

(No Model.)

C. O. BIRNEY.
SASH FASTENER.

No. 465,517.

Patented Dec. 22, 1891.

Fig. I.

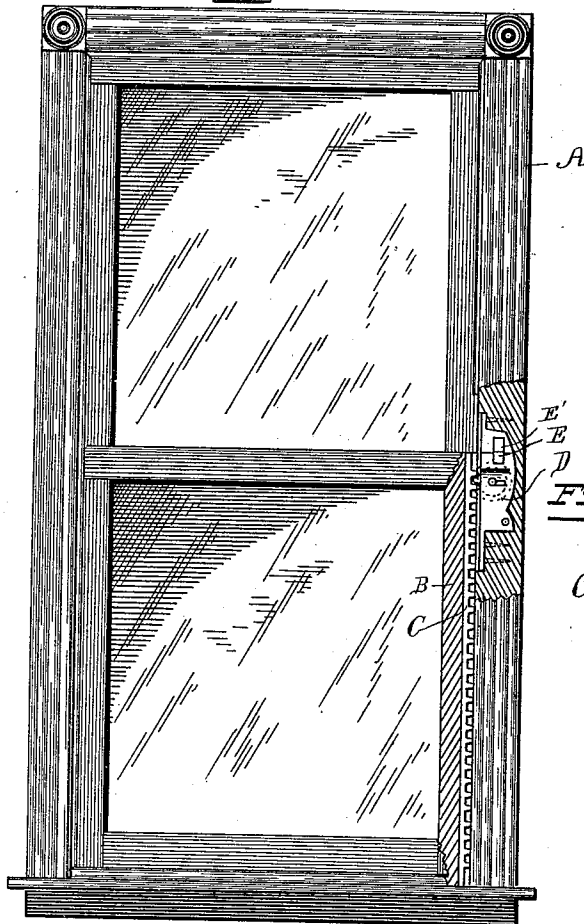


Fig. IV.

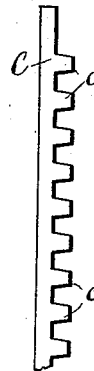


Fig. II.

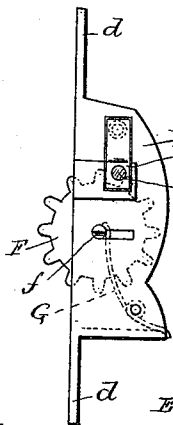


Fig. III.

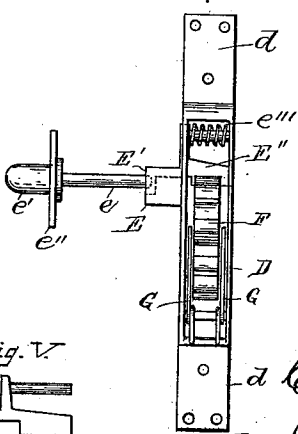
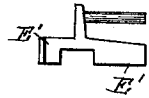


Fig. V.



Witnesses.

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UNITED STATES PATENT OFFICE.

CHARLES O. BIRNEY, OF KANSAS CITY, MISSOURI.

SASH-FASTENER.

SPECIFICATION forming part of Letters Patent No. 465,517, dated December 22, 1891.

Application filed October 12, 1891. Serial No. 408,467. (No model.)

To all whom it may concern:

Be it known that I, CHARLES O. BIRNEY, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in a Combined Sash Fastener, Roller, and Lock; and I do 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 of reference marked thereon, which form a part of this specification.

The object of my invention is to provide a combined sash fastener, roller, and lock which will do away with the old system of cords, weights, and pulleys, and also window fasteners and locks of all kinds heretofore in use.

A further object is to provide such a mechanism that when applied to windows they may be raised or lowered any desirable distance and will not only be fastened, but securely locked at any point, so that when required they may be left open at top or bottom, or both, and be secure from burglars or other intrusion, as by the old method when completely closed and locked.

