

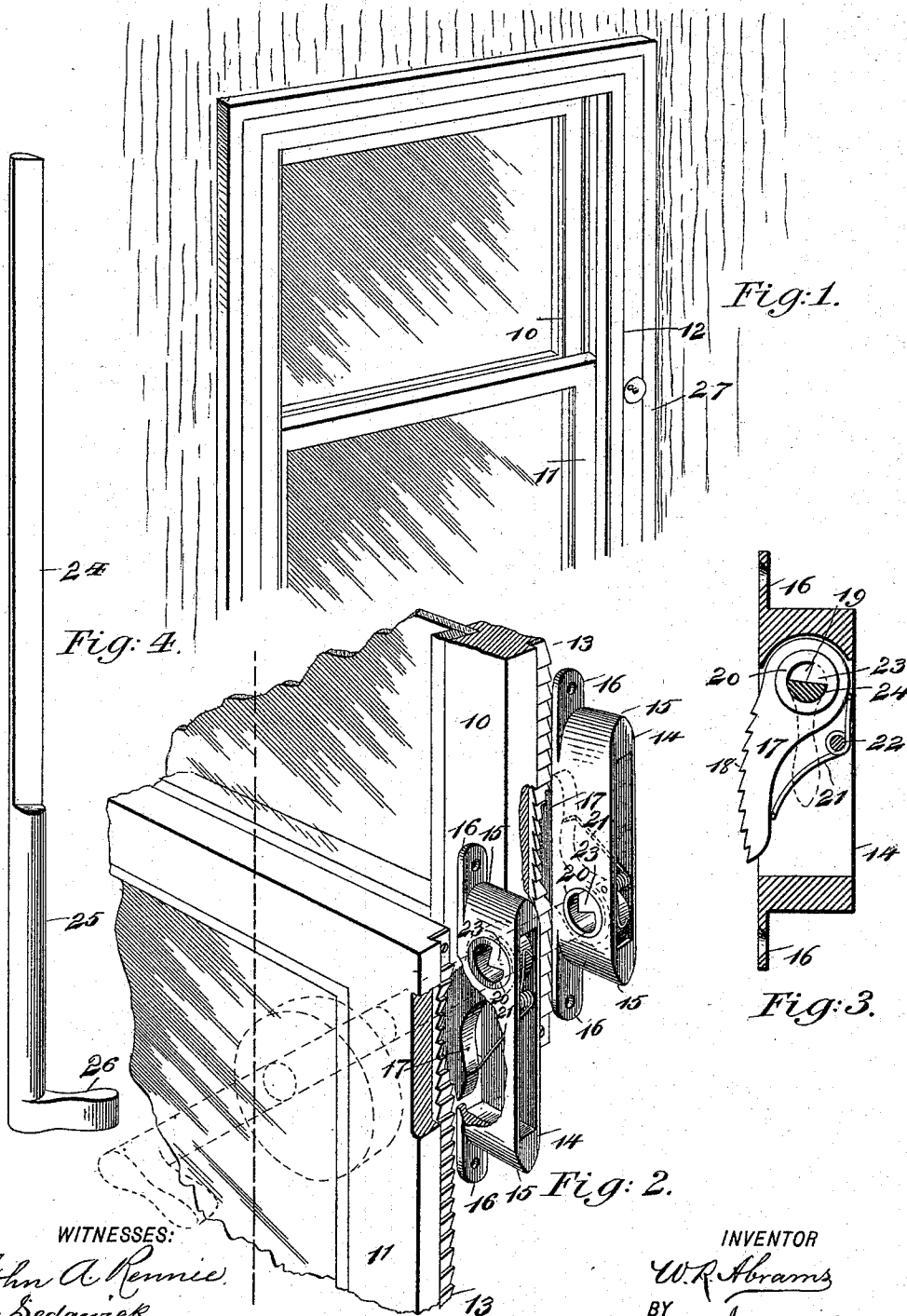
(No Model.)

2 Sheets—Sheet 1.

W. R. ABRAMS.
SASH FASTENER.

No. 528,059.

Patented Oct. 23, 1894.



WITNESSES:
John A. Rennie
C. Sedgwick

INVENTOR
W. R. Abrams
BY *Munn & Co.*
ATTORNEYS.

