(Model.) 2 Sheets—Sheet 1.

J. B. YEAGLEY.

SASH FASTENER.

No. 246,269. Patented Aug. 23, 1881.

Fig 1.

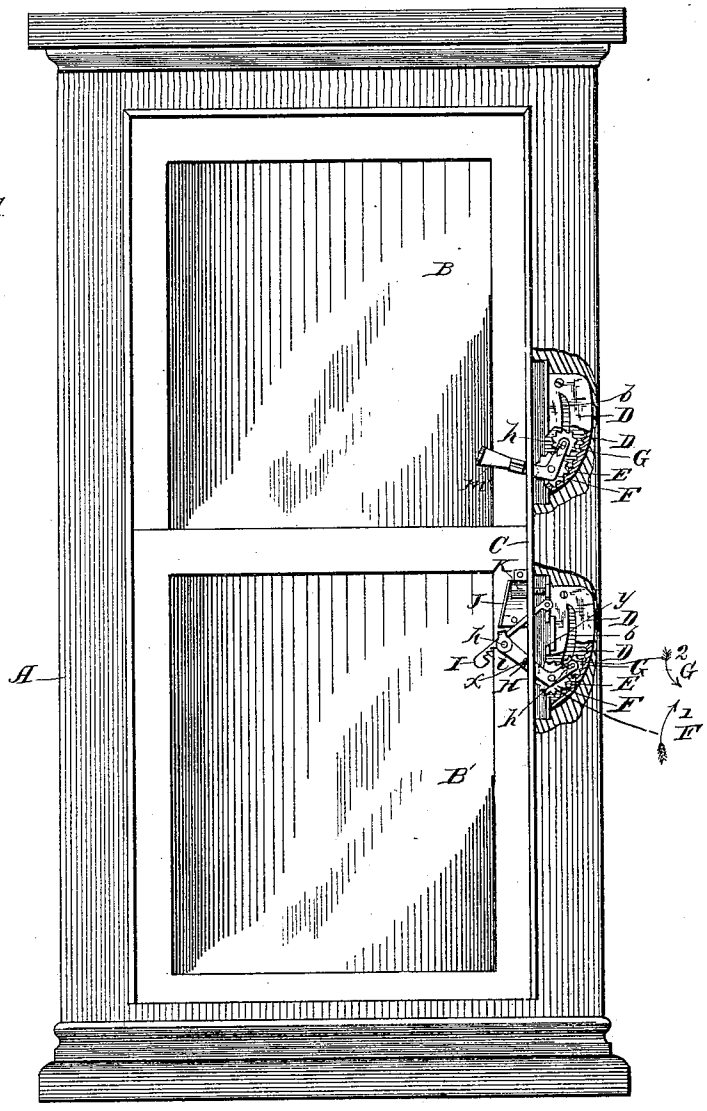
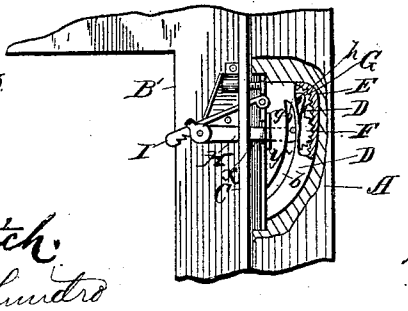


Fig 3.



WITNESSES

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(Model.) 2 Sheets—Sheet 2.

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Fig 4.

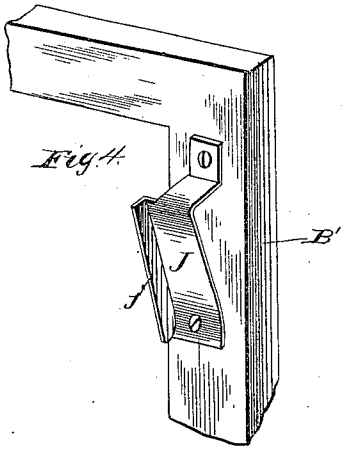


Fig 2.

