

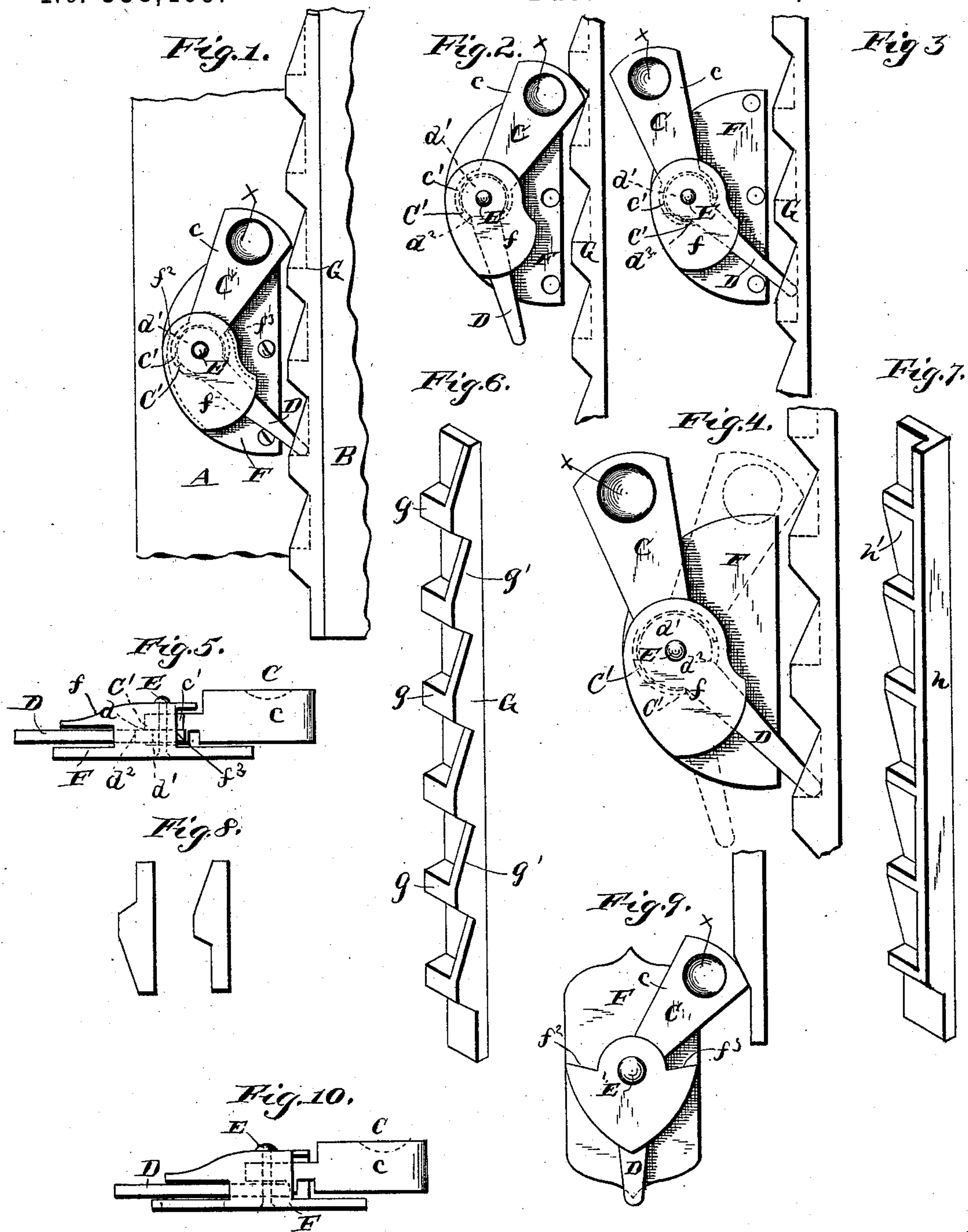
(No Model.)

E. D. ROCKWELL.

SASH FASTENER.

No. 358,409.