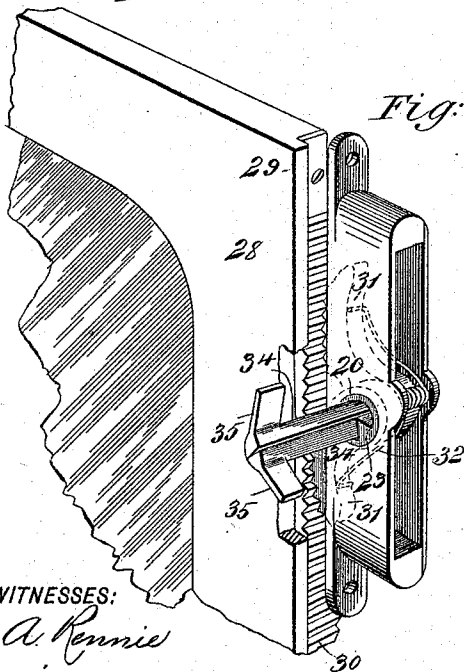
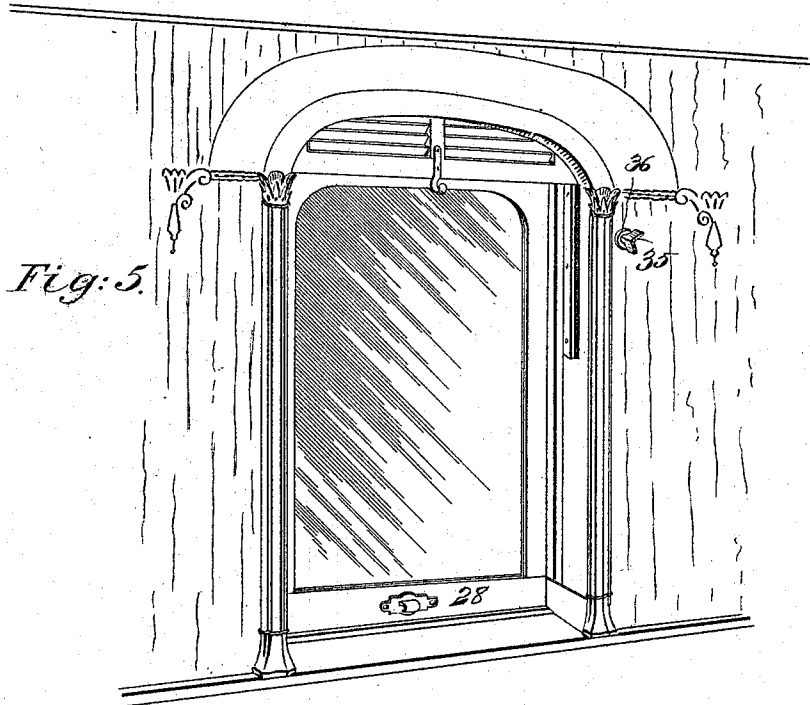
(No Model.)

2 Sheets—Sheet 2.

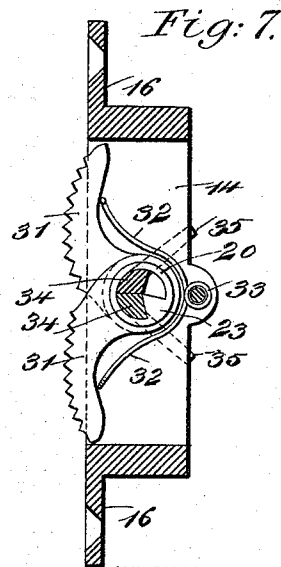
W. R. ABRAMS.
SASH FASTENER.

No. 528,059.

Patented Oct. 23, 1894.



WITNESSES:
John A. Rennie
C. Sedgwick



INVENTOR

W. R. Abrams

BY

Munn & Co.
ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM ROLLINS ABRAMS, OF LOS ANGELES, CALIFORNIA, ASSIGNOR TO
ELIZA ALICE ABRAMS, OF SAME PLACE.

SASH-FASTENER.

SPECIFICATION forming part of Letters Patent No. 528,059, dated October 23, 1894.

Application filed February 15, 1894. Serial No. 500,189. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM ROLLINS ABRAMS, of Los Angeles, in the county of Los Angeles and State of California, have invented a new and Improved Sash-Lock, of which the following is a full, clear, and exact description.

My invention is an improvement in the class of sash-locks in which a toothed pawl is pivoted in a box secured to the window frame, and engages a rack-bar applied to the sash.

The construction, operation and arrangement of my sash-lock are as hereinafter described.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of a window provided with my improved sash lock. Fig. 2 is an enlarged detail broken perspective view of the upper and lower sashes and the locking mechanism applied to them. Fig. 3 is a detail longitudinal section of one of the boxes and the locking pawl therein. Fig. 4 is a detail perspective view of the key used to work the locking pawls. Fig. 5 is a perspective view of a car window provided with my improved lock. Fig. 6 is a broken perspective view of the lock as applied to the car window; and Fig. 7 is a detail longitudinal section of the box and the double locking pawls used in connection with car windows.

The window illustrated in Fig. 1 is of the ordinary kind, having the upper and lower sashes 10 and 11 which slide in the customary manner in the frame 12. These sashes have each let into on one edge a ratchet bar 13, the teeth of the lower ratchet bar having their flat sides uppermost and the teeth of the upper ratchet bar having their flat sides down. Opposite each sash is a box 14 which is let into the window frame, the boxes being of substantially the same height, and each box is provided with rounded ends 15 to enable it to be more easily slipped into a mortise to receive it. Each box 14 has end flanges 16 which facilitate its attachment to the frame, and in each box is a pawl 17, curved outward and provided with teeth 18 adapted

to engage the teeth of the ratchet bar 13. The pawls being curved, as described and as shown in Fig. 3, act eccentrically when engaged by the ratchet bar, so that when pressure is applied to the sash to move it, the pawl acts with increasing force to prevent such moving.

