No. 824,545. PATENTED JUNE 26, 1906.

M. L. HUBERMANN.

AUTOMATIC SASH LOCK.

APPLICATION FILED MAY 24, 1905.

Fig. 1.

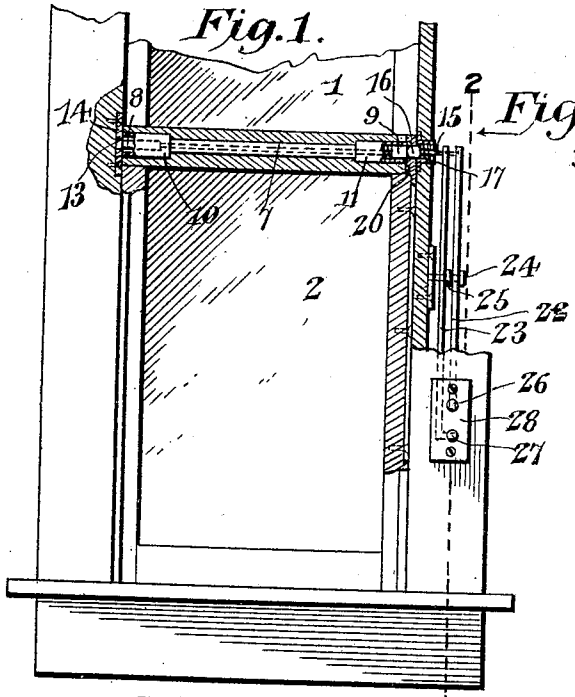



Fig. 2.

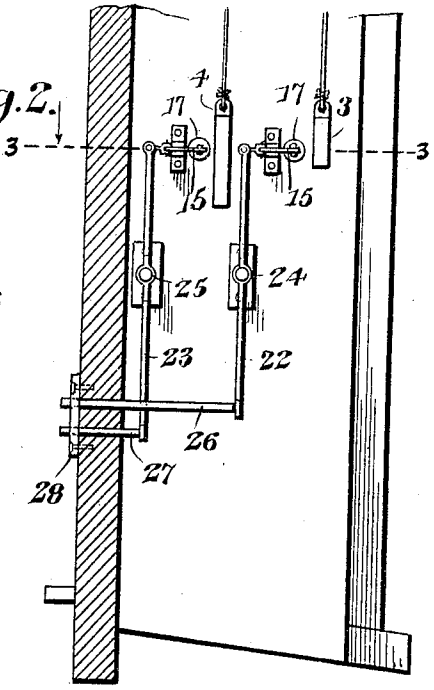



Fig. 3.

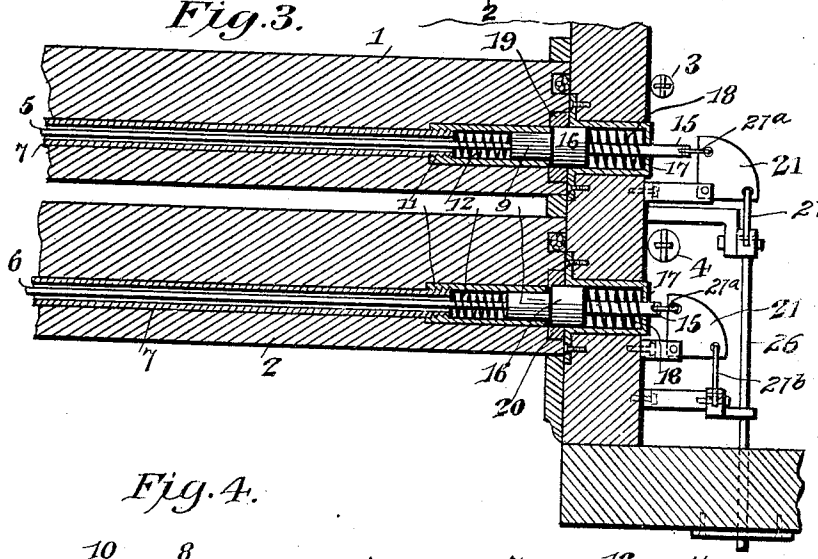
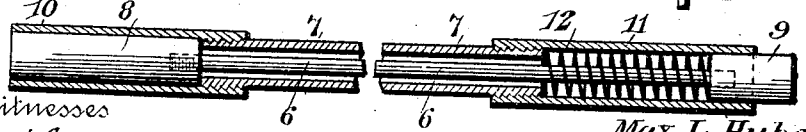



Fig. 4.