Patented Feb. 22, 1887.



Witnesses

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SASH-FASTENER.

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To all whom it may concern:

Be it known that I, EDWARD DAYTON ROCKWELL, a citizen of the United States, residing at Jacksonville, in the county of Duval and State of Florida, have invented a new and useful Improvement in Sash Holders and Locks, of which the following is a specification.

My invention relates to improvements in sash holders and locks; and it consists of the peculiar combination and novel construction and arrangement of the various parts for service, substantially as hereinafter fully set forth, and particularly pointed out in the claims.

The primary object of my present invention is to provide an improved device of the class named which can be adapted for both holding a sash at any desired elevation and for locking it at any point of its elevation, so that a person on the outside of the dwelling or other structure to which the invention is applied cannot raise the lower sash or lower the upper one beyond a point where they shall be left during the night for the purpose of ventilating the apartment.

A further object of my invention is to provide improved means which will enable the operator to use both hands when it is desired to raise or lower the sash, it only being necessary to first operate or adjust the device and then grasp the sash with the hands, while the device acts automatically to lock and hold the sash when it reaches its destination.

A further object is to improve the parts in minor details of construction so that they shall possess superior advantages in points of simplicity, strength, and durability of construction, efficiency of operation, ease and rapidity of adjustment, and cheapness of manufacture.

In the annexed drawings, which illustrate a sash holder and lock embodying my improvements, Figure 1 is a side elevation showing the device adjusted for use as a sash holder and lock combined. Fig. 2 is a like view of the device adapted for service as a sash-lock only. Fig. 3 is a like view showing it adapted for service as a sash-holder only. Fig. 4 is an enlarged detached view of the independently-swinging arms and the base-plate to which they are connected. Fig. 5 is an edge view of Fig. 4. Fig. 6 is a detached perspective view of my preferred form of rack. Fig. 7 is a

similar view showing another form of rack-bar, and Fig. 8 shows still another modification of the stops and supports for the locking and holding device. Fig. 9 shows another form of bed-plate upon which the swinging arms are supported, and Fig. 10 illustrates a side view of the device shown in Fig. 9.

Referring to the drawings, in which like letters of reference denote corresponding parts in all the figures, A designates the sash of a window and B the casing thereto, which may be of any approved pattern, my invention being capable of application to any class or form of window sash and frame.

C designates the upper heavier arm and D the lower arm, which is connected with and controlled by the upper arm, C, to be actuated thereby; and these arms are connected and pivoted on a shaft or pin, E, which passes through their contiguous ends and into the bed-plate F, which is affixed to the sash.

The upper heavier arm, C, is provided, near its lower end, with an enlarged portion, *c*, which is rounded on its edges; and this enlarged portion or end of the arm has an outwardly-projecting flange or rim, *c'*, on one of its faces, which, however, does not form a complete circle, but terminates at nearly diametrically-opposite points in the periphery of the rounded lower end, *c*, so as to form stop-shoulders *C'*, which are adapted to impinge or bear against the edges of the lower arm, D, to actuate the latter simultaneously with the upper arm, as more fully described presently.

The lower end of the upper heavier arm is cut away on its rear side to form a notch or recess, into which the upper enlarged end, *d'*, of the lower arm, D, is fitted; and this rounded enlarged end *d'* of the lower arm provides two shoulders or ledges, *d''*, on opposite sides of the arm at the points where the outer rounded edges of the enlarged portion terminate and join the sides of the lower arm, as will be very readily understood.

The upper arm is made of greater width and thickness than the lower arm, so that the upper arm is considerably heavier than the lower arm, and when the said upper heavier arm is moved or swung on the pivot E one of the shoulders *C'* thereof impinges against one of the shoulders or ledges *d''* of the lower arm, and

moves the latter in the corresponding direction, so that the lower arm is connected with and actuated by the upper arm during some of the movements of the latter, and it is also capable of movement on the pivot independently of the upper arm—as, for instance, when it is desired to lower the sash without unlocking or adjusting the upper arm, as more fully described presently.

