

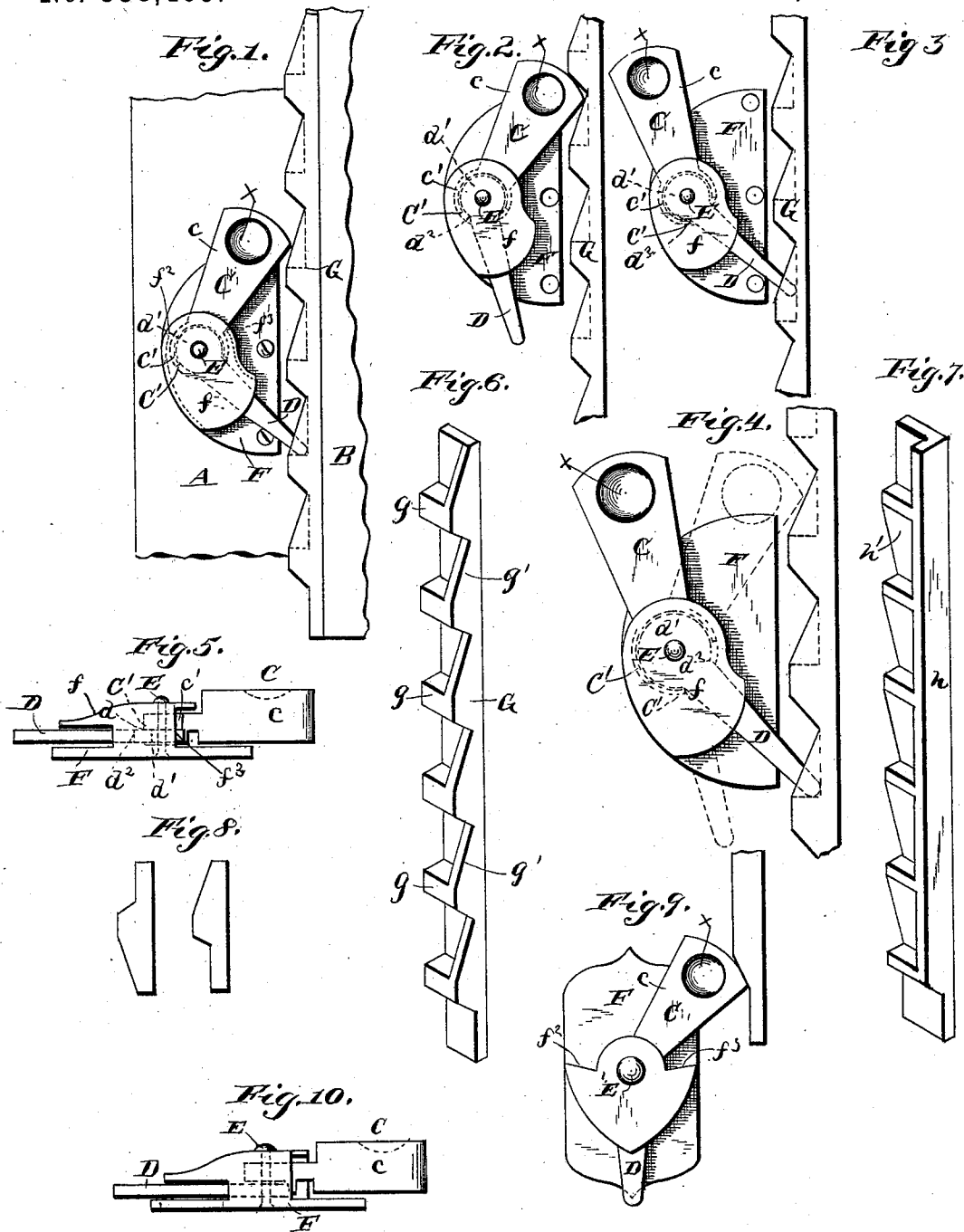
(No Model.)

E. D. ROCKWELL.

SASH FASTENER.

No. 358,409.

Patented Feb. 22, 1887.



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# UNITED STATES PATENT OFFICE.

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## SASH-FASTENER.

SPECIFICATION forming part of Letters Patent No. 358,409, dated February 22, 1887.

Application filed September 20, 1886. Serial No. 214,050. (No model.)

*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<sup>2</sup>*, 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<sup>2</sup>* 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 5 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.

10 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 15 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, 20 *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 pro- 25 jected 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*<sup>2</sup> *f*<sup>3</sup>, against which the upper arm 30 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 35 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 40 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 45 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 50 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 55 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 60 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 65 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 70 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 75 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 80 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 move- 85 ment 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 90 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- 95 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 100 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 adapta- 105 tion 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 110 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 115 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 120 shoulder *g'*, with which it engages, and one of the shoulders thereof impinges upon one of the shoulders *d'* 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 125 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 130 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  
 5 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 hori-  
 zontal upper surface of one of the ledges g, to  
 10 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 oper-  
 ator over against the rack-bar, so that its  
 15 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 be-  
 tween the opposing edges of the upper hold-  
 20 ing-arm and the lower side of the vertical ledge  
 g', beneath which it takes. This space is pro-  
 vided 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  
 25 lower holding-arm to clear the flat upper sur-  
 face 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 in-  
 30 dependently of the upper arm and without af-  
 fecting 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  
 35 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 lower-  
 ing the sash.

When the device is used on an upper sash  
 40 of the window, the upper or heavier swing-  
 ing 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  
 45 arm in engagement with the ledges of rack-  
 bar, as before described, and holds or locks  
 the window against further downward move-  
 ment. To raise this upper sash from any de-  
 sired elevation all that is necessary is to sim-  
 50 ply push it up, as neither arm needs any ad-  
 justment, 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 in-  
 serted to more conveniently operate the same. 55

My improvements are very simple and ef-  
 fective, 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, 60  
 bed-plates, and rack-bars may be varied a lit-  
 tle, to conform, if possible, to a more elegant  
 appearance, without departing from the spirit  
 of my invention.

Having thus fully described my invention, 65  
 what I claim as new, and desire to secure by  
 Letters Patent, is—

1. A combined sash holder and lock, com-  
 prising the fixed rack or stops, the base-plate  
 having the integral shoulders and the locking 70  
 and holding arms C D, pivotally connected to-  
 gether at their contiguous ends, the ends of  
 the said arms and the pivot thereof being ar-  
 ranged between the shoulders and the base-  
 plate and connected thereto, whereby, when 75  
 the locking-arm is turned to a certain point  
 beyond a vertical line drawn through the  
 pivot, it impinges upon the said terminal shoul-  
 ders and is limited thereby, the locking-arm  
 having shoulders C', arranged at its lower end 80  
 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' 85  
 allowing both arms a limited movement on  
 the pivot independently of one another, sub-  
 stantially as described, for the purpose set  
 forth.

2. The combination of a rack having the 90  
 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 con-  
 trolling 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.