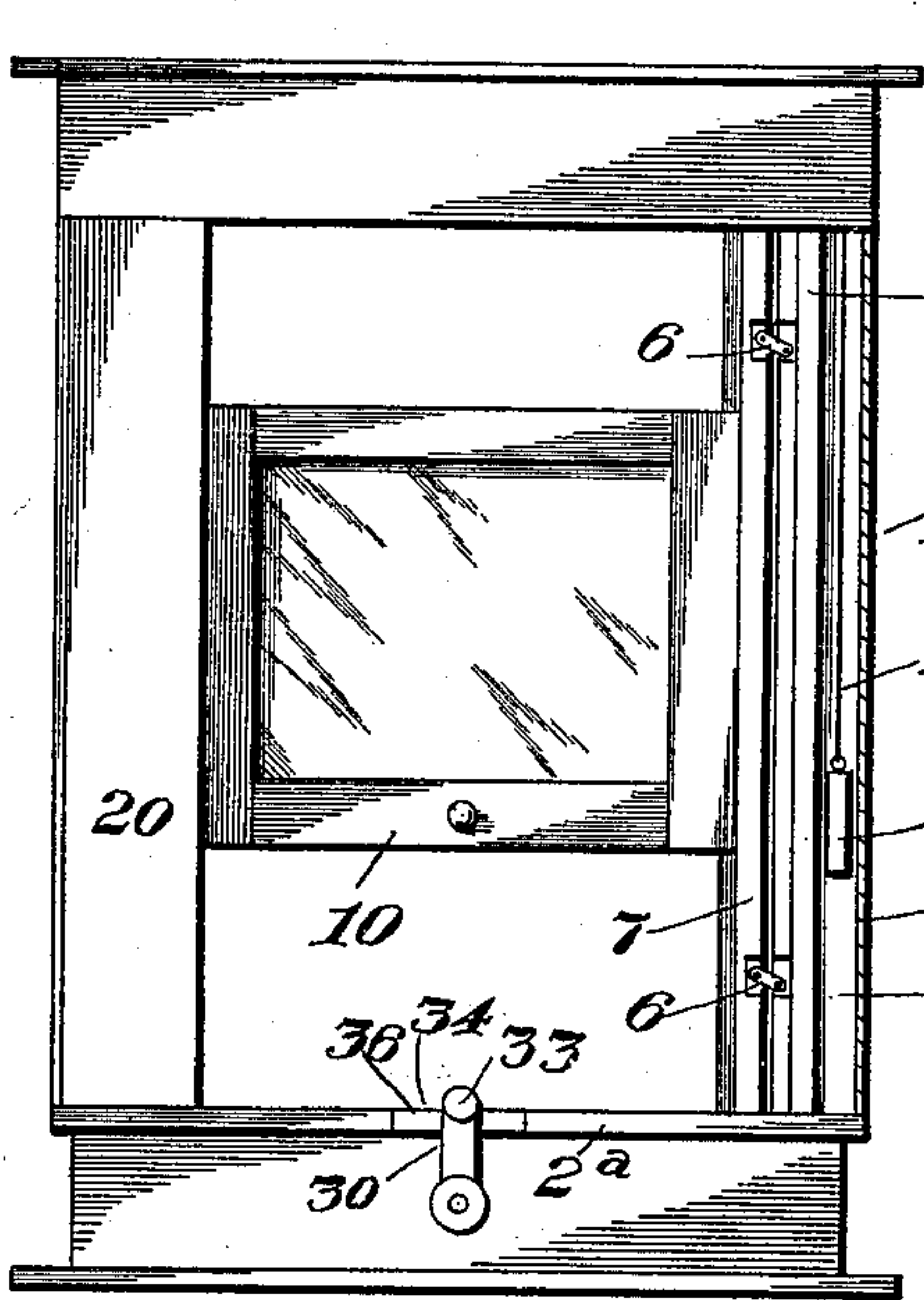


Fig. 1.

