E. FLEMING & A. M. MARSH.

SASH LOCK.

APPLICATION FILED APR. 17, 1911.

1,019,623.

Patented Mar. 5, 1912.

2 SHEETS—SHEET 1.

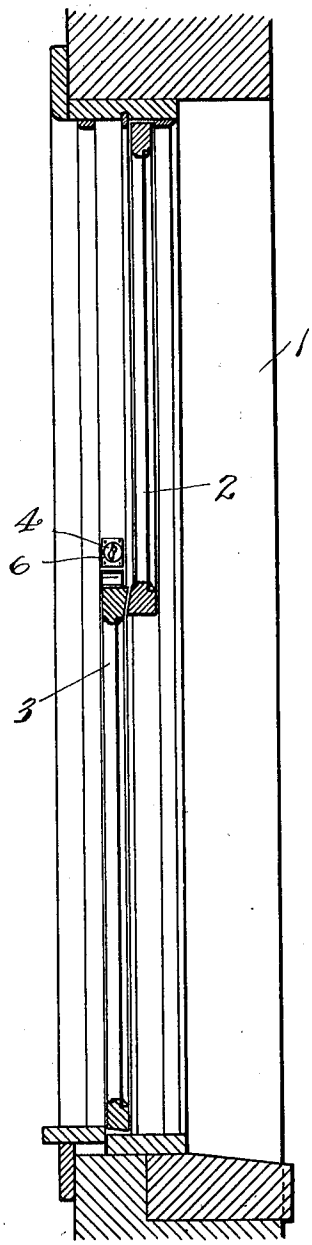

FIG. 1

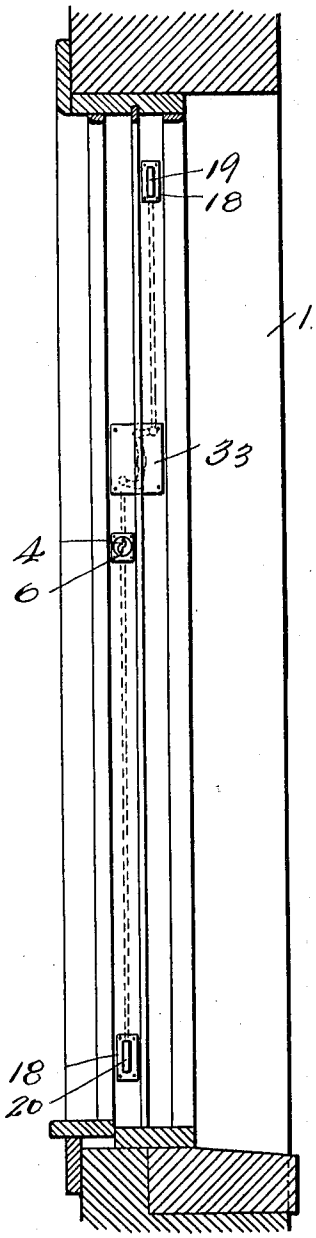

FIG. 2

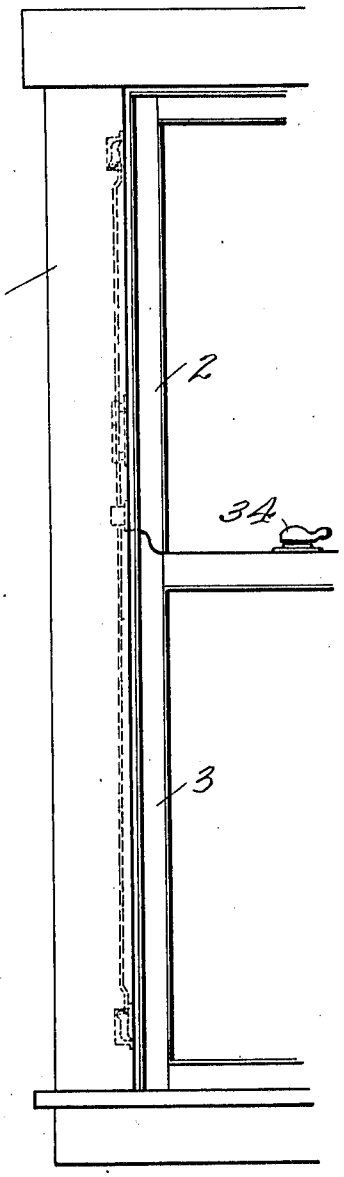

FIG. 3

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2 SHEETS—SHEET 2.