The pawls 17 are arranged with the one opposite the lower sash pointing down and the one opposite the upper sash pointing up. The pawls are perforated at their pivot ends, as shown at 19, and formed integral with each pawl and around the said perforations are trunnions 20, which are adapted to turn in holes in the sides of the box 14, as shown clearly in Fig. 2. This is a cheap construction and also very strong. One side of each box is made removable, so that the trunnions may be inserted in the box sides. The pawls are pressed against the ratchet bars by springs 21, each spring being coiled around a stud 22 in the box 14, with one end pressing against the free end of the pawl and the other against the pivoted portion of the pawl.

In each trunnion 20 is a segmental lug 23 which is adapted to engage the flat section 24 of a key 25, which key is adapted to be pushed through the trunnions of both locks, the boxes 14 being arranged so that the holes in the pawls and trunnions shall come opposite each other. The key 25 has a crank 26 by which it may be turned, and the crank is adapted to turn in a countersunk escutcheon 27 on the frame 12. It will be understood, of course, that the frame is bored out to receive the key and, by having the crank turn in the escutcheon, the crank is kept out of the way of the window-shades and is also out of the reach of sticks or other articles which might be inserted in the open window to turn the crank and unlock the fastening.

As shown in Fig. 2, the lugs, 23, of the two boxes, 14, do not coincide in position. In practice, they may be placed one eighth or even one fourth distance apart on the circle of the trunnion. This is to enable the key, 24, to be turned one way (to the right) to operate the lower pawl, without coming in contact with the lug, 23, of the upper pawl, and, vice versa, to enable it to be turned the other way (to the left) to operate the upper pawl,

without coming in contact with the lug of the lower pawl.

It will be seen that by turning the crank and key in the right direction, the key may be turned against the lug 23 so as to move the pawl 17 against the tension of its spring and free it from the ratchet bar 13, so that the window sash may be freely moved. It will be observed that if the upper sash is dropped somewhat, the pawl 17 engaging the ratchet bar thereon, will prevent it from being pulled open any wider and thus it may be safely left partially open, and if the lower sash is raised, the pawl 17 will prevent it from being raised any further and so the window may be left open at top and bottom, if desired, without danger of any person with felonious intent effecting an entrance.

In Figs. 5 to 7, the device is shown as applied to a car window 28, which is of the usual kind having a single sash, and the edge of the sash is provided with a bar 29 having teeth 30 thereon which, instead of being ratchet teeth are simple beveled teeth, inclined alike on opposite sides, and these teeth are adapted to engage pawls 31 which are hung in the box 14, this box being placed in the frame of the window opposite the edge of the sash in the manner already described.

The pawls 31 point in opposite directions, one extending upward and the other downward and they are curved like the pawls 17 already described. The pawls 31 are forced into engagement with the tooth or rack bar 29 by a spring 32 which is coiled around a stud 33 in the box 14 and presses with its ends against the pawls. The pawls 31 are constructed like the pawl 17, being provided with trunnions 20 and with the lug 23 already described, but instead of a single key they are worked by two keys 34 which are segmental in cross section and placed with their two flat sides together, the keys having cranks 35 at their outer ends, which cranks diverge, as

illustrated in Figs. 5 and 6. The keys 34 operate in an escutcheon 36 on the frame of the window 28. The trunnions of the pawls have lugs 23 arranged so that one key bears against the lug of one trunnion and the other key against the opposite lug, and consequently when the cranks 35 are pressed together the keys rock against the lugs and so swing the pawls out of engagement with the rack bar 29, permitting the sash to be freely raised or lowered and, upon releasing the cranks 35, the spring 32 throws the pawls back into engagement with the rack bar, thus fastening the window. The lock may be applied to a sliding screen in the same way that it is applied to a single sash.

It will be seen that with the form of the lock shown in Figs. 1 to 4 the key may be removed, and then the lock cannot be worked and the sash is left safely locked.

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

1. The improvement in sash-locks hereinbefore described, the same consisting of two toothed pawls whose teeth project in opposite directions, and provided with transverse bores arranged in alignment and having internal lugs which are out of alignment, a key adapted to be inserted in said bores and to engage either lug independently of the other as specified, and rack-bars applied to sash and having teeth projecting in opposite directions, as shown and described.

2. The improved double or two-part key for operating sash fasteners, the same being composed of two bars of like angular form, and having divergent cranks on one end, as shown and described.

WILLIAM ROLLINS ABRAMS.

Witnesses:

FRANK MCFARLAND,
W. M. PATRICK.