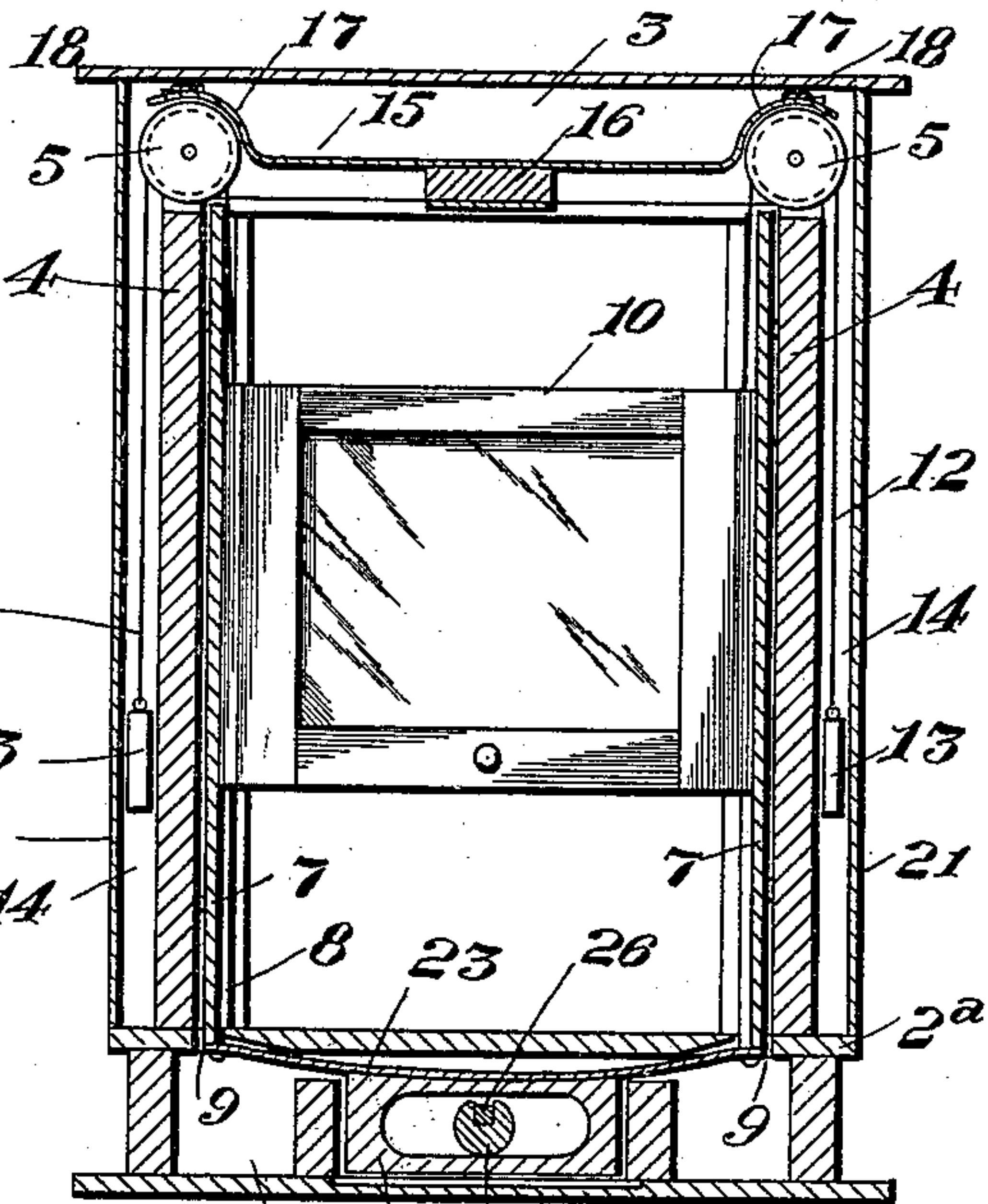


Fig. 2.