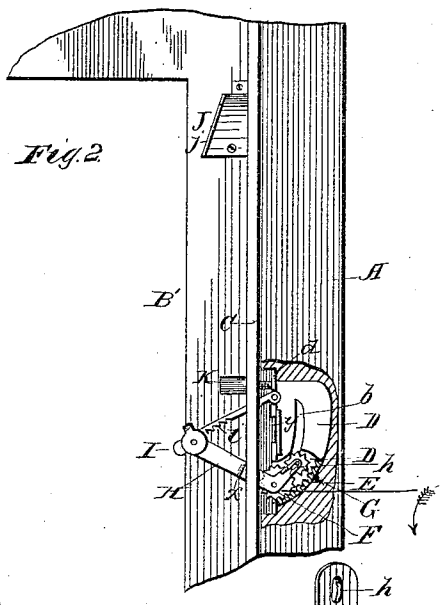


Fig 5.

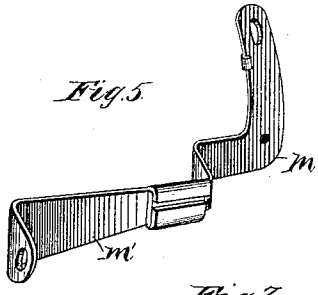


Fig 6

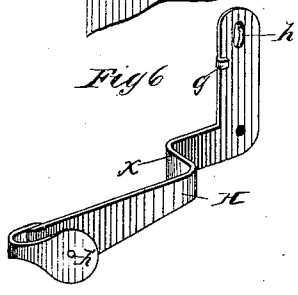


Fig 7.

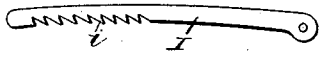
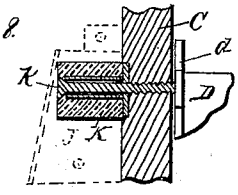


Fig 8.



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UNITED STATES PATENT OFFICE.

JACOB B. YEAGLEY, OF INDIANAPOLIS, INDIANA.

SASH-FASTENER.

SPECIFICATION forming part of Letters Patent No. 246,269, dated August 23, 1881.

Application filed July 11, 1881. (Model.)

To all whom it may concern:

Be it known that I, JACOB B. YEAGLEY, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Combined Sash Lock and Holder; 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, reference being had to the accompanying drawings, and to the letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to certain new and useful improvements in combined sash lock and holder; and the invention has for its object the production of a sash lock and holder adapted to lock the sash when closed, and also hold or lock the sash in either of its directions or movements; and to this end the invention consists in novel features of construction and combination and arrangement of parts, all as will be hereinafter fully described, and specifically designated in the claims.

Referring to the accompanying drawings, Figure 1 represents a side elevation of the sashes and window-frame, a portion being broken away to show sash locks and holders, the latter being in position for holding the upper sash from being moved down, and the lower sash from being moved up, and the position of the devices for holding the same tightly against wind or rain. Fig. 2 represents a side elevation of the lower sash and window-frame, partly broken away to show lock and holder, the latter being in position for holding the sash from being moved down. Fig. 3 represents a similar view, but showing the lock and holder in the position in which it is inactive and allows the sash to be run up or down, as may be desired; Figs. 4, 5, 6, 7, and 8, detail views, to be hereinafter referred to.

In the drawings, A may represent a window-frame of any kind, B B′ the upper and lower sashes, and C the window-bead.

The lock and holder case is composed of two case-plates, D D, and the face-plate *d*, through which screws pass to secure it in the window-frame, and the rear or back of the case has the inclined and slightly-curved rack-bar E. The plates D D are held together by screws, rivets, or any other suitable means.

F and G represent two cogged or toothed wheels of different diameters, both of which are adapted to mesh in the rack-bar, and either one of said wheels adapted to engage the other wheel and also engage the rack-bar, as will be hereinafter fully explained.

H represents an operating elbow key or lever, having the axle of the large wheel F journaled in the elbow thereof and the ends of the axle projecting into and working or sliding in slots *b b* through the case-plates D D, for preventing said wheel from moving out of the casing, while the small or ratchet wheel G plays between said case-plates, and also in the longitudinal slot *h* in lower end of key or lever, which slot *h* allows the wheels F G free action in moving up or down the rack-bar when in or out of gear, as may be desired. The axle of large wheel F, journaled in the elbow of the key or lever, forms the fulcrum of said lever in unlocking or throwing the small or ratchet wheel G out of the rack-bar and in gear only with the large wheel F, thus forming a positive and convenient sash-holder, all as clearly shown in Fig. 2. The finger end of key or lever by its own weight prevents the small or ratchet wheel from engaging the rack-bar, and it will only gear within the casing on the large wheel. The key or lever H is provided with a stop, *g*, which, working or sliding in one of the slots *b* and engaging with the upper edge of the case-plate formed by said slot, prevents the small or ratchet wheel G from being thrown out of the casing of the lock, but allows said wheel to be thrown out of engagement with the rack-bar.