The bed-plate *F* of the device is provided with transverse apertures, through which are passed screws or the like to secure the same to the sash, so that the device is carried by the sash; and this plate has an integral enlargement, *f*, which projects outwardly from one of the vertical faces of the plate. The enlargement is slotted vertically, and through this slot passes the upper end of the lower arm, *D*, and the lower end of the upper arm, *C*; and through the said ends of the arms passes the pivot or pin *E*, which also passes through the enlargement *f* and the base-plate and is secured in the latter. The free ends of the said upper and lower arms are thus projected beyond the enlargement of the base-plate, and are free to engage the rack or stops to perform their functions; and the upper side of the base-plate is rounded and forms two stop-shoulders, *f*² *f*³, against which the upper arm is adapted to bear or impinge, so that the arm is limited in its movements in both directions by coming in contact with the stop-shoulders.

In the form of bed-plate shown in Fig. 4 the projection is rounded on its upper and lower sides, while in the form shown in Figs. 9 and 10 the stop-shoulders are made larger and more prominent, and the lower sides of the projection are converged toward each other in curved lines until they meet in a point, as clearly shown.

The form of bed-plate shown in Figs. 4 and 5 I preferably employ for the sashes of dwellings and the like, because it can be made narrower to more readily fit the sash, while the form shown in Figs. 9 and 10 is especially adapted to railway-cars and steamboats.

G designates the rack-bar, which is formed or cast in a single piece of metal, and consists of a flat plate or bar, a series of equidistant horizontal ledges, *g*, which are arranged transversely across the outer face of the flat plate or bar, and which have flat upper sides and downwardly and inwardly beveled or inclined under sides, and the vertical ledges *g'*, which are arranged at one side of the transverse horizontal ledges *g* and on one edge of the flat plate or bar, the upper surface of the vertical ledges being inclined downwardly and outwardly and the lower face thereof being inclined upwardly and outwardly, the two faces being thus arranged in reverse directions to adapt the heavier upper arm to take beneath the lower under face and lock the sash against upward movement, and to slide very freely over the upper face when the sash is lowered, this form of rack-bar being intended more particularly for dwellings. In lieu, however, of providing the

rack-bar with the beveled vertical shoulders or ledges *g'* at one side of the flat plate or bar, they may be dispensed with and a flat bar or rib, *h*, substituted therefor, as shown in Fig. 7. This rib is arranged at right angles to the flat plate or bar and to the horizontal ledges, which are provided, as is usual, and the upper arm impinges upon the said rib and slides freely thereon when the sash is raised or lowered, the outer end of the said upper arm taking beneath a shoulder or ledge, *h'*, at the lower end of the said flat strip or rib to lock the sash against elevation when it is lowered, this style of rack-bar being preferred for car and steamboat windows. If desired, however, to substitute for these rack-bars a cheaper contrivance for holding the sash at its desired elevation and for locking the same against movement when lowered, the stops shown in Fig. 8 can be substituted. Each stop is provided with an outwardly-projecting shoulder, *g*, one side of which terminates abruptly, while the other side is gradually inclined. The stops are affixed to the window jamb or frame in reverse positions—that is to say, the upper stop has its abrupt shoulder uppermost and the lower stop has the said abrupt shoulder lowermost—so that when the sash is elevated the holding-arm will rest on the abrupt shoulder of the upper stop to prevent it from descending, and when the sash is lowered the locking-arm will take beneath the abrupt shoulder on the lower stop, and thus prevent the window from being elevated, as will be very readily understood; but I do not, however, wish to be understood as claiming this invention, as I am well aware that the same is old, and only illustrate the same herein for the purpose of showing the adaptation of my invention to racks or stops of different classes.

By means of the transverse and vertical ribs or ledges *g* and *g'* the rack is very materially strengthened and the flat plate or bar can be reduced in thickness to a very material extent, so that the cost of manufacturing the rack-bar is reduced, as well as the weight thereof, and the rack-bar can be made in a single continuous piece or formed in separable sections, as may be preferred.