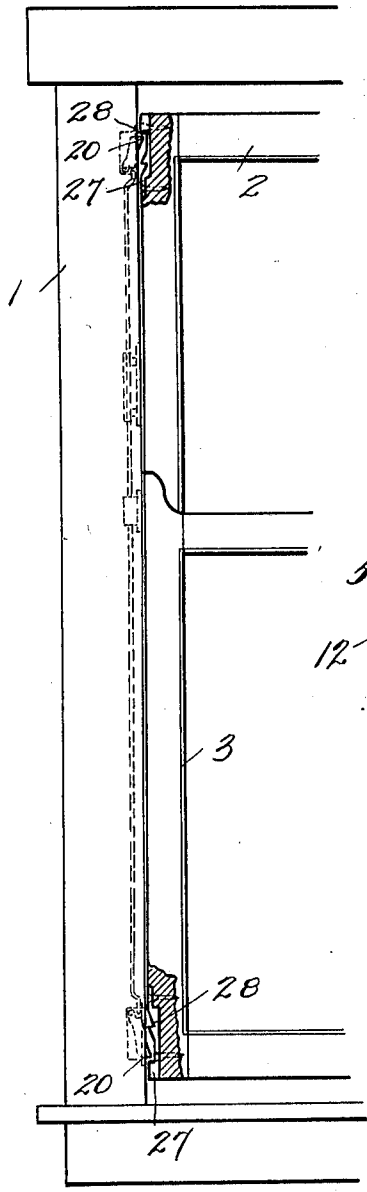

FIG. 4

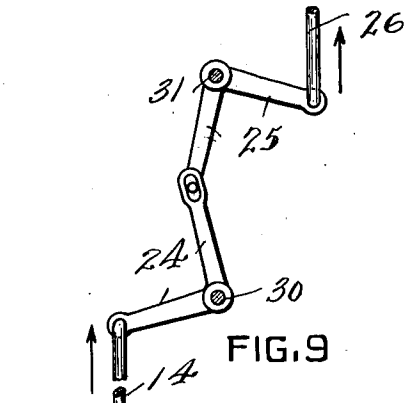

FIG. 9

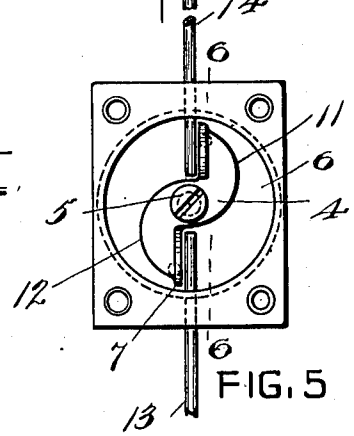

FIG. 5

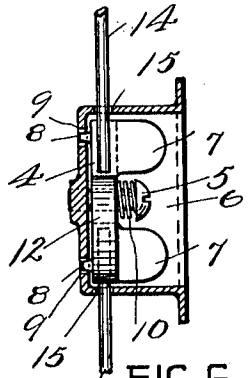

FIG. 6

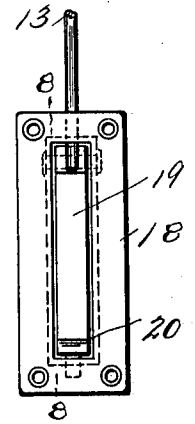

FIG. 7

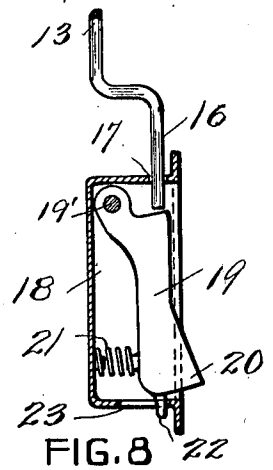

FIG. 8

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EDWARD FLEMING AND ALBERT M. MARSH, OF COLUMBUS, OHIO, ASSIGNORS OF ONE-THIRD TO WILLIAM D. HOPKINS, OF COLUMBUS, OHIO.

SASH-LOCK.

1,019,623. Specification of Letters Patent. Patented Mar. 5, 1912.

Application filed April 17, 1911. Serial No. 621,584.

To all whom it may concern:

Be it known that we, EDWARD FLEMING and ALBERT M. MARSH, citizens of the United States, residing at 182 Guilford avenue and 609 East Cherry street, respectively, Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Sash-Locks, of which the following is a specification.

The present invention relates to improvements in sash locks and is designed especially as a means for fastening window sashes.

The object of the invention is the provision of novel means for fastening the upper and lower sashes of an ordinary house or dwelling window, either in their closed positions, or in a predetermined open adjustment of the window sashes.

The invention consists in certain novel features of construction and combinations and arrangements of parts as hereinafter set forth and more particularly pointed out in the annexed claims.

In the accompanying drawings I have illustrated one example of the physical embodiment of our invention constructed according to the best mode we have so far devised for the practical application of the principles thereof.

Figure 1 is a vertical sectional view through a window frame and the sashes, showing the application of our invention. Fig. 2 is a similar view with parts omitted for convenience of illustration. Fig. 3 is a partial elevation looking at the window from the inside of the house, showing in dotted lines the fastening means, with the sashes closed. Fig. 4 is a view similar to Fig. 3 with parts broken away, and showing the upper sash lowered and the lower sash elevated, but locked. Fig. 5 is an enlarged detail view of actuating parts of the fastening mechanism. Fig. 6 is a sectional view on line 6—6 Fig. 5. Fig. 7 is a front elevation of one of the duplicate locking latches or catches. Fig. 8 is a sectional view on line 8—8 Fig. 7, and Fig. 9 a detail view of the link mechanism for transferring motion from the actuating part.