I represents the pivoted key or lever catch, having its inner end fulcrumed to the side of the face-plate *d*, and provided at its free end with a series of notches, *i*, arranged at such an angle as to allow the locking-pin *h′* at the finger end of key or lever H to slide over said notches when said lever is raised to lock the cogged wheels, but falling by its own gravity and catching and holding the key or lever when the said cogged wheels are locked.

The slots *b b* in the case-plates D D are

made wide enough and of such shape as to allow the axle of large wheel F sufficient play to be thrown out of engagement with the rack-bar and into engagement with the small or ratchet wheel G, (see Fig. 1,) when, for instance, the lower sash is locked and attempted to be forced open.

I prefer to make the finger end, or rather the entire key, out of spring sheet-brass or other spring metal, so that when the finger end of key or lever is raised into the highest possible notch in key or lever catch, it will have a tendency to hold the large wheel tighter against the sash in forcing it upward, while at the same time it will be seen that no force can be brought to bear, no matter how great, to break the key or lever, though light or thin it may be, as the pressure always rests against the wheels, rack-bar, and sash. When the upper sash, for instance, is open and desired to be closed, the small or ratchet wheel is thrown out of gear with large wheel, when the sash can be easily pushed or raised up. The large wheel alone will hold and lock the upper sash from being opened or let down. To open or let down the upper sash, it must be remembered that every movable sash must have some side-play, and when the upper sash is closed and the large wheel allowed to engage and lock it will move down a little, as well as to the opposite side, in locking, by taking up this side-play. Hence, to open or let down upper sash, raise it up a little, which will liberate the large wheel, when it may be rolled back into the case through the medium of the key or lever, so that the shoulder *x* of the key or lever will rest in the notch *y* in the face-plate *d*, liberating the sash entirely from the lock, when the sash may be moved down to any desired point and there locked.

The weather-proof sash-adjuster is composed of a roller-plate, J, secured to the lower sash, as shown, and a roller, K, mounted on a screw, *k*, which is secured to the face-plate *d* of the lock. The plate J is bent, as shown in Fig. 4, so that when secured to the sash it forms an inclined plane, over which the roller K will roll and force the sash against the dividing strip or stop and the lower cross-rail of the upper sash, and at the same time the oblique side flange, *j*, of the plate will force sash against opposite side of window-frame, thus making it weather-proof and preventing the sash from rattling. The roller-plate and roller, constituting the weather-proof sash-adjuster, are used only for lower sash, as said device, adjusted to lower sash, will also tighten upper sash when the two sashes are closed. This sash-adjuster is advantageous for the lower sash, in connection with my improved lock and holder, as the wheels are not heavy enough to force sash against the opposite side of the window-frame, so as to come down and engage sash when closed.

The lock and holder is adjusted in a recess cut into window-frame opposite and below the upper rail of lower sash when the sash is closed, and for upper sash above and opposite the lower cross-rail when it is closed, so as to allow the finger end of the key or lever and key or lever catch to play without friction by the side of the vertical sash-rail. The inner end of tightening-roller also plays without friction. A notch is cut out of vertical sash-bead adjacent to sash, to allow key or lever and key or lever catch to play freely, which notch should be covered by a thin metallic plate, so that sash cannot strike it in moving upward. The key or lever, key or lever catch, and tightening-roller should be so arranged in the lock and holder that the key or lever and catch and the periphery of the roller adjacent to the sash should be in the same vertical line, and then, if necessary, the screw on which roller plays can be screwed through the vertical sash-bead into the face-plate *d*, obviating cutting out space for the screw, the said tightening-roller playing always by the side of sash-rail. The key or lever is made strong enough to allow it to be raised into the highest possible notch in the key or lever catch for throwing the large cog-wheel against the sash.