Witnesses

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# UNITED STATES PATENT OFFICE.

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## AUTOMATIC SASH-LOCK.

No. 824,545. Specification of Letters Patent. Patented June 26, 1906.

Application filed May 24, 1905. Serial No. 261,983.

*To all whom it may concern:*

Be it known that I, MAX L. HUBERMANN, a citizen of the United States, residing at Santa Margarita, in the county of San Luis Obispo and State of California, have invented a new and useful Automatic Sash-Lock, of which the following is a specification.

The invention relates to improvements in automatic sash-locks.

The object of the present invention is to improve the construction of sash-locks and to provide a simple, inexpensive, and efficient sash-lock adapted to release either or both of a pair of automatically-opening sashes and capable of controlling the opening movement and of holding the sashes at the desired elevation.

A further object of the invention is to provide a sash-fastener capable of effectually preventing the sashes when in any position from being rattled or shaken by the wind.

With these and other objects in view the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended, it being understood that various changes in the form, proportion, size, and minor details of construction within the scope of the claims may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is an elevation, partly in section, of a portion of a window provided with an automatic sash-fastener constructed in accordance with this invention. Fig. 2 is a vertical sectional view taken substantially on the line 2 2 of Fig. 1. Fig. 3 is an enlarged horizontal sectional view taken substantially on the line 3 3 of Fig. 2. Fig. 4 is an enlarged detail sectional view illustrating the construction of the locking-rod.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 and 2 designate upper and lower window-sashes, which are adapted to open automatically when free to move. The upper sash is partially counterbalanced by sash-weights 3, which permit the upper sash to open slowly when free to move. The lower sash 2 is counterbalanced by weights 4, which are heavier than the lower sash and which are adapted to automatically open the same when the sash is free to move. Each sash carries a transversely-disposed spring-actuated locking-rod, the rod 5 of the upper sash being at the bottom thereof and the rod 6 of the lower sash being at the top thereof. Each rod is mounted in a tubular casing 7 and is provided at its ends with heads 8 and 9, slidable in enlarged end portions 10 and 11 of the tubular casing and normally held retracted or within the planes of the side edges of the sashes by a coiled spring 12, disposed on the rod and interposed between the head 9 and the adjacent end of the central portion of the tubular casing. The head 8 when extended is adapted to engage a recess or opening 13 of a plate 14, secured to the left-hand side of the window frame or casing. When the locking-rod is retracted, the head 9 projects slightly beyond the enlarged end portion 11 of the tubular casing and is adapted to be engaged and forced inward by a spring-actuated bolt 15, having an enlarged head 16, adapted to lock the sash and also capable of operating as a brake to hold the sash at the desired elevation. The bolt 15 operates within a tubular casing 17, mounted within the window frame or casing, as clearly shown in Fig. 3, and the bolt 15 is actuated by a spring 18, housed within the casing 17 and engaging the enlarged head 16.

The spring 18, which is stronger than the spring 12, is adapted to automatically move the locking-rod to its extended or engaging position, whereby when the sashes are closed by hand they will be automatically locked by the sash-fastener. The sashes are provided at their engaged side edges with metal strips 19 and 20, provided with recesses or openings for the heads 16 of the bolts 15 and forming wear-plates to be engaged by the same when the sashes are open. When the bolts 15 are withdrawn from the recesses or openings of the sashes, the springs 12 automatically withdraw the locking-rods from engagement with the window frame or casing, and the sashes are adapted to open automatically, the opening movement being controlled by the bolts. The bolts 15 are connected by bell-cranks 21 with upright levers 22 and 23, which are fulcrumed between their ends on suitable pivots 24 and 25, extending horizontally from attachment-plates, as clearly indicated in Figs. 1 and 2 of the drawings.