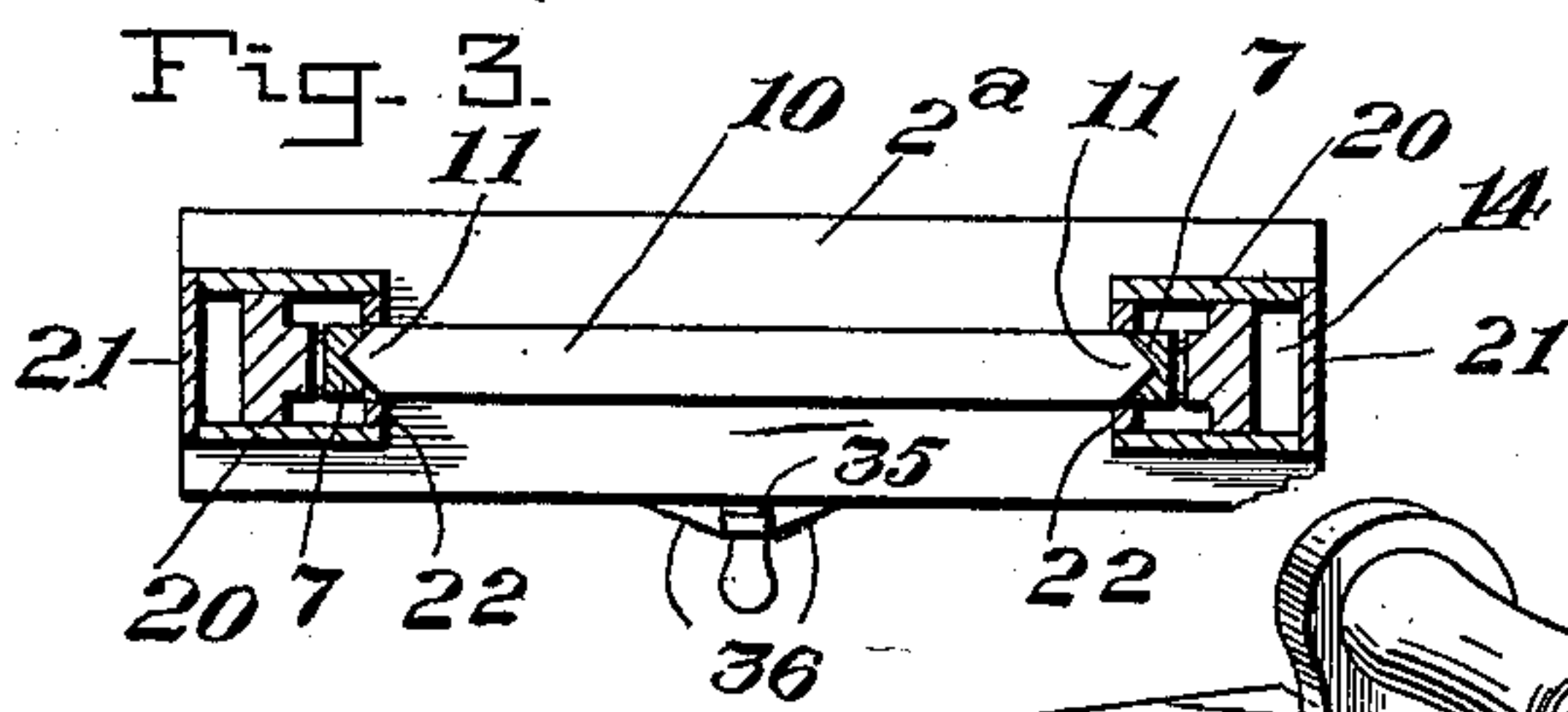


Fig. 3.