I attain these results by the mechanism illustrated in the accompanying drawings, in which—

Figure I is a view of a front elevation of a window, showing the sash and jamb sufficiently cut away to expose and illustrate the invention. Fig. II is a detail view of the sash-lock as sunken in a recess in the jamb to such an extent that the cogs of the toothed wheel F will operate in the recess in the rack-bar. Fig. III is a detail front view of the sash-lock, press-button, coil-spring, and pressure-springs to the axle. Fig. IV is a detail view of the rack-bar. Fig. V is a detail view of the spring-pivot and lock-bar combined, which are operated back and forth by pressure or release of the button.

Similar letters refer to similar parts throughout the several views.

A represents the window-jamb, in which the sash B is operated.

B is the window-sash.

C is the metallic rack-bar or cog-rail coun-

tersunk in the sash and held in rigid position by bolts or screws.

c c c are the cogs of the rack-bar, in which the toothed wheel operates.

D is a metallic frame provided with flanges d d for affording better provision for bolting and holding itself in rigid position in the sunken recess of the jamb.

d d are flanges.

E is a hollow lug on casting D, in which a lock-bar E' is operated by means of the button e', the shaft e, and the coil-spring e'''.

E' is the lock-bar, which always holds the window in locked position, except when the button is pressed in, which throws it out of locking position and allows the window to be raised or lowered at will.

E'' is that portion of the locking-bar which holds the gear-wheel in locked position when at rest.

e is the push-pin passing through the jamb, entering a socket in the lock-bar, and is held firmly in constant pressing condition by means of a metallic plate firmly bolted to the jamb and through which its head e' protrudes. This push-pin is provided with a flange on the inside of the plate to hold it from protruding too far.

e' is the protruding end of the push-pin and is the operating-button, by pressure of which the locking device is thrown out of gear with the cogs on the toothed wheel.

e'' is a retention-plate bolted or screwed to the jamb, which by aid of a flange on the push-pin prevents the same from freeing itself from its position in the socket in the head of the locking-bar.

e''' is the coil-spring surrounding the arm of the lock-bar and fastened so that when the button or push-pin is pressed and lock thrown out of gear the moment the button is released the lock-bar flies back into locking position.

F is the toothed gear-wheel.

f is the axle of the gear-wheel.

G are the parallel arm-springs, pressing against the axle f to hold the axle in constant pressing position, and as the gear-wheel operates loosely on its axle and as the axle has a backward and forward motion by means of these springs prevent any rattling of the

window-sash, whether in process of raising, lowering, or at rest.

In the operation of my mechanism it will be seen that the metallic rack-bar C is countersunk into the sash just sufficient to afford smooth movement of the sash up and down. The metallic frame is then sunk into a recess in the jamb and rigidly bolted therein, so that the cogs or teeth of the gear-wheel will exactly fit into the corresponding recesses of the rack-bar, and this gear-wheel being held in constant pressing position against the rack-bar by suitable parallel springs operating against the ends of the gear-wheel and the ends of the axle resting in horizontal parallel slots the gear-wheel, while never binding, yet is constantly being pressed against the rack-bar and prevents any rattling of the mechanism or window, and whenever the pressure-shaft is released the window is firmly locked at any desired point, being capable of being locked at as many different points as there are recesses in the rack-bar. Having placed the metallic frame in position, a shaft extends from the outside of the jamb through it and into a socket in the end of the locking-bar,

which, with the assistance of the coil-spring on the pivot, is moved back and forth and the gear-wheel is locked or unlocked as desired.

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

In combination with a window-sash and jamb, the rack-bar or cog-rail countersunk in the sash, the toothed gear-wheel operating loosely on an axle in a metallic frame in conjunction with the rack-bar or cog-rail, the lock-bar and pivot-bar, a coil-spring surrounding the pivot-bar for throwing the lock-bar into locking position, and a push-pin or button passing into the jamb, having a flange coming in contact with the jamb-plate to hold it firmly in the socket of the lock-bar, substantially as set forth.

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

CHARLES O. BIRNEY.

Witnesses:

BESSIE E. YOUNG,
S. N. KERR.