All upper sashes generally have a flange on their lower cross-rail, which is intended to meet the upper cross-rail of lower sash to close the sashes tightly at that point when the sashes are closed. This flange is generally termed the "weather-flange," and gives room for the key or lever of upper sash lock and holder, so that the lower sash cannot interfere with it in being raised and lowered. The key or lever for the upper sash lock and holder can, however, be made in two parts, *m m'*, so that the finger end *m'* can be slipped on and off the part *m*, and which, when off, will prevent the lower sash from touching it in its upward or downward movements, and, besides, making it more secure against burglars, while the key or lever catch for upper sash in this event may be dispensed with, as upper sash opens by lowering it, and the large wheel engaging sash and cogged plane or spiral ratchet E will always lock it from being opened, and thus it could only be pushed up or closed either from inside or by persons from the outside.

The operation of my improved lock and holder in raising and lowering the sashes and holding and locking them in position is as follows: When it is desired to raise the lower sash the lever or key catch is thrown out of engagement with the key or lever, which will permit said key or lever to be raised upward, and thus permit them to be moved up the rack-bar, so that the large wheel will be out of engagement with the sash, in which position they are secured by the shoulder *x* of the key or lever engaging the notch *y* in face-plate, all as clearly shown in Fig. 3, which position of parts permits the sashes, upper or lower, to be raised or lowered, as desired. When it is desired to hold the lower sash in a raised position or open, and the upper sash

in a lowered position or open, the key or lever is released from the key or lever catch, so that the key or lever will move toward the free end of said catch, which will permit the large wheel to roll down toward lower end of lock and holder, and engage directly with the sash and rack-bar, thus securing sash in position, the wheel F moving in the direction of the arrow, as shown in Fig. 2. When it is desired to lock the lower sash when closed the finger end of key or lever is raised into the highest possible notch of the key or lever catch, which will throw the small or ratchet wheel into engagement with both the large wheel and rack-bar. (See Fig. 1.) Any attempt to raise the sash will cause wheel F to move in the direction of the arrow in Fig. 1, and said wheel F, being in engagement with wheel G, will cause said wheel G to move in an opposite direction, as per arrow 2, thus securely locking said parts together, and preventing the sash from being raised, as the sash is held against the opposite side of the window-frame, and the wheel F, while the small wheel, meshing with said wheel F and the rack-bar, prevents the wheel F from being turned any farther. The roller and guide-plate will tighten the sash only when it is closed down, and the side-play being thus taken up, the wheel F at once engages sash and locks it.

The screw *k*, carrying the roller K, should be long enough to allow said roller to play just beyond the vertical sash-bead, resting and revolving near or against it.

The weather-proof sash-adjuster to be used in connection with my improved sash lock and holder, as before described, will form the subject-matter of a separate application.

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

1. In a sash lock and holder, the combination, with a rack-bar, of a movable key or lever provided with two cogged or toothed wheels adapted to be thrown into engagement with each other, and either or both wheels into engagement with said rack-bar through the medium of the movements of said lever, substantially as and for the purposes specified.

2. In a sash lock and holder, the combination, with a rack-bar, of a movable elbow key or lever having wheel F journaled in the elbow thereof, and wheel G, working in a longitudinal slot, *h*, in the lower end thereof, the axle of said wheel F forming the fulcrum of said lever, substantially as and for the purposes herein shown and described.

3. In a sash lock and holder, the combination of the slotted case-plates D D and lever H, provided with the stop *h'* and cogged or toothed wheels F G, substantially as and for the purpose herein shown and described.

4. In a sash lock and holder, the combination of the face-plate *d*, provided with notch *y*, and the key or lever H, carrying wheel F, and provided with shoulder *x*, adapted to engage said notch *y* and hold the wheel F out of engagement with the sash, substantially in the manner herein shown and described.

5. In a sash lock and holder, the combination, with the key or lever carrying the cogged or toothed wheels F G, of the pivoted key or lever catch I *i*, substantially as and for the purpose herein shown and described.

6. In a sash lock and holder, the combination of the slotted case-plates D D, rack-bar E, and the movable lever or key provided with the wheel F, having the ends of its axle projecting into the slots of the case-plates, and the longitudinal slot *h*, for the reception of the axle of wheel G, substantially in the manner as and for the purpose herein shown and described.

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

JACOB B. YEAGLEY.

Witnesses:
WILLIAM T. STEELE,
HERMAN F. SPRANDEL.