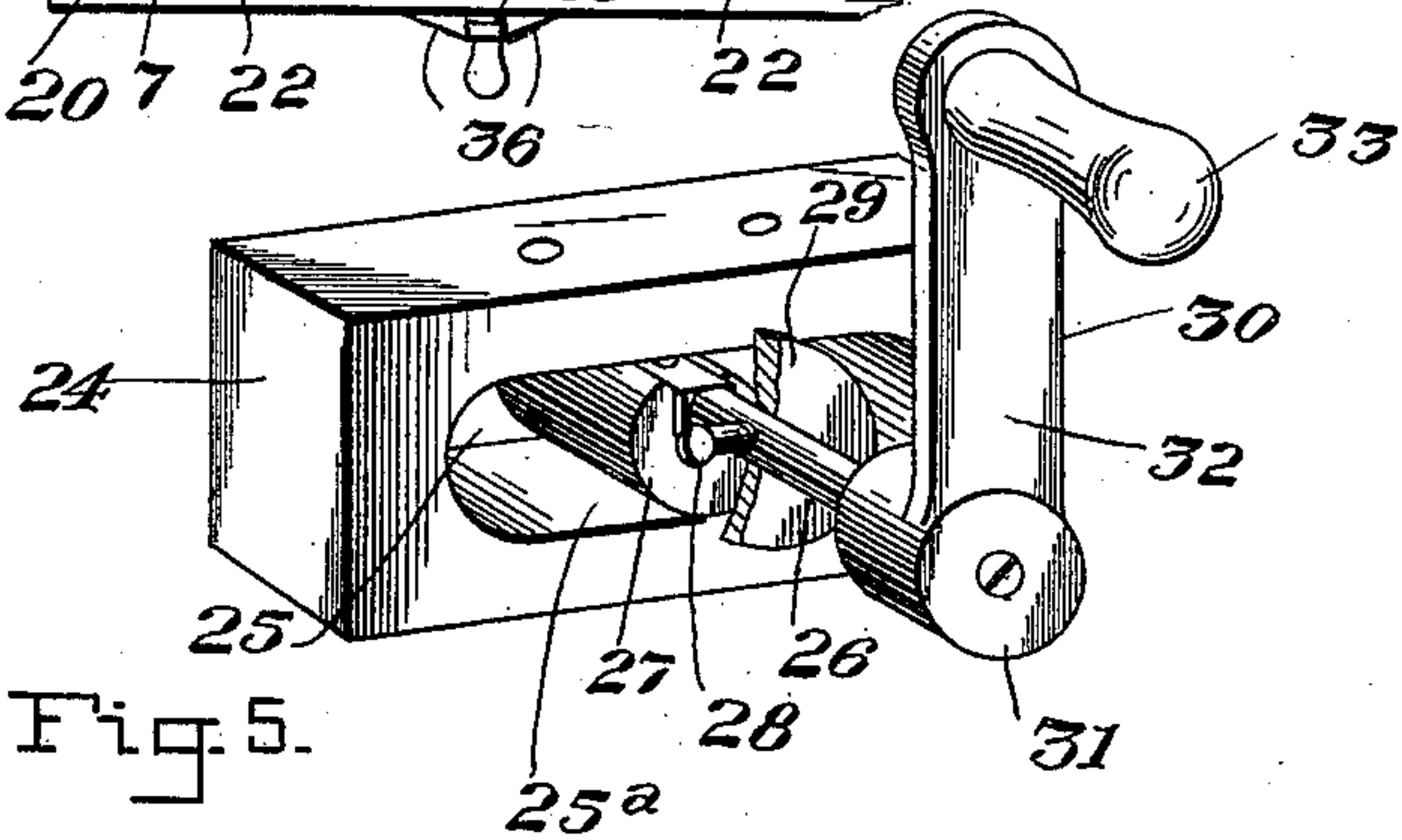


Fig. 4.

Fig. 5.

Witnesses  
Chas. P. Heinemann.

Victor J. Evans

Inventors  
Charles F. Davis,  
Perry L. Cooper.

By John Wedderburn  
Attorney



# UNITED STATES PATENT OFFICE.

CHARLES F. DAVIS AND PERRY L. COOPER, OF OLIVET, MICHIGAN.

## SASH-HOLDER.

SPECIFICATION forming part of Letters Patent No. 594,356, dated November 23, 1897.