The invention is applicable to any of the usual styles of window frames as indicated at 1 in the drawings, in which the upper sash 2 and the lower sash 3 are adapted to be raised or lowered.

In applying the mechanism, the parts are located within the box frame, and are practically invisible, except for the actuating device. The actuating means for the fastening devices, is preferably a thumb button 4, pivoted by means of the screw 5 within the cup 6. The cup 6 is countersunk in the material of the window frame, and when in proper position is flush with the strip forming part of the lower sash guide, and is secured thereto by screws.

The button 4 has integral flanges or ears 7, 7, by which it may be turned on its pivot 5, and on its under side is cast with integral bosses 8, 8, which are adapted to seat in complementary openings 9, 9 in the cup 6. These bosses and openings, in conjunction with the spring 10 coiled about the screw 5, tend to hold the button in either of its two positions, as will be described hereinafter. The button 4 is provided with two oppositely disposed cam arms 11 and 12, and these cams are means for directly actuating the latch or locking mechanism.

In coöperation with the cam arms 11 and 12 are arranged the rods 13 and 14, the former adapted to lock the lower sash and the latter adapted to lock the upper sash, either in closed or open position. The rods 11 and 12 enter the cup 6 through side openings 15, and their ends are located in the path of their respective actuating cams. The rod 13 which actuates the locking mechanism for the lower sash, as clearly seen in Figs. 7 and 8, has its end 16 passed through an opening 17 in a casing 18 which is set into the box frame of the window. This casing is the housing for the latch 19, which is pivoted therein at 19′, and its locking end 20 is urged through the open face of the housing by the spring 21. A lug 22, working in the slot 23 in the keeper prevents displacement of the latch. The latch for locking the upper sash is a duplicate of the latch for the lower sash. But in order to transfer the motion from the cam button in a workmanlike manner to the upper sash lock, which is located in a different vertical plane from the cam, we provide a system of links in connection with the actuating rod 14.

The motion transferring mechanism is

clearly seen in Fig. 9, wherein the upper end of the rod 14 is pivoted to one end of the two-arm lever 24, and this lever is again pivoted to the reversely located lever mechanism 25, and the plunger rod 26 is adapted to contact at its upper end with a duplicate latch member 19. For the accommodation of the two latches 19 the upper and lower sashes are respectively provided with metallic plates 27 formed with teeth 28 and secured at the inner upper and lower corners of the upper and lower sashes. The levers 24 and 25 are pivoted at 30 and 31 respectively, in the metallic plate 33, and are supported therein.

The operation of the mechanism is obvious. When in closed position, the windows may be locked by means of the usual fastening 34 (Fig. 3) and in addition, the two latches 19, by their engagement with the remote teeth 28 of the plates 27, form a supplemental fastening means, as in Fig. 1.

When it is desired to open the windows, as for ventilation, the turn button is rotated by means of the ears 7 in the grasp of the fingers. The rotation of the button causes the cams 11 and 12 to ride down and up against the ends of the respective plunger rods 13 and 14. The end 16 of the rod 13 bears upon the latch 19 and disengages its end 20 from the teeth 28 of the lower sash. And the upper sash is released through the medium of the plunger rod 14 links 24, 25 and rod 26 in like manner. The upper sash may now be lowered and the lower sash elevated. The sashes may now be locked in open position by a continued turn of the button, whereby the extreme radaii of the cams 11 and 12 are caused to pass the ends of the rods 13 and 14, the rods 13 and 14 are moved to position indicated in Fig. 5, and the springs 21 press the latches 20 into engagement with the innermost teeth 28 of the respective plates 27. The cam button is held in fixed position by the bosses 8, 8 in openings 9 of the cup 6, and the cam button is completely covered by the upper end of the lower sash. In this position, the upper sash may be raised to close the window, and the lower sash may be lowered to close the lower end of the window, but it will be seen that neither sash can be opened a greater distance than shown in Fig. 4.

From this construction it will be observed that the window may be opened for ventilation if desired, and is proof against surreptitious opening, in either closed or open position.

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

1. The combination with the upper and lower sashes of a window and locking latches therefor, of a locking rod for actuating the lower latch, an independent locking rod combined with a pair of pivoted links and a plunger rod for actuating the upper sash latch, a metallic cup and a turn button pivoted therein, cam surfaces on the button for engaging the ends of the locking rods, and bosses on the button for engaging complementary openings in the cup.

2. The combination with the upper and lower latches of a window and locking latches therefor, of a locking rod for actuating the lower latch, an independent locking rod combined with a pair of pivoted links and a plunger rod for actuating the upper sash latch, a metallic cup and a turn button pivoted therein, and cam surfaces on the button for engaging the ends of the locking rods.

In testimony whereof we affix our signatures in presence of two witnesses.

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ALBERT M. MARSH.

Witnesses:
C. M. Shigley,
Ida A. Evans.