In order to enable the parts to work freely,

short links 21[a] and 21[b] are employed for connecting the bell-crank levers with the bolts 15 and with the upright levers 22 and 23. The lower ends of the upright operating-levers are adapted to be operated by horizontal push-rods 26 and 27, having their front or outer portions mounted in a plate 28 and terminating in a head or button. The push-rods are normally held extended by the coiled springs of the bolts, and when they are depressed or pushed inwardly the bolts 15 are withdrawn from engagement with the sashes, which are permitted to open automatically. As soon as the push-buttons are released they will be thrown outward by the springs 18. The spring-actuated bolts 15, which engage the window-sashes with sufficient force to hold them at any elevation, are also capable of effectually preventing the sashes from being rattled or shaken by the wind in a storm.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a sash-fastener, the combination with a sash, of a locking-rod mounted on and extending across the sash for engaging a window-frame at one side thereof, means for automatically retracting the locking-rod, and locking mechanism located at the opposite side of the window and provided with means for engaging the sash and for also engaging the rod to move the same to its extended position.

2. In a sash-fastener, the combination with a sash, of a locking-rod mounted on and extending across the sash for engaging a window-frame at one side thereof, means for automatically retracting the locking-rod, and locking mechanism located at the opposite side of the window and provided with means for engaging the sash and for also engaging the rod to move the same to its extended position, said means being also arranged to engage the sash independently of the rod to control the movement of the former.

3. In a sash-fastener, the combination with a sash, of a locking-rod extending across the sash for engaging the window at one side, a spring for automatically retracting the rod, and locking mechanism located at the opposite side of the window and embodying a bolt arranged to engage the locking-rod and the sash and a spring for actuating the bolt, the spring of the bolt being stronger than the spring of the locking-rod, whereby the bolt is adapted to automatically move the locking-rod to its engaging position.

4. In a sash-fastener, the combination with a sash, of a locking-rod extending across the sash for engaging the window at one side, a spring for automatically retracting the rod, and locking mechanism located at the opposite side of the window and embodying a bolt arranged to engage the locking-rod and the sash, a spring for actuating the bolt, the spring of the bolt being stronger than the spring of the locking-rod, whereby the bolt is adapted to automatically move the locking-rod to its engaging position, and operating mechanism connected with the bolt for withdrawing the same.

5. In a sash-fastener, the combination with a sash, of a spring-actuated locking-rod extending across the sash and arranged to engage one side of a window, and locking mechanism located at the opposite side of the window and embodying a spring-actuated bolt arranged to engage the locking-rod and the sash, an operating-lever fulcrumed at an intermediate point and connected at one arm with the bolt, and a push-rod arranged to actuate the other arm of the lever.

6. In a sash-fastener, the combination with a window-frame, and a sash, of a locking device carried by the sash for engaging one side of the window-frame, and locking mechanism located at the opposite side of the window-frame and provided with means for operating the said locking device.

7. In a sash-fastener, the combination of a sash, a locking-rod extending across the sash for engaging one side of a window-casing, and locking mechanism located at the opposite side of the window and embodying a bolt arranged to engage the sash and the locking-rod, an upright lever, a push-rod fulcrumed at an intermediate point for actuating the lower arm of the lever, and a bell-crank connection between the upper arm of the lever and the bolt.

8. In a sash-fastener, the combination with a sash, of a locking device mounted on the sash for engaging a window frame or casing at one side thereof, means for automatically throwing such locking devices out of engagement with the window frame or casing, and locking mechanism located at the opposite side of the window frame or casing and provided with means for engaging the sash and for also actuating the said locking device to move the same to its engaging position.

9. The combination with a window-frame, and a sash, of a locking device carried by the sash for engaging one side of the window-frame, said locking device being provided with means for automatically moving it out of engagement with the window-frame, and locking mechanism mounted on the window-frame at the opposite side thereof and provided with means for moving the locking device into engagement with the window-frame.

10. The combination with a window-frame, and a sash, of a locking device carried by the sash and arranged to engage one side of the window-frame, said locking device being provided with means for automatically moving it out of engagement with the window-frame, locking mechanism mounted on

the window-frame at the opposite side thereof and provided with means for moving the locking device into engagement with the window-frame, an upright lever fulcrumed at an intermediate point and having one arm connected at one end with the locking mechanism, and a push-rod for actuating the other arm of the lever.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

MAX L. HUBERMANN.

Witnesses:
L. D. WEEKS,
W. W. MATTHIS.