Application filed July 12, 1897. Serial No. 644,242. (No model.)

*To all whom it may concern:*

Be it known that we, CHARLES F. DAVIS and PERRY L. COOPER, of Olivet, in the county of Eaton and State of Michigan, have invented certain new and useful Improvements in Sash and Car-Window Fasteners; and we 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.

Our invention relates to certain new and useful improvements in sash-fasteners.

The object of the invention is to provide an improved construction of sash-frame combining means for holding the window-sashes at any desired height and to exclude entrance of dust and dirt.

With this and other objects in view the invention consists in the novel constructions and combinations hereinafter more fully described, and particularly set forth in the appended claims.

In the accompanying drawings, illustrating the invention, Figure 1 is a front elevation view of the window frame and sash constructed in accordance with my invention. Fig. 2 is a vertical sectional view. Fig. 3 is a horizontal section on the line 3-3 of Fig. 2. Fig. 4 is an enlarged detail perspective view of the clamping-bars and bridge-piece. Fig. 5 is a detail perspective view of the cam-slotted block and operating-handle, the parts being shown in operative relation.

Like numerals designate corresponding parts throughout the several figures of the drawings.

Referring now particularly to the accompanying drawings, 1 designates the window-frame, which is constructed with a sill-compartment 2 and with an upper compartment 3. Connecting between these compartments are vertical side bars 4, provided at their upper ends with pulleys 5, journaled in slots therein. Secured to these vertical side bars by pivoted links 6 are clamping-bars 7, each formed with a substantially V-shaped recessed or grooved face 8, the lower ends of said clamping-bars being adapted to have vertical movement in slots 9 in the top board 2<sup>a</sup> of the sill-base compartment 2.

In illustrating our invention we have shown in the accompanying drawings a single win-

dow-sash frame 10, although it will be understood that in practice a lower and upper sash-frame will be employed. This sash-frame is provided at each side thereof with a V-tongue 11, which fits and slides within the V-grooves 8 of the clamping-bars, as shown. The sash-frame is balanced in the usual manner by means of cords 12, secured thereto, passing over pulleys 5 in the upper compartment 3 and carrying weights 13, which raise and lower in vertical side compartments 14.

To prevent the sash-cords jumping or becoming disconnected from the pulleys, we have provided a shield 15, said shield consisting of a strip of metal secured at its central portion to a block 16, located in the compartment 3, immediately above the sash-frame, and having its ends bent to form substantially semicircular-shaped guards 17, which inclose the upper portion of the pulleys 5 and are adapted to prevent the cords from jumping out of the grooves therein. These guard-pieces are confined in position by stop-plates 18.

The vertical side bars and clamping-bars are concealed from view and inclosed by vertical side boards 20 and end boards 21, the said side boards being provided with inwardly-projecting strips 22, which bear against the side edges of the clamping-bars, concealing the edges thereof from view as well as effecting an air-tight and dust-proof jointure.

The mechanism for operating the clamping-bars for clamping the window-sash is located in the sill or base compartment 2. In this casing is a bow-shaped spring-metal bridge-piece 23, connecting the lower ends of the two vertical clamping-bars 7. Below this bridge-piece or connecting-bar is a vertically-movable block 24, provided with a cam-slot 25, said block being connected with the bridge-piece, as shown. A shaft 26 is journaled in the front wall of the base-compartment and extends to the exterior, and said shaft is provided with an eccentric head 27, which operates in the slot of said cam-block. When the eccentric head bears upon the straight or cam portion 25<sup>a</sup> of the slot, the block 24 and bridge-piece 23 are drawn downward, with the result that the clamping-bars 7 are moved outwardly and downwardly, so as to clamp the window-sash tightly between



them and to prevent the same from being moved. When, however, the eccentric-block is turned so as to bring it out of contact with the said cam-face, the block 24 is released  
 5 and the bridge-piece is left free to distend, so as to force the clamping-bars 7 upward and inward, the latter movement being effected by the manner of pivoting the links. The shaft 26 is retained in position and prevented  
 10 from working out by a pin or screw 28 and washer 29 thereon.