This being the construction of my invention, the operation thereof is as follows: In order to raise the sash, the upper heavier locking-arm is thrown away from the ledge or shoulder *g'*, with which it engages, and one of the shoulders thereof impinges upon one of the shoulders *d*² of the lower arm to force the free end of the latter into contact with the ledges *g*, the outward movement of the upper arm being limited by one of the sides thereof coming in contact with one of the stop-shoulders on the projection of the base-plate. By reason of the locking upper arm being thrown out of the way and the free end of the holding lower arm being forced thereby into contact with the horizontal transverse ledges of the rack, both of the hands of the operator are left free to raise the sash, and during the ele-

vation of the said sash the free end of the lower holding-arm is normally forced inward toward the horizontal ledges, while at the same time it is free to move on the pivot E when it rides on the lower beveled sides of the ledges *g* in order to pass the same. When the sash has been raised the desired height, the free end of the lower holding-arm takes upon the horizontal upper surface of one of the ledges *g*, to prevent the sash from falling; and if it is desired to lock the sash against vertical movement in either direction the upper locking-arm is again forced or pushed by the hand of the operator over against the rack-bar, so that its upper end will take beneath the upwardly and outwardly inclined lower side of one of the vertical ledges, *g'*.

It will be seen that a small space is left between the opposing edges of the upper holding-arm and the lower side of the vertical ledge *g'*, beneath which it takes. This space is provided so that a limited amount of movement is permitted to the sash, in order to raise the latter slightly to adapt the free end of the lower holding-arm to clear the flat upper surface of the horizontal ledge upon which it bears, whereby, when the said free end of the lower arm clears the said ledge, the arm will drop down and assume a vertical position independently of the upper arm and without affecting the latter. In this position the upper arm is free to ride over the vertical ledges *g'* without hinderance from the lower arm, and the latter is arranged out of the path of the horizontal ledges *g*, so that the sash can be lowered with great ease and permit both of the operator's hands to be employed in lowering the sash.

When the device is used on an upper sash of the window, the upper or heavier swinging arm is only forced or thrown over against the rack-bar before and while lowering the sash to the desired elevation, after which it is thrown back and forces the lower or lighter arm in engagement with the ledges of rack-bar, as before described, and holds or locks the window against further downward movement. To raise this upper sash from any desired elevation all that is necessary is to simply push it up, as neither arm needs any adjustment, except before lowering. The upper

end of the locking-arm has a depression or countersunk portion, *x*, in its outer face, into which the finger or thumb can be easily inserted to more conveniently operate the same. 55

My improvements are very simple and effective, cheap and inexpensive, can be applied by an unskilled person, and are not liable to get out of order.

The shape of my improved swinging arms, bed-plates, and rack-bars may be varied a little, to conform, if possible, to a more elegant appearance, without departing from the spirit of my invention.

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

1. A combined sash holder and lock, comprising the fixed rack or stops, the base-plate having the integral shoulders and the locking and holding arms C D, pivotally connected together at their contiguous ends, the ends of the said arms and the pivot thereof being arranged between the shoulders and the base-plate and connected thereto, whereby, when the locking-arm is turned to a certain point beyond a vertical line drawn through the pivot, it impinges upon the said terminal shoulders and is limited thereby, the locking-arm having shoulders C', arranged at its lower end on opposite sides of the pivot, which cause the locking-arm to move the holding-arm in the same direction when the locking-arm has been turned to a point beyond a vertical line drawn through the pivot, the said shoulders C' allowing both arms a limited movement on the pivot independently of one another, substantially as described, for the purpose set forth. 80

2. The combination of a rack having the transverse horizontal ledges and the vertical ledges at one side of the horizontal ledges, the lower holding-arm, and the upper locking-arm connected with the lower arm and controlling the latter, substantially as described. 95

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

EDWARD DAYTON ROCKWELL.

Witnesses:

CHARLES B. BOSTOW,
EUGENE BARNET.