In order to hold the clamping-bars in engaging position with the sash, we have provided the shaft 26 with a handle 30, consisting of a  
 15 socket 31, a spring-shank 32, and knob 33. This handle is adapted to engage with a catch 34 on the front edge of the top board 2<sup>a</sup> of the sill-compartment 2. This catch has a central socket or recess 35 and two oppositely-dis-  
 20 posed inclined faces 36 leading thereto. The spring-metal shank 32 of the handle is adapted to traverse either inclined face and snap into said socket. When the handle is thus locked, the eccentric head 27 bears against  
 25 the cam portion 25<sup>a</sup> of the slot of the cam-block 25, whereby said block and the bridge-piece or connecting-bar 23 are forced downward and the clamping-bars 7 moved to en-  
 30 gage the tongues of the sash.

Our invention provides a simple, positive, and effective construction of sash-fastener which is especially adapted for use on rail-  
 35 road-cars, as the jolting and vibration of the car-body would not affect the fastener, and hence all liability of the accidental closing of a window being held open would be avoided.

It will be seen that the clamping-bars 7 constitute in effect the joints of the window-frame, and are employed in lieu of the ordi-  
 40 nary rigid joints and serve the combined purposes of clamps and joint-pieces.

We do not desire to limit our invention to the specific construction and arrangement of parts herein shown and described, but re-  
 45 serve the right to make such changes and modifications therein as fairly fall within the spirit and scope of our invention.

Having thus described our invention, what we claim as new, and desire to secure by means  
 50 of Letters Patent, is—

1. The combination of the window-frame provided with a base or sill compartment, a sash, clamping-bars at each side of the win-  
 55 dow-frame adapted to clamp the sash, a spring-metal connecting-bar or bridge-piece in the base-compartment having its ends secured

to said clamping-bars, said bridge-piece being adapted to hold the clamping-bars out of clamping engagement by its spring action  
 60 thereon, and means engaging said bridge-piece to move the clamping-bars into engagement with the sash, substantially as de-  
 scribed.

2. The combination of the window-frame provided with two vertical side bars and a  
 65 sill-compartment provided with openings in the top thereof, a window-sash, a clamping-bar pivoted by links to each vertical side bar and having its lower end adapted to move in the said sill-opening, a bow-shaped spring-  
 70 metal bridge-piece connecting the lower ends of the clamping-bars and located in said sill-compartment, said bridge-piece being adapted to hold the clamping-bars out of engage-  
 75 ment with the sash by its spring action thereon, a block secured to the bridge-piece and provided with a cam-slot, and a handle pro-  
 vided with an eccentric head occupying said slot and adapted to force the block, bridge-  
 80 piece and clamping-bars downward so as to cause the latter to clamp the window-sash, substantially as described.

3. The combination of the window-frame provided with two vertical side bars and a  
 85 sill-compartment provided with openings in the top thereof, a window-sash, a clamping-bar pivoted by links to each vertical side bar and having its lower end adapted to move in the said sill-opening, a bow-shaped spring-  
 90 metal bridge-piece connecting the lower ends of the clamping-bars and located in said sill-compartment, said bridge-piece being adapted to hold the clamping-bars out of engage-  
 95 ment with the sash by its spring action thereon, a block secured to the bridge-piece and provided with a cam-slot, a catch device on the exterior of the window-sill, a shaft pro-  
 vided with an eccentric head occupying said cam-slot and acting on the block to draw the  
 100 bridge-piece and clamping-bar downward into locking engagement, and a handle secured to said shaft and adapted to engage with the catch to hold the parts in locking engagement, substantially as described.

In testimony whereof we have signed this  
 105 specification in the presence of two subscribing witnesses.

CHARLES F. DAVIS.  
 PERRY L. COOPER.

Witnesses:

EARL C. COREY,  
 GEORGE M. ELY.